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**Viewer’s Digest: Small-Gauge and Reduction Prints as Liminal Compression Formats**

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In one of the major culinary innovations of the 15th century, “chefs began to learn about the benefits of reducing sauces to concentrate flavors by simmerring them on the stove” (Culinary Pro 2019). As a terminus technicus of culinary art, “réduction” first appears in Viard’s Le cuisinier impérial at the beginning of the 19th century. First published in 1806 and widely circulated in French and other languages in the 19th century, Viard’s book adapted its subtitle to the shifting political landscape from each edition to the next, underscoring the role of the culinary fields as one area of continuity in French culture through the great revulsions of the postrevolutionary era. While the original edition referred to the reign of Napoléon Bonaparte, the ninth edition changed its title to Le cuisinier royal, and from the 22nd edition in 1852, it was published as Le cuisinier national.

Less common than the term “reduction” for gravy is the notion of a “reduction print,” which describes small-gauge versions of films marketed over decades in the 20th century for domestic and nontheatrical exhibition. “Reduction” here can refer to both the film’s gauge and duration, with reduction prints often shortening full-length feature films to the essential 3–20 minutes necessary to screen them in programs alongside home movies and other short films. What some consider mutilated copies of

1 See also the definition of “reduction” in the Oxford English Dictionary: “Cookery. A condensed sauce made by boiling a liquid to reduce and concentrate it; the action or process of reducing a liquid in this way.”
presumably “original” theatrical versions, others appreciate as condensed versions of concentrated “flavors,” similar to a culinary réduction.

My own interest in reduction prints arose from my research on home movies of the 1930s, given that in many private collections, home movies appeared alongside mass-market reduction prints of theatrical films (Schneider 2007).

In recent years reduction prints have become increasingly relevant for archival and restoration purposes, as reduction prints are often the only available copies or fragments of otherwise lost films. However, the question of reduction prints has so far not been addressed in either archival studies or home movie research.

This chapter uses format studies as a framework to present some preliminary research on reduction prints as a historical practice for the distribution of films. Like contemporary compression formats, small-gauge reduction prints had a key purpose: to facilitate the circulation of moving images—in schools, at home, and in alternative screening venues. As I have suggested elsewhere, substandard or small-gauge reduction prints might be understood as a pre-digital compression format of sorts (Schneider 2014). Before the advent of electronic and digital storage formats, size (and format) actually mattered, as “smaller” prints would make film copies cheaper.

At the same time, the historical practices of producing, circulating, exhibiting, and consuming reduction prints can also be considered to occur in complex sites of negotiation: between industrial and artisanal production practices; professional and nonprofessional (amateur) film cultures; niche and mainstream audiences; so-called standard and substandard formats; economic and aesthetic concerns; and other considerations, such as copyright issues, cinephilia, news, entertainment, and education. As Haidee Wasson (2015, 58) observed in her article “Formatting Film Studies,” drawing on Jonathan Sterne’s format theory, the concept of format offers “a productive instrument to move beyond an ahistorical, unchanging and thus rather expansive concept of a medium.”

2 Citing a report from the Library of Congress by Pierce (2013), Hoyt puts in perspective the number of films lost from the silent period: “Pierce determines that 70 percent of American silent features are lost, 14 percent survive in complete form in American 35mm prints, 11 percent survive in 35mm foreign-release prints or small-gauge prints, and 5 percent are incomplete—‘a few reels in 35mm, a shortened Kodascope edition in 16mm, and several cut to a third or less of the original in 9.5mm.’” (Hoyt 2014, 223)
Rather than treating reduction prints as a mere oddity in the history of cinema, or as a “threshold format,” to use Kit Hughes’ (2016) term, I propose to consider them as a “liminal format,” where liminal is used in the sense of being not there yet or transitional, a kind of format de passage, if you will. I draw on the anthropological concept of liminality as proposed by Arnold van Gennep ([1909] 2011) and further explored by Victor Turner (1969). I am particularly interested in the idea of the liminal as a period of “passing through an adjacent, often marginal space characterized by a dissolution of established social order and hierarchy” in order to secure broader structures (Taylor-Alexander 2016, 154). For Turner (1969, 7), there is a “peculiar unity of the liminal: that which is neither this nor that, and yet is both.” In that sense, liminality is understood here as a figure of thought for understanding pre-electronic compression practices of moving image cultures.

Through a discussion of reduction prints as a liminal format, this chapter aims to further our understanding of the complex historical dynamics of formats and particularly of the continuities and discontinuities between analog, electronic, and digital media. It is divided into five sections: A first section engages with the disambiguation of the notion “reduction print” and briefly discusses the state of research. The second section reconstructs the work of Castle films, a company that played an important role in the US reduction print market. Though economically marginal from an industry point of view, small entrepreneurs and movie practitioners producing and marketing reduction prints, such as Castle films, provide an important angle on film and media histories more broadly speaking. Using a philological, text-based approach, the third section proposes a typology of reduction prints. The fourth section raises questions of media theory around the concept of compression. In conclusion and with a view to further research, the final section discusses the Pathé Baby 9.5mm format to provide a synthesis of the historiographical, typological, and media-theoretical challenges presented by the liminal format of the reduction print.

**Taxonomies**

Film historian Simone Fabio Ghidoni defines reduction prints as “sub-standard editions [of] film strips printed between 1912 and the early 1980s in the 28, 22, 17.5, 16, 9.5, 8, Super 8 mm gauges.”

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3 Ghidoni’s (2016, 2) unpublished master thesis in film archiving, *Reduction Prints: A Casuistry*, from the University of Bologna, co-supervised by Paolo Caneppele from
of film had been discussed since the beginning of the history of cinema (Schneider 2004, 56). According to Ben Singer (1998, 37), “manufacturers launched more than two dozen portable projectors designed specifically for the home and other small group uses between 1896 and 1923 alone.” Standardization began when Kodak and Pathé released their first non-theatrical projectors for domestic use in 1912 (Kodascope and Pathé Kok, respectively, with Pathé favoring a 28mm format). Both systems were more successful than other “threshold formats” of their time. However, it was only with 9.5mm and 16mm in the early 1920s that sustainable small-gauge formats entered the market, followed by the 8mm standard format in 1932.

Reduction prints of 35mm theatrical films quickly became an important part of film catalogues for nontheatrical screenings. Apart from just reducing the gauge from a 35mm copy to a smaller format, reduction often also entailed a shortening of the film. In his *History of the Pathé Exchange*, Richard Lewis Ward (2016) uses the terms “abridgement,” “abridged version,” and “feature abridgement” for this practice. These were not technical terms at the time, however. Neither was the concept of “condensed version.” A search in the trade press of the late 1910s and 1920s suggests that “condensed version” was a standard term in the field of performing arts for operas with shortened playing times. In the trade press of the time, most discussions refer to the gauge, i.e., the size of the storage material, by differentiating between standard and substandard or small-gauge formats. “Substandard” and “small gauge” are terms used for all gauges smaller than the standard cinematic distribution format of 35mm. In French, the most current term is *formats réduits* (reduced formats), while in English, “reduction” mostly appears in technical reports, particularly in discussions of optical printing. While optical printers were first developed in the late 1910s to facilitate titling and visual effects, they were also used to produce versions of the same film in different gauges, whether through what is now known as “blow up” or downsizing the original format.

An early report in the *Moving Picture World* highlights the uses of optical printing for reformatting: “The ingenious device illustrated below is a printer for printing from a standard size motion picture negative on to a smaller film used by one of the many small home projecting machines on the market” (“An Optical Printer” 1918, 1660).

The history of optical printing remains as yet to be written. There is some research in the context of advertising (see Hediger 2001) and for special effects and experimental film of the 1960.
An article in the “Transactions of the Society of Motion Picture Engineers” from 1922 states: “The necessity of the industry required an optical printer for making direct reduction prints from professional standard negative” (Mees 1922, 159). Reduction prints were later also referred to as “library prints”: “LIBRARY PRINTS: 8 and 16mm. printed by reduction from original 35mm” (“Library Prints” 1937, 132).

In her seminal article on the role of 16mm and cinema’s domestication in the 1920s, Haidee Wasson (2009, 21) retraces “how the seeing and saving films at home was linked to the function of reading and collecting books, and listening music.” Wasson studies the trade discourse with a focus on the hardware, in particular advertisements for portable devices such as projectors. Wasson concludes that the “the 16mm home theater was more an imagined ideal than a reality, an ideal that prominently migrated to other technologies” (12). Although 16mm found a way into wealthy homes, “it eventually became the primary gauge for schools, churches, libraries, and universities from the mid-1930s onward, a function that spread and was thus secured during and after World War II” (12). The Kodascope Library offered 16mm prints between 1924 and 1939 and 8mm editions from 1932 onward (Wasson 2009). However, the Kodascope library, a catalogue of reduced prints for sale and rent, was only a modest success with private consumers. Eric Hoyt attributes the “the lack of significant consumer adoption” to the high price of the equipment, noting that the Kodascope Library “failed to deliver a profit center for Hollywood’s vault” (2014, 53).

The high cost can partly be traced to the production process. As Ghidoni explains, the prints for the Kodascope and Cine Kodagraphs Libraries of the 1920s and 1930s ‘directly derived from appositely edited, first-generation internegatives.’ They were reduced on positive ‘sunshine’-tinted 35mm stock, where two 16mm (or four 8mm) strips fit parallel to each other in order to be later cut and perforated. The process resulted in sought-after crisp, high-quality prints; the costs being the extreme wear of the internegatives and the slowness of the procedure (two copies for each passage in the optical printer). (Ghidoni 2016, 3)

As with their later reaction to home video, the studios took an ambivalent stance toward reduction prints. Nontheatrical distribution opened up additional markets but also “represented a threat to both the studio’s core business and the more important side business of theatrical reissues” (Hoyt 2014, 71). But the number of available small-gauge prints suggests that smaller companies perceived the reduction print as a potential
business model. Pathé is of particular interest here, as the company was still one of the leading content providers in the global film industry of the 1920s. As we will see later, Charles Pathé was not scared of the non-theatrical circulation of his film library. Another instructive example is companies specializing entirely in the production and sale of nontheatrical reduction prints.

**Castle Films**

Castle films was a “a nontheatrical producer and distributor that specialized in compiling short films into packages and selling them to churches, schools, and home viewers” (Hoyt 2014, 135). In Hoyt’s study on film libraries, Castle films earns its first mention when a larger, studio-affiliated competitor, United World Pictures, buys the company for the considerable sum of $2.25 million in 1946. United World was, in fact, created in the same year as the nontheatrical subsidiary of Universal studios, one of the smaller studios in search of new revenue streams in the postwar era. Castle Films’ specialty was outright sales to home viewers and collectors, a market “Hollywood studios had previously shunned” (135). Not since the transition to the rental distribution system in the early 1900s had film producers sold prints to exhibitors and other users outright, let alone to nontheatrical end users. As the success of the video store would show in the 1980s, rentals were a much more profitable business model for the home viewing market than sales. According to Hoyt, the acquisition of the Castle film library in the end “proved to be a costly mistake” for Universal (135). Nonetheless, Castle films (later rebranded as Universal 8) released over one thousand titles during the almost forty years of its operation, from 1937 to 1984. Every year, new titles were added to its catalogue.5

Eugene W. Castle (1897–1960), the company’s founder, had entered the movie industry in 1914 at the age of 17, working as a stringer and freelance photographer in San Francisco (MacGillivray 2004). He spent the war years as a United States Marine Corps publicity man and worked for Gaumont newsreels for several years (“Gaumont News to Issue West Coast Edition,” 1919, 119). In 1918, at the age 21, Castle started his own company, Industrial Castle Films, which was geared toward the theatrical exhibition market. He first specialized on educational and industrial films and served schools and community groups (MacGillivray 2004, 2). In the early 1920s, Castle held an editorial position in newsreels at Fox while establishing himself as

5 For a full list of titles, see MacGillivray (2004).
a producer of industrial films on the West Coast. As the trade paper *Moving Picture World* reports, Castle went on a 10-month road trip to Europe in 1921:

[Eugene Castle], a well-known Pacific Coast industrial film producer, sails for Europe on April 30 in order to be away for 8 to 10 months. Castle, accompanied by a cameraman, will visit eleven European countries for the purpose of completing industrial contracts that require European scenes. (Tidden 1921, 58)

It remains unclear when and how exactly Castle decided to enter the distribution of small-gauge prints for private homes. As Ward (2016, 160) writes, in 1937 Castle “decided to try his hand at the growing eight-millimeter and 16-millimeter home-movie market.” Pathé Exchange had started to sell 16mm single-reel subjects “at some point in the late 1920s . . . under the trade name ‘Pathegrams.’” But as “the Great Depression set in Pathégrams’ business fell off. Its output consisted largely of highly abridged versions of the Pathé Exchange’s shorts and features of the 1920s” (Ward 2016, 160). But in May 1937 Pathé apparently revived its home-movie division and teamed up with Castle to market its films under the Pathegrams label through Castle’s distribution network. Castle started selling small-gauge reduction prints for the home movie market with the release of a 16mm Pathegram edition of *Hindenburg Explodes!,* a one-reel news special. But the Pathegram–Castle cooperation was short-lived. In July 1937 Castle terminated the agreement and started his own company. All the later films launched with Castle Films “were offered for 16mm and 8mm projectors; in sound and silent, complete editions (9 minutes in sound, 12 minutes at silent speed)”; there were also three-minute silent editions for toy-projectors, called “headlines” (MacGillivray 2004, 4). Castle films used a successful, fine-grained and multi-layered mail-order and retail distribution system. The prints were available via direct-mail sales and they could also be found in department stores, camera shops, and neighborhood drug stores. By carefully harnessing this capillary distribution network, Castle Films became the most successful distributor of home movies and an attractive buyout target for Universal in 1946.7

After the merger with Universal subsidiary United World Film, Castle’s distribution system became a point of contention with theatrical exhibitors, who protested against what they perceived to be unfair competition from one of the big Hollywood studios (see Hoyt 2014). Castle continued

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6 See Wasson (2009, 9): “Pathegrams, newsfilms marketed to the home user.”

7 In the mid-forties Pathé Industries bought the two other home movie distributors: Official Films and Pictorial films (Ward 2016).
to operate, however, and quickly adapted to the introduction of Super 8 in 1971. Castle privileged prints in the new substandard format alongside 16mm prints in its catalogue presentations. The 1976 catalogue still mentions regular 8mm prints, but only lists the prices for Super 8 and 16mm prints. Celluloid-based home entertainment reached its peak with Super 8 in the 1970s, and Castle continued to be the market leader for reduction prints. In 1977, nearly twenty years after the death of its founder in 1960, the company name Castle Films disappeared (MacGillivray 2004, 15). Universal rebranded its home movie retail division under the label Universal 8 Films, but the rapid spread of VHS home video soon made reduction prints obsolete. As MacGillivray writes, “the Universal 8 abridgements were now pointless: people wouldn’t spend money for 17 minutes of clips from a favorite movie, when they could have the entire movie on a tape” (19). In 1984, Universal shut the Universal 8 division down, bringing the age of the commercially marketed small-gauge reduction print version of theatrical films to an end.

Several things are striking about Castle films. First of all, it is interesting to note how the nontheatrical circuit was created and shaped by an independent practitioner and entrepreneur. Eugene Castle had been in business for nearly twenty years before he founded Castle films, a company he then turned into a valuable brand in less than ten years. He was a seasoned and polyvalent industry professional who, like many others of his era, explored and thrived in niches which Hollywood studios considered to be of little or no interest. What remains to be understood is how Castle built his library and how the editorial choices for the abridged small-gauge editions were made. Castle must have been sufficiently well-connected to be able to obtain rights for reduction print versions of studio films and secure funding for his company. What is certain, however, is that Castle and others like him saw in the reduction print a business opportunity afforded by Hollywood’s lack of interest in either its libraries or what would later become known as “ancillary markets,” which are now Hollywood’s main source of revenue.

**Typology**

Hollywood has always made it a point to standardize exhibition practices in the theatrical markets. For instance, to reduce transaction costs, the major studios founded a trade association, the Motion Picture Producers and Distributors of America, to preempt state censorship and limit the number of versions of a given film in circulation to one. By comparison, the market for reduction prints was far less standardized and homogeneous. There
were many different types of reduction prints, both in terms of film gauge and reduction rationale. On August 31, 2009, the Harvard Film Archive published on its blog the following program note on the Northeast History Film Symposium:

We presented film on 3 small gauge formats common to the US home cinema market: 16mm, 8mm, and super 8. First, an 8mm reduction print of a silent Mack Sennett comedy, *The Campus Carmen* (1928). Next up, *New England Holiday!*, a 16mm short, silent travelogue from the 1940s about vacationing in New England. In keeping with tradition, we moved to a cartoon, *Farmer Gray in English Channel Swim* (1925), shown in 16mm. The ‘feature’ finale was a super 8 condensed reduction print of *Taxi Driver* (1976), with mag sound.

While we have seen that the interest of studios in this marginal market was limited, it was far from unusual for studios to release condensed versions of feature films for the home market. Most common were the 8mm or Super 8 silent versions that reduced a feature film to a selection of the five best minutes, using intertitles to explain the story.

The version of *Taxi Driver* screened in the program was a little different. The tale was cut down to the story of Travis, the pimp, and Iris (the teenage prostitute). A narrator is employed to describe some gaps in the story. “Travis Bickle has decided to take revenge against the pimp.” The original sound from the film is retained. “You lookin’ at me?” Using only the scenes of sex and violence, the film is reduced to an exploitation version of itself.

The program included “condensed versions,” “silent versions,” films that were reduced to “exploitation versions” of themselves, or, to refer back to the culinary term *réduction*, versions that were reduced to their best.

Simone Ghidoni distinguishes two types of reductions: those made by printing copies to a smaller gauge and those made by abridging the running time of the film. Both processes reduce the amount of material needed for a film copy. A standard 8mm copy requires only a quarter of the material of a 35mm copy, and a three-minute version of a feature film requires only a small percentage of the film stock needed for a theatrical version. However, information is lost not only through abridgment but also through copying down, as a smaller image surface means less data on the print (fig. 1). Unlike the aspect ratio or size of a specific format, the resolution can be considered as a secondary reduction effect. Losing resolution does not make a copy cheaper. While unabridged small-gauge editions exist, most reduction
prints are also abridged, not least for copyright issues. Reduction prints were edited down “in line with requirements generally (but not exclusively) ascribable to commercial needs,” as Ghidoni observes. The abbreviation changed “the textual structure, the figural-narrative dimension and the audiences’ experience of movies. The extent of the alterations was largely dependent on the style and target audience of the publishing company” (Ghidoni 2016, 4). For a single title different reduction editions were produced for different target audiences and through successive re-issues.

Ghidoni also proposes to differentiate between an “abridged” and a “digest” version. The abridged version is a “classic reduction, where the movie has been significantly shortened without heavily affecting its narrative structure” (2016, 4). Usually, the beginning and end of sequences are shortened, a practice often used for Kodascope prints. By contrast, editions with more radical and evident changes, as in the Taxi Driver version of the Harvard program, are “digest-editions” (5). The German-based Piccolo Film specialized in digest versions, as did Castle Films. Taking into account the professional background of Eugene W. Castle we can assume that he relied on his experience in the production of short news items in preparing digest versions of feature films.

Reduction meant lowering prices and thus also lowering the threshold for prospective buyers. Reducing the gauge and condensing the film to its presumably essential scenes saved footage, while turning a color film into a black-and-white film or a sound film into a “silent” film created further economies. In the latter case, titles were added to soundless versions to
sustain the narrative, with the savings on the soundtrack offsetting the cost of the additional footage. With the shift from academy to widescreen ratio in the 1950s then, most reduction prints edited widescreen films back down to a 4:3 ratio, raising the problem that Jacob Burckhardt (1919) described for etchings of famous paintings and anticipating similar issues with VHS video versions of widescreen films in the 1980s and 1990s, which used so-called “pan-and-scan” procedures to keep the focus of the action in the center of the screen in video versions adapted for TV screenings. Widescreen systems for substandard formats did exist, but they were expensive and therefore mainly marketed as special editions for collectors and connoisseurs. Reduction prints were also used for home sales of pornography, and it remains to be determined to what extent this subsegment of the market may have contributed to the development of reduction prints and their distribution.

Reduction as Compression?

In his discussion of paper formats, Marek Jancovic argues that “formatting has always been a compression” in that “the folding of the sheet shrinks the dimensions of paper and simplifies its transport and storage” (see Jancovic in this volume). But if every format is already a form of compression, then what is a compression format? Is there a categorical or a gradual difference between a format and a compression format? For Jonathan Sterne (2012, 2), formats are a “technique of removing redundant data.” However, Sterne does not specify what distinguishes a compression format, such as MP3, from a non-compression format, such as WAV or HD-CD. We must infer that for Sterne the opposite of a compression format is high definition, but the distinction between “high” and “low” remains blurry, perhaps intentionally so. Sterne writes: “A general history of compression also connects contemporary practices that are self-consciously understood in terms of compression with a broader history of practices that share the same morphology” (2012, 6). In the case of the reduction print I would argue that it is indeed a set of practices that share “the same morphology” with other processes of compression. Small-gauge formats as such are based on compression, as we have seen. For the time being, I propose to understand compression according to a gradual and common-sense use of the notion: in such an understanding, MP3 is indeed always a compression format, not

8 Relatedly, the Oxford English Dictionary defines compression in the context of computing as “the process of reducing the amount of space occupied by data that is being stored or transmitted, by minimizing redundant information.” First mentioned in Russian in 1957.
least for being a kind of wide-bodied aircraft of pop music and vehicle of
global data tourism.

As we all know, the MP3 compression standard is a compromise, the
result of an allocation of available data and the physiological conditions
of human perception. The latter are also relevant for the standards in film
history. The illusion of movement occurs at frame rates above 16 images
per second. And those images become sharper and more luminous with
increases in image size, or changes in the image format. A 70mm frame con-
tains four times the amount of data of a 35mm frame. Similarly, increases
in running speed, such as moving to 48 frames per second, produce even
better, more data-rich moving images. In requiring more data, however,
higher image resolution and faster frame rates also increase the price
of the product. The standard rate of 24 frames rate per second was
established in the 1920s as a compromise between the human physiology
of perception and the economic and technical affordances of the circulation
and projection of movies. It solidified into a world standard with the
introduction of optical sound after 1928. Small-gauge formats were stand-
adized at speeds between 16 and 18 frames per second, i.e., just above the
threshold where human perception synthesizes separate successive frames
into the illusion of movement.

Compression can thus be understood as the reduction of data to the
threshold of comprehensibility. A standard 8mm reduction print of A Gen-
tleman’s Gentleman, a well-known Mickey Mouse cartoon directed by Roy
William Neill and released in 1941, can illustrate this point. Mickey sends
Pluto downtown to fetch the paper, but Pluto loses the coin he was sup-
posed to trade for the paper. His effort to retrieve the coin with bubble
gum only makes things worse. The reduction print starts about two and
a half minutes into the original film and ends before the original ending.
The reduction covers about half the running time of the 1941 release print
and omits all scenes with Mickey Mouse, focusing on Pluto’s adventure
instead. The substandard version is also a black-and-white silent version of
a Technicolor cartoon with music, dialogue, and sound effects. But because
only Mickey talks in the original version and he has been eliminated from
the reduction, the lack of the soundtrack does not really impair the com-
prehensibility of the film.

The reduction print is copyrighted by Disney Films, but it was made and
distributed by Hollywood Films Enterprises, a company specializing in Walt
Disney cartoons, which “resorted to an even less considered procedure,
exploiting the original camera negative for every single reduction” (Pierce
1989, 40, as cited in Ghidoni 2016, 3). The small-gauge version ends as it began: with a title card. The card suggests that this is not a fragment or a reduction, but a “complete” film. In terms of data it is a much smaller version: both frame and run time are reduced, and color and sound information are omitted. Which raises the question: was the data that was eliminated in the reduction process redundant? In terms of narrative comprehensibility, the answer would be yes. The resulting silent, black-and-white film of a dog losing and trying to retrieve a coin in an urban setting is a self-contained narrative that can stand on its own and needs no further aids to be accessible to an audience. Yet if we assume that comprehensibility is not just a matter of passing the threshold of the perceptibility of movement set by human physiology and of mapping narrative events onto a basic story schema, but a matter of aesthetics, which means that the difference between silence and sound and black and white and color matters, then the data eliminated in the reduction process was not redundant at all.

Then again, compression practices and standards vary over time. What qualifies as comprehensibility is, to a certain degree, historically contingent. In the case of this Disney film, neither the lack of color nor the sound was considered to be an obstacle for its commodification and circulation in nontheatrical venues. Which means, among other things, that the acceptability and the success of reduction formats is always a function of the lack of alternatives. Absent an easily accessible version of the complete movie, even as radical a reduction as that of the color, sound, and Mickey-less Disney film would be deemed sufficient and acceptable by distributors and their audience.

The Pathé Baby Filmathèque

Pathé, the first fully vertically integrated producer of moving image equipment and films before Sony’s acquisition of Columbia Studios and Matsushita’s temporary ownership of MCA Universal, played a groundbreaking role in making movies portable and mobile, certainly outside of Northern America. In 1912 the Pathé Frères introduced their first nontheatrical substandard gauge, the 28mm Pathéscope home cinematograph, more commonly known as the Pathé KOK. Charles Pathé “comprehended the potential behind a well-conserved back-catalogue ready to be capitalised whenever a new technological advancement would allow it,” as Ghidoni (2016, 3) writes. Pathé considered even the 28mm-system as a carrier for reductions, and an extensive catalogue of small-gauge prints, the
Descriptive Catalogue of Pathéscope Films, was made available for rental. But it was the next substandard format developed by Pathé, which was even smaller and easier to handle, the Pathé Baby 9.5mm format, that finally hit a cord and became a mass-market success. The library for the Pathé Baby was called the Filmathèque Pathé Baby in French (using the library and art gallery as a model and reference almost a decade before the Cinémathèque Française was founded) and the Catalog of Pathex: Motion Pictures for the Home in English. In a departure from the rental-only catalogue of the KOK system, the Filmathèque 9.5mm prints could also be bought. The prints came in closed boxes (a kind of VHS cassette avant la lettre) which made the handling easier. Ghidoni (2016, 3) observes:

Even though the filiation-line behind the Pathé-Baby prints was in many ways comparable to the Kodascope procedure, a fundamental difference was the gauge of the shortened internegative, here a 3 x 9.5mm matrix allocated on specially perforated 35mm stock. This meant that the reduction process had to be carried out only once, in the passage from the lavender material to the internegative. All the projection copies could then be contact-printed three at a time. This method was undoubtedly faster, and, moreover, did not involve the exploitation of the precious standard-gauge intermediates, while it also proved less expensive, requiring a minor amount of stock.

In terms of the material costs of image size and resolution, 9.5mm was an elegant solution because it offered nearly the resolution of 16mm with a smaller gauge. This was achieved by placing the sprocket holes not at the margin but between the frames. Another innovation that allowed for compression without a major loss of quality was so-called notched titles.

A cinephile and amateur film critic and historian explains on his blog:

nine years ago, I bought four bobbins of the 9.5mm Pathé Baby version of *J’accuse* (1919). Since then, I’ve been picking up more when and where ever I could find them. At last, I’ve assembled the entire film. . . . At 840 feet, it’s considerably abridged from the theatrical release . . . If it was run straight, 840 feet works out to around 28 minutes, but *J’accuse* has

9 For the US nontheatrical market and Pathéscope, see Ward (2016) and Hoyt (2014).
10 Pathé Baby made its American debut in 1925, two years after Kodak introduced 16mm film, being sold “under the trade name ‘Pathex,’ an abbreviation of Pathé Exchange” (Ward 2016). As we will learn later, Pathé Exchange had been forced to market the home movie format Pathé Baby in the US by the French head of office from 1925 onward. Sold under the name Pathex, the small-gauge system, which would become a decades-long success in the European and Southern markets, did not sell well in the US, though.
notched titles so it’s actually a bit longer than that. . . . To save film, the Baby had a unique system whereby a little arm feels along the edge of the film as it passes through the projector. When it encounters a notch, it stops advancing the film for a few seconds—holding the picture on the screen. This way, titles could be reduced from several feet down to just a couple frames. . . . so *J’accuse* is probably closer to 45 minutes long. (Those Awful Reviews 2016)

*J’accuse* was released by Pathé in 1919 with an original length of about 156 minutes. It remains unclear when it was first released as a Pathé Baby reduction print, but it is listed in the extensive catalogue in the 1931 edition of the Pathé Baby Filmathèque under the category “comedies and dramas.” Besides the information that the reduction print is about a third of the length of the theatrical release, the blog post offers a good description of the so-called notched title or stop notch mechanism that Pathé had introduced for its system to save film material, increase the comprehensibility of its prints, make copies cheaper, and improve the operation of a small-reel system (first using reels of 30 and later 60 feet). At the same time, the system had disadvantages in comparison to 16, 8, and later Super 8mm film systems, as the light source for obvious reasons could not be too strong lest it melt the film strip.11

Notched titles were used not only for intertitles but also for photographic images, such as portraits, landscapes, and other pictures that were turned into freeze frames. This is particularly interesting because it thus turned film into a composite medium of moving and still images. The compression process of Pathé Baby is somehow in between the two models of reduction printing that I have described before. Marking the titles for notching required a conscious selection process, but it was much simpler than creating a condensed version of a film narrative selecting entire sections of the film for elimination. I concur with Ghidoni when he argues that

> it appears true to me that small-gauge editions testify to a fluid, shifting concept of cinematographic work. They indicate that the boundaries, the support and the text of a film can change, adapting to the times, the places and the functions which (r)evolve around them. Their existence implicitly supports the idea that cinema is an art (and

11 Or as Richard Ward writes: “Auto stop was only possible because the Pathé-Baby projectors came with low-wattage lamps that could only produce an acceptably bright image in a completely darkened room and a screen size that did not exceed three feet by four feet. While a higher-wattage lamp would have generated more light, permitting a brighter and larger image, it would also have produced enough heat to melt the film during a prolonged freeze-frame.” (Kindle-Positions 3505-3510)
industry) where there is limited space for the concept of ‘original’, ide-
ally intended as an unchangeable, untouchable model. (Ghidoni
2016, 8-9)

From today’s perspective, the practices of reduction offer a perspective on
what is clearly a very extensive history of watching movies in fragments
and low-resolution or at speeds at variance with the original projection
speed (Alexander 2016). This history stretches from the earliest reduction
prints to present-day clip shows on YouTube. Film historical research of
the past decades has shed light on the many movie-watching practices
that question the idea of a closed text of a single work as the predominant
mode of the exhibition and reception of moving images. For instance, Ross
Melnick's (2012, 14) work on the exhibition practices of the 1920s and his
notion of the “unitary text” of the film program highlights the fact that even
in theatrical exhibition, the feature film was only one element in a larger
ensemble. Thus the individual work can no longer be the primary frame of
reference.

As Vinzenz Hediger argued in a text on film restoration a few years ago, the
original version of a film is always lost. What film historians and archivists
have to contend with is instead a multiplicity of prints and versions, or
the “original as a set of practices” (2005, 147) As Hediger writes, “Historical
research must always come to terms with the one fact that a complete set
of facts does not exist. A film historiography that defines the original as a
set of practices would have to take this limitation into account” (2005, 145).
The study of reduction prints complicates this question even further. Not
only does considering the histories of communication and representation
shift our attention from media to formats, as Sterne argues, but once that
shift happens, we can no longer limit ourselves to a film historiography that
is based on an abstract notion of the work as isolated from the conditions
of possibility of its existence. As Burckhardt knew, format is what keeps a
work from dissolving into infinity. A historiography that does not account
for “poor images,” to quote Hito Steyerl (2009), for images that “lose matter
and gain speed” and “are poor because they are heavily compressed and
travel quickly,” such as the Mickey cartoon stripped of color, sound, and
Mickey, cannot fully account for the work of which the reduction print is a
seemingly lesser version.

In that sense, format cannot be reduced to the protocol that defines what
a medium is, or what function it performs. For the foreseeable future, the
question of format will be one of the questions that defines what media
historiography is.
References


