Technology and Film Scholarship

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Section I: Experience

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**Abstract**

This chapter explores the technological and discursive conditions under which cinema attained its singular identity as “cinema.” In contrast with André Gaudreault’s paradigms of ‘kine-attractography’ and ‘institutional cinema,’ which locates the emergence of cinema with the advent of institutional norms in 1910, the year 1903 is instead proposed as a pivotal moment in this process of definition. During this year, the three-blade shutter began its widespread integration within motion picture machines, which sharply reduced the flicker effect and created a more absorbing cinematic experience. When film discourse became pervasive in newspapers and film trade publications, “cinema” had already undergone a reconceptualization that granted it a new a status, that of cinema, separate from other media and practices.

**Keywords:** flicker effect, three-blade shutter, periodization, early cinema, film experience

When did cinema become cinema? In some respects, the answer to this is obvious. One widely accepted moment is when the Lumière brothers showed their *cinématographe* in the basement of the Salon Indien du Grand Café in Paris on 28 December 1895. Although this answer might seem to result from narrow technological determinations – the invention of the *cinématographe* apparatus – this event is already technology plus several additional factors. We might hypothesize, then, some ‘eureka moment’ when the Lumière brothers first ‘perfected’ their new invention (perhaps on some dark stormy night), but such a moment seems to have
little traction in relevant historiographies. Moreover, the Lumière brothers had earlier public screenings, but it was the one at the Grand Café, at which an admission fee was first charged, that many argue constituted cinema’s true ‘beginning’. Cinema is understood, at least implicitly, to involve something more than a technology – not just a new technological system of projected motion pictures, but one that, from the outset, involved projection onto a screen in a theatrical setting of some kind with a paying audience.

Cinema, then, is also different from the first commercial modern motion picture system – the kinetograph-kinetoscope – introduced by Thomas A. Edison on 14 April 1894. Here, again, its beginning is traditionally tied to the opening of a Kinetoscope parlor at 1156 Broadway NYC – not to the demonstration of Edison’s experimental model on 20 May 1891, or the demonstration of a prototype on 9 May 1893 at the Brooklyn Institute of Arts & Sciences. Edison’s motion picture system was a crucial antecedent for cinema not only in terms of technology, but also for the generation of a distinct set of motion picture practices. Conceptually, the application of projection (in particular, a projector with an intermittent mechanism) to Edison’s motion picture system or some similarly constructed system c. 1895 made possible the essential components of cinema. This also acknowledges that the Lumière debut at the Grand Café must share honors with other screenings in other countries when it comes to the generation of motion picture practices, including the Lathams Panoptikon/Eidoloscope and the Thomas Armat-C. Francis Jenkins Phantoscope, which debuted at the Cotton States Exposition in October 1895, but was quickly ended by a fire only to re-emerge five months later as Edison’s Vitascope. Other motion picture systems developed c. 1895-1896 include the Cinématographe Joly, the Biograph, and Gaumont’s 60mm motion picture system.

Although historiography continues apace on this flurry of initial commercial projections, it has not led to a revival of pre-Brighton Conference/ pre-1978 arguments over firsts, but neither has it closed off discussion about the origins of ‘cinema’. To answer the question ‘When did cinema begin?’, we must first answer the *a priori* question, ‘What is cinema?’ Inherently, this question also asks what is not cinema. If cinema is defined as ‘projected motion pictures in a commercial, theatrical setting’, a variety of motion picture practices are clearly not cinema. Cinema excludes devices such as Edison’s peep-hole kinetoscope, the Biograph company’s mutoscopes as well as soundies from the 1940s. It also excludes press screenings such as the one for Edison’s Vitascope at the inventor’s laboratory on 3 April 1896,²
and the projection of advertising films onto buildings or makeshift screens in large cities, which became common in late 1896 and 1897. Already in the 1890s and early 1900s, many US exhibitors, such as Lyman Howe, showed films in churches and parish houses, offering theatrical entertainment at a time when important Protestant groups saw theater as a sin. Looking to a later period, there was also a large non-theatrical market for motion pictures, such as the use of educational films in schools and libraries. College film societies in the 1960s and 1970s were certainly considered part of the non-theatrical market, but they did their best to emulate the experience of cinema. Screenings in auditoriums and lecture halls often have enough of the attributes of what we consider cinema that to exclude them entirely would require a rigid purism. I continue to insist on classroom screenings of films because they provide an experience that is much closer to that of cinema than watching the same work on a computer, in which the experience is constantly interrupted as the user stops to check email or a news aggregator such as Google News or Facebook – not to mention speeding through a DVD in order to get the film’s gist. Hollywood now offers digital cinema, screened in theaters via a Digital Cinema Package (DCP). For Hollywood, the theatrical experience remains key to subsequent marketing formats (television, internet video screening, Blu-ray, cell phone apps, etc.) even if, as Francesco Casetti argues, cinema is, in some sense, relocated and persists in these various delivery systems.3

This definition of cinema, which I have tended to use in my own scholarship, is only one of several possible ways of conceiving of cinema. For instance, in Film and Attraction, André Gaudreault argues that “the fundamental rupture in film history was not the invention of the moving picture cameras in the 1890s […] but the constitution in the 1910s of the institution ‘cinema’, whose primary principle could be seen as a systematic rejection of the ways and customs of early cinema.”4 This idea of a decisive moment in film history, which occurred around 1910, is something Gaudreault shares with other film scholars. Dudley Andrew states that “the cinema came into its own around 1910 and it began to doubt its constitution sometime in the late 1980s.”5 Andrew is consciously echoing Edgar Morin, whose book Cinema: Or the Imaginary Man (1956) has a chapter entitled ‘Metamorphosis of the Cinematographe into Cinema’, which Gaudreault also mentions.6 Morin seems to think that those in the industry made films without worrying about its role as an art until roughly fifteen years after the cinema started, i.e. 1910.7 To the extent that we treat Cinema: Or the Imaginary Man as a historical text, it is worth asking if it escapes the problems of other histories from that period. (I would suggest that it sometimes fails.)
Moreover, although becoming an art and becoming an institution may (or may not) be related, they are hardly the same thing.

As Lee Grieveson noted at the IMPACT film conference, according to the *Oxford English Dictionary*, the term ‘cinema’ became popular in the United Kingdom over the course of 1910. Recall Virginia Woolf’s most famous pronouncement: “On or about December 1910 human character changed [...] All human relations have shifted – those between masters and servants, husbands and wives, parents and children. And when human relations change there is at the same time a change in religion, conduct, politics, and literature.” Did this change occur most of all in the cinema itself?

Not everyone sees 1910 as the magical year. In the second volume of Jacques Deslandes and Jacques Richard’s *Histoire Comparée du Cinema*, entitled *Du Cinématographe au Cinéma, 1896-1906*, the authors suggest that the *cinématographe* had become *cinema* by 1906 – not 1910 or 1915. Their chosen year is loosely linked to Gaumont’s incorporation (on 1 December 1906) and related phenomena, such as the rise of storefront or specialized motion picture theaters known as nickelodeons in the United States, penny gaffs in England, Kintopps in Germany – and cinemas in France. It is a moment when cinema gains a certain weight and its own infrastructure.

All this perhaps signals a larger historiographic problem of periodization. For instance, Gaudreault’s so-called birth of cinema 1 or (the *cinématographe*), which he increasingly considers a minor event in its history, produced the cinema of attractions era or that of kine-attractography, which lasted until 1903 (or perhaps 1906 or 1908), followed by the birth of cinema 2 or its institutionalization occurring around 1910 (or perhaps from 1910 to 1915). According to Bordwell, Staiger, and Thompson, this culminated in the establishment of the Classical Hollywood Cinema (its further institutionalization?) somewhere around 1917 with the establishment of the Hollywood system of representation. Another important watershed is the emergence of Hollywood’s vertically integrated studio system around 1920 and its new global dominance. These various and sometimes fluctuating dates are one sign that periodization floats between several different levels and needs to be assessed more carefully. That is, we need to reground this historiography in a stronger understanding of (broadly conceived) motion picture practices as they go through a series of interconnected transformations.

In the spirit of this persistent idea that cinema proper was subsequently constituted out of some earlier moment or formation in the history of cinema – what Gaudreault calls ‘the birth of cinema 2’ or what might, more neutrally, be called Cinema 2.0 – I want to return to the question ‘When did cinema become cinema?’ and be particularly sensitive to the role of
technology in providing an answer. Of course, one problem here is that there are several transformational moments over the course of cinema’s history. For instance, some (perhaps including André Bazin) might want to associate Cinema 2.0 with the coming of sound, while some contemporary media scholars might identify Digital Cinema as Cinema 3.0. In that case, Gaudreault’s birth of cinema 2 might be Cinema 1.4 and 1.5. These debates involve questions of 1) naming – I prefer to avoid applying birth metaphors to historical transformations; 2) periodization – what are the important moments of transformation or development and, ultimately, what are the most decisive or salient ones – or, in the case of Gaudreault’s ‘second birth’, the salient one? And 3) the kind a history we are writing – is it a history of films (Gerald Mast et al.), a history of film production and representation (Bordwell, Staiger, and Thompson), a history of the screen, a history of photography, a social and cultural history, a history of media, or a history of motion picture practices? The latter engages both the mode of representation and the mode of production as they interact, but it also understands cinema production not only to include film production (what was called ‘negative production’ in the early 1900s), but also exhibition and spectatorship, as well as various interstices such as distribution, advertising, and promotion. Of course, historians often write more than one simultaneously, though they generally privilege one over the other. Good cinema history, nevertheless, is also immersed in a larger cultural and social history.

What Gaudreault calls the ‘birth of cinema 1’ (or Cinema 1.0) is largely determined by the bringing together of technological innovations into what really constituted a system of inventions. Assuming the answer to the question ‘When did cinema become cinema?’ is not simply 1895-1896, and that we are looking for a new and decisive formation, a hypothetical Cinema 2.0, there are many possible answers. The history of cinema as an art and the larger social and cultural ramifications that result from these changing formulations are interesting and important. I find it difficult to imagine a decisive moment either in 1910 or even in 1910-1914. The process of institutionalization can be difficult to define precisely – and identifying a decisive moment of institutional emergence seems fraught. These issues seem particularly dynamic within what has often been called the transitional period of proto-classical cinema (from c. 1907-1908 to 1920), with the formation of the classical Hollywood vertically integrated studio system. Certainly, there are compelling reasons to argue for a new Cinema 2.0 in the wake of World War I, when American cinema asserted its global dominance. However, if we look at cinema practices in the first decade of the twentieth century, before 1910, there are at least three possible moments when we
might say that Cinema 1.0 became Cinema 2.0 – or, to drop computer-age terminologies—when cinema became ‘cinema’:

(1) In 1908, cinema became a form of mass communication – and thus mass entertainment and mass culture – with the introduction of the regular release schedule and an emergent mode of representation that was more accessible and consistent in meaning to a broad range of spectators (through the use of intertitles and a strong linear narrative organization of shots). This coincided with efforts to organize the film business in all its aspects through the Association of Edison Licensees and the then Motion Picture Patents Company, with related efforts in Europe. It was also at this moment that film (or ‘negative production’) moved away from a partnership model of production towards a hierarchical, military style or corporate chain of command and responsibility. The ‘director’ emerged, with Griffith as an early and notable example. Moreover, it was at this moment that many motion picture companies began to build their stock companies of actors. In addition, again in the US, the New York Dramatic Mirror started reviewing films, suggesting that, from an outside but closely affiliated perspective, films could be judged on the basis of their artistic merit. I should add that when I started to use the term ‘early cinema’, I was referring to the period up to this moment of transformation. Indeed, this conforms to the emergence of what Tom Gunning calls the ‘narrator system’. Likewise, Gaudreault refers to this as a new post-monstration era of narrative integration. So, here is a glimmer of coincidence – though our rationales for focusing on this date seem quite different, as does the importance Gaudreault and others give to it.

This remarkable, far-reaching transformation happened as a more or less direct result of another earlier moment when one might argue that cinema became cinema:

(2) I have remarked that “[i]t is not too much to say that modern cinema began with the nickelodeons.” Here, my term ‘modern cinema’ might be seen as ‘cinema 2’. It was in 1906 that the nickelodeons provided the motion picture industry with its own specially designated exhibition sites. To have specialized motion picture houses or cinemas but no cinema seems odd. This is the Deslandes-Richard date. Of course, any date always involves a certain amount of wiggle room. For example, the nickelodeon boom was getting underway in places such as Pittsburgh and Chicago in the second half of 1905, but not in Denver until 1907. And the US is just one instance in a global system. Thus, the boom in specialized motion picture theaters started in the Philippines in 1902-1903! Nevertheless, despite this geographic privileging, 1906 seems the critical year.
This rapid proliferation of movie houses – and the movies needed to show there – was possible or greatly facilitated by another earlier moment of reorganization.

(3) Anything characterized as a second birth should be something quite momentous. We should be talking about the wholesale reorganization of the dispositive or cinematic practices, when there was a convergence of multiple changes that put motion picture practices on a new footing. Moreover, it should be a moment when cinema becomes, in some sense, ‘cinema’. Is there such a moment – one that might at least rival 1908 or 1920 but is somehow more appropriate? I believe there is: the year 1903 – when a series of interconnected changes occurred in the dispositif, at least in the United States. What were these, and what was their relationship?

The Year 1903

The year 1903 involved a multifaceted, far-reaching reorganization of the dispositif that needs particular attention. Moreover, it is important to note that this included an essential, though often overlooked technological component: the introduction of the three-blade shutter on motion picture machines/projectors, which sharply reduced the flicker effect and made spectatorship much more pleasurable. Its use was widely advertised by traveling exhibitors in the US in the second half of 1903, and must have been widely and almost simultaneously adopted among those motion picture companies competing for outlets in the nation’s leading vaudeville houses. The three-blade shutter was a component of larger reorganizations of cinema practices, which, taken together, formed a transformational moment that, arguably, had no equivalent in its far-reaching nature. It did not determine this change, but rather was an integral and perhaps essential component of it.

Before 1903, post-production was largely under the control of the exhibitor. Indeed, film programs were not strictly speaking film programs. Most so-called film exhibitions involved the cutting back and forth between slides and film. This was not only common, it was desirable and, in some sense, necessary. In October 1896, Biograph was already alternating between titles slides and motion picture films. Title slides provided the spectators’ eyes with respite from the heavy flicker of projected films; and since motion picture film stock was expensive, it also reduced the costs of materials. By late 1896, and with increasing frequency thereafter, purveyors of illustrated lectures were giving evening presentations in which they alternated
between slides and film with something like a 4:1 or 6:1 ratio. Until 1903, exhibitors of motion pictures typically included slides in their programs. After 1897 or 1898, apparatuses for projecting films were generally combination stereopticon-moving picture machines that allowed operators to swivel the image carrier back and forth as they alternated between the two media. This meant that post-production was no longer under the ultimate control of the exhibitor: the process of assembling material into a coherent program was physically occurring in the course of exhibition. What we now call editing – the juxtaposition of shots to create meaningful connections – was under the control of the showman. (Of course, the exhibitor was also responsible for the sound – music, effects, narration and so forth.) Certainly, there were times when producers or production companies took on such editorial responsibilities (increasingly from 1899 onward) and the exhibitor acquiesced. Porter’s *Jack and the Beanstalk* (1902) and Méliès’s *A Trip to the Moon* (1902) are two such examples, and neither had intertitles. More often, exhibitors would assemble a group of short films and combine them into programs that might offer a miscellaneous collection of views or a program that offered thematic and/or narrative coherence. It was not unusual for programs to be somewhere in between. The surviving paper print of Edison’s *Jack and the Beanstalk* does not have a head title, but this does not mean that the film was shown without one. Exhibitors used a title slide to introduce the film. If the work can be said to include the title, we must conclude that the film was only a part of a larger work (in the case of *Jack and the Beanstalk*, easily the largest and essential part) and that the title slide varied from exhibitors to exhibitor – along with the sound accompaniment. Films were thus only building blocks or units for larger programs.

The year 1903 was the pivotal moment when editing and other elements of what is commonly called ‘post-production’ moved decisively from the responsibility of the exhibitor to the production company in key areas. Even as the three-blade shutter was introduced in the United States, the Edison Manufacturing Company began to sell its longer films – *Uncle Tom’s Cabin* (July 1903) was the first – with head titles and intertitles. Because the three-blade shutter reduced flicker, it became more viable to show filmed titles rather than title slides. Likewise, the cost of film was decreasing thanks to other, more modest technological innovations that reduced the time for perforating film as well as for printing of film positives. Key elements of post-production thus became rapidly centralized inside the production company – a process that had begun somewhat earlier, but had been impeded by well-established exhibition procedures. (Obviously, this shift applies to the projected image, and not to sound.)
The centralization of post-production inside the film manufacturing company had a profound impact on exhibition. Until 1903, an exhibitor provided venues such as vaudeville houses with a full service that included an operator, projector, slides, and films. Now that titles were on films rather than separate slides, projectionists were now simply showing a reel of film – a noticeable reduction in their responsibilities and skill levels. These old-line exhibition services, notably Percival Water’s Kinetograph Company, became distributors who rented a reel of film to the vaudeville houses (and probably sold them a projector in the process). In many cases, the vaudeville houses gave the role of projectionist to the house electrician. Again, this occurred in the later part of 1903. This, in turn, produced a new pattern of distribution – the rental system – in which the reel of film became a commodity.

It was also at this moment that narrative fiction began to dominate in vaudeville and elsewhere. In *The Emergence of Cinema*, I traced the kinds of film subjects that were being featured in Chicago vaudeville houses in 1903 using newspaper advertisements. The shift in subject matter was quite dramatic: roughly 20 per cent of the headline attractions were fiction or acted films early in the year, and this percentage had increased to roughly 80 per cent by the fall. There were multiple reasons for this shift to story films, but reduced flicker certainly facilitated the kinds of pleasures one associates with fantasy and fiction. The moving picture houses that soon followed could then be given names such as Bijou Dream and Dreamland. This shift also meant that lanterns were redesigned just to show films: they became motion picture machines. While perhaps not the only moment when we can argue that ‘cinema became cinema’, the year 1903 was a decisive moment, as, practically for the first time, projectionists in vaudeville houses and elsewhere only showed films as part of their programs. While before mid-1903 cinema was a screen program that typically included both slides and films, after mid-1903 cinema was constituted as a pure film program. Although there were lots of old film without head titles, this transition may have happened surprisingly quickly. Old-line distributors often had their own filmmaking capabilities and could have easily shot head titles on film and cut them into their reels of film. (In fact, even into the nickelodeon era, distributors sometimes replaced head titles supplied by production companies with their own as a way of claiming ownership if not authorship.)

Finally, there is the consideration of theory, of changing conceptions of cinema, of its ontology. What is cinema? As André Gaudreault and Philippe Marion suggest in their talk ‘Measuring the “Double Birth” Model against the Digital Age’, cinema was initially seen as a special kind of magic lantern. Here, we are certainly in agreement. In *The Emergence of Cinema*, I wrote:
The *Optical Magic Lantern Journal* of November 1896, for example, observed that ‘The greatest boom the lantern world has ever seen is that which is still reverberating throughout the land – the boom of living photographs’. In *Animated Pictures* (1898), C. Francis Jenkins wrote:

It has frequently been suggested that the introduction of chronophotographic apparatus sounded the death knell of the stereopticon, but with this opinion I do not agree. The fact is, the moving picture machine is simply a modified stereopticon or lantern, i.e. a lantern equipped with a mechanical slide changer. All stereopticons will, sooner or later, as are several machines now, be arranged to project stationary pictures or pictures giving the appearance of objects in motion.

These observations were echoed by Henry V. Hopwood in *Living Pictures* (1899): ‘A film for projecting a living picture is nothing more, after all, than a multiple lantern slide’.

During the year 1903, cinema was largely invisible in the press – at least, there was little said about what was going on in vaudeville houses. If very little was said about the nature of cinema, it was perhaps also a moment of profound realignment and reconceptualization. When the discourse resumed – indeed, once story films were clearly dominant within the industry, the cinema was newly conceptualized as a special kind of theatrical entertainment, rather than an extension of the lantern or a visual newspaper. The appearance of film reviews in the *New York Dramatic Mirror* in 1908 offers one piece of evidence. From this point forward, at least for many years to come, comparisons between stage and screen would do much to structure theories of film.

These different moments when cinema became not ‘the cinema’, but a new kind of cinema (a new formation distinct from what it had been only a few years before), should not obscure the fact that the moment when cinema (Cinema 1 or ‘the cinématographe’) first appeared was one of fundamental importance and impact. In *Film and Attractions*, Gaudreault argues:

My hypothesis is that ‘cinema’ was not invented in 1890 by Thomas Edison and W. K. L. Dickson with the Kinetograph, nor by Auguste and Louis Lumière in 1895 with their Cinématographe, nor by an other supposed inventor of cinema. The only things invented by those who are generally
recognize[d] as having invented cinema were the devices to make cinema. It is a subtle distinction, but the device used to make cinema is not the same as cinema itself.\textsuperscript{22}

As one of the presumed ‘partisans of Edison’ (though they go unmentioned by name),\textsuperscript{23} I find it essential to be clear and therefore reiterate my position. There is no question in my mind: \textit{Edison neither invented the cinema, nor the device to make cinema}. Cinema is, in my opinion, projected motion pictures in a commercial, theatrical setting; this is what the Lumières did with their \textit{Cinématographe} – not just by ‘inventing’ the machine, and developing an entire motion picture system that was an alternative to Edison’s, but by utilizing that machine for commercial purposes inside a theater. Edison and Dickson invented a motion picture system that relied on the peep-hole kinetoscope to exhibit films and was \textit{a pre-cinematic device}.

The distinction between the invention of the device that can produce cinema and the cinema itself is a tricky one. The device could be invented but not given commercial application (a possible example is Louis Le Prince) Then, clearly, there is no cinema. Or, it could have been used only for scientific purposes à la Jules-Etienne Marey – in which case, no cinema. But this did not happen. Exhibitors introduced it into theatrical settings almost immediately (even prematurely from a technological viewpoint if we consider the Lathams’ Eidoloscope). But one might argue – and this seems to be Gaudreault’s point – that even though it was put into theaters, this new media form was not transformative; it remained little more than an extension of previous ‘pre-cinematic’ practices; its impact on culture and social life was similar to what already existed; it was a novelty that was not so different from the pre-cinematic peep-hole kinetoscope. I must strongly disagree. Between late 1895 and 1897, cinema emerged as a new phenomenon, a new worldwide cultural force. In an essay I wrote for another Gaudreault anthology, I detail cinema’s transformative impact in the United States on sports, religion, politics, theatrical culture, the newspaper, and American courting rituals between April 1896 and the end of 1897.\textsuperscript{24} The appearance of this new media form has often been relegated to the status of ‘novelty’. Indeed, I have been as guilty as anyone in referring to 1896-1897 as cinema’s novelty period in the United States. As too often happens, I am afraid, the naming of a phenomenon can conceal as much or more than it reveals. \textit{Mea culpa}. Even so, this sense of novelty – of something fundamentally and importantly new – was widespread and garnered widespread comment and attention wherever it first appeared. Certainly,
there were important continuities, but transformative moments always involve continuities as well as ruptures.

Second Birth = Institutionalization?

Although I have suggested a number of crucial moments in the ongoing transformation of cinema before 1910 – moments when one might argue that cinema became more recognizably ‘the cinema’ – I don’t want to privilege any one of them. In this respect, I align myself with Yuri Tsivian who remarked that “in the course of cinema’s history what cinema is has changed enough times for a history of the cinema’s identities to be written.” Of course, there were a number of innovative developments over the course of the 1910s that should not be overlooked. The year 1912 saw the full maturation of the one-reel film and the emergence of the feature film, often starring the world’s leading stage actors. By 1915, traditional production companies in the US were no longer making profits from their short films, and feature film exhibition was entrenched with its own standardized release schedule. With Charlie Chaplin and Griffith’s *The Birth of a Nation*, film achieved a new level of recognition as an art form, while the first important books on film appeared. Bordwell, Staiger, and Thompson have asserted that the Classical Hollywood cinema’s mode of representation was in place by 1917, while the vertically integrated studio system was a reality by 1920. Each of these can be said to mark a notable shift in cinema’s identity, though it should be pointed out that there never was and never has been any periods of extended stability. Even in the 1920s, the introduction of synchronized recorded sound meant tremendous change and upheaval.

What, then, constitutes the institutionalization of cinema – this “fundamental moment of rupture in film history” such that we should separate cinema into two periods: a kind of new ‘pre-cinema’ in which the cinematic butterfly was not a butterfly but actually a caterpillar, and the moment when the butterfly burst forth from its cocoon? This underlying issue seems underexplored in *Film and Attractions* where a formulation by Lucie Robert is offered:

> [A]n institution is a ‘normalization system’ which is structured in order to ‘produce in its area of influence, certain particular forms of behavior’. In other words, as Clement Moisan puts it, an institution is made up of a ‘set of codified practices’.
Or, as Gaudreault puts it, “[t]ime was required – a minimum amount of time, for production of codes and norms – and thus the interpretive codes and norms – to appear or if you prefer, to be instituted.”28 But codified practices of some kind and degree were always in place. They did not so much come into existence as they changed. This is one of the problems with the birth metaphor. (Though the birth metaphor typically uses the pathetic fallacy for which the human rather than the butterfly is the subject of such a birth). Editing, for instance, was neither invented, nor organically appeared from nowhere. It existed before cinema in well-developed lantern practices – the juxtaposition of images created by the sequencing of slides. The exhibitor was often both programmer and editor – two roles that were not clearly differentiated. It was only in 1903 that these roles became more clearly distinct as key elements of post-production – specifically, editorial control – shifted into the production company and concentrated creative control in one place – while programming resided with the exhibitor. Even so, as Richard Koszarski and Ross Melnick have shown, in the 1920s showmen sometimes re-edited a film so that it would conform to time constraints and have its artistry or entertainment value enhanced – still seeing it as part of their prerogatives of showmanship.29

Even though codes, norms, and practices changed, in crucial respects they were in place from cinema's very beginning. Why? Because cinema's beginnings did not constitute a birth, but a transformation of existing practices – or a powerful collision, a dialectical synthesis of nascent motion picture practices that came out of photography with well-established magic lantern/stereopticon practices. Certainly, the realm of cinema was much smaller in 1896-1897 than in 1915, and its practices had changed radically over that intervening period. Certainly, elements such as film gauge lacked standardization. Certainly, it was associated with a wide range of entertainment forms (vaudeville, the circus, magic shows, road shows, lantern shows, and more). Nonetheless, the reality of cinema as a technological practice was that this technology demands that its practitioners operate within rigorous constraints and norms. This was particularly true for production – both negative production and print production. Although the width of motion picture film might have varied from one motion picture system to another, within each system the format had to conform to quite rigorous standards. The protocols for making a film print from a film negative were every bit as severe and elaborate in 1896 as they were in 1910 or 1920. In fact, they had just become much more efficient and, in some sense, simpler and more routine in 1920. For the technology to function, indeed for cinema to even come into
existence, this required not only an appareil (a technical apparatus) but a dispositif – that is, a practice with its own distinct protocols.

From the outset, these practices and protocols were distinct in ways that set themselves apart from prior practices in photography and the lantern – which themselves had already constituted a powerful nexus. It is worth noting that at least in the United States during the second half of the nineteenth century, this intersection of photography and the lantern had been widely seen as a kind of emergent media form called the stereopticon. That is, the stereopticon as a practice, formation, and media form was conceived of as photography plus a new improved lantern with a stronger light source and sharper lenses. In this, it was very similar to the cinema, which can be defined as motion pictures plus lantern projection (in a theatrical setting – but this is something else).

The stereopticon obviously failed as a media form while the cinema has enjoyed much greater claim to this status. The question is why? Among other things, the stereopticon ultimately proved to be just another version of the lantern platform (the magic lantern). Its lantern could also show painted slides, slip slides, slides with messages that had been typed on a typewriter, science slides with specimens sandwiched between the two pieces of glass and so forth. This is at least one of the reasons why its identity as a media form encountered substantial resistance and ultimately fell apart. Initially, cinema had similar structural vulnerabilities. As already mentioned, Edison’s Projecting Kinetoscope or Lubin’s Cineograph also functioned as a stereopticon in the late 1890s and early 1900s, as they showed both slides and films. Once again, these slides involved a variety of media. For instance, title slides were often hand-painted on glass. So, when people saw a turn of motion pictures at Proctor’s 23rd Street Theater during the Spanish American War, they saw more than just projected motion pictures – perhaps more than projected photographs (both still and animated). Motion pictures were clearly dominant – they were the official attraction – but this was an impure cinema. Thus, once again the importance of cinema’s new identity after 1903. The reel of film that became the standard offering for the system of film exchanges that quickly spread across the United States and the world after 1903 was both a commodity and a pure, new form of cinema. It was a critical step in the establishment of cinema as a newly self-contained practice and media form.
Notes

1. I would like to thank André Gaudreault, Martin Lefebvre and their associates for organizing a wonderful conference at La Cinémathèque Québécoise in Montreal, where a version of this essay was first presented. After some thought, I decided not to revise that presentation into some impersonal, polished article, but to keep the spirit of what was said while pursuing modest but appropriate refinements. At the conclusion of this presentation in Montreal, André took off a few articles of clothing but stopped well before decency required a halt, which may suggest a certain failure on my part to overcome some of our different perspectives.


4. Gaudreault, *Film and Attraction*, 34.


6. Ibid., xiv.


8. Organized by André Gaudreault and Martin Lefebvre in Montreal on 1-6 November 2011.


11. Gaudreault offers two periods before institutionalization, which occurs around 1915. The first – the system of monstrative attractions – goes to 1908. The second, “the system of narrative integration” (Gaudreault, *Film and Attraction*, 53) or the proto-institutional period, goes from 1908-1914. (Gaudreault, *Film and Attraction*, 90).


13. If we consider cinema in the context of the long history of screen practice, we might want to consider the initial formation of cinema in 1895/96 as something like Screen 4.0 (to take a somewhat arbitrary number).


15. Musser, ‘Pre-Classical American Cinema’.


19. ‘A Moving Picture of M’Kinley’.


21. Ibid., 15.

22. Gaudreault, *Film and Attraction*, 5.

23. Ibid., 33.


26. Gaudreault, *Film and Attraction*, 34.
27. Ibid., 67.
28. Ibid.
29. Koszarski, An Evening’s Entertainment, xx; Ross Melnick, American Showman.
30. I examine this in Musser, ‘The Stereopticon and Cinema: Media Form or Platform?’, 129-160.

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