

Digital Cinema or What Happens to the *Dispositif*?

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THE DIGITAL CINEMA PACKAGE

Created in 2005 by the Digital Cinema Initiatives—a group of Hollywood majors that formed a joint venture in 2002,—the Digital Cinema Package (DCP) is a wrapper containing images, sound, subtitles, and metadata. Six studios got together to agree on internationally valid norms (“DCI specifications”) to ensure that their movies would be screened in 2K / 4K and compressed in JPEG 2000. The initiative also strove to protect movies against copyright infringement and to assert total control over the movies’ distribution via a decryption code, the key delivery message (KDM), without which the encrypted content could not be accessed. The KDM is a rental license that allows projection under specific conditions.

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THEORETICAL FRAMING

In this chapter, Frank Kessler and Sabine Lenk discuss the debate on the digitization of film and what the digital roll-out means for cinema and for the audience. With a particular focus on the transformations and continuities in what film theory commonly addresses as the traditional cinematic *dispositif*, Kessler and Lenk explore the positions taken by various authors participating in the debate and ask the question: To what extent is the cinematic *dispositif* actually affected by the shift from celluloid to digital?

DIGITAL CINEMA OR WHAT HAPPENS TO THE *DISPOSITIF*?

Compared with the traditional reel of 35mm film, the Digital Cinema Package (DCP), which is delivered on a hard disk, has the appearance of a “black box.” Not only does it look like one, it also completely hides what it contains. On a celluloid print, one can always look at the frames even when it is in a format for which one does not have a projector nor a viewing table. This allows one to identify the film or at least get a rough idea about its content. Nothing of the sort is possible with a DCP. Access to the content of the black box is rigorously controlled: you are allowed to watch the film over a given period in one particular theater—which has to be equipped with an authorized beamer—and in a specific language version for a limited number of screenings, provided one has the correct Key Delivery Message (KDM) and the software that is able to read it. | 303

As far as commercial screenings are concerned, the celluloid era will soon definitively belong to the past. Most of the films that one can watch in a movie theater today are no longer delivered as prints but as a huge amount of pixels that are projected digitally. In this chapter, we look at the consequences of these developments. A number of authors have recently argued that this process will result in “the end of cinema,” at least as we knew it. Indeed, strictly speaking, there is no “film” anymore, but the consequences of this technological shift are seen to reach much further. We will try to disentangle the different aspects of this debate, concentrating on what the digital roll-out means for cinema and for the audience. We will discuss the positions taken by various authors participating in the debate, focusing on the transformations and continuities in what film theory commonly addresses as the traditional cinematic *dispositif*—that is, the viewing position of a spectator seated in a movie theater in the dark and immersed in a film. The question we ask ourselves is to what extent is the cinematic *dispositif* actually affected by the shift from celluloid to digital?¹

THE DIGITAL ROLL-OUT

Country	2010	2011	2012
Luxemburg	73.0 %	100.0 %	100.0 %
Germany	33.1 %	49.0 %	no information
France	25.4 %	47.6 %	81.0 %
Netherlands	c. 26.8 %	c. 65 %	100.0 %
UK	37.8 %	72.0 %	92.0 %

Table 1: Digitization of movie houses in 2K between 2010 and 2012 in selected European countries.

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The Digital Cinema Initiatives, having introduced new screening standards in July 2005, has progressively divided the world of movie theaters into those showing pixels and those still screening grains. The former has become the majority in North America (85% by the end of 2012), Africa and the Middle East (80%), Europe (67%), and in the Asian-Pacific area (64%). Thus “[...] the world’s cinemas are now over 75% converted [...]”⁵ and it is evident, given the increasing speed of the development, that within the next ten years the rest will follow.

Additionally, a whole professional branch is slowly disappearing, because projectionists (who were gradually being replaced by underpaid students and other non-professionals ever since the 1990s) are no longer needed. Their knowledge of lenses, gauges, and all the electrical and mechanical aspects of film projection has become obsolete. Today, films are transferred from disk to server and electronically programmed and timed for a whole week by one technician. They could in theory be “launched” from the ticket booth by simply switching on the system.⁶

DOES CINEMA HAVE A FUTURE? THE DEBATE

With the end of celluloid in cinemas nearing, some theorists believe there cannot really be “films” anymore, at least in the material sense of the term. According to David Rodowick, “film disappears into digital movies,”⁷ or, to quote André Gaudreault and Philippe Marion, we have now moved past the point when “cinema was reduced to a mere material base or technology, limited to a mere combinatory formal logic joining a given technology with certain signs, certain expectations, certain kinds of representation, certain consumer practices.”⁸ The initially gradual and more recently dramatically accelerated replacement of prints by DCPs thus has provoked a wave of reflections on the future of cinema, which for many clearly is something that will be quite different from what has come to be known as “cinema” since the beginning of the 20th century—if there is a future at all.⁹

In this debate, several issues are closely intertwined, and it may be useful to separate them here:

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- The loss of what has been seen by many theorists—from Boleslas Matuszewski in 1898 to André Bazin and Stanley Cavell—as the defining quality of the cinematographic image: its “indexicality,” referring to the image being a trace of something that took place in front of the camera lens.¹⁰ This is a discussion we will not go into, as it has already been amply debated.¹¹
- Movie theaters are no longer spaces devoted exclusively to the screening of films made specifically for that purpose, as they are increasingly resorting to showing so-called “alternative content.”
- The traditional *dispositif* of a film being projected in a movie theater can no longer be considered the default option, as spectators today watch films on all sorts of screens (tablets, laptops, home cinema sets, TV screens, mobile phones, portable DVD players, etc.) and on all sorts of carriers.

Thus it is not simply the technology of the medium but also the institution itself that is deeply affected by the digital, according to Gaudreault and Marion, among others. The parameters are changing, and maybe even the paradigm as well. This, in turn, raises the question of whether we have finally come to the end of cinema.

The answers to this question vary, of course, from nostalgic and pessimistic views to enthusiastic ones that embrace the expansion of cinema across a variety of new platforms. Those who are located somewhere in the middle of this debate with their more pragmatic positions—scholars such

as Francesco Casetti but also Jacques Aumont—argue that in spite of the changes brought about by the digital, spectators continue to watch films and still go to movie theaters, and even more so over the past years. Looking at these issues from a more distant and in particular historical point of view, things indeed appear to be less dramatic than some have portrayed. Let us first consider briefly the fact that movie theaters today have started to offer other kinds of shows, such as live transmissions of operas, ballets, theater plays—often from prestigious companies such as the New York Metropolitan Opera, the Opéra de Paris, or the Royal National Theatre London—more or less on a regular basis. (Sports events could be the next step.) Digital technology makes it possible to transmit such stage events live to cinemas all over the world, which sometimes means that spectators will have to adapt their theatergoing routines and come to see a Paris soirée in the afternoon at their local moving picture house somewhere across the Atlantic.¹² Such shows, it seems, are lucrative and generate extra income, because of the higher prizes for the tickets and maybe also because audiences can be served champagne and shrimp during the intermission rather than soft drinks and popcorn.¹³ Yet offering alternative content as a business strategy for movie theaters is in itself not a novelty, because already in the 1940s and 1950s there were telecasts of sports events and even operas in US movie theaters, even if this failed to become commercially viable at the time.¹⁴ Alternative content, in other words, is a commercial opportunity a number of multiplexes have turned to, but it remains to be seen whether it will be a viable one in the long run.

The remaining issue is indeed an important one, but again not really one that has been prompted by digital technology. It is obvious that for a majority of viewers the consumption of moving images, and even the consumption of fictional feature-length films, frequently takes place outside of movie theaters. But this does not necessarily imply a doom scenario. In 1992, Douglas Gomery wrote:

At the beginning of the 1980s some industry observers predicted that there would be no need for movie theatres by 1990. Everybody could stay home and view films on the coming new television technologies. Instead, during the 1980s more new movie theatres were built, creating more theatrical screens in the United States than at any time in history.¹⁵

Similarly, in spite of the increasing availability of feature films on DVD, Blu-ray, or the internet, cinemas in Europe overall did rather well. In Germany, for example, ticket sales actually peaked in 2012.¹⁶

Nevertheless, the fact that theatrical screenings are no longer the default

option for watching a movie—a situation, we might add, that dates back several decades by now—undoubtedly does have an effect not only on cinema as a cultural institution but also on the way in which one experiences films. Francesco Casetti has discussed this development in terms of a “relocation” of cinema towards other platforms and of a shift in the way one experiences film from “attendance” (of a film in a cinema) to “performance” (of a viewing act using a specific, generally digital device).¹⁷ Casetti argues that it is not simply the availability of new digital devices that has caused this relocation but that the new viewing habits are also the result of cultural changes.¹⁸

Thus the DCP is not the only carrier on which a film can be distributed, contrary to the reels of a film (at least in the pre-television and pre-video era). There exists a wide range of other viewing devices, and indeed, it is the studios themselves that are pushing for this subsequent distribution of a film on DVD, Blu-ray, pay-television, video-on-demand, etc., as this “secondary market” is an integral part of their business model. Today, possible viewing situations (e.g., to pass the time while waiting somewhere, while travelling on a train, or simply while relaxing at home) have multiplied. Together with the technological shift from celluloid to digital files, the experience of moviegoing as such has changed fundamentally, giving rise to the question “What, under these circumstances, is the meaning of ‘cinema’?”

Among the reactions to this issue, two stances can be distinguished. There are those who, without necessarily defending an essentialist view of the medium, link “cinema” to one or more features that for them are not negotiable, as it were: one may speak of cinema when, and only when, conditions A, B, or C are fulfilled. There is also a more pragmatic, maybe even relativistic view that argues that ever since the 1890s there has never been a unified phenomenon called “cinema” and that both synchronically and diachronically there has always been a diversity of *dispositifs* through which moving pictures could be experienced. Obviously, one can always find a conception of “what is cinema” that can be considered dominant, but this still will necessarily be one that is historically and culturally specific.

THE CINEMATIC *DISPOSITIF*: TRANSFORMATIONS AND CONTINUITIES

Traditional film history has tried to distinguish cinematography from all other moving image devices that preceded it, defining them as “pre-cinema.” According to this perspective, there are seven aspects that have to be taken into account in the definition of cinema: we talk of “cinema” when we have a moving image that is taken by a camera (1) on a photographic carrier, which generally has the form of a ribbon (2) that constitutes a series of still images

(3) representing a movement (4) that is projected by means of a light beam onto a screen (5) for an audience (6) that has paid to see it (7). On the face of it, one might conclude that for those subscribing to this concept, probably too many parameters of the *dispositif* have changed because of digitization. From their point of view, “cinema is dead,” a new era has started, and the “digital revolution” has brought new standards, which constitute a rupture with the past. Facing this inevitable fact, there are some authors who try to hold on to at least some characteristics to explain why there still is a certain type of experience one can refer to as “cinema.” For Raymond Bellour, “the lived, more or less collective experience of a film projected in a cinema, in the dark, according to an unalterably precise screening procedure remains the condition for a special memory experience, one from which every other viewing situation more or less departs.”¹⁹ For Jacques Aumont, it is the criterion *ex negativo* of a presentation allowing the spectator “to freely interrupt or modulate this experience,” which cannot count as “cinema.”²⁰

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For both authors, however, the changes that occurred at the level of the screening technology have by no means led to a digital revolution that has completely reversed the situation. A *revolution* is commonly defined as “a far-reaching and drastic change, esp. in ideas, methods, etc.”²¹ Therefore, the shift from analog to digital in terms of projection hardly justifies the word. A look at certain aspects of *dispositif* and some practical constraints helps to clarify what has changed for screenings in movie theaters and multiplexes.²²

Consequently, for the cinema audience, the impact of digitization is hardly noticeable, whereas the changes on the economic level are indeed dramatic. This concerns not only the financial parameters (costs for staff, transportation, and distribution of the carrier) but more importantly also the control of access to what now has become “content,” which has changed the balance of power between producers, distributors, and exhibitors, giving a pivotal role to the firms providing the Key Delivery Message. It is in this respect that the term “revolution” is indeed justified.

So is there a way to theoretically frame this process of digitization and to come to grips with the multiplication of viewing situations that it has made possible? We believe Roger Odin’s concept of “communication space” can help provide an answer: “A communication space is a space within which a bundle of constraints pushes the actants (S) [Sender] and (R) [Receiver] to produce meaning along the *same axis of pertinence*.”²³ For the screening of a fiction film in a movie theater, for instance, this would mean that within the communication space that is constructed there, both (S) and (R) produce meaning along the axis of what Odin calls a “fictionalising reading,” that is, a reception mode resulting in the spectator being immersed in the fictional events presented on the screen.²⁴ In this respect, in other words, the

Aspect	Analog	Digital
carrier of image / sound	Print	hard disk
screening apparatus	projector with light beam on a white screen	digital projector with light beam on a white screen
image / sound experience during screening	wide range, from pristine to defects such as dots, scratches, etc., degrading progressively	pristine image and sound
image / sound format variety	8mm to 70mm, 1.33:1 to 2.55:1, magnetic, optical and digital sound, 2D and 3D	1.85:1 (flat), 2.35:1 (scope), 2K or 4K, digital sound, 2D (digressive) and 3D (progressive – for the moment)
position of apparatus	projection booth	projection booth
organization of screenings	one projectionist starting one flatbed projector per booth per show	one technician programming all projectors once a week and starting the projector once a day
flexibility in screening	total flexibility in theory (only restricted by constraints imposed by the distributor)	no flexibility (pre-determined number of screenings at a given location)
distribution of new films	depending on availability of prints	depending on availability of “slots”

Table 2: Analog vs. Digital Projection in Cinemas.

shift from analog to digital projection does not affect the functioning of a film theater as a communication space—or, one could add, as the experiential space that this reading mode implies. When trying to define “cinema,” authors such as Bellour and Aumont attempt to outline criteria that allow them to define such a specific communicational and experiential space—criteria, in other words, that do not apply to other viewing practices. In this context they discuss viewing modes, such as film viewing in a “home cinema” environment or on a mobile device, which sometimes differ only gradually but in other cases quite radically from the ones Bellour or Aumont refer to as “cinema.”²⁵

The *dispositif* of the film theater showing fiction films thus is hardly affected by digitization when considered in terms of a communicational and experiential space. The DCP replacing a print does not cause a fundamental shift. What is happening, though, is the emergence of a whole range of mobile devices that, among other things, make it possible to view moving pictures in

a variety of contexts and situations, which does have an impact on the kinds of experience that one can have when watching a movie. But for these new *dispositifs*, it is not really digitization as such that constitutes the most relevant technological change but rather the advances made in the area of energy sources, and in particular the batteries that allow laptops, tablets, or smartphones to have enough autonomy to allow users to view huge moving image files wherever they are. This, however, is a different story.