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.

9

THE CINEMA OF THE FUTURE: VISIONS OF THE MEDIUM AS MODERN EDUCATOR, 1895–1910

OLIVER GAYCKEN

Before the Supreme Court defined cinema primarily as "harmless entertainment," a variety of commentators, including inventors, journalists, and businessmen, characterized it as a medium destined to educate.¹ Indeed, many of the pioneers of cinema foresaw educational applications for the emerging medium. The traveling lecturer and photographic inventor Eadweard Muybridge envisioned his chronophotographic images as aids for students of the fine arts.² The French physiologist Etienne-Jules Marey, although largely indifferent to the cinema's synthesis of motion, worked within a tradition that saw certain applications of cinematic technology, such as high-speed cinematography, as prostheses for limited human senses allowing for the investigation of the hitherto invisible. Marey's assistant, Georges Demeny, used his expertise with the moving image to invent what he called the chronophonoscope, a device to help the deaf learn to

Support for the completion of this essay was provided by a study leave from Temple University and a visiting researcher position in Department II at the Max Planck Institute for the History of Science during 2008 and 2009. I would also like to thank David Cantor for inviting me to present a version of material at the Works-in-Progress Seminar, National Institute of Health History Office, Bethesda, Maryland, where I received particularly helpful feedback from Mike Sappol. Thanks are due as well to Christine Blättlinger and Janina Wellman for the invitation to the workshop "Was There a 'Cinematographic Turn' in the (Life) Sciences around 1900?" at the Zentrum für Literatur-und Kulturwissenschaft, Berlin, Germany, where I presented a version of this material and benefited from many insightful comments. Finally, I am indebted to the editors of this volume for their helpful suggestions that resulted in substantial improvements.

¹ For the story of how Hollywood cinema came to be defined as "harmless entertainment," see Lee Grieveson, *Policing Cinema: Movies and Censorship in Early Twentieth-Century America* (Berkeley: University of California Press, 2004); and Richard Maltby, *Harmless Entertainment: Hollywood and the Ideology of Consensus* (Metuchen, NJ: Scarecrow Press, 1983).

² See Phillip Prodger, ed., *Time Stands Still: Muybridge and the Instantaneous Photography Movement* (New York: Oxford University Press, 2003). For more on how the traveling lecturer prefigured and participated in early cinema culture, especially the culture of instructive amusement, see Charles Musser in collaboration with Carol Nelson, *High-Class Moving Pictures: Lyman H. Howe and the Forgotten Era of Traveling Exhibition*, 1880–1920 (Princeton, NJ: Princeton University Press, 1991).

speak.3 One of the leading figures of the French film industry, Charles Pathé, proclaimed, "the cinema is the newspaper, the school, and the theater of tomorrow."4 The Anglo-American producer Charles Urban (discussed below) created a large collection of educational films, as did Pathé's chief rival Léon Gaumont.⁵ In the early 1910s, Thomas Edison made headlines by declaring that films would soon become a widespread and indispensable aid in the classroom, a prediction that on occasion he amplified into the more exciting and alarming notion that films would soon replace textbooks.6

More than scattered epiphenomena, these pronouncements about cinema's future were remarkably persistent and widespread. This essay outlines the contours of educational cinema and its major developments by focusing on both the arguments advanced on its behalf as well as examples of films that were considered educational before 1910.7 Two related and frequently commingled formulations of the cinema's relation to education held sway in this period. Many commentators saw the cinema as already, and perhaps inherently, educational because of the medium's technological features, in particular its ability to recreate motion and to archive events. This type of argument was particularly prominent before 1900, cinema's novelty period, when the cinematographic apparatus and its capture of motion were considered instructive in and of themselves, in the tradition of other optical "philosophical toys" and mechanical marvels. At the same time, appeals for a cinema that would be more explicitly educational at some point in the near future envisioned a pedagogical repertoire of films and screening situations distinct from the emerging culture of commercial cinema.

In one of the earliest histories of cinema, Thomas Edison's assistant W. K. L. Dickson and Dickson's coauthor and sister Antonia made the following claims for the new medium: "The advantages to students and historians will be immeasurable. Instead of dry and misleading accounts, tinged with the exaggerations of the chroniclers' minds, our archives will be enriched by the vitalized pictures of great national scenes, instinct with all the glowing personalities which characterized them."8 An initial distinguishing characteristic of this passage is its use of the future tense (advantages "will be immeasurable"). Although occurring in a book entitled History of the Kinetograph, Kinetoscope, and Kinetophonograph, here history gives way to futurology, and the forecast calls for an educational cinema.9

This passage grounds its imagined future in a certain understanding of cinematic properties, which it invokes in two comparisons. First, the passage

³ For an account of Marey and Demeny's motion picture work, see Marta Braun, Picturing Time: The Work of Etienne-Jules Marey (1830-1904) (Chicago: University of Chicago Press, 1992). While this article focuses primarily on educational ideas as promulgated by nonscientists, professional scientists also had visions of cinema as an educative force that both overlapped with the territory outlined in this essay (in the work of Jean Comandon, for example) and constituted a separate tradition, as in the case of Marey. An informative overview of the early history of research science and cinema can be found in Virgilio Tosi, Cinema before Cinema: The Origins of Scientific Cinematography, trans. Sergio Angelini (London: British Universities Film and Video Council, 2005). See also Thierry Lefebvre, "Scientific Films: Europe," and Scott Curtis, "Scientific Films: USA," in Encyclopedia of Early Cinema, ed. Richard Abel (New York: Routledge, 2005), 568-72; The Educated Eye: Visual Pedagogy in the Life Sciences, ed. Nancy Anderson and Michael R. Dietrich (Lebanon, NH: University Press of New England, 2012); and my "'The Swarming of Life': Moving Pictures, Education, and Views through the Microscope," Science in Context 24, no. 3 (September 2011). For other accounts of scientists whose research led them to use cinematic technology, see Jimena Canales, "Photogenic Venus: The Cinematographic Turn and Its Alternatives in Nineteenth-Century France," Isis 93, no. 4 (2002): 585-613; Hannah Landecker, "Microcinematography and the History of Science and Film," Isis 97, no. 1 (2006): 121-32; and Charlotte Bigg, "Evident Atoms: Visuality in Jean Perrin's Brownian Motion Research," Studies in History and Philosophy of Science 39, no. 3 (2008): 312-22.

⁴ Charles Pathé, quoted in Georges Sadoul, Histoire du cinéma mondial des origins à nos jours, 6th ed. (Paris: Flammarion, 1949), 49. Sadoul does not date this quotation, nor does he provide a source; however, the period that he is discussing is 1903–1909. Sadoul points out that François Dussaud, a professor, inventor, and sometime Pathé collaborator, actually authored the sentence, but Sadoul maintains that the sentiments were expressed on behalf of Pathé. Thierry Lefebvre quotes this sentence as well, and provides the following citation: François Valleiry, "Une [sic] interview de M. Dussaud," Phono-Ciné-Gazette, June 15, 1906, 225–26. See Lefebvre, "Film scientifique et grand public. Une rencontre différée," in E. J. Marey: Actes du colloque du centenaire, ed. Dominique de Font-Réaulx, Thierry Lefebvre, and Laurent Mannoni (Paris: Arcadia, 2006), 159-67.

⁵ For an account of Gaumont's encyclopedia project, see Frédéric Delmeulle, "Contribution à l'histoire du cinema documentaire en France: Le cas de L'Encyclopédie Gaumont (1909-1929)" (PhD diss., Université de Paris III, 1999).

 $^{^{\}rm 6}$ Edison's pronouncements appeared in Frederick James Smith, "The Evolution of the Motion Picture," New York Dramatic Mirror, July 9, 1913, 24; and F. P. Hulette, "An Interview with Thomas A. Edison," Moving Picture World, July 22, 1911, 104. For a bevy of citations in this vein, see Ben Singer, "Early Home Cinema and the Edison Home Projecting Kinetoscope," Film History 2, no. 1 (1988): 51-54 and 60-61.

⁷ For a similar perspective, see Luke McKernan, "Education," in *The Encyclopedia of Early* Cinema, ed. Richard Abel (New York: Routledge, 2005), 214-15. McKernan, "Something More Than a Mere Picture Show': Charles Urban and the Early Non-Fiction Film in Great Britain and America, 1897–1925" (PhD diss., University of London, 2003), contains an excellent discussion of early educational cinema.

⁸ W. K. L. Dickson and Antonia Dickson, History of the Kinetograph, Kinetoscope and Kinetophonograph (New York: Albert Bunn, 1895), 51-52; facsimile ed. (New York: Museum of Modern Art, 2000).

⁹ To be fair, the Dicksons have a capacious conception of the cinema's future that encompasses just about everything: "What is the future of the kinetograph? Ask rather, from what conceivable phase of the future it can be debarred. In the promotion of business interests, in the advancement of science, in the revelation of unguessed worlds, in its educational and re-creative powers, and in its ability to immortalize our fleeting but beloved associations, the kinetograph stands foremost among the creations of modern inventive genius" (Dickson and Dickson, History, 52).

draws a distinction between the questionable veracity of the textual ("misleading accounts," "exaggerations") and the cinema's inherent truthfulness. Since the "chroniclers' minds" are the source of "exaggerations," what recommends cinema in this regard is precisely its mindlessness. In other words, the suggestion here is that cinema possesses a technological accuracy that is free from the distortions of subjectivity, which builds on a discourse established over the second half of the nineteenth century that linked the photographic image to objectivity.¹⁰

The second comparison draws a distinction between the "dryness" of traditional chronicles and the cinema's experiential intensity, which it signals with such phrases as "vitalized pictures" and "glowing personalities." The notion that the cinema could provide accounts that glow with vitality represents a wide-spread strand of reaction to the first screenings of motion pictures that celebrated the medium's sensory immediacy. Certain names for the cinema during the first decade, such as "living pictures" or "animated photography," indicate further this conception of a vivifying technology.

This understanding of cinema was easily allied with the advocacy of sensory experience in education. Implicit in the Dicksons' contrast of the dryness of textual records and the intense, image-based experience of the cinema is a preexisting discourse about the value of the senses in education. A prominent articulation of this discourse was the notion of the object lesson, which came from the theories of Johann Heinrich Pestalozzi, a Swiss educator and educational reformer. Influenced by his reading of Jean-Jacques Rousseau's treatise Émile: or, On Education (1762), Pestalozzi believed in the primacy of sensation, which led him to emphasize the importance of studying actual objects as an initial step in learning. He reversed the traditional importance accorded to the teacher's lecture, arguing that direct, concrete perception should precede verbal description. Only after an initial encounter with the object was the student encouraged to name it and identify its characteristics." In the United States, Pestalozzi's ideas began to find a small audience by the 1820s, and they were popularized in the 1860s by Edward Sheldon's object-lesson plan (the "Oswego plan") and Francis W. Parker's "Quincy methods." The latter included such natural history lessons as taking field trips and planting seeds (leading some parents to complain that Parker had turned schools into "mud-pie factories"). ¹² Some schools created "object lesson boxes," repositories of everyday objects such as plants and mineral specimens with which students could interact directly.

These specific examples formed part of the wider Progressive education movement in America, sometimes called the "new education," which rose to prominence during the last quarter of the nineteenth century. A central tenet that recurred across the various strands of this loosely woven movement was an emphasis on learning by doing. Although cinema frequently was understood as a medium that promoted passivity, the rhetoric of reformers consistently described motion pictures as close analogues for certain forms of activity, especially traveling and nature study. 13 The Dickson passage renders this advantage in terms of how the cinema can provide students with an enriched sense of key historical moments that is similar to having been there and thus constitutes a form of virtual witnessing.¹⁴ Furthermore, the cinema's qualities as an educational medium versus traditional approaches of book-based learning, rote drills, and memorization frequently were distilled into an opposition between the moving image's vivid immediacy and the textbook's "dryness." Cinema, in other words, provided an alternative to the perceived aridity of traditional learning. Few advocates for educational cinema had a background in educational theory, but the frequency of the dry versus vivid comparison indicates that these ideas had become part of the turn-of-the-century vernacular.¹⁵

¹⁰ See Lorraine Daston and Peter Galison, Objectivity (New York: Zone Books, 2007).

¹¹ Anschauung, a kind of immediate perceptual truth/insight, was an important term for Pestalozzi and represented the goal of his method. On Anschauung, see Henning Schmidgen, "Pictures, Preparations, and Living Processes: The Production of Immediate Visual Perception (Anschauung) in Late-Nineteenth-Century Physiology," Journal for the History of Biology 37 (2004): 477–513.

¹² My account of Pestalozzi's educational philosophy and its dissemination in the United States is indebted to L. Paul Saettler, *The Evolution of American Educational Technology* (Englewood, CO: Libraries Unlimited, 1990), 36–41; "mud-pie factories" on 40.

¹³ See Singer, "Early Home Cinema," 53, where he cites Anthony M. Platt, *The Child Savers: The Invention of Delinquency*, 2nd ed. (Chicago: University of Chicago Press, 1977). On the alliance between early cinema and travel, see Jennifer Peterson, *Education in the School of Dreams: Travelogues and Early Nonfiction Film* (Durham, NC: Duke University Press, forthcoming). On the introduction of nature study into North American public schools, see Sally Gregory Kohlstedt, "Nature, Not Books: Scientists and the Origins of the Nature-Study Movement in the 1890s," *Isis* 96, no. 3 (2005): 324–52. Elizabeth Wiatr, "Between Word, Image, and the Machine: Visual Education and Films of Industrial Process," *Historical Journal of Film, Radio, and Television* 22, no. 3 (2002): 334, notes the importance of thinking about film as a "vicarious" experience for visual educators of the 1920s.

¹⁶ For the classic account of virtual witnessing, see Steven Shapin and Simon Schaffer, *Leviathan and the Air Pump: Hobbes, Boyle, and the Experimental Life* (Princeton, NJ: Princeton University Press, 1985); for an extension of the concept of virtual witnessing to the question of science content in Hollywood films (which thus addresses the matter of their educational value) see David Kirby, "Science Consultants, Fictional Films, and Scientific Practice," *Social Studies of Science* 33, no. 2 (April 2003): 231–68.

¹⁵ Consider, for example, Herbert Spencer, who writes that child-centered and self-directed learning methods lead to a "vividness and permanency of impression which the usual methods can never produce. Any piece of knowledge which the pupil has himself acquired, any problem which he has himself solved, becomes by virtue of the conquest much more thoroughly his than it could else be" (Herbert Spencer, *Education: Intellectual, Moral and Physical* [New York: D. Appleton, 1896], 155; cited in Platt, *The Child Savers*, 58). The "vividness and permanency of impression" that "learning by doing" imparted carried over from the domain of educational theory into the work of promoting cinema as an educational force.

Overall, this educational philosophy represented an attempt to organize the curriculum according to what its proponents saw as the natural laws of human development. Although novel in many respects, Progressive educational reform also built on well-established ideas, such as the ancient hierarchy of the senses that placed vision above hearing, touch, taste, and smell. Since vision was seen, so to speak, as more intuitive than other means of instruction, it presented an invaluable and primary resource for educators, and the cinema's obvious visual appeals allowed it to fit neatly into arguments for "education by the eye." Visual learning via the cinema thus updated a venerable form of instruction by linking its tenets to a modern technology.¹⁶

The Dicksons employed rhetorical devices that typified the arguments for cinema as an educational medium in the decades to follow, providing a primer of the basic ideas that persistently would link cinema and education. These arguments found support in many films from the first decade of U.S. cinema history, a period during which nonfictional titles constituted the majority of films produced.¹⁷ The most prevalent genres of early nonfiction—the actuality, the travel film, the popular science film, and the industrial film—were concerned primarily with providing information: about current events, travel to foreign places, scientific advances, or what a manufacturing process looked like.¹⁸ In this sense, many of these films can be characterized as educational. In other words, the cinema of attractions and its proclivity for spectacular display and direct viewer engagement is frequently also a cinema of epistemophilia.¹⁹

In 1904 the Westinghouse Electric & Manufacturing Company commissioned American Mutoscope and Biograph to produce a series of films chronicling manufacturing activities at three of its factories. Photographed

by G. W. "Billy" Bitzer (who would go on to work as D. W. Griffith's cinematographer), these films (known as the "Westinghouse Works" series) were exhibited at the company's pavilion on the grounds of the Louisiana Purchase Exhibition, commonly referred to as the St. Louis World's Fair. Collectively, they supply an example of how the cinema functioned as a source of knowledge.²⁰

Writing about the Westinghouse films, journalist John Brisben Walker noted, "[The kinetoscope] is a wonderful instrument that does not seem to have been fully appreciated from its educational point of view. . . . It was fortunate, then, that two men [John Patterson and George Westinghouse], each so noted in his own work, should have given the schools these object-lessons in the use of the biograph which we find at the Louisiana Purchase Exposition." Since the great expositions of the late nineteenth and early twentieth centuries were thought of as gigantic object-lessons, the presence of the term "object-lesson" in a description of these films is unsurprising. Walker's use of the term is interesting, however, since he praises the *use* of the films. This distinction indicates something exemplary about how the films were deployed (see fig. 2.1).

¹⁶ As Jennifer Peterson points out in this volume, the concept of "efficiency" was also often employed to characterize the linkage of cinema to education.

¹⁷ Story films became predominant around 1903 or 1904. See Charles Musser, "The Transition to Story Films, 1903–1904," chap. 11 in *The Emergence of Cinema: The American Screen to 1907* (Berkeley: University of California Press, 1990), 337–69.

¹⁸ Often early nonfiction films are referred to as "actualities," which is an imprecise term. See Frank Kessler, "*Actualités*," in *Encyclopedia of Early Cinema*, 5–6, for a helpful disambiguation.

¹⁹ See Tom Gunning, "The Cinema of Attractions: Early Film, Its Spectator, and the Avant-Garde," in Thomas Elsaesser, ed., *Early Cinema: Space, Frame, Narrative* (London: British Film Institute, 1990), 56–62. For an account of how the aesthetic of attractions was linked to other epistemic practices, see also Gunning, "In Your Face: Physiognomy, Photography, and the Gnostic Mission of Early Film," *Modernism/modernity* 4, no. 1 (1997): 1–29; reprinted with corrections in *The Mind of Modernism: Medicine, Psychology, and the Cultural Arts in Europe and America, 1880–1940*, ed. Mark S. Micale (Stanford, CA: Stanford University Press, 2004), 141–71.

²⁰ Twenty-one of these films are available at www.memory.loc.gov/ammem/papr/west. The website notes that twenty-nine Westinghouse Works films were listed in the American Mutoscope and Biograph catalog. The Westinghouse films are just a few of many sponsored films made by American Mutoscope and Biograph, which also produced films for the U.S. Post Office Department, Department of the Interior, and Navy; see Musser, *Emergence of Cinema*, 359–60. Other films, such as the Edison motion pictures made about or around President McKinley's assassination in 1901 and *Electrocuting an Elephant* (1903), serve equally well to illustrate the issues of educational cinema during this period. The McKinley films are available on the "American Memory" section of the Library of Congress website; the page is entitled "The Last Days of a President: Films of McKinley and the Pan-American Exposition, 1901," http://memory.loc.gov/ammem/papr/mckhome.html. This collection of Edison titles includes films of McKinley's inauguration, films of the Pan-American Exposition, which McKinley visited and where he was assassinated, and films of his funeral. It also includes the remarkable and curious *Execution of Czolgosz, with Panorama of Auburn Prison*, which combines actuality footage with a reenactment of the first official execution by electrocution in U.S. history.

²¹ John Brisben Walker, "World Instruction in Pictures: How Westinghouse and Patterson Use the Biograph," *The Cosmopolitan* (Sept. 1904): 529. I was led to this source by Sarah Gooch, "Casting a Guide Box: Object Lessons, World Expositions, and the Westinghouse Films," paper presented at the Film and History Conference, Dallas, Texas, Nov. 2006. I am also indebted to her for sharing her seminar paper on the Westinghouse films with me.

²² Tom Gunning notes, "the term 'object lesson' became the buzz word which justified the World Exposition as an educational experience" ("The World as Object Lesson: Cinema Audiences, Visual Culture, and the St. Louis World's Fair, 1904," *Film History* 6, no. 4 [1994]: 425). See also Emmanuelle Toulet, "Cinema and the Universal Exposition, Paris 1900," *Persistence of Vision 9* (1991): 10–36. Toulet writes that the exhibition "was intended as a gigantic national 'school'" (31).

Learning with the Lights Off Educational Film in the United States

EDITED BY DEVIN ORGERON, MARSHA ORGERON, AND DAN STREIBLE



TABLE OF CONTENTS

Foreword by Thomas G. Smith	ix
Acknowledgments	xv
About the Companion Website	xvii
Introduction	3
1. A History of Learning with the Lights Off	15
Devin Orgeron, Marsha Orgeron, and Dan Streible	
2. The Cinema of the Future: Visions of the Medium	
as Modern Educator, 1895–1910	67
Oliver Gaycken	
3. Communicating Disease: Tuberculosis, Narrative,	
and Social Order in Thomas Edison's Red Cross Seal Films	90
Miriam Posner	
4. Visualizing Industrial Citizenship	107
Lee Grieveson	
5. Film Education in the Natural History Museum:	
Cinema Lights Up the Gallery in the 1920s	124
Alison Griffiths	
6. Glimpses of Animal Life: Nature Films and the	
Emergence of Classroom Cinema	145
Jennifer Peterson	
7. Medical Education through Film: Animating Anatomy	
at the American College of Surgeons and Eastman Kodak	168
Kirsten Ostherr	
8. Dr. ERPI Finds His Voice: Electrical Research	
Products, Inc. and the Educational Film Market, 1927–1937	193
Heide Solbrig	
9. Educational Film Projects of the 1930s: Secrets	
of Success and the Human Relations Film Series	215
Craig Kridel	

10. "An Indirect Influence upon Industry": Rockefeller	
Philanthropies and the Development of Educational Film in the	230
United States, 1935–1953 Victoria Cain	
	249
11. Cornering The Wheat Farmer (1938) Gregory A. Waller	
12. The Failure of the NYU Educational Film Institute	271
Dan Streible	
13. Spreading the Word: Race, Religion, and the Rhetoric	
of Contagion in Edgar G. Ulmer's TB Films	295
Devin Orgeron	
14. Exploitation as Education	316
Eric Schaefer	
15. Smoothing the Contours of Didacticism: Jam Handy	338
and His Organization	330
Rick Prelinger	266
16. Museum at Large: Aesthetic Education through Film	356
Katerina Loukopoulou	
17. Celluloid Classrooms and Everyday Projectionists: Post–World War II Consolidation of Community Film Activism	377
Charles R. Acland	
18. Screen Culture and Group Discussion in Postwar Race Relations	397
Anna McCarthy	
19. "A Decent and Orderly Society": Race Relations in	
Riot-Era Educational Films, 1966–1970	424
Marsha Orgeron	
20. Everything Old is New Again; or, Why I Collect	
Educational Films	442
Skip Elsheimer with Kimberly Pifer	
21. Continuing Ed: Educational Film Collections in	
Libraries and Archives	457
Elena Rossi-Snook	
22. A Select Guide to Educational Film Collections	478
Elena Rossi-Snook	
Contributors	499
Index	499

FOREWORD

At a Fourth of July picnic in 2006, I found myself sitting across the table from Oscar-winning cinematographer Haskell Wexler. He had been recently selected by the International Cinematographer's Guild as one of the ten most influential cameramen in history and had a star on Hollywood's Walk of Fame. He also directed one of my favorite feature films concerning the tumultuous 1968 Chicago political protests, *Medium Cool* (1969). Wexler was eighty years old, physically spry, and mentally sharp. He extended his hand and we introduced ourselves.

Although he didn't know it, we had one thing in common: the place where we both began our careers in film. So I asked him, "Do you remember working with Johnny Walker at Encyclopaedia Britannica Films in Wilmette?"

His eyes lit up. "How do you know about Johnny?"

"I worked at EBF from 1965 to 1980 and he told me you started there and worked with him."

"Johnny taught me how to thread a camera," Wexler said with tears glistening in his eyes. "Those were great days. My friends in features can't believe it when I tell them about the freedom we had making those 16mm movies. Sometimes I wonder if I dreamed it or was it really part of my life?"

It wasn't a dream but most physical traces are now gone. When I was in my twenties I started as a writer/director for Encyclopaedia Britannica Films (EBF), fifteen years after Wexler had moved on. While Wexler came to EBF after serving in the Merchant Marines during World War II, I was fresh from three and a half years in the U.S. Air Force during the Cold War.

Prior to the Air Force, Northwestern University's Jack Ellis introduced me to film, diverting me from my first love, radio broadcasting. After I graduated from Northwestern in 1960, Ellis encouraged me to study film in France and I was fortunate to win a Fulbright Scholarship for a year overseas. While in Paris I ran into Milan Herzog, head of film production at EBF. Herzog was