



Tri-unial magic lantern
McIntosh Stereopticon Company;
USA, 1890s; Erkki Huhtamo Collection

Screen: Etymologies and Semantic Shifts

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A screen can be tentatively defined as an “information surface.”¹ This is deliberately vague. Although screens are two-dimensional surfaces, they often give us an impression of a three-dimensional reality that can be accessed through the screen. Screens are framed, which metaphorically associates them with paintings or windows—a screen is often conceived as a kind of virtual window opening to a mediated realm.² As Vilem Flusser has remarked, screens also have characteristics of the door—they let us “enter” the realm they depict.³ This is particularly clear in the case with interactive screens (we “push” them, either directly, or the via the mouse serving as a door handle), but applies more metaphorically to other types of screens as well.

to the “magic lantern tradition in which showmen displayed images on a screen accompanying them with voice, music, and sound effects.”¹⁵ Magic lantern shows had been staged since the second half of the seventeenth century, but unlike Phantasmagoria (part of this tradition), most early shows made no effort to hide either the lantern, the lanternist or the screen.¹⁶ The shows performed by itinerant lanternists in private homes had an intimate quality. The audience gathered around the showman who told his stories, illustrated by images and accompanied by a hurdy-gurdy or some other musical instrument.

The slides were projected either on a blank wall or on a piece of white cloth serving as the screen. The available light sources were weak (until late eighteenth century only candles or simple mineral oil lamps were used), so the lanternists had to optimize the situation: placing the lantern further from the screen enlarged the projected image but made it faint. Judging by existing evidence, the lantern often stood fairly close to the screen—brightness was more important than size. This situation partly explains the position of the spectators. They had to remain close to perceive the images well and to hear the lanternist’s interpretations.¹⁷ The visible presence of the “box” from which the luminous pictures emanated—whether interpreted as a magic object or a rational contrivance—must have been an essential part of the attraction.

The further evolution of “screen” can be traced fairly accurately. By the middle of the nineteenth century formulations like [the] “[m]agic lantern is a species of lucernal microscope, its object being to obtain an enlarged representation of figures, on a screen in a darkened room” had become common.¹⁸ During the second half of the century, the magic lantern show became increasingly sophisticated, attracting larger audiences. Reflecting its growing but short-lived socio-cultural prominence as a public educational entertainment, the size of the screen grew larger. Magic lanterns were even used in urban outdoor spaces to project advertisements or election results for large crowds.¹⁹ All this was made possible (although not caused) by powerful new illuminants—the oxy-hydrogen limelight and the electric carbon-arc. Parallel to this development, simple magic lanterns became widely available for the middle class consumers, signaling the beginning invasion of media to the home. The domestication of the magic lantern stripped it of some of its mystery. It remained mostly a toy for projecting fairy tales and comic episodes. Fancy design became more important than the quality of projection. The projected image was small and faint, creating an unintentional link with the projections of the past.



Fantascope, magic lantern for phantasmagoria shows
England, 1810–30; Erkki Huhtamo Collection



“Lampascope carré,” polychrome magic lantern for domestic use
Édouard Virgile Lapiere; France, c. 1890; Erkki Huhtamo Collection



Phantasmagoria magic lantern slide depicting a floating Medusa’s head
Probably British, 1810–30; Erkki Huhtamo Collection



Panorama hand screen
France, 1820–30s; contains a translucent picture roll depicting the four seasons; Erkki Huhtamo Collection

The professional magic lantern show provided a model of screen practice for the early film culture. The word “screen” became firmly associated with film projection, reflecting the victory of projected moving images over other media practices such as peeping. By 1910 the word was used metonymically about the film culture itself. It was often written with capital letters: The Screen. That year the *Moving Picture World* wrote that “people like to see on the screen what they read about,” referring to their filmic preferences, and when a Mrs. P. Campbell stated in 1920 that she felt “much too aged for Eliza on the Screen,” she was referring to acting in the movies.²⁰ The word “big” was added around the same time, on par with the prodigious development of the Hollywood film factory. Thus, in 1919 the *Motion Picture News* wrote about Blanche Sweet’s appearances in “many big screen offerings.”²¹

“Silver Screen” sounded even more glamorous. The expression referred originally to a technical improvement, the coating of the screen with varnished silver-leaf to make it more reflective, yet it certainly came to express the “otherworldly” qualities of the new industrial entertainment, with the unreachable film star as its emblem.²² In 1938 *The Rotarian* appropriately stated that “[a]ge-old customs that refused to budge in centuries of pressure from outside simply melt in the glamorous glow of the silver screen.”²³ Two years later Lester Sumrall wrote *The Worshipers of the Silver Screen*, bridging in its title religious and media-related metaphors.²⁴

Such overblown expressions were put to good use by the proponents of film as a “screen” against an audiovisual intruder—the television. Interestingly, the promoters of television made valiant efforts to convince potential audiences that the new medium was anything but lilliputian. The expression “large screen television” appeared frequently in discursive contexts in the 1940s, the decade when regular broadcasts began on wider scale. The expression was often used about efforts to project television images publicly “on a full-sized movie screen.”²⁵ A solitary (male) television viewer was depicted facing a giant television screen in an ad evocatively titled “You’ll be an Armchair Columbus!” (1944).²⁶ DuMont implied that the gigantic pleasures of movie houses were about to be transferred into the home. And not only that: unlike cinema, the television allowed the viewer to “sail ... through vanishing horizons into exciting new worlds.” For anyone who encountered an actual TV screen it became immediately clear that the rhetorics of scale and the reality did not match. Other qualities, such as immediacy and liveness, were more convincing. To counter them, the film industry further magnified its offerings, introducing larger screen formats than ever (Cinerama, Todd-AO, Cinemascope...).

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Magic lantern broadside; USA, c. 1890;
Erkki Huhtamo Collection

From a media archaeological point of view it is intriguing that until the 1950s television screens were often round. There are several possible explanations, ranging from media-historical to technological. Magic lantern slides were often surrounded by round masks; peep show boxes had circular peeping holes; round and oval picture frames were popular in the Victorian era, also for displaying portrait photographs. On the technological side, early cathode ray tube screens were small, round and bulbous; they mostly transmitted talking heads, matching the curvature of the face.

The shift from round to square was related to television's relationship with other media. The TV set replaced the radio as a domestic center of attention. Radio was not

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DU MONT Precision Electronics and Television

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You'll be an Armchair Columbus!
ad for DuMont; *Billboard*, Aug. 19, 1944, p. 9

a visual medium, but it did attract gazes during listening. The round loudspeaker was “imprinted” in the designs of many radio sets; the round screens of early television sets appeared on the same spot.²⁷ During the 1950s square shapes with rounded corners came to dominate.²⁸ Why did it happen? Pointing to the technical evolution of the cathode ray tube is not sufficient. Already before “flattened” cathode ray tubes became generally available, TV manufacturers had begun masking the upper and lower edges of the tube to give the screen a more quadrangular look; eventually, the sides were also “straightened out.”²⁹ Making the screen square could be read as a symbolic challenge to the cinema, but there is more: showing old movie serials and Hollywood

films became an important part of television programming, forcing manufacturers to imitate the ratio of the cinema screen.³⁰

The etymology and emergence of the screen is a complex issue, much too detailed and varied to be covered in a short essay. The screens introduced during the past half a century, as well as the discourses that have surrounded them, need to be integrated into the overall picture. There are intriguing developments, such as the screen of the iPhone that can be instantaneously switched from horizontal to vertical mode and back again; are there any media-archaeological predecessors to such metamorphic magic? Obviously, the iPhone is an example of portable screen-based devices that are increasingly challenging the hegemony of earlier screen types. Their archaeology is an urgent task for “screenology,” a hypothetical branch of media studies that should be established.³¹

Notes

1. This text is an updated excerpt from a longer study, “Elements of Screenology: Toward an Archaeology of the Screen,” *ICONICS: International Studies of the Modern Image*, Vol. 7 (2004), pp. 31-82 (Tokyo: The Japan Society of Image Arts and Sciences).
2. About window / screen parallels, see Anne Friedberg, *The Virtual Window*, Cambridge, MA: The MIT Press, 2006.
3. Vilem Flusser, “Two approaches to the Phenomenon, Television,” *The New Television: A Public/Private Art*, edited by Douglas Davis and Allison Simmons, Cambridge, MA.: The MIT Press, 1977.
4. Lev Manovich, *The Language of New Media*, Cambridge, MA.: The MIT Press, 2000, p. 103.
5. *Ibid.*, p. 96.
6. *Ibid.*, p. 95.
7. *Ibid.*, p. 95.
8. Much the same goes for the French “écran”, which most dictionaries, including the *Oxford English Dictionary*, see as “closely corresponding with” the history and the meanings of “screen.” All references to the OED are to the II edition, edited by J.A. Simpson and E.S.C. Weiner, Oxford: Clarendon Press, 1989.
9. OED, vol XIV, “screen.”
10. *The Century Dictionary and Cyclopaedia*, New York: The Century Co, revised and enlarged edition, 1911 (orig. 1889), Vol VIII, “screen.”
11. OED, vol XIV, “screen.”
12. In the beginning of Etienne-Gaspard Robertson’s Phantasmagoria (Fantasmagorie) show in Paris, the oil lamps illuminating the auditorium were put out, plunging the audience into total darkness. Only then was the screen revealed from behind a curtain. The easiest way to make the screen invisible was to make it wet. To enhance the illusion, the backgrounds of the slides around the figures were painted black. See *Lanterne magique et fantasmagorie. Inventaire des collections*. Paris: Musée national des techniques, CNAM, 1990; Jann Matlock, “Voir aux limites du corps: fantasmagories et femmes invisibles dans les spectacles de Robertson,” in *Lanternes magiques. Tableaux transparents*, edited by Ségolène Le Men, Paris: Réunion des Musées Nationaux, 1995, pp. 82–99.
13. The word attraction was introduced in the context of early cinema by Tom Gunning and André Gaudreault in a series of influential articles, including Gunning’s “The Cinema of Attractions: Early Film, Its Spectator, and the Avant-Garde,” in *Early Cinema: Space, Frame and Narrative*, edited by Thomas Elsaesser with Adam Barker, London: BFI, 1990. The cinema inherited various levels its logic of attractions from earlier popular spectacles. The idea of “attraction” does not only relate to the aesthetic and narrative structuring of the show itself, but to the whole context surrounding it, including promotion, the role of the “barker”, the building or the tent, etc.
14. The word “screen practice” was coined by Musser, *Emergence of the Cinema: The American screen to 1907, History of the American Cinema*, vol. I, Berkeley and Los Angeles: University of California Press, 1994, chapter one, “Towards a History of Screen Practice.”
15. Musser, op. cit., p. 15.
16. A rich resource on the history of the magic lantern is *The Encyclopedia of the Magic Lantern*, edited by David Robinson, Stephen Herbert and Richard Crangle, London: The Magic Lantern Society, 2001.
17. Maximizing the brightness of the images may be one reason for the use of rear-projection in Phantasmagoria. Because they were hidden, the lanterns could be brought very close to the screen. To enlarge the images they had to be pulled back, which made the image progressively more faint. This discrepancy was commented on by the contemporaries. In 1833, David Brewster wrote about Phantasmagoria: “The power of the magic lantern has been greatly extended by placing it on one side of the transparent screen of taffetas, which receives the images while the spectators are placed on the other side, and by making every part of the glass sliders opaque, excepting the part which forms the figures.” (David Brewster, *Letters on Natural Magic*, London: John Murray, 1833, p.80).

18. OED, vol XIV, “screen.” Entry from 1846.
19. See my “Messages on the Wall: An Archaeology of Public Media Displays,” in: *Urban Screens Reader*, edited by Scott McQuire, Meredith Martin and Sabine Niederer, Amsterdam: Institute of Network Cultures, 2009 (INC Reader #5), pp. 15-28. Such projections were often pictured in popular magazines like *Frank Leslie’s Illustrated Newspaper* (for examples, see Nov. 23, 1872 and Oct. 25, 1884).
20. OED, “screen.”
21. *Motion Picture News*, Vol. 20, No. 22 (Nov. 22, 1919), p. 3788.
22. Lewis Wright, *Optical Projection. A Treatise on the Use of the Lantern in Exhibition and Scientific Demonstration*, III ed., London: Longmans, Green, and Co., 1895, p. 427. The silver screen was described here as a novelty developed for early stereoscopic lantern slide projections.
23. Henry Albert Phillips, “Movies Move the World,” *The Rotarian*, Vol. 52, No. 6 (June 1938), p. 23.
24. Lester F. Sumrall, *The Worshipers of the Silver Screen*, Grand Rapids: Zondervan Publishing House, 1940.
25. See “Television. Color and Big-Screen Images open New Horizons,” *Life*, Vol. 11, No. 12 (Sep. 22, 1941), p. 52.
26. Ad for DuMont, *Billboard*, Aug. 19, 1944, p. 9. Reproduced in *From Receiver to Remote Control: The TV Set*, edited by Matthew Geller and Reese Williams, New York: The New Museum of Contemporary Art, 1990, p. 132.
27. This point is supported by a newspaper cartoon by Arthur Ferrier (England, 1928). We see a couple in an armchair, staring intensely at what seems to be an ordinary radio set with a horn loudspeaker. The opening of the horn, however, is a round screen displaying images! The caption says: “A Vision of the Near Future. Listening and seeing at the same time.” Reprinted in: *TV Kultur. Fernsehen in der Bildenden Kunst seit 1879*, Herausgegeben von Wulf Herzogenrath, Thomas W. Gaehtgens, Sven Thomas und Peter Hoenisch, Amsterdam, Dresden: Verlag der Kunst, 1997, p. 154.
28. For visual anthologies of TV designs, see Phillip Collins, *The Golden Age of Televisions*, Los Angeles: W. Quay Hays, 1997; *Classic TVs. Pre-War thru 1950s*, Edited by Scott Wood, Gas City, In.: L-W. Book Sales, 1997 (II printing). These are invaluable sources for a design history of the TV set, rarely found in any academic libraries.
29. In any variation, the corners remained rounded. The only way to produce a quadrangular screen with straight corners was to use a back-projection system inside the television cabinet. Early examples include RCA 741 PCB (1947) and Scott 6T11 (1949). Both pictured in *Classic TVs*, op.cit, p. 73, 75.
30. The recent proliferation of flat wide-screen television sets could be partly explained by similar reasons: the screen ratio simulates that of widescreen films—at the same time original TV programs can be produced in the wider format, providing a competitive position against cinema.
31. I first proposed this idea in my “Elements of Screenology,” op. cit.