1 A HISTORY OF LEARNING WITH THE LIGHTS OFF

DEVIN ORGERON, MARSHA ORGERON, AND DAN STREIBLE

> Although the picture falls within the unhappy category known as "educational films," it is nevertheless entertainment in a full sense.
>
> —Frank S. Nugent, *New York Times*

In his review of *The Human Adventure* (1935), a documentary about archeological sites explored by the University of Chicago's Oriental Institute, Frank Nugent humorously alludes to a dilemma that has always plagued this volume's object of study.[1] An "unhappy category" indeed, the educational film, regardless of how one defines it, has been subject to debate from the start. This chapter provides a selective account of its history in the United States gleaned from the substantial—indeed, at times overwhelming—print materials associated with this industry. The tremendous size and scope of this literature begins to suggest its relevance, both to that larger and better known American film industry and to our culture more broadly. Debates over film's educational use inside as well as outside of the classroom have been with the medium since its inception.

In a superb 1988 essay about early efforts to market home projection systems for nontheatrical use, scholar Ben Singer observes that discussions of potential classroom applications for motion pictures appeared in *Moving Picture World* and *The Show World* in 1907, the first year of publication for both trade journals. Throughout the Progressive Era, a nationwide explosion of press dealt with the subject of moving pictures in the classroom.[2] Magazine accounts began appearing about broad instructional applications of moving pictures. In 1908, journalist John Meader reported that "several of the larger cities' educational and philanthropic institutions have adopted the moving-picture plan of instruction and entertainment," adding that "regular manufacturers . . . are now beginning to realize the possibilities offered

[1] Frank Nugent, review of *The Human Adventure*. *New York Times*, Oct. 30, 1935.

[2] Ben Singer, "Home Cinema and the Edison Home Projecting Kinetoscope," *Film History* 2 (Winter 1988): 51.

in the educational field, and nearly all the most progressive [movie] houses are now exerting a certain portion of their efforts in this direction."[3] Meader's observation demonstrates that the idea of educational film was being used both to conceptualize as well as to market films in the early twentieth century.

A leading trade journal, the *Moving Picture World* characterized its own "endeavor to crystallize the wave of sentiment that is abroad in favor of the educational value of the picture" in its January 1911 debut of the column "In the Educational Field." Detailing progress in the implementation of educational possibilities, *Moving Picture World* also revealed less noble motivations behind some educational film programming. It reported that troubles with "the local clergy and the press" in Buffalo, New York, were threatening to lead to theater licenses being revoked, which in turn compelled local theaters to decide to devote "a whole day for the benefit of the tuberculosis exhibition" in order to avoid "incurring further unfavorable comment from the pulpit and the press."[4] In 1926, movie journalist Terry Ramsaye noted a similar motivation: "*Educational* pictures were born of a necessity in complying with Sunday show legislation in New York City in 1908, when so-called lecturers were added to the film shows to give them pretext of a defense as institutions of instruction."[5] These examples explain some endorsements of the medium's educational capacities. However, they do not negate film's educational potential or its use.

There was always something schizophrenic about the demands and expectations placed upon the educational mode, in large part because it needed to be differentiated from frivolous and morally suspect entertainment movies. In 1920, psychologist L. L. Thurstone (perhaps humorously) put it, "If a film that purports to be educational is too entertaining we had better look it over again to see if it is really educational." Writing in *Visual Education,* he suggested that "a film may be of the very highest educational value as a teaching tool, even if it is extremely boring and uninteresting to the casual onlooker." "Its entertaining features are secondary but desirable," he concluded.[6]

Finding the "just right" temperature at which to pitch the educational film would never quite be resolved, as the widely divergent tones of educational films made throughout the twentieth century attest. In 1923, educational reformer May Ayres Burgess proclaimed that any element of amusement in classroom films rendered them "unpedagogical": "The classroom film does not need to be funny; it does not need to be clever; it does not need to tell a

[3] John Meader, "The Story of the Picture That Moves," *The Bohemian* (Sept. 1908): 363. Brackets ours.

[4] "In the Educational Field," *Moving Picture World* (Jan. 21, 1911): 128, 129.

[5] Terry Ramsaye, "Movie Jargon," *American Speech* 1 (Apr. 1926): 360.

[6] L. L. Thurstone, "What Is an Educational Motion Picture?" *Visual Education* 1 (Apr. 1920): 25.

story."[7] Many of her contemporaries disagreed, however, averring a balance needed to be struck between elements of information and engagement. Still, school films needed to distinguish themselves from the pablum being peddled to the masses. And some advocates embraced making informational films entertaining as well. Writing in 1926 about health films, such as those made to prevent tuberculosis, diphtheria, and rickets, Thomas C. Edwards of the National Health Council explained that many people will not take the time and energy to read but "will sit through several reels of films and carry away certain important facts, through a natural interest in action portrayed in graphic form and mixed with entertainment."[8] Narrative strategies might, in other words, help the medicine go down.

A decade later it would be necessary to warn teachers against using films *as* entertainment. Education professor M. R. Brunstetter claimed that "many untrained teachers" used film as an educational pacifier, a mistake "probably carried over from film theater-going habits."[9] Motion pictures might have special communicational abilities, but they required a skilled teacher to make them effective. It was also incumbent upon the manufacturers and distributors to make film's educational possibilities known to conventional exhibitors as well as to those overseeing alternative exhibition circuits. By 1910, the Essanay Company categorized its releases as Comedy, Dramatic, Western Drama, Industrial, and Educational, featuring such short educational releases as *Aviation at Los Angeles* and *The Ostrich and the Lady*. The *Edison Kinetogram* categorized certain films as educational starting in 1910 with *United States Life Saving Drills*.[10] In 1913, the Edison company also began providing educational films for its Home Projecting Kinetoscope, which used an idiosyncratic 22mm film.[11]

Developments on the educational film front escalated throughout the teens, despite both definitional and tactical barriers, in large part due to the Progressive Era's faith in educational reform and the betterment of society, which was perfectly matched with the educational capabilities of the motion picture. In 1911, *Moving Picture World* reported introductions of moving pictures into schools in Rochester, Cleveland, Chicago, and the public library in Madison,

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[7] May Ayres Burgess, "Motion Pictures in the Public Schools," *Elementary School Journal* 23 (May 1923): 681.

[8] Thomas C. Edwards, "Health Pictures and Their Value," *Annals of the American Academy of Political and Social Science* 128 (Nov. 1926): 134. This issue was a symposium on motion pictures, with Arthur Edwin Krows, Terry Ramsaye, and Charlotte Perkins Gilman, among others, publishing pieces. Reprinted as *The Motion Picture in Its Economic and Social Aspects,* The Literature of Cinema series (New York: Arno Press, 1970).

[9] M. R. Brunstetter, *How to Use Educational Sound Film* (Chicago: University of Chicago Press, 1937), 12.

[10] *Essanay Guide,* Apr. 15–30, 1910; and *Edison Kinetogram,* June 1, 1910, 9; both available at the Margaret Herrick Library of the Academy of Motion Picture Arts and Sciences, Los Angeles.

[11] Singer, "Home Cinema," 51, 60–66.

Wisconsin; similar plans were underway for New York, San Francisco, Oakland, Pittsburgh, Milwaukee, Minneapolis, Baltimore, and Washington, DC.[12] In 1919, the board of education in Evanston, Illinois, created a "bureau of visual education," in order to facilitate more efficient and effective classroom use of educational motion pictures.[13] But even as schools and libraries were beginning to utilize film educationally, debates raged over the appropriateness of bringing film into a scholarly setting. What was the point of incurring such expense? More important, how might motion pictures negatively impact America's youth in the institutions where their intellectual growth was supposedly assured?

The answers to these questions lay partly in countering the medium's reputation as frivolous and harmful by promoting its educational properties. Advocates went to great lengths to achieve this. Film could conquer time and space, revealing that which could not be readily seen (and, later, heard) in most classrooms. Footage of wheat harvesting in Kansas, meatpacking in Chicago, or salmon migration in Alaska could be replayed to students in a classroom in Peoria, Atlanta, or the Bronx. In 1912, Frederick Talbot discussed the way that microcinematography captured parasites attacking blood corpuscles: "The film was shown lately before a gathering of medical men, and created widespread interest, as it introduced them to a phase in the life of the parasite which hitherto had been beyond their comprehension."[14] Surely these special abilities and applications could sway even the most doubtful of the cinema's critics.

If, indeed, film's ability to amuse was "its least important appeal," as one museum director contended, then it was up to an array of pontificators, researchers, and advocates to convince the public and the specialists that its educational abilities might be harnessed.[15] Still, the medium's ability to entertain in an educational context could be an asset. As movie critic Winifred Aydelotte put it, "To this day, I have never forgotten one detail of those old flickers. And I *have* forgotten practically everything that the thin, bony structure of learning in the little red schoolhouse hoped I would remember."[16] Children watching a film about Napoleon, Aydelotte continued, "are on the screen with Napoleon and his soldiers," experiencing a simulation of reality so that "children live the events pictured on the screen and they become part of their own experience."[17] (See fig.1.1.) If

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[12] "In the Educational Field," *Moving Picture World*, Jan. 21, 1911, 129.

[13] W. Arthur Justice, "Visual Instruction in the Public Schools of Evanston, Ill.," *Visual Education* 1 (Jan. 1920): 12. Evanston schools had been using films since Nov. 1918.

[14] Frederick A. Talbot, *Moving Pictures: How They Are Made and Worked* (1912; reprint, Philadelphia: Lippincott, 1914), 167.

[15] George W. Stevens, "The Muse of Motion Photography in Museums," *Metropolitan Museum of Art Bulletin* 11 (Sept. 1916): 204.

[16] Winifred Aydelotte, "The Little Red Schoolhouse Becomes a Theater," *Motion Picture Herald* (Mar. 1934): 35.

[17] Ibid., 88.

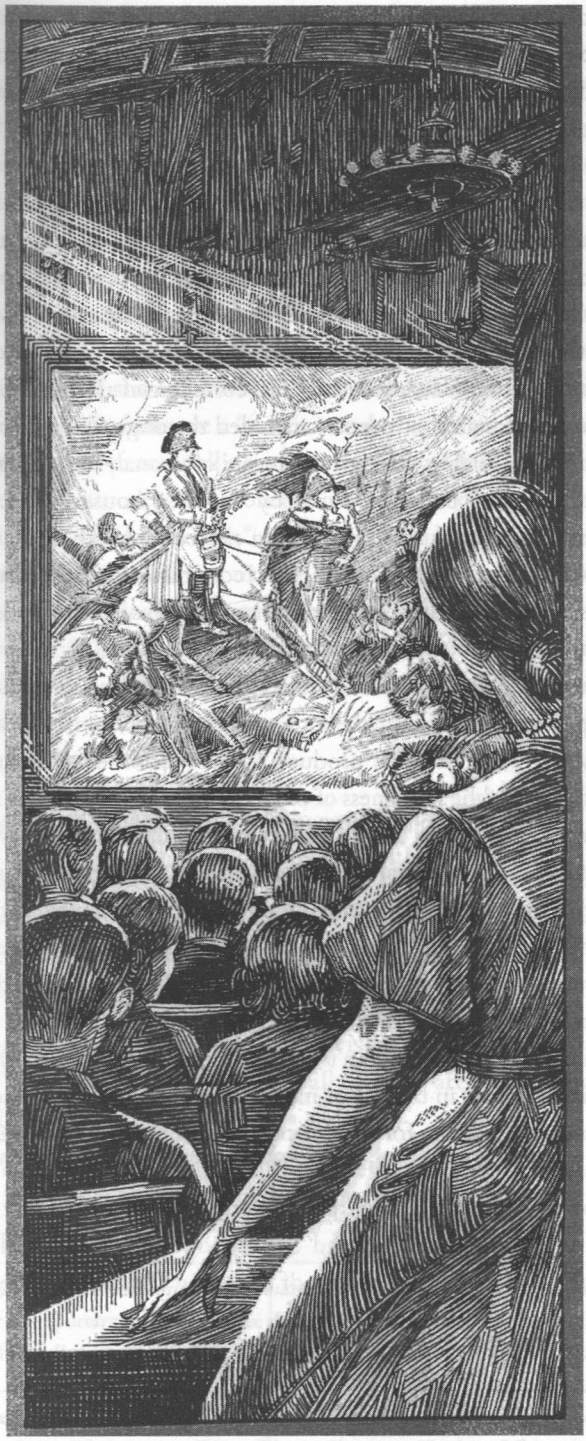

Figure 1.1. The Hollywood-oriented *Motion Picture Herald* provided this illustration for Winifred Aydelotte's "The Little Red Schoolhouse Becomes a Theater," March 1934, 35.

movies could be more engaging than books or teachers, then they could enhance students' educational experiences. Some applications, of course, such as educating Talbot's medical men about parasites, were to have no entertainment aspect to them, but would logically maintain a dry informational tone.

By the 1940s, pundits only occasionally questioned the "supposedly educational ends" of much educational film use, except perhaps when they were not used as *educational* films. The unhappy result of informal and unpurposeful use in schools, churches, or clubs, claimed G. L. Freeman in 1940, was that "very little of this well-intentioned effort meets with the standards of 'education' as carried by other and better understood media of communication or the standards of 'entertainment' demanded by the commercial theater." The growing pains of the educational film industry included the ongoing problem potential exhibitors had with sorting through "this mass of unanalyzed, unclassified, and unassimilated material" being produced by "business houses, service organizations, and various propaganda groups." On the other hand, educational films were often handicapped by the inability to "command the lively attention and critical respect that is accorded entertainment features," not only in the classroom but in many other "more informal types of education."[18]

Where the first decades of educational film use most often found commentators urging educational filmmakers to avoid being too entertaining lest the patina of frivolity denigrate their product, by the 1940s most advocates realized that "engaging films" (the vagueness of the term hints at the problem itself) were potentially more educational by virtue of the attention given them by spectators. As a study of the Santa Barbara, California, schools from 1941 reported, "There is no reason why education cannot be entertaining, or why entertainment cannot be educational. . . . Schools can utilize the local movie theater as a community resource without contaminating the school or sterilizing the theater." Still, the same study concludes that "the greatest development of curriculum thinking came when teachers began to shift their thinking from methodological to educational purposes in the use of motion pictures, and when they began to make use of motion pictures for specific purposes in the unit, not merely as novelties and 'interest-getters.'"[19]

This notion of using film's entertainment capacities for—but not in lieu of—educational purposes is echoed throughout the 1940s, at least partly reflecting the perceived effectiveness of engaging filmmaking methods used

[18] G. L. Freeman, "The Motion Picture and Informal Education," *Journal of Educational Sociology* 13 (Jan. 1940): 257–58.

[19] Reginald Bell, Leo Cain, and Lillian Lamoreaux, *Motion Pictures in a Modern Curriculum: A Report on the Use of Films in the Santa Barbara Schools* (Washington, DC: American Council on Education, 1941), 169, 176.

upon military personnel in wartime training films. Charles F. Hoban Jr., an influential figure in the field, observed this, writing that "in developing films for . . . important educational purposes, the Army applied to educational films the dramatic techniques hitherto used only in entertainment films."[20] The U.S. Navy alone produced 1,100 training films (mostly two-reel) in just three-and-a-half years and claimed to have distributed more than 10,000 different training films during the war.[21] This concentrated use gave administrators and teachers some significant argumentative leverage in the postwar period in terms of convincing school boards to spend more on classroom film than in the prewar period. Still, teachers were advised that it was most appropriate to treat films the same way as they did textbooks, maps, and charts: "Dispel the idea that films are a 'treat' or that you are putting on a 'show.'"[22]

Perhaps the most compelling argument about the debate was made by F. Dean McClusky in 1947. The professor of education compared the division of films into "those which entertain" and "those which educate" to similar categories of literature. Such divisions failed to sustain themselves, he argued, as "many novels and plays which were written in the first instance to entertain are used in schools for highly desirable educational purposes."[23] Therefore, McClusky contended, films were what one made of them, emphasizing the role played by exhibitors and exhibition contexts.

For Good or Bad: Harnessing the Influence of Motion Pictures

> The Motion Pictures relate to and directly bear upon and control to an unbelievable extent, the trend of the mind and the education and morals of every man, woman and child in the community.
> —*Chicago Motion Picture Commission, 1919*

> We have, it is true, a struggling subdivision of what we call "educational" pictures, failing to see that all pictures are educational, for good or bad.
> —*Charlotte Perkins Gilman, 1925*

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[20] Quoted in Gloria Waldron, *The Information Film* (New York: Columbia University Press, 1949), 12. For an important study of film use during the war see Carl Hovland, Arthur Lumsdaine, and Fred Sheffield, *Experiments on Mass Communication* (Princeton, NJ: Princeton University Press, 1949).

[21] Orville Goldner, "The Story of Navy Training Films," *Business Screen* 6 (May 15, 1945): 29, 83.

[22] Norma Barts, "Techniques of Using Film in Classroom Teaching," *Educational Screen* (May 1946): 270.

[23] F. Dean McClusky, "The Nature of the Educational Film," *Hollywood Quarterly* 2 (July 1947): 372.

The influence of motion pictures on citizens—especially the young, foreign-born, lower-class, or uneducated—was a concern for Progressive-Era America. That concern continued through the 1920s, as the visual education movement flourished alongside a booming Hollywood. Professor of education Edwin A. Lee summed up the overall perception in 1923: "The motion picture is the single most potent educational factor in our present-day civilization. A student body of over fifty millions attends some performance every week of the year."[24]

An array of theories and rhetorical tropes began circulating in the early twentieth century regarding the powers of the moving image, especially over children. Some argued that the motion picture possessed hypnotic powers; others argued that moviegoers—especially children—were getting daily theatrical doses of harmful and corrupting ideas; others claimed that going to the movies at night resulted in eyestrain and, more generally, in children being less able to learn at school the next day.[25]

What cinema historian Miriam Hansen has called "the myth of universal language" existed in rhetoric about cinema from its inception. "The universal-language metaphor," she writes, "was soon adapted by industrial publicists and advertisers." By 1915, the likes of Edwin S. Porter, D. W. Griffith, and writer Jack London—not to mention the studio Universal Pictures—were invoking the concept. By 1920, the press commonly used it as a truism. The educational sector was equally quick to speak of moving pictures as universal in their capacity to reach and to instruct virtually anyone, even the illiterate. Francis Holley, head of the largest international educational film distributorship, used the cliché verbatim in a 1921 interview with *American Magazine:* "The motion picture is a universal language."[26]

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[24] Edwin A. Lee, "The Motion Picture as a Factor in Public Education," *Elementary School Journal* 24 (Nov. 1923): 185. The preceding epigraphs are from Chicago *Motion Picture Commission Report* (Sept. 1920), quoted in Estella L. Moulton, "Our School Children and the Movies," *Visual Education* 1 (June 1920): 24; and Charlotte Perkins Gilman, "Mind-Stretching: The Mental Area Can Be Made Coterminous with the Universe," *Century Magazine* 111 (Dec. 1925): 219, reprinted in *Red Velvet Seat*, ed. Antonia Lant (New York: Verso, 2006), 287.

[25] See, for examples of such arguments: George Elliott Howard, "Social Psychology of the Spectator," *American Journal of Sociology* 18 (July 1912): 40; Florence Butler Blanchard, "The Woman's Club: Its Attitude toward Visual Education," *Visual Education* 1 (Sept.–Oct. 1920): 17; reported by Ernest Dench, *Motion Picture Education* (Cincinnati: Standard Publishing, 1917), 13, 15.

[26] Miriam Hansen, *Babel and Babylon: Spectatorship and American Silent Film* (Cambridge, MA: Harvard University Press, 1991), 77. Edwin S. Porter quoted in "Portrayal in Lieu of Spoken Word," *Moving Picture World*, Aug. 13, 1915, 1328; Jack London, "The Message of Motion Pictures," *Paramount Magazine,* Feb. 1915, reprinted in *Authors on Film*, ed. Harry Geduld (Bloomington:

With the great influence of motion pictures presumed, advocates were embracing motion pictures as a tool for wide-ranging purposes, including classroom use, public health management, and instruction on citizenship. As social psychologist Arland Weeks argued in "The Mind of the Citizen" (1915):

> The instant response of millions to the moving picture creates a suspicion that the propaganda of reform has quite too fully relied upon a relatively unpopular method—that of printed or spoken arguments. The same forces of perception and emotion which now so often go to waste in attention given to distressingly weak subject-matter at the cheap-show place might, if applied to social ends, work in brief time advancement which otherwise would require centuries. . . . Control images, and civilization may be made to approximate any ideal.[27]

This was certainly an idea picked up by many government and public advocacy organizations. In 1936, Jean Pinney of the American Social Hygiene Association wrote that "social hygiene is a subject which naturally lends itself to interpretation through the motion picture," applicable to both lay and professional audiences. Noting that the spread of knowledge was the only way to stop the spread of disease, Pinney emphasized the need for engaging material and a reliable nontheatrical circuit, especially given the "difficulties of making any educational film for commercial distribution" if the information is "scientifically accurate" and comes up against a conservative censorship board.[28] Although the National Board of Review had no purview over educational films (though they tried to promote film as a teaching tool by providing information on educational films), local censor boards might reject a film depicting, say, details about how syphilis was transmitted, whether it was explicitly educational or merely posing in educational garb.[29]

Theatrical interests, however, often felt encroached upon by nontheatrical exhibitors offering free shows. In fact, some distributors refused to rent films to

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Indiana University Press, 1972), 106–7. The many educational-sector invocations of the "universal language" rhetoric include Moulton, "Our School Children and the Movies"; and earlier, "Growing Use of Commercial Motion Pictures," *Iron Age*, Apr. 10, 1913, 886. Francis Holley is quoted in Aaron Hardy Ulm, "Once Blind, He Now Helps Others to See," *American Magazine* 92 (Oct. 1921): 55.

[27] Arland Weeks, "The Mind of the Citizen," *American Journal of Sociology* 21 (Nov. 1915): 391.

[28] Jean B. Pinney, "The Motion Picture and Social-Hygiene Education," *Journal of Educational Sociology* (Nov. 1936): 158, 162–64.

[29] Wilton A. Barrett, "The National Board of Review of Motion Pictures—How It Works," *Journal of Educational Sociology* 10 (Nov. 1936): 178. See Eric Schaefer's essay in this volume for discussion of the relationship between hygiene and exploitation films, and Skip Elsheimer's essay, which includes a discussion of educational films and venereal disease.

schools or churches due to pressure from their theatrical customers. In other cases "school people or church people have frankly started opposition theaters of their own with the avowed intention of running the commercial exhibitors out of business."[30] *Educational Screen*'s catalog, *1000 and One*, critiqued this shortsighted "boycott" strategy in 1924, pointing out that theatrical prints that might be repurposed for nontheatrical use were, instead, being shelved due to pressure from commercial exhibitors.[31]

Concerns about the movies' influence upon children in particular were most famously spurred in the early 1930s by the Payne Fund Studies, in which a group of prominent social scientists sought to assess what effects movies had on the behavior and attitudes of young audiences. As educational researcher Charles Hoban Jr. observed in 1942, the Payne Fund Studies ultimately "demonstrated that motion pictures are a powerful medium of education," whether—as Charlotte Perkins Gilman suggested twenty years prior—for good or bad. Furthermore, Hoban noted that films were commonly used to influence thought well beyond the classroom, including "the education of the farm population in newer agricultural practices, in sales campaigns, in the development of general good will toward a product or an industry, in vocational training, in technical research, in analysis of sports performance, and in many other vocational and avocational situations."[32] Film's influence, recognized in these prewar years, would be most strategically directed in the 1940s.

World War II played the greatest part in the "at long last" recognition of the motion picture's value as a tool of teaching and persuasion. Films not only helped train millions of soldiers but also did important work on the home front. As documentary advocate Mary Losey put it in her 1943 call to arms, "Films can help win the war, if we use them intelligently." Losey urged "schools, libraries, Y's, churches, motion picture councils, forums, civilian defense councils, service clubs, social agencies, trade unions, women's clubs" to disseminate films that would shore up support for the war effort.[33] By war's end, a clear consensus existed: Motion pictures were not just influential, they also could be effectively used for specific instructional purposes, which was itself a significant victory in a long-fought battle.

Toward a "Visual" Education: The Long Justification Period

In the very first issue of *Visual Education*, a survey of students and teachers in Evanston, Illinois, produced the following commentary on motion picture use in the classroom:

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[30] Burgess, "Motion Pictures in the Public Schools," 679.

[31] "Foreword," *1000 and One* (Chicago: Educational Screen, 1924), 8.

[32] Charles F. Hoban Jr., *Focus on Learning: Motion Pictures in the School* (Washington, DC: American Council on Education, 1942), 9.

[33] Mary Losey, *Films for the Community in Wartime* (New York: National Board of Review, 1943), 9.

FIFTH-GRADE TEACHER: "Pictures are almost the only means many children have of gaining knowledge of the topography of a country. Few of our pupils have had the opportunity to travel, and moving pictures stimulate their interest in a subject and induce them to do more research work."

FIRST-GRADE TEACHER: "Moving pictures have brought to us things we need in our work in the way of illustrative material which it would be impossible for us all to go and see. For instance, today we had a song about geese building their nests by a reedy lake and if it hadn't been for our last movie we wouldn't have had so easy a time understanding what a reedy lake was."

STUDENT: "I think the movies have helped us a great deal. Our knowledge of the manufacture of things we see in the home is much larger. We can remember how things were made if we see them made. We can't remember so well if we read about it."

STUDENT: "Before I saw the movies here at Lincolnwood I knew almost nothing of the outside world."[34]

As these testimonies suggest, motion pictures of many stripes seemed to bring the world and its workings into the classroom, transcending time and space in a fashion that was impossible to tackle so efficiently and effectively with any other medium. Such enthusiasm was not hard to find; nor were critiques of using film in educational contexts, especially the classroom. Proponents and critics of educational motion pictures took to the printed page on a quest to justify their respective visions and anxieties. Advocates, detractors, and middle-grounders duked it out for decades over whether or not film had the ability to properly, efficiently, economically, and effectively uplift and inform the masses. Throughout much of the twentieth century, independent researchers as well as those supported by such institutions as the Carnegie Corporation, the Rockefeller Foundation, the Alfred P. Sloan Foundation, the Fund for Adult Education, or the Film Council of America, conducted hundreds of studies that sought to determine the medium's educational capabilities and liabilities.

In 1955, F. Dean McClusky, a leading figure in audiovisual education, looked back to the conceptualization of visual education "as an antidote" to "book learning." School museums, a phenomenon of the early 1900s, sought to "bring the world to the child," he said, by showing all manner of visual material. In addition to displaying physical objects, these museums incorporated photographs, slides, maps and charts, stereoscopes and 3D stereographs, magic lanterns, stereopticons, and other means of visualizing knowledge. By the early 1920s, motion picture holdings were included in this pedagogical arsenal. The

[34] All quotations from W. Arthur Justice, "Visual Instruction in the Public Schools of Evanston, Ill.," *Visual Education* 1 (Jan. 1920): 18–19.

visual education movement gave these films (and filmstrips) an inordinate amount of attention.[35]

Advocates of film's educational uses made claims for implementations that went well beyond obvious classroom potentialities. In the teens, John Randolph Bray's animated military-training films revolutionized the expedited teaching of such difficult subjects as map reading, dealing with indirect fire, and the effective use of artillery horses in a fashion that, one author (naively) claimed, "shuts off all arguments regarding both the relative and absolute merits of the motion picture method of teaching."[36] Teaching "Americanism," patriotism, and good citizenship to adult immigrants was, many argued, necessary to national security—and ideally suited to the cinematic medium. In the 1920s, the U.S. government, with the aid of Hollywood studios, developed plans to show "patriotic and educational films in the steerage of trans-Atlantic steamers so that the potential citizen may know something of our customs, our ideals and our backgrounds before reaching our shores."[37] William F. Russell, dean of education at the University of Iowa, argued in 1920 that "we need to have available for the unrestricted use of every city and state, every Council of Defense and Americanization committee, every patriotic meeting and class in citizenship, a series of films especially designed to supply this need."[38] Reformers claimed that films were ideal for teaching prisoners "right conduct" and the fact that "obedience to law brings comfort and happiness and disobedience to the law the contrary."[39]

Trade periodicals dealing with visual education proliferated in the 1920s. *Reel and Slide* was the first in 1918, changing its title to *Moving Picture Age* the following year, followed by a host of others such as *Educational Film Magazine, Visual Education, The Screen, The News Letter* (supported by the Payne Fund), and *Educational Screen*. These journals often had ties to the visual education organizations forming in these same years, such as the National Academy of Visual Instruction (*Moving Picture Age/Educational Screen*), the Visual Instruction Association of America, the Society for Visual Education (publishers of *Visual Education*), the

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[35] F. Dean McClusky, "A-V 1905–1955," *Educational Screen* 34 (Apr. 1955): 160–61. "Bring the World to the Child" was the slogan of the School Museum of St. Louis, which opened in 1905. It is considered the first such museum in the United States.

[36] Charles Frederick Carter, "Speeding Military Training Films," *Educational Film Magazine* (Jan. 1919): 15.

[37] Sidney R. Kent, "The Motion Picture of To-Morrow," *Annals of the American Academy of Political and Social Sciences* 128 (Nov. 1926): 31. Kent, an executive at Famous Players–Lasky, notes that these films were supplied at no charge by the American government in conjunction with the Motion Picture Producers and Distributors of America, the Hollywood trade association formed in 1922.

[38] William F. Russell, "New Films for Teaching Americanism," *Visual Education* 1 (Apr. 1920): 16.

[39] William Horton Foster, "Why They Need the Motion Picture Most of All," *Visual Education* 2 (Mar. 1921): 24.

Table 1. Audiovisual Education Organizations and Periodicals

Organizations in the Visual Education Movement

- National Academy for Visual Instruction (1919, folded first year)
- American Educational Motion Picture Association (1919, folded first year)
- Society for Visual Education (1920–present)
- National Academy of Visual Instruction (1920–1932)*
- Visual Instruction Association of America (1922–1932)*
- National Education Association Dept. of Visual Instruction (NEA DVI) (1923–1946)

*Merged with NEA DVI in 1932; NEA Dept. of Audio-Visual Instruction (1947–1971) became Association of Educational Communications and Technology (1971–present).

Periodicals

- *Educational Film Magazine* (1919–1922)
- *The Screen* (1920–1922, "for business, school and church")
- *Reel and Slide* (1918–1919)
  changed title to *Moving Picture Age* (1920–1922, National Academy of Visual Instruction)
  changed title to *The Educational Screen* (1922–1956)
    absorbed *Visual Education* (1920–1925, Society for Visual Education)
    absorbed *Visual Instruction News* (1927–1932, University of Kansas)
      merged with *Audio-visual Guide*** (1947–1956)
      to form *Educational Screen and Audio-visual Guide* (1956–1971)
      AV Guide: The Learning Media Magazine (1971–1973)

***Audio-visual Guide* (1947–56) was the ultimate title of a set of periodicals published by Educational & Recreational Guides, Inc.:
  Group Discussion Guide (1936–1941), which included joint issues with
    Photoplay Studies (1935–1940)
    Photoplay and Radio Studies (1940–1941)
    Photoplay, Radio and Newspaper Studies (1941)
  becoming *Film and Radio Discussion Guide* (1942–1945)
    and *Film and Radio Guide* (1945–1947)

- *International Review of Educational Cinematography* (1929–1934, International Educational Cinematographic Institute, League of Nations)
- *The News Letter* (1935–1971, Edgar Dale, Bureau of Educational Research, Ohio State University)
- *Audio-Visual Communication Review* (1953–1963, NEA Dept. of Audio-Visual Instruction)
  AV Communication Review (1964–1977)
  Educational Communication and Technology (1978–1988)
    merged with *Journal of Instructional Development* (1977–1988)
  Educational Technology Research and Development (1988–present)
- *Audio-Visual Instruction* (1956–1978, NEA, Dept. of Audio-Visual Instruction)
- *[Bertha] Landers Film Reviews* (1956–1989)
- *Business Screen* (1938–1977) continued as
  Business and Home TV Screen (1978–1979)
  Back Stage Magazine Supplement/Business Screen (1979–1980)
  Business Screen (1980–1982)
  Computer Pictures (1983–1995)

(*continued*)

Table 1. *(continued)*

- *EFLA Bulletin* (1945–1967, Educational Film Library Association)
  merged with *The Filmlist* and *Film Review Digest*
  became *Sightlines* (1967–1993)
    EFLA Bulletin (1977–1987; published between issues of *Sightlines*)
    became *AFVA Bulletin* (1988–1993, American Film and Video Association)
- *EFLA Evaluations* (1979–1987)
  became *AFVA Evaluations* (1988–1993)
- *The Film Counselor* (1947–1953, Film Council of America)
- *Film Forum Review* (1946–1949, Institute of Adult Education, Teachers College)
- *Film News* (1940–1958, American Film Center)
  Film/AV News (1958)
  Film News (1960–1981)
  Film and Video News (1984)
- *Film World: The Basic Magazine of the 16mm Industry* (1945–1951)
  Film World and AV World News Magazines (1951–1960)
  Film World and AV News Magazines (1960–1966)
- *See and Hear: Journal on Audio-Visual Learning* (1945–1953)
  combined with *Business Screen* in 1954
- *Southern Film News* (1947–1950, Southern Educational Film Production Service)
- *Teaching Tools* (1953–1960)
- *TechTrends* (1985–present, Association of Educational Communications and Technology)
- *Educational Broadcasting Review* (1967–1973, National Association of Educational Broadcasters)
  Public Telecommunications Review (1973–1980)

Bureau of Educational Research at Ohio State University (*The News Letter*), and the National Education Association's Department of Visual Instruction (which became the Department of Audio-Visual Instruction in 1946 and later the Association of Educational Communications and Technology).[40] See Table 1.

Catalogs of available educational pictures also began around 1920, serving as guidebooks for those programming nontheatrical venues. *Moving Image Age* compiled one of the first: *1001 Films: Suggestions for the Compilation of Film Programs for Americanization, Boy Scouts, Churches, Clubs [etc.]* (Chicago, 1920). When *Educational Screen* took over the publication as *1000 and One: The Blue Book of Non-Theatrical Films* in 1926, the annual catalog became an indispensable

[40] The Department of Visual Instruction was formed as a response to the (Charles H.) "Judd Report" of 1923, cosponsored by the Motion Picture Producers and Distributors of America and the National Education Association. See F. Dean McClusky, "Public Schools," in *Sixty Years of 16mm Film, 1923–1983: A Symposium* (Evanston, IL: Film Council of America, 1954), 46–59.

guide for users and providers of 16mm educational films, soon listing thousands of available titles. For decades regular users knew it simply as the *Blue Book.*[41]

A. P. Hollis's *Motion Pictures for Instruction* (1926) attempted this in book form, describing roughly 1,500 educational films, providing context, and presenting research findings to guide use of the material. When H. W. Wilson Company, known for its book indexes, published its first *Educational Film Catalog* (1936–1945; continued as *Educational Film Guide* through 1962), it included "a selected list of 1175 nontheatrical films, classified, annotated, and graded."[42] Manufacturers of projectors issued their own (less selective) listings, such as *Directory of Film Sources: Where To Buy, Rent and Borrow 16mm Films* (Victor Animatograph, Davenport, Iowa, 1929) and *Free Films for Schools, Clubs, CCC Camps, and Other Non-theatrical Users* (DeVry, Chicago, 1939, continued as *Free Films Source Directory*).

In 1942, the American Council of Education (ACE) and its Committee on Motion Pictures in Education published *Selected Educational Motion Pictures: An Encyclopedia,* which elevated the quality of such resources. The council put its imprimatur on five hundred 16mm films deemed the best by a panel that included teachers who had tested them in their classrooms as well as the students they taught.[43] The encyclopedia aimed to provide a better guide than previously existed by testing and designating pedagogically useful movies. Rare at the time were tomes like William H. Hartley's *Selected Films for American History and Problems* (Teachers College, 1940), which provided in-depth description and evaluation of works for a single discipline.

New organizations and publications appeared over the course of the 1930s and 40s, notably the Educational Film Library Association, which formed in 1943 and published bulletins from 1945 to 1993. Other periodicals entered the fray, most importantly the monthly *Business Screen* (1938–1976), which also published resources such as *The Index of Training Films* (1946) and *Sports, Physical Education and Recreation Film Guide* (1947). (See Table 2 for information on finding educational film and video titles.)

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[41] The catalog changed titles as follows: *1001 Films: Suggestions for the Compilation of Film Programs for Americanization, Boy Scouts, Churches, Clubs* [etc.] (1920); *1000 and One: The Blue Book of Non-Theatrical films* (1926–1948); *Blue Book of 16mm Films* (1949–1953); *Blue Book of Audio-Visual Materials: Films, Filmstrips, Slides, Recordings* (1954); and *Blue Book of Audio-Visual Materials* (1955–1964).

[42] Dorothy E. Cook and Eva Cotter Rahbek-Smith, *Educational Film Catalog* (New York: H. W. Wilson, 1936), v. The book excluded films available only on flammable nitrate stock. *Motion Pictures for Instruction* had a precursor in A. P. Hollis and R. A. Corbett, *Free Slides, Films, Charts, and Photographs for Schools, Clubs and Extension Workers* (Fargo: North Dakota Agricultural College, 1919).

[43] *Selected Educational Motion Pictures: A Descriptive Encyclopedia* (Washington, DC: American Council on Education, 1942).

Table 2. Finding Educational Film and Video Titles

When the first two major guides—*Educational Film Catalog/Guide* (H. W. Wilson, 1936–1962) and *Educational Screen*'s annual *Blue Book* (1926–1964)—ceased publication, two other entities led the field for the rest of the century.

A longtime publisher of authoritative bibliographic volumes, R. R. Bowker issued several filmographic resources, beginning with the *North American Film and Video Directory* (1976). Its *Educational Film Locator* (1978) went through four editions, the last entitled *Educational Film and Video Locator of the Consortium of College and University Media Centers* [CCUMC] *and R. R. Bowker* (1990). The CCUMC also issued a CD-ROM, *Precision One MediaSource* (Brodart Co., 1995), with similar listings of educational film and video titles. Other CD-ROM resources include *Bowker's Complete Video Directory on Disc* (1999, covering "educational, instructional, and documentary films") and *Bowker's Audio & Video Database* (2000).

The other major English-language publisher of educational media locators is the National Information Center for Educational Media (NICEM). Glenn McMurry assembled its first *Index to 16mm Educational Films* (McGraw-Hill, 1967), which ran nearly a thousand pages. The University of Southern California (USC) created the center in 1967, an outgrowth of nine years of research into automated cataloging systems. Director of the USC Film Distribution Division, McMurry used educational film catalog entries as the basis for a computer database that grew to 20,000 titles by the time NICEM began. Bowker and others published subsequent editions of the NICEM *Index to 16mm Educational Films* until 1984, when USC sold the database to a commercial firm, Access Innovations. With the ability to sort records and print computer-generated lists, in 1969 NICEM and Bowker published separate indexes to 16mm film, 35mm filmstrips, and 8mm film cartridges, as well as educational audiotapes and even overhead transparencies. The NICEM *Index to Educational Videotapes* appeared in print six times (1971–1985) before the *Film and Video Finder* (1987–1997) combined the two formats. The regularly updated content next appeared in 1989 as *A-V Online*, with CD-ROM and online access. As of 2011, NICEM reports that it indexes nearly a half-million nonprint items. However, access to the *Film and Video Finder Online* (nicem.com) is by paid subscription only. All of these indexes provide titles, dates, producers, running times, subject categories, and abstracts for each entry, as well as directories of production and distribution companies.

Many other educational motion picture catalogs were circulated throughout the twentieth century, peaking in the 1970s. Researchers will find printed catalogs from the major university film distribution hubs and extension services (Indiana University, Penn State, University of Wisconsin, New York University, USC, et al.) and smaller institutions. A few idiosyncratic books, such as Salvatore J. Parlato's *Superfilms: An International Guide to Award-Winning Educational Films* (Scarecrow, 1976), provide focused perspectives. The series of *Footage* sourcebooks are also valuable aids: Richard Prelinger and Celeste R. Hoffnar, *Footage 89: North American Film and Video Sources* (Prelinger Associates, 1989); Richard Prelinger, Cyndy Turnage, and Peter Kors, *Footage 91: North American Film and Video Sources* (Prelinger Associates, 1991); and *Footage: The Worldwide Moving Image Sourcebook* (Second Line Search, 1997).

The long justification period for educational film use, however, first escalated in the 1920s, when visual education was being pitched as essential to the modernization of America. Indeed, the modernization of education was intimately tied to national improvement, innovation, and health. Several arguments came into focus in the 1920s and recur throughout the following decades regarding film's educational prowess. Many argued that film would uplift the medium and industry as a whole, elevating patrons' expectations and forcing producers to enrich the content of movies across the board. Early advocacy writings often focused on the efficacy of the eye as a perceptive organ in an effort to prove the motion picture's superiority. As the first issue of *Visual Education* explained, "It is a matter of common experience that we learn more rapidly and

retain longer when our learning is based upon first-hand contacts with materials and processes. . . . The eye, through which knowledge comes to us, is second to no other one of the senses."[44] Not only, this argument went, does the motion picture present material in a more learnable way but it also conveys information more economically, staying with the spectator for a longer period of time.

Retention went alongside the belief that motion picture images were more convincing and "real" than other visual aids or teaching methods. With microscopic cinematography, students could witness a world inaccessible to the unassisted eye; events could also be compressed from days to minutes onscreen. As one self-taught medical film producer, Dr. Joseph Franklin Montague, explained, he could depict the dissection of a human body in just over an hour on film, though the process of dissection itself takes "months of careful work." Students who might otherwise be crammed into a medical theater, trying to catch a glimpse of a "malodorous cadaver," could instead appreciate the whole process—and even repeat aspects that might have been difficult to understand—"from the seat of a comfortable chair in the lecture hall."[45]

In addition to this capacity for capturing distant happenings and compressing time, Director of the Lincoln School of Teachers College at Columbia University Otis Caldwell argued in 1922 that film was stimulating to its spectators, increasing interest and inspiring additional reading on virtually any subject it depicted, a sentiment echoed throughout the advocacy literature.[46] Although teacher guidance was needed to ensure that film was not making students passive about the learning process, it was widely agreed that film could encourage active learning and foster enthusiastic audience reactions. Film's economy—its alleged ability to teach not only more effectively but also more quickly—also reverberated in the literature. "If a truthful and characteristic motion picture film were available," wrote Harvard professor of physiography Wallace W. Atwood in 1920, "it would teach more in a few minutes than any other illustrative material."[47]

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[44] "Why the Society for Visual Education?" *Visual Education* 1 (Jan. 1920): 7.

[45] Joseph Franklin Montague, "What Motion Pictures Can Do for Medical Education," *Annals of the American Academy of Political and Social Science* 128 (Nov. 1926): 140.

[46] Otis W. Caldwell, "The Need of Experimental Investigation of Visual Instruction," *Visual Education* 1 (Jan. 1920): 11.

[47] Wallace W. Atwood, "First Steps in the Study of Geography," *Visual Education* 1 (Jan. 1920): 23. In 1920, Atwood left Harvard to become president of Clark University. In 1932, the newly formed International Film Foundation announced Atwood as its president. The foundation was to be an independent "centralized producing and distributing organization for educational films." However, it was never heard from again after releasing, in conjunction with Fox Film Corp., *The Cry of the World* (1932). Editor Louis de Rochemont compiled excerpts from Fox Movietone newsreels into a themeless chronology of world events, and Fox donated the nontheatrical rights to the foundation. "Most of the personnel of I. F. F., including President Atwood," *Time* reported, "were previously connected with the visual education department of Fox

Although this efficiency claim would later be refuted by respected educational researchers, it was one of the assets touted by early advocates and especially by those who sought to convince school administrators of film's fiscal worth.

Pontificating about the amazing nature of film as an educational tool was one thing, but pundits figured out quickly that this would not suffice to persuade the doubtful to implement educational film usage, especially from a financial point of view. Scientific methods would be required to effect the mass modernization of educational methods through film use, hence the beginning of a series of experiments—some more methodologically sound than others—that were regularly reported starting in the early 1920s.[48] In 1919, one author could easily complain that "the exponent of motion pictures has little evidence upon which to base his claims, for experimental data on this subject are practically non-existent"; within a decade, there would be a plethora of data sets with which to make claims either for or against film's educational capacities.[49] Considering motion pictures alongside photographs, lantern slides, museums, stereoscopes, maps, graphs, and excursions, researchers tried to ascertain how film compared with other pedagogical methods.

While some studies, such as *Motion Pictures in History Teaching* (1928), which reported on the effectiveness of the pioneering Yale Chronicles of America Photoplays, found significant gains (around 20 percent) for students instructed by film, some of the highest-profile studies to come out about instructional motion picture use did not wholeheartedly endorse the widespread use of film.[50] In 1924, University of Chicago educational psychologist Frank Freeman compiled thirteen studies of visual versus nonvisual methods of education. The resulting publication did not simply affirm the moving image's inherent superiority as a teaching medium. Rather, the studies in the volume

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which, after spending $300,000 on educational films in the last two years, has ceased to function." "New Group to Issue Its First Films Soon," *New York Times*, Apr. 26, 1932; "The New Pictures," *Time,* May 16, 1932. (The 1932 International Film Foundation was unrelated to the long-lived organization of the same name created by documentary filmmaker Julien Bryan in 1945.)

[48] For a thorough accounting of significant educational film research from the teens through the 1950s, see Charles F. Hoban Jr. and Edward B. Van Ormer, *Instructional Film Research 1918–1950* (1951; reprint, New York: Arno Press, 1970), especially chap. 2, "Major Film Research Programs in the United States."

[49] John V. Lacy's early study, "The Relative Value of Motion Pictures as an Educational Agency," first appeared in *Teachers' College Record* in November 1919 and is reprinted in *Visual Education* 1 (June 1920): 33+. An interesting precedent is David Sumstine's "Educational Research and Statistics: A Comparative Study of Visual Instruction in the High School," *School and Society* (Feb. 23, 1918): 235–38.

[50] Daniel C. Knowlton and J. Warren Tilton, *Motion Pictures in History Teaching* (New Haven, CT: Yale University Press, 1929), 87. The study also found appreciable gains in memory retention and in class participation among the experimental (film) group.

Figure 1.2. Rockville Fair, [Maryland] 1928. (National Photo Company Collection, Library of Congress.) This prizewinning exhibit from a school fair in Rockville, Maryland, illustrates the impact of the visual education movement of the 1920s. "The Motion Picture Educates While It Entertains," reads a placard at the top-center of the bulletin board; beneath it is the inscription, "Preserving Historical Motion Pictures for Posterity," illustrated with newsreel images. "The Motion Picture Makes Scenes from All Lands Familiar," reads another (right), hanging above stills from *Chang* (1927, filmed in Siam). Some images are from science films, but most are stills from Hollywood features from 1916 to 1928: *The Ten Commandments, The King of Kings, Moana, The Big Parade, The Mystic, The Amateur Gentleman, Les Miserables, Bardelys the Magnificent, Ben-Hur*, and *The Blue Boy*; there is also one of soprano Anna Case recording for the Vitaphone in 1926. The screen device (right) is probably an opaque projector.

provide mixed and even unfavorable results in terms of film's efficacy not only in the classroom but also in other instructional contexts: "The results of the experiments reported in this monograph give color to the opinion that mere presentation by motion pictures is not of itself of any advantage." Freeman's conclusions are tempering in nature, trying to bring scientific observation to bear on a subject that was causing palpable excitement in the educational community. Taking a step back from the rush to educate with the eyes, Freeman reports on the significant expense of visual education as well as on the tendency of proponents of film use to hyperbolize the medium's pedagogical potential: "We are told that it will in whole or in part displace the teacher or the textbook, that it will speed up education tenfold, that it will make education absorbingly

interesting and thoroughly permanent." Indeed, these claims were repeated ad infinitum in the literature of the period.

Educational psychologist H. Y. McClusky's study of the content of educational motion pictures, reported in Freeman's compendium, concludes that given the "difficulties and the expense attendant upon the production, distribution, and projection of educational motion pictures that their contents should be limited to subject matter which cannot as well be presented in any other way." Not only, Freeman concludes, are there advantages to using still pictures in certain instructional situations ("it permits analysis" and "provides the opportunity for a more active study attitude on the part of the pupil"), but there are certain circumstances (such as teaching science) in which films are notably inferior to other methods, such as demonstration by the teacher. Freeman also concludes that films do not necessarily stimulate student interest more than other teaching techniques, tackling one of the prevailing claims to the medium's superiority.[51]

In a two-year study sponsored by Eastman Kodak, Frank Freeman teamed with Ben Wood, director of Columbia University's Bureau of Educational Research, to assess "the value of motion pictures as supplementary aids in regular classroom instruction." The study grew out of George Eastman's 1926 announcement that a Kodak survey of teaching films concluded that not enough films for classroom use had been produced; that the expense of classroom film use was prohibitive; and that the value of film as a teaching aid had not yet been adequately established for school authorities to make the expenditures needed for effective motion picture use in the classroom. Eastman Kodak agreed not to rent or sell films or projection equipment to schools during the period of the experiment but it provided the films and funding for the project. Clearly, this seriously limited the scope of the study even as it enabled it to transpire under more controlled conditions than Freeman's earlier experiments.

Working with directors of visual education in twelve cities, Freeman and Wood used experimental and control groups of teachers to carry out the ambitious investigation, which involved "nearly 11,000 children in more than three hundred Geography and General Science classes, taught by nearly two hundred teachers, in grades four to nine . . . in twelve cities." Unlike Freeman's previous study, in this experiment all of the films were intentionally made for classroom utilization. These productions constituted a collection known as Eastman Teaching Films (or, later, Eastman Classroom Films), which soon became widely adopted. The films made minimal use of intertitles, avoided

[51] Frank N. Freeman, ed., *Visual Education: A Comparative Study of Motion Pictures and Other Methods of Instruction* (Chicago: University of Chicago Press, 1924), 63; 3–4; 64; 76. The studies were conducted in fourth-to-eighth-grade schools involving 649 children in Illinois (Evanston, Urbana, Oak Park, Joliet, and Chicago), as well as in Detroit and Cleveland (ibid., 88).

storytelling, and abstained from "pedagogical tasks which can be better accomplished by other media of instruction." Not unlike Freeman's earlier study, this one concluded that teaching films should never be conceived of as a substitute for teachers. This time around, Freeman's study did not deliver the same mixed results as the prior study, leading the authors to conclude that "the demonstrated contributions amply justify the extensive use of films of this type in our schools." Students taught by film were found to excel in "questions of fact," and also demonstrated "superiority" in "explanatory and conceptual test items."[52]

Though these studies are far from whole-hearted endorsements, most were more concerned about film's potential detrimental effects on its spectators. Writing in the *International Journal of Ethics* in 1923, Joseph Roy Geiger expressed an oft-repeated concern about film's imposition of passivity on its spectator, which discouraged creativity and self-expression; he also noted other common concerns of the time regarding eyestrain and the time moviegoing might take away from healthier outdoor activities.[53]

In the 1930s, studies sought to grapple with sound film usage and the ongoing need to improve implementation. The American Council on Education published a series of studies in the late 1930s, which evolved out of earlier support from the Payne Fund, to assess the status of film in the classroom. The Educational Motion Picture Project involved major educational film commentators Edgar Dale, Frank Freeman, and Charles Hoban Jr. Noting the difficulties still impeding educational film use, the ACE called for a single agency to provide information to "schools and universities, producers and distributors, administrators and teachers," an unheeded call that would be made by many others through the 1950s.[54]

In the 1940s, experiments "to see if classes taught with films did better than those taught with the usual methods" were largely a thing of the past. According to Dale, "Fifty such experiments (of varying scientific exactitude) offered the almost unanimous conclusion that films conveyed information in ten to twenty percent less time than usually required by other methods."[55] In the war and postwar eras, "effective use" would be the mantra of advocates, administrators, and teachers, in both school and other educational contexts, including the military (see fig. 1.3). Extensive film use in all of the branches of the military made film's educational capacities seem virtually irrefutable. The U.S. Navy's "six reasons for using instructional films as training aids" summed up the justifications of

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[52] Ben D. Wood and Frank N. Freeman, *Motion Pictures in the Classroom* (Boston: Houghton Mifflin, 1929), xviii, 210, 4, 36, 228.

[53] Joseph Roy Geiger, "The Effects of the Motion Picture on the Mind and Morals of the Young," *International Journal of Ethics* 34 (Oct. 1923): 72–73.

[54] *The Motion Picture in Education: Its Status and Its Needs* (Washington, DC: American Council on Education, 1937), 4.

[55] Edgar Dale, "The Real Film Problem," *The News Letter* 10 (Dec. 1944): 1.

Figure 1.3. Lessons learned during World War II filtered into civilian culture. Teachers were taught optimal usage of audiovisual materials. In the first panel, a uniformed navy officer previews "Points to Look For" during a film. Second (bottom), a projector screens *United States Navy Training Film 13650*. Last comes a summarization chart, discussion, and test. W. H. Durr, "Promoting Better Film Utilization," *See and Hear* (December 1945): 32.

prior decades, only now they were assumptions: "(1) to learn more, (2) to remember longer, (3) to increase interest, (4) to make training uniform, (5) to build morale, and (6) to save time."[56] So invested was the military in training films that the U.S. Navy produced the meta-film *Film Tactics* (1945), an instructional film to teach naval officers how to present films effectively in the training of sailors. (*Film Tactics* begins from the point-of-view of a trainee who falls asleep during a screening; we then see his dream-self standing inside his own head, looking out through his own eye sockets, watching himself watch the classroom film!)

Though much of the wartime and postwar rhetoric remained the same—"we must revolt from the authoritarian, rote, thoughtless drill, textbook-worshipping methods"—the fact of film's role in any educational scenario no longer seemed disputable; rather, it had become almost entirely uncontroversial.[57] Justification was, at long last, a thing of the past. This is not to say that criticisms of using movies—those entertainment-heavy tools that induced passivity—disappeared altogether. Rather, these critiques were now reduced to intermittent squawks from the sidelines, overwhelmed by the widespread sentiment that films had revolutionized the production of knowledge not only for school children but for all spectators, fostering critical thinking, curiosity, and efficient training in unparalleled ways. As Charles Hoban Jr. put it in 1941, "There is no longer any question whether motion pictures should be used in school. . . . The more fundamental question is how they should be used to obtain the best results."[58]

Helping Teachers Teach

> The essence of good teaching is the vivid and unmistakable presentation of ideas; if cameras can be so manipulated as to help teachers in the hard climb up the laborious steep, may God speed the operators in their enterprise, endowing them with wisdom to know that no easy substitute can be contrived for all the hard work, giving them skill to cheer us all along the difficult road.
>
> —*C. H. Ward, high school English teacher, inaugural edition of* Visual Education, *1920*

The great refrain on film's educational use was that it should not and would not replace the human role in facilitating knowledge. "A motion picture may supplement the sermon," wrote Edward M. McConoughey in 1916, "but can never take

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[56] George H. Fern and Eldon Robbins, *Teaching with Films* (Milwaukee: Bruce Publishing, 1946), 5.

[57] Edgar Dale, "The Real Film Problem," *The News Letter* 10 (Dec. 1944): 1.

[58] Hoban, *Focus on Learning*, 21.

its place."[59] Freeman's 1924 omnibus repeated this sentiment: "The superiority of the [live] demonstration over the film seems to indicate that there is a distinct advantage in the actual personal presence of the instructor." Freeman takes pains to reaffirm the value of teachers as the primary conduits of information, cautioning that long classroom films are problematic because "they take over the rightful function of the teacher," whereas shorter films allow teachers to utilize the media to fit their own lessons.[60]

The need to defend the teacher emerged at least in part due to predictions about the motion picture's potential to dramatically reorder the world of education. The age of mechanization generated concerns about people being replaced by machines, and anxieties about projectors taking over the classroom were expressed publicly. Thomas Edison's prediction that moving pictures would replace books was repeated and refuted for more than thirty years across the body of academic and popular literature.[61] By the 1940s, the sentiment most often echoed was that proper and effective film use was even more demanding for teachers than other more rudimentary visual aids and that films could never threaten the primacy of books in an educational setting, which was quite a reversal from the dominant thinking in the first decades of the twentieth century.[62]

Teachers clearly needed, however, to be taught how to use films. Don Carlos Ellis and Laura Thornborough's *Motion Pictures in Education: A Practical Handbook for Users of Visual Aids* (1923) was an early response to that need.[63] Many complained that teachers showed films but did not actually teach with them. While it may seem obvious to us now, it was commonplace for teachers to be advised that they should see films before they showed them in their classes, an act that was difficult in a school system utilizing a film rental system that made previewing films all but impossible (see fig. 1.4). For this reason, advocates in the early 1920s strongly advised that schools or school systems appoint a director of visual instruction who could arrange advance screenings or provide detailed information

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[59] McConoughey, *Motion Pictures in Religious and Educational Work with Practical Suggestions for Their Use* (New York: Federal Council of the Churches of Christ in America, 1916), 14.

[60] Freeman, *Visual Education*, 50, 80.

[61] See, for example, Ward, "Fact of 1925," 35–36; George H. Fern and Eldon Robbins, *Teaching with Films* (Milwaukee: Bruce Publishing, 1946); Nelson L. Greene, "Motion Pictures in the Classroom," *Annals of the American Academy of Political Social Science* 128 (Nov. 1926): 122. Even radical behavioral psychologist B. F. Skinner (although he did not write about film or video per se) maintained that human teachers would always need to guide the use of "teaching machines." *The Technology of Teaching* (New York: Appleton-Century-Crofts, 1968).

[62] See, for example, Gerald McDonald, *Educational Motion Pictures and Libraries* (Chicago: American Library Association, 1942), 12.

[63] Don Carlos Ellis and Laura Thornborough, *Motion Pictures in Education: A Practical Handbook for Users of Visual Aids* (New York: Thomas Y. Crowell, 1923).

Figure 1.4. By the 1930s, proponents of visual education urged teachers to preview films, both to gauge their effectiveness and to plan for their integration in lessons. M. R. Brunstetter, *How to Use the Educational Sound Film* (University of Chicago Press, 1937), 13.

to teachers, a position that would be standard in urban school districts by the 1950s. Furthermore, they advised teachers to use pictures in a fashion that subordinated the medium to the curricula and textbooks. Teachers were also counseled to edit out less relevant material from commercially made films, tailoring reels to fit their individual classroom plans.[64] Some school districts were able to work with "jobbers" who were "willing to cut and combine one or two reels into one to suit our needs, thus frequently making one very good reel out of two doubtful ones," real do-it-yourself work in an era of uncertain film dependability.[65]

Other ways that educators were trained included free summer institutes, such as that sponsored by DeVry Corp., the Chicago manufacturer of projectors. Its 1925 schedule listed sessions on using the portable projector in industry, projecting in places of worship, demonstrations on projector operation, teaching lessons, merchandising, and the International Harvester Company's use of motion pictures.[66] By the early 1920s it was commonplace for "teachers' leaflets" to be included with film purchases, and later years would witness differently pitched

[64] Hollis, *Motion Pictures for Instruction*, 16ff.

[65] Clarence E. Howell, "First Experiences with Portable Motion-Picture Projectors," *Elementary School Journal* 27 (Oct. 1926): 107.

[66] Hollis, *Motion Pictures for Instruction*, 237–39.

study guides for students as well. These provided, according to A. P. Hollis, "additional facts concerning the topics in the reels, and suggestions for teaching" and became increasingly sophisticated—with discussion questions, activities, and contextualizing information—in the decades to come.[67]

Teacher training for handling film prints became a serious enterprise. Pennsylvania and New Jersey required a laboratory course in motion picture instruction for teacher certification by the late 1930s, at which point around one hundred teacher-training institutions offered similar courses.[68] The first annual conference on Motion Pictures and Education was held in 1935 at the University of Illinois, with 150 in attendance. The ACE's Educational Motion Picture Project developed conferences and courses on the subject, producing a handbook, Edgar Dale and Lloyd Ramseyer's *Teaching with Motion Pictures* (1937).[69] The book began life as a mimeographed manuscript, circulated among and critiqued by experts in visual education. Among other things, it provided administrators with ammunition to take to their school boards when arguing for funds.

As Dale and Ramseyer observed, teaching with film was no easy task. Not only was it important for teachers to screen and understand films in advance of using them, but implementation was key to the lesson's effectiveness. Teachers were faced with numerous decisions: for example, if a film should precede or follow a lesson, if it should be stopped for discussion or played through, or how many times it should be screened.[70] Since a consideration of such issues had to be repeated with each film a teacher wanted to use, it became clear that teachers were in need of guidance regardless of their level of experience. Furthermore, because films are such dense, material-rich texts, it was especially important—Dale and Ramseyer argued—for teachers to have a strategy for approaching selective aspects of any film they showed based upon intimate knowledge of both the film and their audience's capabilities.

To meet these informational needs, organizations published a proliferation of catalogs in the middle part of the century, including the H. W. Wilson *Educational Film Guides*, the *Blue Book* series, and the longstanding *Educators Guide to Free Films*, which first appeared in 1941 (and is still in publication as of 2011!).[71]

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[67] Ibid., 10.

[68] *The Motion Picture in Education,* 3. According to Paul Saettler, in 1914, the Educational Motion Pictures Bureau "was the first producing company to issue teaching syllabi with their educational films." Saettler, *Evolution of American Educational Technology*, 97.

[69] *The News Letter* 1 (Nov. 1935): 2, 11.

[70] Edgar Dale and Lloyd Ramseyer, *Teaching with Motion Pictures* (Washington, DC: American Council on Education, 1937), 41.

[71] *Educators Guide to Free Films* (Randolph, WI: Educators Progress Service, 1941–present). A professor of education at the University of Wisconsin, John Guy Fowlkes, began publishing *Educators Index of Free Materials* in 1937.

Additionally, thousands of directories and catalogs were issued by agencies of the federal and state governments, as well as nonprofit organizations, such as *U.S. Government Films for Public Educational Use* (1955–1964); *Library of Motion Pictures: Films Available for Schools, Clubs, Industry, Free from Your State Savings Bonds Office* (1968); and *National Directory of Safety Films* (National Safety Council, 1943, 1973).[72]

As noted earlier, the events of World War II brought not only respectability to the educational motion picture but also a testing ground for efficacy. After the war the lessons learned by military instructors were passed along to school teachers. There was a new emphasis on teacher involvement in screenings, especially providing engaging introductions, appropriate stops during screenings, and rigorous discussions. Concerns about ballooning classroom sizes bolstered the call to perfect motion picture use in the classroom.[73]

Perhaps the greatest help on the educational film front came in the form of financial assistance. National legislation—most importantly the National Defense of Education Act of 1958 and the Elementary and Secondary Education Act of 1965—provided federal dollars to support equipment and 16mm print purchases (among other things) for American classrooms. In turn, these acts stimulated production and the proliferation of new film-producing organizations, which could better anticipate sales volume because of increased school purchasing power. The late 1950s and 60s saw a burst in educational filmmaking activity, with scholarly consultants almost always credited onscreen as a testament to producer attempts at making high-quality, appropriate films on an array of specialized subjects, all aimed at facilitating classroom use. Even the social guidance film *Dating Do's and Don'ts* (Coronet, 1949, a camp classic since at least the 1970s), begins by citing its consultant, Dr. Reuben Hill, "Research Professor of Family Life, University of North Carolina."

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[72] In the 1970s complaints still circulated about the faulty nature of educational film reference works. J. Williams Youngs Jr. claimed that the numerous indexes of educational films were relatively useless lists. He referred to works such as Westinghouse's *Learning Directory* ("a comprehensive guide to instructional materials in all media," 1970–1973), *Index to 16mm Educational Films* (1967–1980), and *Index of Educational Videotapes* (1971–1982). The diligent teacher would, he explained, have to search out reviews in sources like *Media and Methods*, journal of the American Society of Educators, 1969–2006, *Film Review Digest*, or *Landers Film Reviews*. J. William Youngs Jr., "Educational Films and the Historian," *History Teacher* 8 (Aug. 1975): 589. Other such postwar resources included the Institute of Inter-American Affairs' *Catalog of Educational Films* (1949) and the U.S. National Commission for UNESCO Panel on Educational Films report, *United States Educational, Scientific and Cultural Motion Pictures Suitable and Available for Use Abroad* (1950).

[73] For more on this see Robert Wagner, "Design in the Educational Film," *Educational Research Bulletin* 33 (Sept. 15, 1954): 141–48.

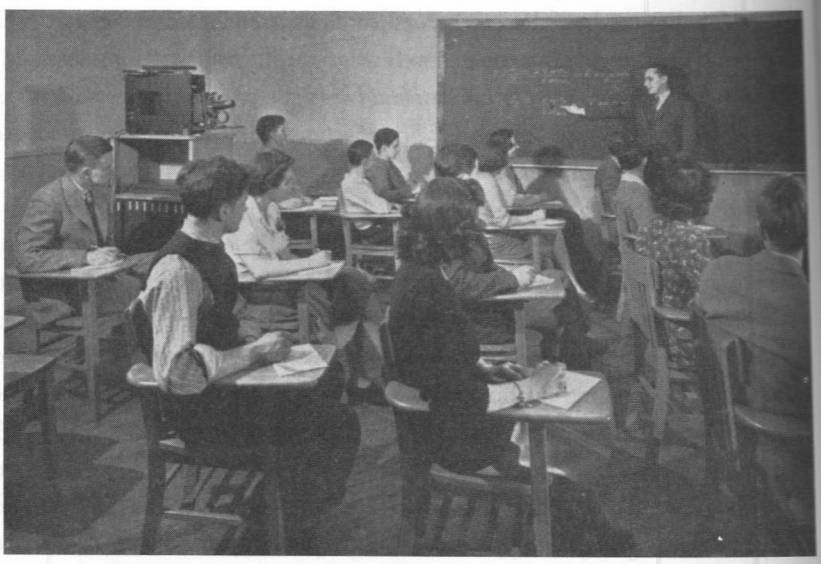

Fig. 32. The follow-up discussion after the showing of the film provides an opportunity to clinch key points and correct misconceptions.

Figure 1.5. Pedagogical books and essays sought to teach the teacher how best to use motion pictures in the classroom. Photograph from George H. Fern and Eldon Robbins's *Teaching with Films* (Bruce Publishing, 1946), 96.

Producing "Practical Films"

> We are using slides and motion pictures extensively in our school work. We are awaiting very anxiously the coming of actual text-book work in this line. Why are school folks so slow in recognizing this wonderful opportunity for using the most susceptible of the five senses?
> —*A. J. Stoddard, school superintendent, Beatrice, Nebraska, 1920*[74]

By the 1910s, rather than accepting theatrical leftovers, advocates were calling for higher quality classroom films. A lack of viable productions threatened to stymie film education. Early on, some bragged of the proliferating availability—though not necessarily the elevated quality—of educational films, as *Moving Picture World* did in 1911 when it noted the recent publication of a catalog with "upward of perhaps three thousand different subjects . . . prepared solely for the mental uplift and betterment of society" covering "history, geography, botany, travel, entomology and ethnology," not to mention "the latest advances made in the fields of surgery, pathology, biology, and bacteriology . . . zoology, ornithology, geology, microscopy, aeronautics, mineralogy, metallurgy, and the science of naval and military warfare."[75]

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[74] "What School Superintendents Think," *Visual Education* 1 (Sept.–Oct. 1920): 20.

[75] "The Educational Field," *Moving Picture World*, Jan. 21, 1911, 129. The author is likely referring to Kleine's *Catalogue of Educational Motion Pictures* (1910).

From such plenitude one might infer that all the film education movement needed was willing exhibitors and a captive audience. Quantity might be one thing, but quality or suitability was another. Many producers were repackaging their theatrical films and rebranding them as "educational." Major feature production companies, wrote A. P. Hollis, "who alone have the technical equipment and capital necessary for quality film production have shown no inclination to produce purely educational films."[76] Writing from the perspective of the church in 1916, Edward M. McConoughey propounded that:

> Too much stress cannot be laid upon the importance of first-class films. It is a mistake to show in churches films that have already been discarded by photo-play houses. For everybody will recognize the pictures except the few who refuse to go to see the "movies." Too many religious organizations use films, scratched and torn, because they are cheap, or use photographs worn indistinct and those in which the story suddenly jumps, because whole sections of the wornout film have been cut out.[77]

By the early 1920s, some companies were catering "to the church screen and producing adequate material of the highest grade."[78] But for many fledgling educational film exhibitors, repurposed theatrical films were the most affordable entrees into nontheatrical film use. In 1916, General Film Co. (where Katherine Carter, an ex-schoolteacher, headed the educational division before leaving in 1914 to start her own educational film business[79]), Universal, Edison, Paramount, Pathé, Kleine, Gaumont, Éclair, Hepworth American, and Mutual Film all boasted what McConoughey called "so-called educational films" in their catalogs.[80]

Following Eastman Kodak's introduction of 16mm safety film in 1923, the range of film topics, as well as the companies producing and distributing them, expanded significantly, but not to the point of solving problems of quality and scarcity. A school, for example, could invest valuable resources in outfitting themselves with the proper equipment "only to find endless difficulty in securing material worth projecting," a *Visual Education* editorial ran, because "the chief thing obtainable from commercial companies' lists of 'educationals' is fond hope and keen disappointment."[81] In 1920, *Visual Education* reported

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[76] Hollis, *Motion Pictures for Instruction*, 220.

[77] McConoughey, *Motion Pictures in Religious and Educational Work*, 14.

[78] William S. Mitchell, "How to Use Motion Pictures in the Pulpit," *Visual Education* 2 (Oct. 1921): 5.

[79] "The Picture in Education," *Moving Picture World*, Apr. 11, 1914, 200.

[80] McConoughey, *Motion Pictures in Religious and Educational Work*, 37.

[81] Nelson Greene, "Editorial," *Visual Education* 1 (Apr. 1920): 5.

that it had "numerous inquiries from schools having projectors which are forced to stand idle for lack of usable materials," a truly unforgivable situation given the significant expense involved. Furthermore, they warned the users of their "Film Field" exchange guide about the "present chaotic and discouraging situation" of procuring films for educational purposes:

> Constant disappointment must be expected. Often the nearest exchange will not have a print in stock; or the film will be out and unavailable on the date it is needed; or the film will be worn and in bad condition; or the price will be hopelessly high; or the shipment will go astray; or slight attention will be paid to your communication; etc., etc.[82]

Clearly one impediment to film supply was the limited profitability of producing nontheatrical films, which would never be able to achieve anything like theatrical grosses. As May Ayres Burgess observed in 1923, an educational film producer could spend thousands of dollars on a series of films about a specific subject that would then realistically be marketable for one grade level in one subject area, a serious fiscal deterrent for any business. Furthermore, making certain kinds of educational films might involve weeks of difficult photography ("to show a toad shedding his skin depends . . . on the ability of the producer to secure the co-operation of the toad") to yield images that may last only seconds on the screen.[83] Because some films—like health education pictures—carried with them the expectation that they would be available at no charge for the "public good," production had to be subsidized by a philanthropic or governmental agency willing to foot the bill. Writing in 1926, Andrew Phillip Hollis observed that "attempts made by educators or those interested in the educational film to produce classroom films for serious study purposes have practically all ended in financial loss, or at best in profits too modest to break any comparison with theatrical producers."[84] However, Hollis also optimistically contended that the "vast non-theatrical market" could be "40 times the size of the theatrical market when it gets the projectors."[85] For the time being, however, an individual educational film was highly unlikely to yield significant profit.

Given these difficulties it is not surprising that sponsored films—productions subsidized by a company, agency, institution, or organization—had a place in visual education. As the 1924 edition of *1000 and One* justified their inclusion

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[82] "The Film Field," *Visual Education* 1 (Sept.–Oct. 1920): 49.

[83] Burgess, "Motion Pictures in the Public Schools," 677, 681.

[84] Hollis, *Motion Pictures for Instruction*, 222.

[85] Ibid., 231.

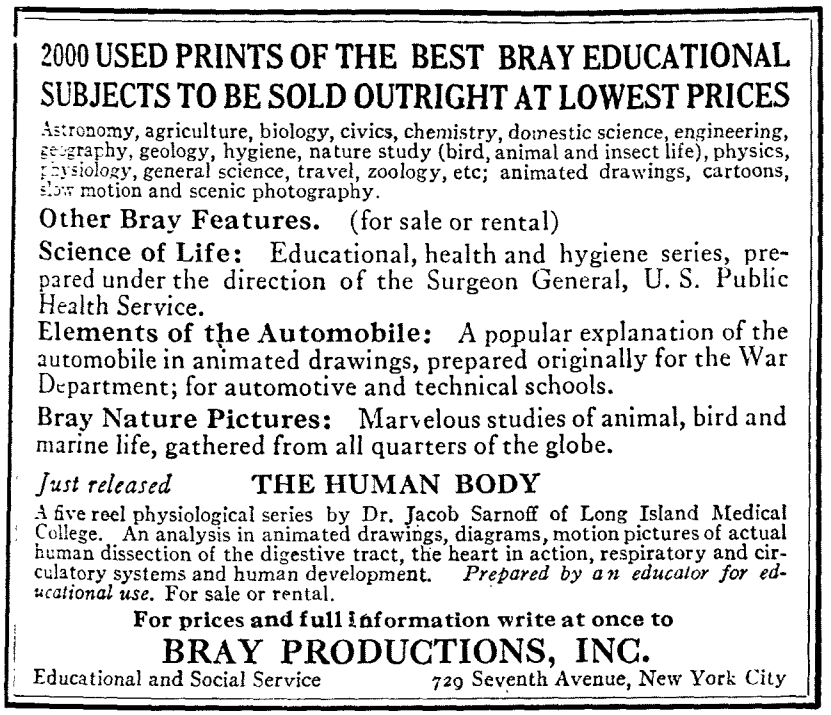

Figure 1.6. This Bray Company advertisement sells "used prints" while renting out newer ones. Note the boast that *The Human Body* (1925) was "*Prepared by an educator for educational use*," a marketing tactic that spoke to critiques that educational film producers were not properly preparing films in consultation with professional advisers. *1000 and One*, 4th ed. (June 1926), 6.

within their pages, industrial films "have considerable educational value . . . [and] . . . being 'free' films, they frequently enable a school or community with modest resources to complete a program of film showing which would be impossible if rental had to be paid on all the reels shown."[86] In 1936, *Educational Film Catalog* included "some films made for advertising purposes . . . when the votes of our collaborators indicated they were useful for classroom work. Those preferring not to use such films will be able to recognize them by the producer's name."[87] Although these might be less than stellar arguments from an ideological perspective, they point out the ways that educators sought to fill the significant gaps created by a lack of material. Some pundits argued that any commercial interest should be kept out of the classroom. Administrators reported not using industrial films because "there was too much advertising matter and propaganda in

[86] "Foreword," *1000 and One: The Blue Book of Non-Theatrical Films for 1924* (Chicago: Educational Screen, 1924).

[87] Dorothy E. Cook and Eva Cotter Rahbek-Smith, *Educational Film Catalogue* (New York: H. W. Wilson, 1936), vi.

them."[88] However, industrial and sponsored films (made as public relations films) found their way into the classroom regularly throughout the better part of the twentieth century. As Nelson Greene, editor of the *Educational Screen*, argued in 1926, if industrial films abandoned overt direct advertising of their products, the films could "be made truly educational by proper handling by the teacher."[89] In its 1951–1952 directory, *Film World* noted 1,084 sponsors, with almost 70 percent from industry and the rest divided among educational, government, religious, medical, and social science sectors.[90]

Some corporations were establishing themselves as industrial film leaders, making quality films in consultation with educators for specific pedagogical applications. Yale University, the Harvard Film Service, and the University of Chicago were producing films (historical, psychological, scientific, and so on) in the late 1920s and 30s. In 1927, Western Electric was at the forefront of synchronous-sound motion picture technology, forming Electrical Research Products, Inc. (ERPI), a commercial concern with ties to the University of Chicago. ERPI would go on to produce short 35mm sound films until 16mm sound-on-film projectors were introduced in 1934, resulting in the final victory of 16mm over 35mm for nontheatrical use.[91] The teaching films made for Eastman's grand experiment of 1926–28 were the basis for Eastman Teaching Films, Inc., a Kodak subsidiary set up in 1928 to produce more titles and to sell prints to schools. New production continued into the mid-1930s, resulting in a collection of more than two hundred 16mm silent films. Print sales continued until 1943, when the newly formed Encyclopaedia Britannica Films acquired the Eastman Teaching Films library. Through the 1950s, Britannica added to and updated the original silent films. (See Table 3.) Hollywood concerns began considering the educational film market seriously in the 1930s in addition to marketing "theatrical productions which have educational significance."[92] As Craig Kridel's chapter in this anthology observes, the reediting of feature Hollywood films into shorter films for classroom use was just one way Hollywood entered the educational film enterprise.

Though the temptations to enter educational film production in the postwar era were greater than in earlier decades, it could still be said in 1947 that "the

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[88] Cline M. Koon and Allen W. Noble, *National Visual Education Directory: A List by States of 8,806 School Systems, including an Inventory of Audio-Visual Equipment* (Washington, DC: American Council on Education, 1936), 10.

[89] Nelson L. Greene, "Motion Pictures in the Classroom," *Annals of the American Academy of Political and Social Science* 128 (Nov. 1926): 125.

[90] Leo Beebe, "Industry," in *Sixty Years of 16mm Film*, 93.

[91] Slide, *Before Video*, 89.

[92] *Motion Picture in Education*, 2.

Table 3. Encyclopaedia Britannica Films, Inc.

Among the many producers of classroom films, Encyclopaedia Britannica Films (EBF) was perhaps the most successful, launching its products at the beginning of the boom period for educational reels. Hundreds of schools and libraries used the company's productions, which numbered up to a thousand titles.

The film corporation's relationship to the redoubtable printed *Encyclopædia Britannica* obviously allowed it instant name recognition and authority. The encyclopedia, first published in Edinburgh in 1768, was acquired and published by American firms from 1901. In 1928, the Sears Roebuck company bought the publishing brand, selling it to advertising executive, philanthropist, and University of Chicago vice president William Benton in 1943. He maintained ownership until his death in 1973; thereafter a foundation bearing his name, run by his son Charles, managed the company until 1996.

Upon buying Encyclopaedia Britannica, Inc., Benton simultaneously created its film production/distribution subsidiary. Although unable to persuade the University of Chicago to be a full partner, he provided the financing that made it part owner. To launch Encyclopaedia Britannica Films at full strength, Benton acquired two of the most influential entities in the educational film business. From Western Electric, he bought Erpi Classroom Films, Inc., which included production facilities and a large library of films. Benton also convinced George Eastman's company to donate the Eastman Teaching Films collection to the university. Thus EBF began with a foundation of more than 500 titles. In an industry known for marginal economic status, Benton made the motion picture operation into a viable, large-scale business. He bought out the University of Chicago's share in 1952.

However, EBF was not simply built to exploit these assets. Its productions established a reputation for quality, both technical and educational. The company's success was also attributable in part to a large sales and support team that visited schools frequently.

In 1966, near the height of the boom in educational film, the company became Encyclopaedia Britannica Educational Corporation (EBEC), producing and marketing other audiovisual media for schools—filmstrips, supporting texts, and eventually video and web-based media.

Financier Jacob Safra bought the ailing corporation in 1996, creating Encyclopaedia Britannica Holding S.A. Copies of most of the original Britannica films continue to be sold on video. The stock footage company Getty Images licenses access to video clips from the library of EBF material, with more than 300 titles on-hand in complete form. Safra's holding company, however, has the original film elements in deep storage, with no known plans to access or preserve them. Meanwhile, many libraries and archives have prints available, and some of the early EB productions are now in the public domain.

Sources: "Britannica Films," *Time,* Apr. 24, 1944; "Help on Celluloid," *Time,* Apr. 29, 1957; "History of Encyclopædia Britannica," Jan. 2010, http://corporate.britannica.com. Also, Kenneth Kaye, "40th Anniversary of Encyclopedia Britannica Films and Its Predecessor Companies, 1928–1968," unpublished ms. (1968), provided by Charles Benton, who commissioned this study while president of EBEC.

production of educational films is expensive and to date has not proven generally profitable."[93] Still, the postwar era saw film production rise to almost 1,000 nontheatrical films each year, with the 1948 *Educational Film Guide* listing almost 3,800 16mm educational films, most of them produced in Chicago (see Table 4),

[93] Floyde E. Brooker, "Motion Pictures as an Aid to Education," *Annals of the American Academy of Political and Social Science* 254 (Nov. 1947): 105.

Table 4. Chicago: Epicenter of Educational Film

While Hollywood was in the process of becoming the motion picture capital of the country, the American educational film industry's undisputed center was emerging in the Midwest: Chicago, Illinois. The University of Chicago was partly to credit for this development, with a roster of faculty and alumni who took center stage in the educational film movement over the decades. Numerous educational film studies as well as motion picture productions came out of the University of Chicago, and its press was one of the key publishers of books on the subject.

Chicago was home to publishers of *Visual Education*, *Educational Screen*, and *Business Screen*, three of the most prominent publications in the nontheatrical field, as well as the industry bible *1001 and One: The Blue Book of Non-Theatrical Films*. Major educational film producers Electrical Research Products, Inc. (ERPI) and Encyclopaedia Britannica Films had direct ties to the University of Chicago. Coronet, producer-distributor of social guidance films par excellence, was headquartered in the city. Charles Benton's company Films, Inc. became the largest nontheatrical 16mm film distributor in the country. And at nearby Northwestern University, G. L. Freeman headed up the University College Motion Picture Project for adult education.

The producer of the first educational film catalog in 1910, George Kleine, was based in the Windy City, as were the Society for Visual Education, Educational Film Library Association, American Library Association, University Broadcasting Council, National School of Visual Education, and Film Council of America (in nearby Evanston). Projector manufacturers DeVry, Ampro, Victor Animatograph, and Bell & Howell were also Chicago-based.

In 1917, the city's school system became the first in the United States to create its own educational film library.

New York, Detroit, or Los Angeles.[94] As the market grew, producers could afford more frequent use of color and sound, elements that audiences had grown accustomed to in theatrical contexts. Businesses like General Electric and Bell Telephone utilized more training films in the postwar period, and producers like Coronet, Encyclopaedia Britannica Films, Vocational Guidance Films, Centron, and McGraw-Hill Films flourished, filling niche markets. (See fig. 1.7.) The number of 16mm film libraries in the United States grew from 897 in 1949 to 3,660 ten years later.[95]

Despite the appearance of a booming industry, in the early 1950s many complained that the anticipated postwar boom in school purchasing power had "failed to materialize." More firms were making educational films, supplying a marketplace with limited demand. Demand was limited because when a school or library purchased a print, it was typically projected until it wore out or until time proved its content irrelevant or inaccurate.[96] The U.S. State Department did open up new markets in a Cold War boom of international

[94] Waldron, *Information Film*, 16.

[95] Seerley Reid of the U.S. Office of Education issued government bulletins reporting on the growing number of libraries, from *A Directory of 897 16mm Film Libraries* (1949) to *A Directory of 3,660 16mm Film Libraries* (Washington, DC: GPO, 1959).

[96] See, for example, Ned L. Reglein, "The Plight of Educational Film," *Hollywood Quarterly* 4 (Spring 1950): 309–10. Reglein also provides a useful overview of the costs of production and distribution.

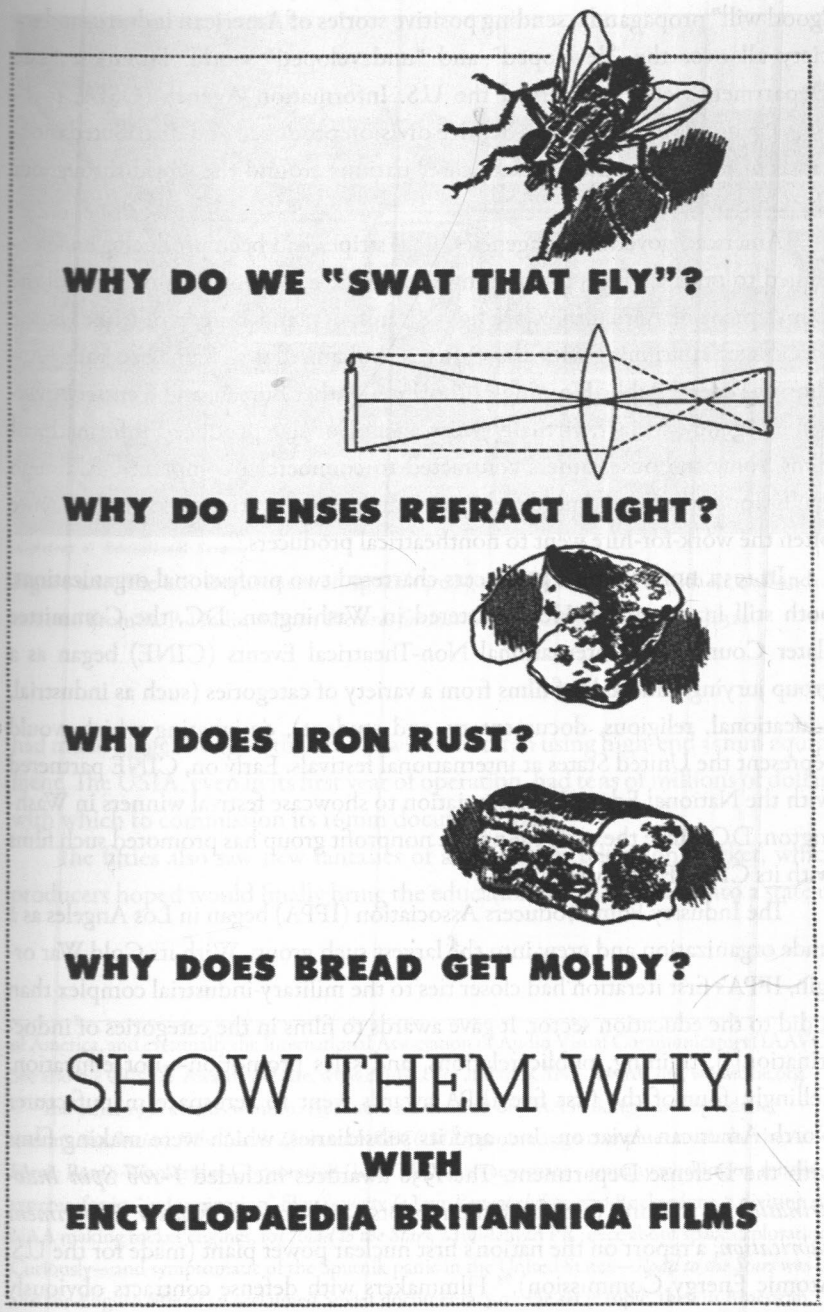

Figure 1.7. Encyclopaedia Britannica Films, Inc. was the leading educational film producer-distributor in the postwar era. *Business Screen* 6 (May 15, 1945): 84.

"good will" propaganda, sending positive stories of American industry and society all over the "developed" and "undeveloped" world. From the State Department's efforts emerged the U.S. Information Agency (USIA, 1953–1999), whose Motion Picture Service division produced and distributed thousands of nonfiction films to "educate" nations around the world throughout the Cold War.

American government agencies of all stripes had been producing and continued to produce films for training and public education, beginning with the Department of Agriculture (see fig. 1.8), military, and Bureau of Mines in the 1910s, later continuing with the Office of Indian Affairs, Tennessee Valley Authority, Federal Public Housing Authority, Weather Bureau, and Central Intelligence Agency. In fact, virtually every agency of size produced informational films, some in-house, others contracted to commercial companies. Although Hollywood studios and newsreel services had such government contracts, more often the work-for-hire went to nontheatrical producers.[97]

In 1957, nontheatrical producers chartered two professional organizations, both still in operation. Headquartered in Washington, DC, the Committee (later Council) on International Non-Theatrical Events (CINE) began as a group jurying hundreds of films from a variety of categories (such as industrial, educational, religious, documentary, and student), designating which would represent the United States at international festivals. Early on, CINE partnered with the National Education Association to showcase festival winners in Washington, DC. Since the early 1960s, the nonprofit group has promoted such films with its CINE Eagle awards.

The Industry Film Producers Association (IFPA) began in Los Angeles as a trade organization and grew into the largest such group. With its Cold War origin, IFPA's first iteration had closer ties to the military-industrial complex than it did to the education sector. It gave awards to films in the categories of indoctrination[!], training, public relations, and sales promotion—not education. Tellingly, four of the first five IFPA awards went to aerospace manufacturer North American Aviation, Inc. and its subsidiaries, which were making films with the Defense Department. The 1958 awardees included *F-100 Spin Indoctrination*, a training film for fighter pilots; and *Sodium Reactor Experiment Fabrication,* a report on the nation's first nuclear power plant (made for the U.S. Atomic Energy Commission).[98] Filmmakers with defense contracts obviously

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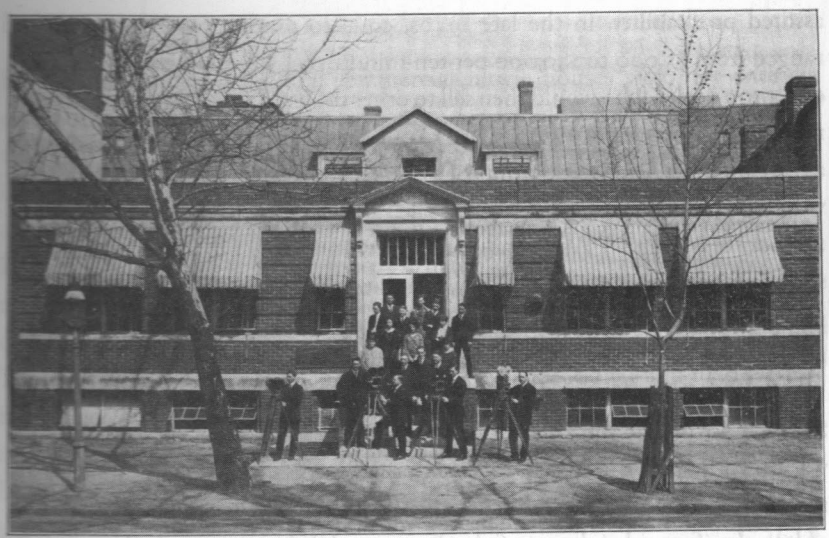
[97] Mercer, *The Informational Film*, 30. An early federal publication was *Motion Pictures of the U.S. Department of Agriculture: A List of Films and Their Uses* (Washington, DC: GPO, 1920).

[98] "Industry Film Producers Cite First Film Awards," *Business Screen*, Production Review Annual (1958): 72. In 1959, the IFPA award became known as the CINDY (Cinema in Industry). The association has had several name (and identity) changes, becoming the Information Film Producers



Courtesy of Educational Screen

Figure 1.8. The U.S. Department of Agriculture Motion Picture Studio with its staff and cameras. From A. P. Hollis, *Motion Pictures for Instruction* (Century Co., 1926), 52.

had much bigger budgets than those without, often using high-end 35mm equipment. The USIA, even in its first year of operation, had tens of millions of dollars with which to commission its 16mm documentaries.[99]

The fifties also saw new fantasies of an emerging television market, which producers hoped would finally bring the educational film industry into a state of

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of America, and eventually the International Association of Audio Visual Communicators (IAAVC). See also the CINDY Awards website, www.cindys.com and the CINE Awards site, www.cine.org.

The other 1958 awards went to: Autonetics, a division of NAA making missile guidance systems, for *Brains: Who Needs Them with RECOMP?*, promoting a computer made for the Air Force; Ramo-Wooldridge Corporation (later TRW), an aerospace company working on missile systems, for its "indoctrination" film *Security Is Your Responsibility*; and Rocketdyne, a division of NAA making rocket engines, for *Road to the Stars,* a full-length PR piece about space exploration. Curiously—and symptomatic of the Sputnik panic in the United States—*Road to the Stars* was also the English title of an acclaimed Soviet documentary on the same topic, then in American theatrical release). Both *Road* movies were screened in educational contexts for several years (though apparently not together). The Air Force and USIA acquired prints of the Soviet version. *Doroga k zvezdam* (1957, Leningrad Popular Science Film Studio, 52 min., a.k.a. *Russian Rocket to the Moon* in 16mm distribution), directed by Pavel Klushantsev, includes art and set design greatly resembling parts of *2001: A Space Odyssey* (1968). Artkino distributed an English-language version in the United States. "Man in Moon: U.S. or Russ?" *Los Angeles Times,* February 16, 1958; "Two Soviet Imports Open at the Cameo," *New York Times,* June 5, 1958.

[99] "U.S. Urged to End Film Propaganda," *New York Times*, May 15, 1954.

assured profitability. In the late 1940s, costs to produce an educational film ranged from $5,000 to $30,000 per ten-minute reel. Films were sold by the producer to a dealer, who would then sell to other dealers or film libraries, with prices ranging anywhere from $19.50 to $50 to purchase a one-reel film, or $1.25 to $6.00 a reel for rental. Selling 200 prints of a one-reel film targeted at an adult audience would have been considered "a good sale" at this juncture, generating $7,000 to $10,000 in revenue.[100] And though the television market did help to extend the shelf lives of some educational films, television companies also got involved with production and distribution, with CBS buying Bailey Films and Film Associates in 1969, and NBC creating NBC Educational Enterprises in 1970.

In 1969, more than 14,000 educational films were produced in the United States, most in color and almost all shot on 16mm film.[101] In 1975, that number was down by two-thirds, with 4,000 to 4,500 works produced—although still represented by almost 1,000 distributors. This decline in production was a result of (1) a significant shrinkage in federal support, (2) the ongoing challenges of efficient and centralized distribution, and (3) a stubborn lack of clear channels of communication between teachers, administrators, distributors, and producers. As filmmaker Vincent Tortora and educational media consultant Peter Schillaci observed, teachers, departments, and even school systems were regularly demanding previews of all films prior to adoption, resulting in thousands of preview films circulating the country with little way for distributors to accurately keep track of them, leading to a dismal "preview to purchase ratio" of between ten and twenty to one.[102]

The 1960s and 70s also witnessed significant stylistic and pedagogic changes in educational films. There were now many types of films to choose from in terms of presentational style. Certain kinds of films became de rigueur—such as the open-ended or "trigger" film, intended not to be didactic but rather to let spectators hash things out for themselves. Such films allowed for a reassertion of the teacher's or group leader's role, since leading an effective discussion after such a film was as much if not more important than the film itself. Though new video formats displaced educational film prints, in 1977 more than 15,000 nontheatrical films were made, many of them of the informational variety.[103]

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[100] Waldron, *Information Film*, 56, 87–89.

[101] Thomas Hope, *AV-USA 1969* (Rochester, NY: Hope Reports, 1970), 16, 14. Tom Hope was a former Kodak sales representative who worked with 16mm clients. From the 1960s through the 1990s he issued field reports, market research, and statistical assessments of the nation's nontheatrical AV users. During World War II, Hope helped train servicemen in the production of military training films. Hope conversation with Dan Streible, July 23, 2003.

[102] Vincent Tortora and Peter Schillaci, "The Educational Film Industry," *Previews* (Oct. 1975): 10–11.

[103] Mercer, *Informational Film*, iii.

Exhibition

Even in their earliest iterations commercial movie houses were not entirely devoid of educational content. However, they proved to have a complex relationship to films that deviated from entertainment and went beyond the reporting function of actualities and, by the teens, of newsreels. Local theaters could, on occasion, be talked into showing edifying programs. A "photo-play house" in Pawtucket, Rhode Island, for example, "situated among the mills and in the immigrant quarter of the city" in the 1910s, offered "a civic and patriotic program" one evening each week.[104] More programmatically, in 1920 the Motion Picture Theater Owners of America pledged to offer free educational film matinees to high-schoolers. Programs lasted one hour per day (longer on Saturday mornings), and theaters received gratis print loans from the Bureau of Commercial Economics (BCE), a nonprofit venture launched in 1914. One iteration was noted in the *New York Times*, when the so-called American Educational and Industrial Theater opened at the Savoy movie house in New York in 1921, running only such fare from noon to 1 p.m. daily.[105]

Some theaters showed films as part of particular campaigns, such as New York state's diphtheria immunization crusade, which found *New Ways for Old* (1926), a one-reel film sponsored by Metropolitan Life Insurance, circulating in commercial movie theaters in conjunction with radio, church, and newspaper contributions.[106] Novelty presentations were sometimes deployed, as when the state health department commissioned a cartoon, *A Two-Family Stork* (1926), about prenatal care. Reportedly, when the film was shown "in a store window of a Hudson River city," visits to the local maternity clinic doubled or tripled. The film (and many like it) also circulated for several years on small "automatic movie" machines.[107] However, for theatrical shows, arrangements were negotiated on a case-by-case basis. Theater owners relied on a steady stream of entertainment-seeking customers and were displeased by unmarketable feature films or competition from nontheatrical exhibitors.

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[104] McConoughey, *Motion Pictures in Religious and Educational Work*, 21, 24. McConoughey discusses similar arrangements in Orange, New Jersey, and Hartford, Connecticut.

[105] "First Educational 'Movie' Theater to Open Monday," *New York Tribune*, April 16, 1921. The Bureau of Commercial Economics initiative is not well documented, but evidence appears in unexpected sources, viz., Testimony of W. L. Clark, To Amend Section 27 of the Merchant Marine Act of 1920, Hearings before the Committee on the Merchant Marine and Fisheries, U.S. Congress, House, 67th Cong., 1st sess., October 28, 1921, 140–41. See also, Testimony of Francis Holley, Hearings on Internal-Revenue Revision, House Committee on Ways, U.S. Congress, July 29, 1921, 311–14.

[106] Thomas C. Edwards, "Health Pictures and Their Value," *Annals of the American Academy of Political and Social Science* 128 (Nov. 1926): 135. Edwards reports 90% of parents who brought their children in for immunization credited seeing the film for their action.

[107] Ibid., 136.

It was therefore in nontheatrical venues that the educational film took hold. The teens saw educational film exhibition increasing significantly. In 1915, for example, the San Francisco World's Fair showed more than sixty films classified as "industrial, religious, educational, and governmental."[108] However, the Bureau of Commercial Economics was responsible for a large-scale push to show educative industrial films worldwide, with its impact continuing through the 1920s. As Sean Savage's research has shown, this nongovernmental organization quietly reached millions of people. The original implementation of its altruistic mission was idiosyncratic, the vision of a single philanthropist who had no ties to the educational system or the movie industry. Francis Holley, an engineer who had become blind for several years, devoted his life to visual education when he regained his eyesight.

The bureau collected prints of sponsored films donated by manufacturers, government agencies, newsreel services, trade associations, civic groups, churches, and schools. Most were nonfiction films documenting manufacturing processes. If Holley judged a work to have "educative" value and no overt advertising, the bureau distributed it. He testified to Congress that the BCE had amassed 55 million feet of film, reaching an audience of 34 million in 1920. (Two months later, Holley boasted to *American Magazine* that his audience was 60 million.) The bureau used a fleet of "projection trucks" to bring free open-air screenings to spaces rural and urban, in dozens of nations. In the United States, it also loaned prints to universities, extension services, American Legion halls, military posts, and many other public institutions.[109]

A year after the launch of the Bureau of Commercial Economics, a psychologist holding great optimism for the future of film's classroom applications asked if "a projector in every grammar and high school" was "practical," acknowledging that film producers, school boards, state departments, and the bureau of education would have to band together in order to create a functional educational film circuit.[110]

As with any new technology, cost confronted film advocates. In 1916, the Toledo Museum of Art reported that installing a 35mm projection setup cost

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[108] Godfrey M. Elliott, "The Genesis of the Educational Film," in *Film and Education*, ed. Godfrey M. Elliott (New York: Philosophical Library, 1948), 13.

[109] Sean Savage, "The Eye Beholds: Silent Era Industrial Films and the Bureau of Commercial Economics," master's thesis, New York University, 2006; and "Unraveling the *Madison News Reel*: An Unlikely Convergence of Collage, Industrial, and Local Film," *The Moving Image* 8, no. 2 (2008): 61–77. See also Francis Holley, "Industrial Education and the Uses of the Cinematograph in Public Instruction," *Proceedings of the Second Pan American Scientific Congress*, vol. 5 (Washington, DC: GPO, 1916), 160–65; and Ulm, "Once Blind," 55.

[110] Lawrence Augustus Averill, "Educational Possibilities of the Motion Picture," *Educational Review* (Nov. 1915): 396–97.

around $300.[111] In 1921, *Visual Education* reported 9,000 nontheatrical projectors in use, most of them "standard size" (35mm), despite the fact that their implementation was more expensive than small-gauge outfits. Of the many "substandard" formats marketed in the era of silent film apart from 16mm, only a few made headway among educational users. These were generally products of the French company Pathé and were mostly adopted in Europe. The 28mm system that Pathé unveiled in 1911 had success in Europe and Canada, but in the United States only a few institutions purchased its Pathéscope prints and projectors. The 1924 edition of *1000 and One* notes its exclusion of 28mm films because "it requires a special projector" and would therefore be "useless to the great majority of our readers.")[112] The so-called Pathé Rural, a 17.5mm format, briefly became France's "standard for pedagogical screenings" and nontheatrical presentations in remote areas. The 9.5mm amateur format created in 1922 (Pathé-Baby) enjoyed global popularity for a few decades, but it too had little presence in America.[113]

Although 16mm remained the dominant nontheatrical exhibition format, by the 1960s, suppliers of educational audiovisual materials supplemented 16mm film sales with the still cheaper and more portable 8mm film (and Super 8mm from 1965 on). Some school libraries (like many private collectors) opted to acquire reduction prints of theatrical films, especially as teaching about cinema itself emerged within the academy. Schools with limited budgets could acquire 8mm prints, for example, of silent-era features and shorts, ranging from Robert Flaherty's *Nanook of the North* (1922), Sergei Eisenstein's *Ten Days that Shook the World* (1928), and the whole three hours of D. W. Griffith's *Intolerance* (1916) to Keystone comedies, recut newsreels, and Encyclopaedia Britannica documentaries. By the early 1970s, one could purchase 8mm and Super 8mm prints of movies and television series with soundtracks, including the likes of TV news coverage of Apollo missions, *The Godfather I* and *II* (1972/1974), or Warren Beatty's *Reds* (1981).[114]

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[111] George W. Stevens, "The Muse of Motion Photography in Museums," *Metropolitan Museum of Art Bulletin* 11 (Sept. 1916): 204.

[112] "Foreword," *1000 and One*. See Anke Mebold and Charles Tepperman, "Resurrecting the Lost History of 28mm Film in North America," *Film History* 15, no. 2 (2003): 137–51. For historical information on small-gauge film formats, see Alan Kattelle's authoritative *Home Movies: A History of the American Industry, 1897–1979* (Nashua, NH: Transition, 2000).

[113] Christel Taillibert, "Pathé Rural," trans. Martyn Stevens, *Cinerdistan*, Oct. 13, 2009, www.cinerdistan.co.uk/path%C3%A9_rural.htm; Alexandra Schneider, "Travel with Pathé Baby: The Small-Gauge Film Collection as Historical Archive," *Film History* 19, no. 4 (2007): 353–60.

[114] See Ernest Callenbach, "The State of 8," *Film Quarterly* 19 (Summer 1966): 36–39. Blackhawk Films, based in Davenport, Iowa, was the most consequential distributor, beginning its rentals and sales in 1947. See also *8mm Sound Film and Education; Proceedings of a Conference Held at Teachers College on November 8, 9, and 10, 1961*, ed. Louis Forsdale (New York: Columbia University, 1962).

In the late 1960s, a vogue for using 8mm film loops peaked. A 1968 UNESCO report said that "the cartridge loop projector has made a significant impact upon educationists concerned with audio-visual media." The format was designed specifically for small-group or individual instruction. These short teaching films (running no more than four minutes) were mounted in cartridges and played on special machines. Allowing a student or teacher to play the film easily, immediately, and repeatedly (without turning the lights off), loops offered tailored learning experiences. Users could pause to view a single image. Thousands of machines were in use in the United States, with nearly forty production houses offering an estimated five thousand titles.[115]

As some early observers would smartly point out, setting up a projection system at a school was typically less costly than setting up a classroom science laboratory; once films were considered a need (as labs already were) they would not face the same psychological funding obstacles.[116] However, there was also a need to establish practices for print labeling since it was difficult for the layperson to ascertain whether film was inflammable or not, leading some to call for a law requiring manufacturers to mark nontheatrical film product "non-inflammable for *educational use*."[117] Calls for portable projectors capable of showing non-inflammable film ratcheted up in the teens and became commonplace by the early 1920s, when Eastman Kodak's 16mm safety stock and projectors addressed the worst of these logistical problems. The complexity of conceiving of an alternative to 35mm stemmed largely from the reduced availability of titles printed on other film gauges and the diminished image size when a smaller projector was used in auditorium settings. To be fully useful, argued the director of visual instruction for the state of New Jersey, projection equipment had to be portable, simple to operate, and sturdy. It had to run on the available electrical source, provide good visibility, and be able to freeze on an image.[118] By the 1940s, it was a given that educational films

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[115] Geoffrey Bell, *8mm Film for Adult Audiences*, Reports and Papers on Mass Communication, no. 54 (Paris: UNESCO, 1968). Many professional articles about 8mm film appeared in education and science journals. Examples include Robert T. Kreima, "The 8mm Film in Education," *Educational Media International* 2, no. 1 (1968): 4–6; Joan R. Forsdale, "The 8mm Film Loop: What Does Research Suggest about the Value of the Short Accessible Film?" *Media and Methods* 6 (Nov. 1969): 56–58; and A. H. Crocker, "8mm Film in Education," *Educational Media International* 13, no. 3 (1976): 22–24.

[116] Nelson L. Greene, "Motion Pictures in the Classroom," *Annals of the American Academy of Political and Social Science* 128 (Nov. 1926): 126.

[117] R. F. Egner, "'Why' Change Motion Picture Standards," *Visual Education* 2, no. 5 (May 1921): 11–12.

[118] Clarence E. Howell, "First Experiences with Portable Motion-Picture Projectors," *Elementary School Journal* 27 (Oct. 1926): 101. The ability to freeze on a single frame for study purposes was available to instructors using the so-called analytic projector, which many manufacturers sold.

EQUIPMENT RECOMMENDED FOR MOTION PICTURE ACTIVITIES

1 Classroom projector (portable)	$200.00 to $300.00
1 Bench rewind	5.00 to 10.00
1 Mending block or clamp	5.00 to 10.00
Razor blades, scissors, and Eastman film cement, oil can, and projector oil	
1 Extra lamp	3.50 to 8.50
1 Extra reel	.50
1 Metal container with cover for scrap film	
1 Roller screen (4 x 5) for classroom	15.00 up
1 Darkened room	

If films are used for entertainment purposes in an assembly room or auditorium, the following are essential:

1 Semi-portable or professional projector and accessories	$300 to $1000
1 Fire-proof booth equipped according to fire code	
1 Metal stand or work table (built-in)	
1 Extra metal film container or humidor	
1 Chemical fire extinguisher	
Necessary tools such as pliers, screw drivers	

Figure 1.9. An indication of the cost of showing films in schools. *Visual Aids in Education* (Los Angeles City School District, 1929), 22.

were distributed on 16mm, projected by smaller machines, and served many functions.[119]

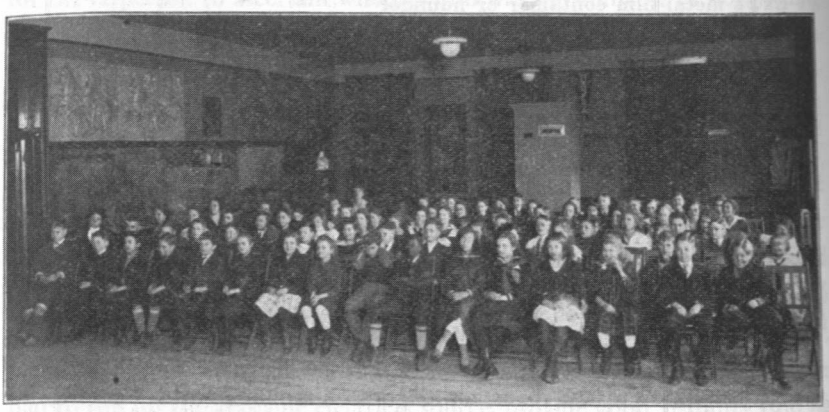
Auditoriums equipped with fireproof booths proved the most common arrangement prior to the 1920s, although semi-mobile booths—erected, for example, on piano casters to facilitate limited movement—were an acceptable alternative.[120] In the schools of Evanston, Illinois, students were trained to run the 35mm prints (see fig. 1.10), which were scheduled by grade and projected at scheduled times throughout the day and across the district. But in other states, such as Massachusetts, all projectionists were required to be licensed, forcing teachers to go through the licensing process and limiting their use of student labor at screenings.[121]

[119] See, for example, Gerald McDonald, *Educational Motion Pictures and Libraries* (Chicago: American Library Association, 1942), 7.

[120] W. Arthur Justice, "Visual Instruction in the Public Schools of Evanston, IL," *Visual Education* 1 (Jan. 1920): 14.

[121] Clarence E. Howell, "First Experiences with Portable Motion-Picture Projectors," *Elementary School Journal* 27 (Oct. 1926): 103.

STUDENT OPERATORS AND TYPICAL BOOTH



A MOTION PICTURE CLASS IN AN EVANSTON SCHOOL

Figure 1.10. As *Visual Education* illustrated in its inaugural issue (January 1920), students could help with the projection of 35mm film by working in a fireproof booth, such as this auditorium-style setup in a public school in Evanston, Illinois.

Just how many nontheatrical exhibitors there were at various historical moments is difficult to gauge. In 1921, *Visual Education* predicted that "within five years, at the present rate of growth, the educational use of the film will exceed that of the theatrical field in the quantity of film in circulation and within ten or more years to come it will surpass it by a large percentage."[122] One estimate for

[122] Egner, "'Why' Change Motion Picture Standards," 12

1924 claims that there were 15,000 motion picture projectors employed in nontheatrical exhibition.[123]

Mobile exhibition played an important role in film's educational applications, especially for rural communities where more permanent forms of exhibition were not feasible. For example, beginning in 1917 and continuing into the early 1920s, the North Carolina Department of Education implemented a plan "for bringing visual instruction to rural communities." The Department of Public Instruction selected moving pictures with "entertainment and educational value" and sent them to rural communities via twenty portable operating units that consisted of "a motion picture projector, a Delco light plant, and other necessary equipment, all mounted on a ¾-ton truck" (see fig. 1.11). Reportedly, attendance at these events was consistently impressive. The programs blended "purely educational subjects" with other films, like "simply good, wholesome comedies" selected from the state's collection of eight hundred motion pictures—and the success of the enterprise was gauged by the "live discussions [that] crop out in that wholly spontaneous way" at each event. They were reaching "people who never saw the movies," and were willing to "walk eight or ten miles to attend these meetings."[124]

In 1945, Edgar Dale looked to the future, asking, "Will the motion picture theater become an anachronism, to be replaced by television and 16-mm. non-theatrical film showings in churches, schools, unions, granges, and homes?"[125] Although Dale's imagined future did not come true (at least not yet), after World War II nontheatrical film exhibition escalated across the country at all educational levels.

The National Educational Television (NET) network was founded in 1952 with significant financial support from the Ford Foundation to provide educational broadcasts in an otherwise commercial medium. Stations all over the

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[123] Hollis, *Motion Pictures for Instruction*, vii. Hollis reports (221) manufacturer claims that 30,000 projectors "have been sold to schools, churches and business firms."

[124] Fred A. Olds, "How North Carolina Uses Motion Pictures in Its System of Community Service," *Visual Education* 1 (Sept.–Oct. 1920): 21–24. For an examination of a federal project to bring educational films to rural North Carolina in this same period, see Jennifer Zwarich, "The Bureaucratic Activist: Federal Filmmakers and Social Change in the U.S. Department of Agriculture's Tick Eradication Campaign," *The Moving Image* 9, no. 1 (Spring 2009): 19–53. See also two essays in *Journal of Popular Film and Television* 37 (Fall 2009): Allyson Nadia Field, "John Henry Goes to Carnegie Hall: Motion Picture Production at Southern Black Agricultural and Industrial Institutes (1909–1913)," 106–15; and Noah Zweig, "Foregrounding Public Cinema and Rural Audiences: The USDA Motion Picture Service as Cinematic Modernism, 1908–1938," 116–25. Both are part of the special-themed issue "Orphans No More: Ephemeral Films and American Culture," ed. Elizabeth Heffelfinger and Heide Solbrig.

[125] Edgar Dale, "What's Ahead for Hollywood?" *The News Letter* 11 (Nov. 1945): 1.

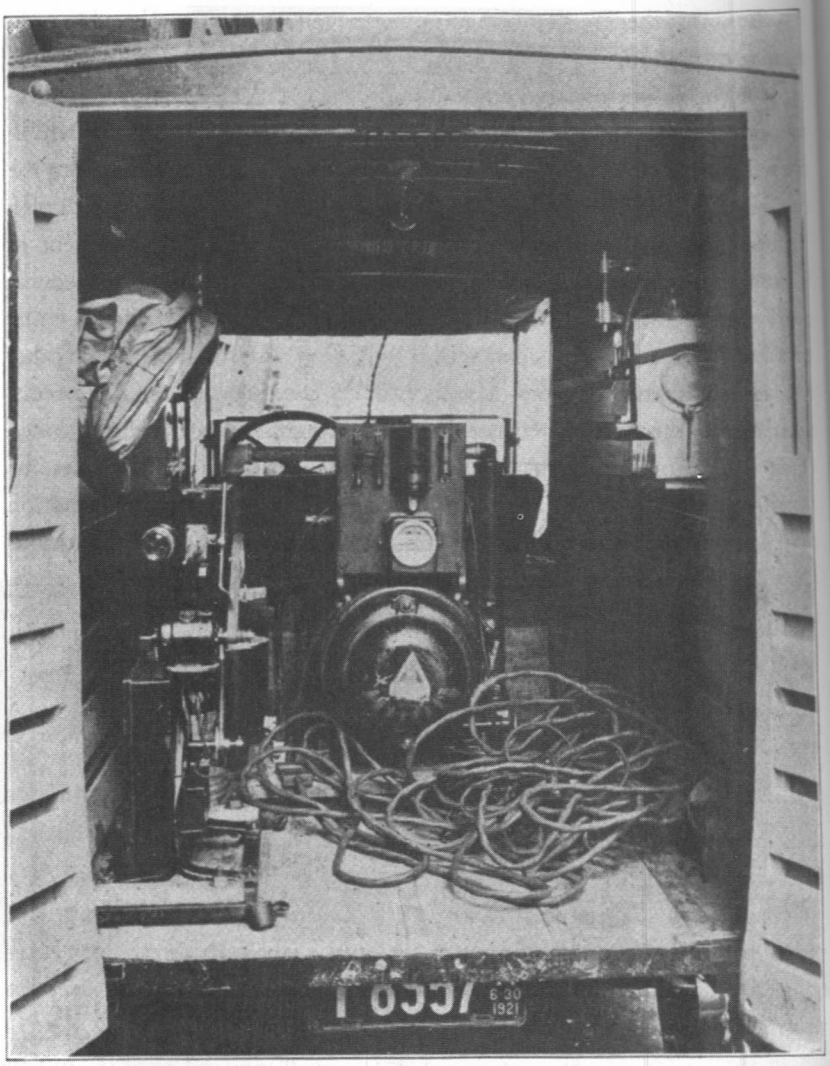

Figure 1.11. One of twenty mobile projection units operated by the state of North Carolina to show motion pictures in rural communities. In *Visual Education* (September–October 1920): 22.

country joined the network during the 1950s. As a mid-1960s commentator observed, programming was often "desultorily inadequate," especially live broadcasts, which often came across as amateurish and technically inadequate in comparison to their polished film equivalents.[126] This was also, however fleetingly, a new outlet for educational films.

[126] Lewis Herman, *Educational Films: Writing, Directing, and Producing for Classroom, Television, and Industry* (New York: Crown, 1965), 310.

Writing for the launch of the Education Film Library Association's journal in 1967, James Limbacher noted CBS's announcement of its Electronic Video Recording (EVR) system, which "aroused considerable interest among educational and library circles," with some insiders "predicting that if it works, EVR might supplant both 16mm and 8mm projection in the classroom."[127] But this was a false dawn. Even three years later, Jack Gould of the *New York Times* could report, "The blue-sky ballyhoo over home video cartridges of many different types and different applications is getting somewhat out of hand." The EVR, he noted, did not have its first commercial sale until late 1970. The following year CBS ceased development of the technology.[128]

However, the fact that an EVR player plugged into a television monitor indicated the future for educational media and signaled the impending death of widespread educational *film* use. At the end of the expansion period for educational films, in the late 1960s, it was estimated that more than half of A-V spending by schools—over half a billion dollars—went to nontheatrical films and equipment.[129] These dollars not only went to 16mm, but also to 8mm, Super 8mm, and a variety of other forms, novel and short-lived. By the late seventies, schools and libraries were purchasing commercial releases on LaserDisc and other optical videodisc systems, which made a modest impact for a decade.[130] Not until the eighties did VHS videotapes earn the lion's share of the market for movie sales.

The New Modern: Television, Video, Computers, and the Death of Educational Films

> I find television very educational. The minute somebody turns it on, I go into the library and read a good book.
>
> —*Groucho Marx*

Writing in 1946, audiovisual experts Francis Noel and Elizabeth Noel (both of whom served terms as chief of California's Division of Audio-Visual Education) made a prediction:

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[127] James Limbacher, "The World of Film . . . 1977," *Sightlines* 1 (Sept.–Oct. 1967): 15.

[128] Jack Gould, "The Great Day Isn't Exactly at Hand," *New York Times*, November 15, 1970; David Fischer, "The Quest for Home Video: EVR," *Terra Media,* August 26, 2004, www.terramedia.co.uk/media/video/evr.htm. Although an EVR player output a video signal, the images and sound were actually recorded on 17.5mm film (not magnetic or digital videotape) transported in a round cassette.

[129] Thomas Hope, *AV-USA 1969* (Rochester, NY: Hope Reports, 1970), 9.

[130] For excellent overviews see Lois McLean, "Videodiscs in Education," Dec. 1985, *ERIC Digests,* www.ericdigests.org/pre-924/discs.htm; and Tom Howe, "RCA SelectaVision VideoDisc FAQs," *CED Magic* website (2009), www.cedmagic.com/home/cedfaq.html#header.

> New devices will make possible low-cost color and three dimension projection. The stereoscope, modernized, will again return, taking a prominent place in classroom instruction. Vectographs [3-D photographs] will come into general use especially in the visualization of mathematical concepts. . . . A sound motion picture projector will be manufactured especially for classroom needs. These will be probably followed later by small individual desk projectors for use by individual students.[131]

Forecasts such as this were a veritable trope in visual education literature, especially in the postwar era when so many technological capabilities were emerging. Although the Noels may not have gotten all of the details of future educational film use correct, they were spot-on about some, and their mention of "individual desk projectors" can certainly be imagined, albeit a bit more interactively, in the context of "computer assisted instruction," as it was being called in the 1960s. Along with the advent of video technologies, such modernization helped to extinguish the era of educational film use.

The emergence of television, video, and computers were all viewed with mixed excitement and skepticism by those with a stake in the educational film industry. In 1961, the head of the FCC famously disparaged commercial TV as a "vast wasteland," and the social science "effects" literature at that time generally reported the negative impact of watching television. Yet educators and policymakers maintained hope in educational television.[132] These technologies opened up new markets and an exploding technological industry that inundated educators with promises of a brighter future for "smart classrooms" and smarter students. While on the one hand billed as the new "modern," promising to revolutionize, simplify, or economize educational media use, they also threatened established modes of production, distribution, exhibition, as well as pedagogy.

The first sustained discussions about television's potential impact on educational film surfaced in the 1940s. Writing in 1948, A. W. Vandermeer opined that "the pessimist can reasonably predict that television may accomplish what 150 years of textbooks and 25 years of movies have failed to do, namely to relegate the average teacher to the status of a combination monitor and record clerk." The teacher replacement debate reared its head once again in Vandermeer's equation, as it did in many of the considerations of television's potential

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[131] Francis Wright Noel and Elizabeth Goudy Noel, "Looking Ahead Twenty-Five Years in Audio-Visual Education," *Educational Screen* (Feb. 1946): 68.

[132] Godwin C. Chu and Wilbur Schramm, *Learning from Television: What the Research Says* (Washington, DC: National Association of Educational Broadcasters, 1968), reported a consensus that television could be an effective learning tool when correctly deployed; cited in Saettler, *Evolution*, 429.

classroom use. However, the more important insight has to do with the idea of dissemination without the constrictions of motion picture projection equipment, which had become more convenient, certainly, but still presented many challenges that seemed possible to eradicate with a new technology like television. Once its significant "mechanical limitations are overcome," wrote Vandermeer, television "can bring the brilliant scholarship of the genius and the matchless technique of the master-teacher to even the most isolated schoolroom."[133] Concerns about image size, color, and technical difficulties aside, television seemed even at this early stage to promise yet another modern revolution in educational moving image dissemination.

By the end of 1953, an estimated 26.5 million television sets were being used in the United States, offering an unprecedented market for educational film for the general public, particularly of the "travel, safety, and sports" variety.[134] Most TV stations aired freely available sponsored nonfiction films as filler programming. The National Association of Manufacturers series *Industry on Parade* (1950–1960), for example, appeared in fifteen-minute episodes on nearly every station in operation. Accordingly, the 1950s saw a shift away from educational motion pictures on film to the potential uses of public broadcasting, as well as closed-circuit instructional or educational television, especially for schools, adult education, and the military. As film historian Jack Ellis put it in the mid-1960s, "Television is a marvelous electronic means of distributing and exhibiting the moving image accompanied by sound. . . . Much of what educational television transmits *is* educational film, with the images and sounds transported on a 16mm cellulose acetate strip and the kind of edited assemblage possible only in film."[135]

As early as 1951, a study of instructional television for naval air reservists concluded that "TV and TV recordings [16mm kinescopes] were found to be superior to local instructors and about equal in effectiveness." Experiments in the public schools of Philadelphia and Washington, DC, indicated both significant advantages to instructional television, as well as student and parent enthusiasm about the medium.[136] The professional literature of the 1950s documents a notable realignment of interests in and curiosity about "ITV"

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[133] A. W. Vandermeer, "From Textbook to Movie to Television," *Elementary School Journal* 48 (Jan. 1948): 276.

[134] Leo Beebe, "Industry," in *Sixty Years of 16mm Film*, 97.

[135] Jack Ellis, "Film for Education: Considerations of Form," *Journal of the Society of Cinematologists* 4 (1964–65): 31.

[136] William Allen, "Audio-Visual Materials," *Review of Educational Research* 26 (Apr. 1956): 128–29. Allen cites the study by psychological researchers Robert Rock, James Duva, and John Murray, *The Effectiveness of Television Instruction in Training Naval Air Reservists, Instructional TV Research Reports* (Port Washington, NY: U.S. Naval Special Devices Center, 1951).

(instructional television) and distance education. With the allure of "the new modern," educational film had certainly lost its glimmering associations with the future.

However, 16mm educational film production continued in great volume for another two decades. Broadcast television arrived in the 1950s, but classroom-friendly video formats did not displace 16mm screenings until the 1980s. Thus, it is important to keep in mind the distinction between televised content (however delivered—broadcast, cable, satellite, microwave relay), which was viewed on a TV set, and content provided as a video recording (tape, disc, computer file) played back at a particular site. Videotape, available to professional producers from 1956 on, did not penetrate the classroom market until the diffusion of "home video" cassette formats, particularly Betamax (introduced in 1975) and VHS (in 1976).[137] As late as 1982, a scholarly book on educational media could still limit discussion of videotape to schools recording lectures for off-campus students.[138] But the diffusion was otherwise rapid. In 1985, an early issue of *TechTrends* reported, "VCRs Silently Take Over the Classroom," and the *Index to Educational Videotapes* listed 60,000 titles for sale. In 1988, the Consortium of University Film Centers, founded in 1971, signaled video's new dominance by changing its name to the Consortium of College and University Media Centers.[139]

Part of the push to bring television into the educational arena had to do with what many commentators anticipated would be an impending educational crisis—a steep increase in students and a shortage of teachers in the baby boom era. Their ongoing pontification often found its imagined corrective in the promise of new technology. Closed-circuit television instruction might, some argued, replace certain aspects of person-to-person instruction, reinvigorating age-old teacher replacement debates and anxieties, now tuned to the latest technology. In 1950, there was only one educational television station; in 1957, there

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[137] The ¾-inch U-matic videotape, successfully marketed after 1970, was adopted by many schools teaching media production. Television news and industrial producers used the format, but distributors of educational content seldom sold titles on ¾-inch videotape. Patricia Ann Brock, *Educational Technology in the Classroom* (Englewood Cliffs, NJ: Educational Technology, 1994), 163.

[138] Leslie Wagner, *The Economics of Educational Media* (New York: St. Martin's Press, 1982), 28, mentions Colorado's SURGE program (State University Resources from Graduate Education), which launched in 1967. Students earned master's-level course credit by watching video replays of lectures recorded a day or two previously (presumably on professional one-inch videotape) and delivered to a viewing site by courier.

[139] William L. Reider, "VCRs Silently Take Over the Classroom," *TechTrends* (Nov.–Dec. 1985): 14–18; *Index to Educational Videotapes*, 6th ed. (Albuquerque, NM: NICEM, 1985); Consortium of College and University Media Centers site, www.ccumc.org.

were twenty-seven.[140] These stations could show previously produced educational films or new programming made for television (whether live or recorded on film or, after 1956, videotape).

Videotape offered producers and exhibitors yet another way to envision distribution and viewing. As educational film stalwart Charles Hoban Jr. itemized the new technologies of instruction in 1975, educators now had many choices beyond the educational film, including "instructional television, the audio cassette, the three-sided box for individualized instruction, computerized instruction, gaming and simulation, etc., etc."[141] Film was just one of a myriad of media and mediated options for the classroom or any other public interface with educational technology.

Many of the old debates about film use would be retooled for these new technologies, especially regarding the lack of availability of "appropriate material" on video, television, and computer. Furthermore, as Richard Hooper wrote in his 1969 critique of educational A-V aids, "A Diagnosis of Failure,"

> most educational hardware is not custom-built for education, but a (lucrative) spin-off from the consumer industry. . . . The task of locating materials from catalogs and brochures is formidable. . . . Film clips, still pictures, discs and tapes, lie in their millions across the country, unknown, often uncataloged, and mostly unused. Once located, the problems of retrieval and evaluation are, despite the growth of videotape, audiotape, and film libraries, vast. The evaluations of educational films, distributed regularly by the Educational Film Library Association, are intensely subjective, based on the previews of three adults and no members of the target audience.[142]

In what could be confused with discourse about the current state of educational films residing in archives, Hooper's complaints about using educational media in the 1960s remind us of the challenges faced by current scholarly researchers, both in terms of finding educational film materials and in seeing or utilizing the

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[140] F. A. Ficken, "The Use of Films and Television in Mathematics Education," *American Mathematical Monthly* 65 (June–July 1958): 393. Ficken also discusses concerns about television replacing teachers, 402.

[141] Charles F. Hoban [Jr.], "The State of the Art of Films in Instruction: A Second Look," *Audiovisual Instruction* (Apr. 1975): 30. Note that Hoban's "gaming and simulation" refers to role-playing and board games then extant, even if it seems a prescient allusion to the digital simulations and computer/video games of twenty-first-century education.

[142] Richard Hooper, "A Diagnosis of failure," *AV Communication Review* 17 (Fall 1969): 254, 267.

materials once found. The films—which, as Hooper suggests, were never easy to account for—are, in many cases, still out there. Decades of neglect, however, have buried them deeper within institutional or private collections. Researchers, librarians, and archivists must be diligent about locating such films. As technology changes and media migrations occur, we find ourselves removed from original formats but with greater access to content, as the Internet Archive amply demonstrates.

In *The Evolution of American Educational Technology,* L. Paul Saettler observes that the rush to the next new technology has always been a part of America's educational landscape, formal or otherwise, often resulting in bouts of enthusiasm and investment that factionalize educators as well as those observing from the outside. Advocates and detractors with various economic, political, and institutional allegiances have, from the moment film began to be used in educational contexts, squared off over the latest technological and ideological shifts. The result is a dense, rich, and largely neglected history, one that tells us a great deal about two institutions—education and cinema—that helped define the contours of the last and present centuries.