

Media of Attraction: a Media Archeology Approach to Panoramas, Kinematography, Mixed Reality and Beyond

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Abstract. This paper presents a new concept for understanding contemporary interactive works created with emerging or new media, such as virtual and augmented reality, as part of a larger historically informed category called *media of attraction*. Inspired by scholarship in film history and media archaeology, the media of attraction concept connects contemporary digital experiments to earlier forms including cabinets of curiosity, 18th century panoramas, pre-filmic moving image technologies, vaudeville, early film or cinematography, and others. Foundational elements defining media of attraction are laid out and discussed. This new approach has profound implications for how work created today is valued and understood, how central debates in the field can be re-contextualized, and how notions of progress can be radically reframed.

1 Introduction

The concept *media of attraction* builds on scholarship in early cinema by Tom Gunning [1][2], André Gaudreault [3], Charles Musser [4] [5], Richard Abel [6], and colleagues who led a major shift in the approach to film history following the landmark Brighton conference in 1978 sponsored by the Federation Internationale des Archives du Film. In the decades following this influential meeting, these film historians have developed compelling arguments to support their position that so-called early cinema cannot be understood as an embryonic, primitive or naive version of the cinema we know today. These historians eschew a perspective of medium-centricity and reject the idea that media develop by a process of the discovery of essential characteristics that then become exploited by the most adept practitioners, the final result of which becomes recognized as ‘serious art.’ Instead, this group of scholars contends that from the earliest period of film history, the 1890s to 1908, moving images produced on film were developed in complex, interconnected, and improvisatory ways. Thus, they argue that these experiments need to be understood in their own right, as proper expressive works, not through the lens of what later became the institutionalized cinema form. These early works are referred to as *cinema of attraction*.

By broadening the cinema of attraction concept across more time periods and technologies, we can include mixed reality (MR) works in this larger category of *media of attraction*. MR includes a group of platforms and techniques, such as augmented real-

ity, virtual reality, and other immersive or spectacular displays that combine the physical and digital. By understanding MR as a part of the larger, cross-historical media of attraction category, new ways of interpreting MR work may become possible, as well as new directions for the field moving forward. To explore this proposed media of attraction concept, this paper will first discuss the new concept's roots in film scholarship on cinema of attraction, then lay out central characteristics of media of attraction, and conclude with a discussion of implications for future research.

1.1 Cinema of Attraction

The *cinema of attraction* concept is so named to emphasize connections with other forms of attraction, such as cabinets of curiosity, vaudeville shows, dioramas, panoramas, fairground attractions, and displays at World's Fairs. Gunning has described cinema of attraction as an "exhibitionist cinema" that both calls attention to its own technical capabilities, as a source of wonder and astonishment for spectators, and simultaneously reaches out to the spectator directly through meta-theatrical techniques [1]. In addition to the aesthetic connections between this period in film and other types of attraction, historical connections are present too. For example, some of the earliest exhibitions of kinetoscopes and projected films were at World's Fairs. In this early period, film was often presented as exhibit or act, including appearances on vaudeville stages such as Winsor McCay's *Gertie the Dinosaur*, which was not only the short film we may be familiar with today, but an animated projection used in McCay's live vaudeville act in 1914 [7]. Many of the same performers who populated World's Fairs amusement areas (Jim Corbett, Eugen Sandow, Annie Oakley, Buffalo Bill, and others) were also performers for early film. As for connections between dioramas, panoramas, and cinema of attraction, the skills and techniques used in creating those earlier attractions were also utilized for film. For example, in a 1907 essay French filmmaker Georges Méliès discusses the need for absolute precision in backdrop and set painting for film, explicitly referencing the techniques of panorama making that combined detailed, perspectively correct painting on flat surfaces with three-dimensional objects [8].

In addition to the relevant scholarship on cinema of attraction, media archeology and media history scholarship also play into the larger media of attraction concept I propose here. For example, several scholars have offered excellent recent studies focused on the history of technologies of immersion, illusion, and illusions in motion; most notably Oliver Grau [9], Alison Griffiths [10], and Errki Huhtamo [11]. These studies explore historical and aesthetic connections between immersive rooms and spaces from the ancient and classical world, painted panoramas, dioramas, magic lantern shows, panorama "rides" exhibited at World's Fairs, the history of immersive museum spaces, large immersive cinema formats such as Cinerama and IMAX, and contemporary interactive installations and virtual spaces. These works approach the artifacts discussed through a variety of valuable lenses (art history, film history, and media archeology, respectively). Here, I propose these studies might be thought of collectively as historical explorations of media of attraction.

By broadening the cinema of attraction concept to encompass more technologies across more time periods, we can develop a larger *Media of attraction* concept, that

can include our own experimental media work today. I am convinced by Gunning, Gaudreault, Musser and others that early film, or cinematography, is indeed its own form, and not an infant version of the later, standardized cinema form we recognize today. So if we accept there is not much of a connection between cinema of attraction and cinema, could there be an interesting relationship between cinema of attraction and *other* media in ‘attraction’ phases? What about early radio, or television? This presents an interesting possibility for future historical research. But more importantly, if mixed reality (MR) works today could be understood as media of attraction, and not naive or embryonic forms of some forthcoming standardized form, we might open new ways of understanding this type of work and how it should be valued. This larger, cross-historical perspective could also offer new ways to reframe central debates surrounding MR (not to mention other contemporary experimental media, and future media yet to come) as well as suggest a new understanding of what constitutes progress in the field. To begin an exploration of these possibilities, I will suggest a set of characteristics or qualities that can define media of attraction, based on my understanding of cinema of attraction scholarship and media archeology, interpretation of historical primary source materials, as well as reflections on my own design experiences with MR over the past decade.

2 Media of Attraction

Stepping back from cinema of attraction to consider media of attraction as a larger category, it will be helpful to outline a set of central qualities that define the category. The aim is to develop media of attraction as a meta-category that spans time periods, technologies and techniques, to help illuminate design approaches and artifacts in early phases. A first attempt at diagramming a timeline of past and present examples of media of attraction appears in Figure 1, bringing together examples of hypermedia spaces, forms from theatre history, screen history, and spectators in motion.

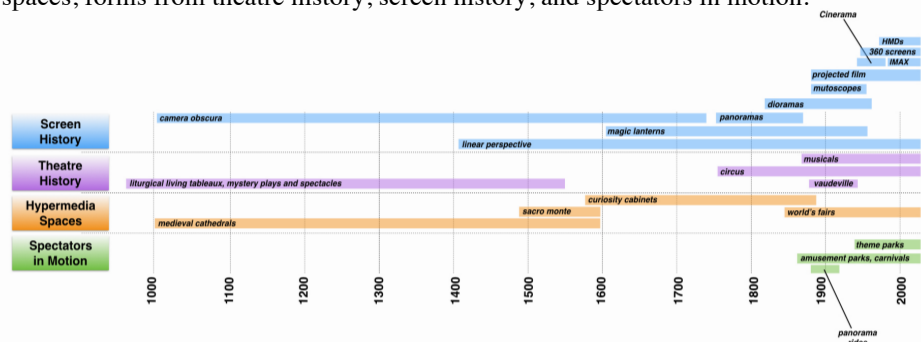


Fig. 1. Towards a timeline of media of attraction, past and present. Further research and contribution from the larger community will be needed to map these histories with more nuance, and more completely. A next iteration should include delineation, where applicable, between media in an attraction phase and media in assimilated, institutionalized forms.

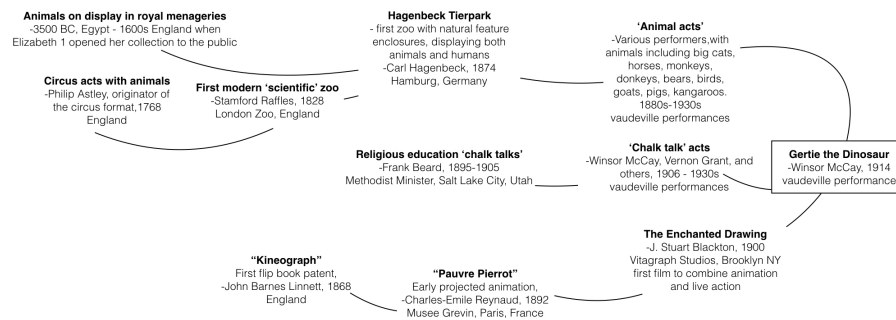


Fig. 2. Towards a graphical representation for the genealogy of media of attraction artifacts, highlighting historical and aesthetic connections, with *Gertie the Dinosaur* as an example.

Figure 2 presents a suggestion for diagramming media of attraction genealogies for specific artifacts; in this case, *Gertie the Dinosaur*. Reflecting on the variety displayed in both Figures 1 and 2, what can be said to draw these forms (and others not yet mapped) together? They all revolve around attraction, to be sure, but this can be unpacked in more detail. If we understand attraction at its core as the inciting of wonder or astonishment in the spectator, we can dig into what particular qualities create the necessary conditions for attraction. I propose the following four characteristics as common threads across media of attraction:

1. Unassimilated
2. Interdisciplinary
3. Seamed
4. Participatory

Unassimilated. By unassimilated, I refer to media that are not yet institutionalized, meaning they are not part of the fabric of everyday life, retain some novelty, and often have no formal, codified training for associated practitioners. Unassimilated media are not restricted to new technologies; assimilated technologies may be combined in new ways to create convergent media artifacts that also lack assimilation. An example of this convergent strategy is the Radio Photologue phenomenon from the Chicago Daily News in the 1920s, when the newspaper had its own radio station and created broadcasts specially designed to be listened to while following along with a newspaper photo spread [12]. Other examples may be entirely non-technological, such as European cabinets of curiosity from the sixteenth and seventeenth centuries [13]. While these collections contained no technology per se, they brought together in new combinations wondrous artifacts in immersive space, and were certainly set apart from the experience of the everyday. In addition, unassimilated media have no formalized means of criticism to evaluate works produced. For example, as of yet there are no professional critics who focus exclusively on augmented reality.

Other consequences of the unassimilated phase in which media of attraction operate is that these media often lack efficient or far-reaching distribution systems, and are also often not archived, or archived poorly. For example, while early film was fairly well distributed (at least compared to MR works today), a vast amount of early films have been lost or destroyed because the value of the work simply was not understood at the time. To cite a well-known instance of this, hundreds of Georges Méliès' films

were seized by the French government and melted down to make boot heels for soldiers during the First World War. A lesser known, but equally important example, is the unexplained loss of all of Alice Guy-Blaché's feature length works made in America [14].

Interdisciplinary. Media of attraction draw on multiple art forms and techniques, necessitating complex teams in most cases, or occasionally one-man-band type of creators. This is partly due to the unassimilated phase in which media of attraction operate; practitioners cannot be trained in a media-specific program, so by necessity, practitioners come from other disciplines and bring existing models and concepts from that medium to bear. Méliès claimed that early film or cinematography was “the most engaging and worthy of the arts” because of this intense interdisciplinarity: “It [cinematography] makes use of almost all of [the arts]: The stage, drawing, painting, sculpture, architecture, mechanical skills, manual labor of all kinds — are all employed in equal measure in this extraordinary profession” [8]. While the management of these complex teams can be daunting, the synergy of this variety of perspectives, approaches, and skills leads to a rich multiplicity in media of attraction, that is not dampened by the institutionalizing forces which more assimilated media are routinely subjected to.

Seamed. Because of this rich multiplicity of design approaches and structures exhibited by media of attraction, these media are not “seamless” as technology industry rhetoric might have us believe. Instead, media of attraction are decidedly seamed. Edges show between parts of a media of attraction experience, and the patchwork of ways in which multiple forms of representation come together are not hidden from spectators. For example, Gaudreault discusses the previously overlooked role of the film narrator, a live performer who accompanied early films (which were of course silent) by adding spoken narration. Some exhibitors even added spoken dialogue and sound effects, performed behind the projection screen [3]. The role of the film narrator highlights early film's lack of “narrative self-sufficiency” by emphasizing the seam between physical and mediated modes of performance. Many of today's MR works are similarly seamed, and likewise not narratively self-sufficient. They require ancillary materials, explanations, and even live performers or guides. But it is through this exposure of seams that the audience to media of attraction is made explicitly aware of the technology itself. If leveraged well, this awareness can operate to allow audiences to take meta-pleasure in the mediation presented, in addition to the feeling of immersion. This double sense of wonder at both the mastery of the designer, as well as the wonder or astonishment at the effect of the illusion itself, is at the core of media of attraction.

This seamed quality is similar to Bolter and Grusin's concept of hypermediacy, which does not erase mediation, but rather highlights it [15]. This roughness or layering is not only a byproduct of the ways in which media of attraction are developed, on another level the seams are actually necessary for audience members to truly enjoy the illusions presented— you must realize the VR game is a construction to fully appreciate it.

Participatory. Media of attraction all reach out to the spectator with some form of invitation to engage in an active and direct way. In some cases, such as vaudeville and other staged entertainments, this invitation comes in the form of a meta-theatrical address to audience members. The Italian Futurist, Filippo Marinetti, described the variety theatre of 1913 as “[...] seeking the audience’s collaboration,” who do not “remain static like a stupid voyeur” [16]. This invitation to participate impacts several aspects of media of attraction, including experience framing, interface design (if applicable), and narrative structures. Tensions between narrative and interactivity have been a key topic of discussion in relation to digital media in particular with notable contributions from many scholars including Marie-Laure Ryan, George Landow, Janet Murray, Henry Jenkins, and others [17, 18, 19, 20]. Despite these many valuable perspectives, the topic of the integration of narrative and interactivity is still somewhat of an open question in the field, with recent papers highlighting the need for the development of new strategies, such as this call by Hartmut Koenitz for more generalized approaches to the issue [21].

Media of attraction always have a push and pull between attraction, narrative, participation, immersion, and seamed-ness. This larger category of media of attraction helps us to see that these tensions should not be understood as negative. Recontextualizing artifacts that may have previously been understood as a part of smaller, siloed categories (database cinema, interactive narrative, augmented reality, etc.) as media of attraction removes some of the negative concepts associated with a mix of interactivity and narrative that may stem from literary theories of narrative, which have been imposed on these more focused disciplines. Moving away from literary approaches into the media of attraction concept also shifts ideas of what constitutes progress in the field, away from calls for ‘the Citizen Kane’ of VR for example. Instead, we are encouraged to move towards embracing multiple narrative structures and strategies, and anti-narrative or non-narrative experiences, as all representing valid forms of experimentation, and valuable contributions to the multiplicity expected of media of attraction.

In the case of early film or cinematography, it is particularly clear to see this non-exclusive focus on narrative at work, balanced by the necessary focus on the attraction of film’s new and exciting capabilities. However the narrative-attraction opposition posed by Gunning [1] has, as noted by Musser, likely been overstated [5]. Among early films, even within the work on a single filmmaker, we can see variety in the ways in which narrative and attraction are balanced, all with valid results. For example, two films from Georges Méliès, made within a year of each other, exhibit a wide range of strategies: *The Man with the Rubber Head* and *A Trip to the Moon*. The 1901 3-minute film *The Man with the Rubber Head* doesn’t have much of a story, and is mostly intended to entertain us with film’s abilities for superimposition and zooming in. Nevertheless, a story frames the film. This framing shouldn’t be discounted, because without the frame and context provided by the story, the film would be much less enjoyable for audiences.

The *Man with the Rubber Head* shows a scientist in a laboratory, with a double of his own head, disembodied. The scientist places the disembodied head on a lab bench, and sets to work inflating it to huge proportions with a bellows. His assistant enters, and is handed the bellows so that he may also see the peculiar effect. The assistant is over-excited, and inflates the head too far, which explodes. The exasperated scientist

kicks his assistant out of the lab. The result is an enigmatic, engaging piece with what could be understood as a sly commentary on scientists' egos. The core of the film is, however, the display of the technology. Interestingly, another film from the following year from Méliès shows a different balance between narrative and attraction: the 1902 film *A Trip to the Moon*. This film is concerned with a space voyage of a group of scientists and officials who visit the moon, and their encounters with the fantastical creatures there. This 9-minute piece includes a showcase of all manner of film capabilities - superimpositions, disappearing characters, explosions, and more. However, the story is much more involved, so much so it is beyond the scope of this paper to relate in detail. What is remarkable across these two examples is the variety of ways in which just one filmmaker has experimented with narrative structures in a short period of time, and this type of energetic experimentation may in fact be a hallmark of media of attraction.

While these early films are not participatory in the same way that today's interactive digital works solicit audience participation, these early films do reach out to the spectator with meta-theatrical techniques (i.e, the magician bowing to the camera before doing his tricks) in a way that invites an interaction. So because there is an inherent connection between media of attraction and interactivity, we might shift our thinking to see a push and pull between story and attraction (which implies participation) as simply a central characteristic of this meta-category, and not a conflict that needs to be solved. The variety of aesthetic choices and narrative structures on display in media of attraction are nonetheless all inextricably bound up with the particular challenges, limits, and affordances of the technology at hand - all of which the creators are (at times quite painfully) aware of.

2.1 The Voice of the Media of Attraction Practitioner

There are at least three ways to understand a media artifact of any kind. First, there is a critical perspective, meaning the critique or interpretation of the scholar, critic, or reviewer. Second, there is the audience perspective, either as a personal narrative or testimonial, or audience reception study. Third, there is the voice of the artifact's designer or creator. The unstable and explorative nature of media of attraction means that the need to engage them from the design perspective is pressing, although this has rarely been done in any systematic way, as we will see.

In drawing this larger category of media of attraction together, one new possibility that is opened up to media of attraction practitioners today is to look back to earlier practitioners and see what can be learned. In terms of cinema of attraction, very few primary sources are available, and even fewer in English, that present the filmmakers' own discussion of their creative process [6]. Part of the difficulty in researching this is that during these very early years, there was no single term for the person with the primary responsibility for making the film - operator, moving photographer, cinematographer, presenter of views - all of these phrases and terms were used, and others besides. (This conundrum must sound familiar to those working in media of attraction today, and has been discussed with respect to interactive narrative in particular [22]).

The earliest sources of writing by makers of films focus on the technical details of the film camera and the various ways in which the filmed image may be displayed.

Largely centered on descriptions of the history of the invention of the camera device, these early sources contain little or no information about how to create meaningful experiences using the new technology. Writings from the Dickson siblings and Edison, Hopwood, and others, while fascinating in their own right, fall into this category [23, 24].

One of the few sources available does include a 1907 essay from French filmmaker Georges Méliès, who was one of the pioneers of the “story film” or film that presented a fictional story enacted by costumed performers in fabricated settings. Méliès’ work stands apart from many of the earliest films, which were often referred to as “views,” and did just that—they presented the viewer with something of interest to look at, such as a dramatic natural view like a waterfall, an anatomic performance like a sneeze or a body builder’s poses, cats fighting, a person throwing a lasso, etc. Méliès brought his experience working at the Theatre Robert-Houdin to bear on his filmmaking, and developed a remarkable number of story films that had great influence on other major early filmmakers, like Edwin S. Porter.

In Méliès’ 1907 essay, he describes in brief every aspect of filmmaking, with his advice on how to handle the challenges in each case. The discussion ranges from a rough taxonomy of different types of films, to the particular needs for a studio building, lighting, costumes, the difficulties of teamwork, and so forth [8]. Of particular interest is Méliès’ perspective on “composing and preparing scenes,” or narrative. He advises one to begin with “[...] a scenario drawn from the imagination.” Then, he counsels, “[...] you must seek effects that will have an impact on the audience, create sketches and models of the sets and costumes, and come up with the view’s star attraction, without which it has no chance of success.” Notably there is no mention of Aristotle, or Freytag, but rather a balance between the “scenario” you imagine, and the “effects” that will draw in the audience. The balance between narrative and attraction appears to be the guiding principle; the rest is left open to the designer’s ingenuity and imagination. Just four years after Méliès’ essay, in 1911, Bennett’s *Handbook of Kinematography* was published including a chapter laying out a standardized format and structure for narrative screenplay writing, that is very close to what persists in Hollywood today [25].

Aside from the Méliès’ essay, another interesting source with an early filmmaker’s own voice is a New York Times interview with American filmmaker Edwin S. Porter from 1940, a year before his death, looking back at his career. Porter is likely best remembered as the creator of *The Great Train Robbery* (1903), but he made a large number of films both working for Edison and later on his own, and engineered countless influential approaches and effects for film. Like Méliès, Porter came to film with a background in staged entertainment, along with a knack for new technologies, having been one of the country’s youngest telegraph operators at age 14 [26]. Porter lost interest in film after standardization, and after debuting the first anaglyph 3D film in 1915, made no more films. In the Times 1940 interview, Porter is said to feel that “though pictures have indubitably made tremendous strides forward since [my] time, much of the initiative and excitement has gone out of movie-making” and confessed “I rarely see pictures any more” [27]. In Porter’s estimation, standardization narrowed and perfected the medium to a point of tedium, a sentiment recently echoed at a 2016 games conference by keynote speaker Richard Bartle, originator of the MUD (multi-user dungeon). Speaking about current methods for virtual world design, and

the often unanticipated cost of developing a medium, Bartle put it succinctly: “It’s a lot easier to make things nowadays but it’s a lot less creative” [28].

Here we find a cautionary tale to those of us working in media of attraction today. By 1912, just a few years after Méliès’ exuberant essay, he no longer made films at all. Dissatisfied with the Motion Picture Patents Company that Thomas Edison had created as a conglomerate to oversee, standardize and control the film industry, Méliès was quoted in a trade publication declaring “I am not a corporation; I am an independent producer” [29]. Méliès ended his life in poverty, working in a shop in the Paris Montparnasse train station, hawking toys and candy.

So perhaps as contemporary media of attraction practitioners that we might not want to fight quite so stridently for standards, best practices, and institutionalization of our media, because even though it is nearly always possible to work creatively to resist norms to some degree, surely any forces of institutionalization will have vast and far reaching consequences for today’s experimental media practitioners.

3 The Future of Media of Attraction

While many of us working in contemporary media of attraction may bemoan the considerable technical challenges we face, and the many difficulties of working in a media in which conventions, best practices, and audience expectations are largely undefined, we might glean from Porter and Méliès a wariness of wishing institutionalization upon ourselves just yet. We should value the multiplicity we are in, as a medium of attraction, and work to better catalogue and archive this rich, vast variety ourselves — not only the media artifacts, but also the first-hand reflections and theories of the designers, to inspire the media of attraction makers yet to come, working in technologies of the future.

To this end, I propose the beginning of a prescriptive set of principles for media of attraction practitioners, based on the central qualities of media of attraction as *unassimilated*, *interdisciplinary*, *seamed*, and *participatory*:

- *Unassimilated media must be carefully archived.* We need an archive of attraction, that values the rich multiplicity found in these types of artifacts. We need a way of representing genealogical relationships between related forms, and must pay careful attention to the voice of the designer.
- *Interdisciplinary media require interdisciplinary teams*, and therefore careful attention to the process of team building. There is a wealth of literature of the topic of teamwork, but research on performing arts teams may be most relevant for other expressive domains [30, 31].
- *Seamed media are best approached through seamful design tactics* that seek to exploit these rough edges [32]. Seams in media of attraction may be caused by technical limitations, but also by issues related to these media’s lack of assimilation, such as lack of conventions or audience expectations. A seamful design approach identifies the areas of dissonance, and incorporates them into the design as affordances or opportunities for creative interaction.

- *As participatory media, media of attraction need to be designed to support emergent interpretations* [33]. Media of attraction user behavior is often highly unpredictable, given the unassimilated nature of the technologies and techniques in play. To accommodate this, and develop the naive user's creativity as an asset, designers should work to strike a balance between providing opportunities for emergent interactions to develop, and careful consideration of how to provide proper constraints to ensure a meaningful experience.

This set of four principles for media of attraction design should be developed into a more nuanced framework, created in collaboration with the larger community, and based on continuing historical research in the area. The aim is to produce a design vocabulary that is generative and specific, but also values the multiplicity inherent in media of attraction. In conclusion, instead of thinking of progress in our field as the narrowing toward best practices that exploit unique affordances, and the eventual canonization of a standardized medium as great art, let's think of progress as the continued great exploration of the widest variety of approaches, and let's think of progress as finding a way to record and share these artifacts, along with the thoughts of their creators.

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