TO ALTERNATE/TO ATTRACT? THE SKLADANOWSKY EXPERIMENT

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Utilizing in this essay the story of Max and Emil Skladanowsky as my vantage point, I would like to test the concept of *alternance* and probe its multiple meanings for the field of early cinema. Trying to forge a new dialogue between structuralist analysis and new film historicism, I will first trace contemporary uses of the term alternation in trade literature, technical manuals and patent language. I am particularly interested in the dissolve, the debt early cinema pays to magic lantern culture and in alternation as a programming device and projection trick. In the final section of my paper, I turn to the "rhyming effects" and editing structures that govern the early cinema experiment of the 1895 *Wintergarten Program*. If the dream of perfecting «alternating pictures»[1] first arises in the arena of magic lantern projection, it is indeed significant that the Skladanowsky experiment also views filmmaking from within this horizon, probing the possibilities and limitations of showmanship itself.

«What does the name Skladanowsky mean for film audiences?», a German newspaper asked its readers rhetorically in March 1935. The answer provoked the audience to think in nationalist terms: «Not one of the hundreds of thousands of film spectators who visit the theater day after day would ever have guessed that *it is a German who is to thank for the technical miracle of film*»[2]. On the 40th anniversary of the "birth" of cinema, the problem of origins had become highly politicized. That same month an article entitled "'Die Rache der Frau Schultze': Max Skladanowsky erzählt von der Erfindung des Kinos" ["'Die Rache der Frau Schultze': Max Skladanowsky talks about the Invention of Cinema"] appeared in the local daily *Stuttgarter Neues Tagesblatt,* announcing a special event in the creation of a national film history:

> *During the next few days in Stuttgart it will be possible to study the starting point and final culmination of the gigantic development that film has taken since its first public exhibition in the year 1895. The audience at the Friederichsbau will see both the first film strips of the inventor of cinema by Max Skladanowsky as well as* The Triumph of the Will*, the new party rally film of the German Reich*[3].

The vaults of the early film archive opened just in the nick of time, allowing Dr. Goebbels and the propaganda ministry to lay the foundation for the "miracle" of a new German film industry. Riefenstahl's rallying bodies meet the shadowy sideshow of early cinema, establishing the field of "film history" as a perpetually moving and evolving attraction.

Yet even in the Third Reich, due to the complications of the "Erfinderstreit" or "inventor's argument", the role of Max Skladanowsky in the field of film history remained contested. Major play-

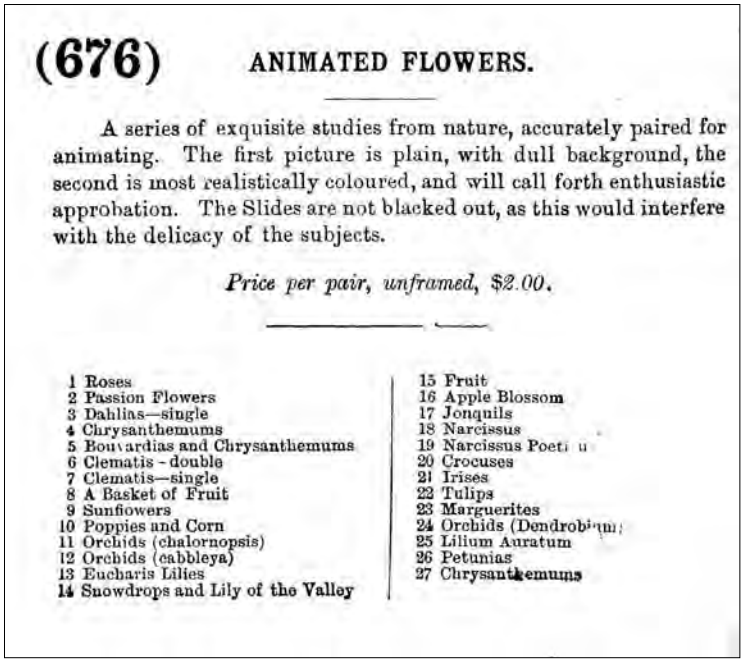
ers in the inventor's argument such as the film industry pioneer Oskar Messter were quick to point out the numerous "flaws" in the Skladanowsky film program and apparatus. Messter was outraged by the commemorative plaque put up by Goebbels and the film committee in the Wintergarten varieté to honor Max and Emil Skladanowsky on the 40th year anniversary of film. While museum exhibits and national film history programs heralded the Skladanowsky loop films as the "Heiligtum" or sacred relic of German cinematography, disgruntled inventors denigrated the film objects as flawed pre-movies and even denounced their makers as «eastern Polish Jews»[4].

Although the "Erfinderstreit" with its high-pitched nationalism and anti-Semitic undertones has now become an object of film history itself, the "other scene" of the Skladanowsky invention still haunts us today[5]. This is largely due to the fact, that, unlike the Lumières, the career of the Skladanowsky is heavily indebted to 19th century visual culture – the "birth of cinema" for the Skladanowskys is directly related to their magic lantern experiments. It is not the cry of "first" that is of significance, but rather the complex technical history that guides each inventor's approach. The Lumières, for example, looked to the sewing machine for the mechanism they needed for intermittent motion and the family wealth they used to market their invention came from success in the manufacture of photographic supplies. One has also argued that the Lumière films owe a great debt to the subjects and styles of 19th century still photography, whereas the filmmaking of Max and Emil Skladanowsky pays homage to the tradition of variety theater showmanship, the family business of itinerant magic lantern projection[6].

The Skladanowsky brothers projected their Bioscop living photographs on the side stage of the Wintergarten varieté on November 1, 1895. One month prior to the Wintergarten billing they had already graced the same theater with their dissolving views or "Nebelbilder". This "other scene" of the "birth" of cinema has a clearly demarcated varieté venue. While it has become standard in early cinema scholarship to reference the popular, fairground origins of film, as well as its roots in variety theater, vaudeville, etc., despite the intense amount of research on this subject, one has hardly begun to lift the veil on the itinerant art form that was perhaps most influential for film inventors and pioneers.

One of the central questions in *lanterna magica* scholarship remains the question of narrative and how it is staged. Trying to describe the relationship between storytelling and formal elements of film language through a famous series of meticulously executed shot-by-shot analyses, Raymond Bellour in the 1970s argued that the principle of alternation constitutes the basic structural feature of classical film narrative. For Bellour, alternation represents an intrinsic property of film and is based on a complex hierarchy of repetitions and differences that create formal "rhyming effects" between or within shots[7]. In an interview with Janet Bergstrom in *Camera Obscura*, Bellour argued that the purest form of the principle of alternation can be found in avant-garde film. He suggests that the hypnotic rhythms of experimental and avant-garde film are musical roadmaps of oscillation. Alternating between effects of black and white, the dynamic process of alternation proceeds uninterrupted, unheeded, unchecked[8]. Since it is of immediate importance for the "other scene" of cinema, one might say that the flickering of the dissolving view apparatus also anticipates this "pure alternation" of avant-garde film, reminding us of Christian Metz' famous adage: that the greatest special effect is the cinema itself.

Alternation thus feeds into the "attraction" of early cinema and attractions-based cinema "displays its visibility", like the magic lantern itself. Here we are reminded of Tom Gunning's adage, that early cinema is an art of exhibition that *shows*[9]. But we would do well to also recall that in the era of "late magic", when the *lanterna magica* was perfected and refined as a highly sophisticated "tricknology", the lantern could also *tell*. As Stephen Bottomore and others have noted, lantern shows could also utilize reverse angles and point-of-view cutting, cut in to close-ups and



(676) ANIMATED FLOWERS.

A series of exquisite studies from nature, accurately paired for animating. The first picture is plain, with dull background, the second is most realistically coloured, and will call forth enthusiastic approbation. The Slides are not blacked out, as this would interfere with the delicacy of the subjects.

Price per pair, unframed, $2.00.

1 Roses
2 Passion Flowers
3 Dahlias—single
4 Chrysanthemums
5 Bouvardias and Chrysanthemums
6 Clematis - double
7 Clematis—single
8 A Basket of Fruit
9 Sunflowers
10 Poppies and Corn
11 Orchids (chalornopsis)
12 Orchids (cabbleya)
13 Eucharis Lilies
14 Snowdrops and Lily of the Valley
15 Fruit
16 Apple Blossom
17 Jonquils
18 Narcissus
19 Narcissus Poeti u
20 Crocuses
21 Irises
22 Tulips
23 Marguerites
24 Orchids (Dendrobium)
25 Lilium Auratum
26 Petunias
27 Chrysanthemums

Fig. 1

move from exteriors to interiors[10]. The dissolve was one of multiple techniques that embodied both the ingenuity of a mechanical spectacle and the spontaneity of a narrative device used to highlight a transition or scene-change. In late Victorian magic lantern culture, images were paired and thus brought to life. Color was also used to great effect to animate a picture: Hughes, for example, distributed "paired" slides of flowers, in both black and white and color, which would call forth enthusiastic appropriation (Fig. 1).

Perfect Alternating Pictures

As documented in richly-illustrated manuals, catalogues and price guides, the magic lantern repertoire in the late 19th century was far-reaching and embraced multiple genres, from moral reform and the poignant scenes of the photographic "Life Model" series to science, art, history and travel. At the heyday of enhanced optical projection (from the late 1860s until approximately 1905), lantern competition became particularly fierce; numerous technical improvements were made and the program itself – as a narrative frame for one night's entertainment – became more nuanced and focused. The final phase of this competition transformed the apparatus itself, which could literally "alternate" between lantern and scope, as seen in this advertisement for "Hughes' Imperial Rotograph" (Fig. 2)[11]. As illustrated in Hughes' catalogue on the art of projection, "alternation" in the late 19th century had a specific temporal register that also fit popular showmanship parlance. To capture audience attention, a successful variety theater program contained a diverse number of acts, new novelties like the cinematograph as well as an eclectic mix of amusing staples and chasers[12], such as lantern slides.

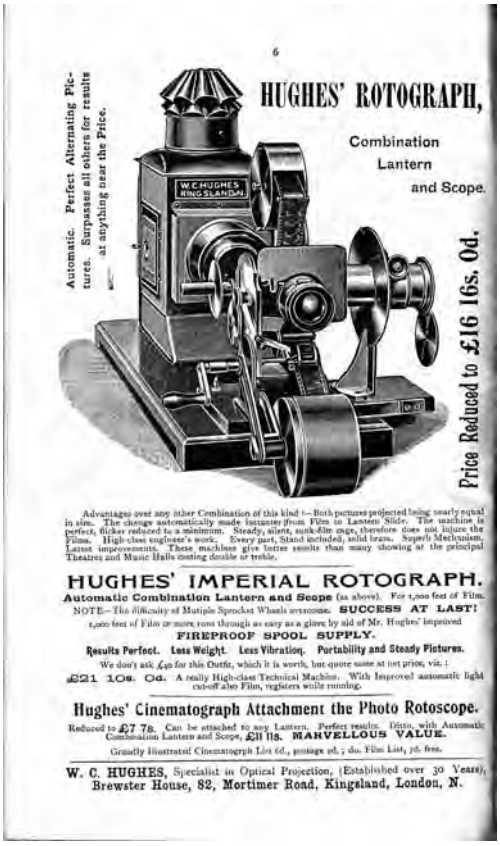


Fig. 2

The *alternating* apparatus marks an important transitional or "combination" moment in film history where the lantern serves as a complement to and an advertisement for the new technology of the cinema. Hughes' showman spins the rotating machine, eager to present an audience with a shifting spectacle of slides and film, or "perfect alternating pictures". This is alternation as an exhibition practice, not a narrative strategy. In addition to highlighting the class act of the Imperial Rotograph, Hughes also advertises a cinematograph supplement or attachment, the "Photo Rotoscope", which «could be attached to any lantern»[13]. Such scopes could be fitted to the front of any unmodified magic lantern, in a manner befitting of a mechanical effect slide. The animated photographs were also a supplement, a staple "effect" that lanternists offered to audiences.

Hughes was not the only specialist in optical projection to cash in on the new apparatus of the cinematograph. The "combined lantern" also appears as a spectacular device in the supplemental section on the cinematograph in Paul N. Hasluck's *Optical Lanterns and Accessories: How to Make and Manage Them* (1901)[14]. Hasluck boasts that «the project of so-called animated photographs has given lantern work a new lease on life»[15]. He quips that «combined lanterns and machines used for this work vary in construction, and are known by many names»; the machine he describes «is but typical of many […] the name "cinematograph" seems the most popular term» and is thus used to «imply all apparatuses for projecting animated photographs»[16]. Husleck

also addresses the problem of lantern time management[17]. When using the cinematograph there was often a built in need for lantern slides and effects: Husleck cautions that working with the cinematograph is frightfully different from working with the usual lantern. He writes that it is particularly difficult to keep an audience entertained while placing or feeding fresh film in the instrument. In order to keep the constant flow of images or "attraction", it was thus «desirable to have an auxiliary lantern ready for the projection of ordinary slides with which to fill the time»[18].

In this transitional era, magic lantern manuals take on the role of standardizing showmanship effects. Two exhibitors who were particularly skilled in alternating between the magic lantern and living or animated photographs were the German projection artists Max and Emil Skladanowsky. As documented in a program for the Kristall-Salongen Variety Theater Tivoli (Stockholm), in act one of the Tivoli program dated August 8, 1896 the showmen present their most recent attraction, the Bioscop projector and loop films of dancers, wrestlers, the boxing kangaroo, etc. They later reappear in act 15 of the variety theater program under the alias "Professor Morieux" to exhibit a lantern show of dissolving views, chromatropes, comic slides and a spectacular current event, Dr. Fridtjof Nansen's expedition to the North Pole[19]. Another lantern program of 1896 also highlights an X-Ray trip into the interior, the North Pole expedition of Dr. Nansen and a hot air balloon trip to the most interesting parts of the earth[20]. I recently tried to analyze the ideological message of such "rhyming effects" on the programming level in magic lantern exhibition culture, using as my primary case study C. Skladanowsky & Sons' 1885 "World Theater". In their imperialist "Welt Theater", an act on the demise and destruction of Babylon follows the feature on "Deutschlands Besitzungen" or overseas colonies. The German landscape already peers behind the curtain of Babylon's ruins: "Followed by Germany's monumental architecture, waterfalls, etc.". The spectator moves elliptically through world history, from the imperialist age to orientalist pre-history and back to Germany. Finally the fairy tale of the Welt-Theater, Robinson Crusoe, appears as another sight-seeing memoir with an imperial signature. History itself is "dissolved" into empire[21].

In the "World Theater", alternation is both a programming and a projection trick. Yet what is this magic lantern dissolve and how did Max Skladanowsky use this technological principle to fashion his own filmmaking experiment? Over a twenty year period, Skladanowsky tried to perfect the art of using a biunial lantern or two separate optical systems to project dissolves and other effects[22]. In his elaborate lantern set up, the optical axes of two lenses converged, producing a registered image of discs of light. A special dissolver mechanism, placed in front of or on the lantern allowed Skladanowsky to darken or dissolve the first projected picture, while simultaneously illuminating a second image[23].

"Highly Imperfect" Pictures

It was a dissolving view apparatus that also provided the inspiration for the 1895 dual projector invented by Max Skladanowsky for the somewhat rudimentary moving pictures exhibited on November 1, 1895 at the Berlin Wintergarten, a leading varieté. The Skladanowsky Bioscop worked in a manner similar to Ottomar Anschütz's double projector for "stroboscopic living pictures" ["Projektionsapparat für stroboscopisch bewegte Bilder"], also called the "projecting electrotachyscope". This apparatus was used to project a large version format of series-photography in the auditorium of a Berlin Post Office in 1894. Whereas Anschütz worked with glass plates, a limited number of frames and horrible clatter, the Skladanowsky dual projector (which was also based on the technology of the dissolving view lantern) exposed and subsequently projected two

alternating and staggered film strips that were looped to create the illusion of a longer take. One strip contained the even frames of a film, while the second strip contained odd numbered frames; when alternately projected the original sequence of the single frames was restored on the screen[24].

Anschütz had already made clear in his German patent of 1894 that "alternation" (*Abwechslung*), based on the principle of the magic lantern dissolve, was the important technique crucial to his invention for projecting stroboscopic pictures. After viewing the *Wintergarten Program* and Bioscop the famous photographer decided to sue Skladanowsky. A contemporary review, published in the *Berliner Zeitung*[25], already suggests that the Skladanowsky dual projector was nothing other than a variation of an Anschütz *Schnellseher* enhanced by a magic lantern. Yet "alternation" as a projection trick was not something one could patent during this transitional period. Skladanowsky retorted that the idea for a dual projector was nothing new to a showman who had already spent his entire career perfecting the art of dissolving views[26]. He thus translated not only history, but also his film projection into a "dissolve", claiming that the Bioscop «optically registered one image so that it softly transitioned into the next»[27].

The truth of the matter is that the Skladanowsky alternating film strips had to be "looped" or repeated several times, to keep flickering to a minimum. And it is highly unlikely that the projection was smooth. I should hasten to add that most film productions prior to Lumière were, as one New York film critic complained in reference to an 1894 kinetoscope film, «highly imperfect»[28].

This early German projection system, with its two film strips which ran in parallel and were alternately exposed, ultimately proved too complicated and limited to survive. The Bioscop was a bulky and unwieldy device, soon superseded by the more common and mechanically simpler single lens, single film systems. The Lumière apparatus was far superior to the Skladanowsky Bioscop or dual projector. And no one was more aware of this than the German inventor himself, who was known to "doctor" his own technology, to keep it from appearing less "primitive" (in one museum exhibit he famously took a second enhanced projector and gave it an earlier production date of 1895)[29].

Max Skladanowsky and his brother Emil ultimately failed at presenting the public with anything more than a passing novelty. Their living photographs or looped circus acts of gymnasts, dancers, wrestlers, and boxers were enthusiastically received, but the fame of such images was short lived. In the Third Reich, the German film industry leader Oskar Messter would argue that the Skladanowsky films were nothing more than projected series-photography. Yet it is worth pointing out that whereas Ottomar Anschütz' "living pictures" documented a simple movement, such as taking a puff from a cigarette, which only lasted 1 1/2 seconds on the screen, the Skladanowsky films are considerably longer. Although historians sometimes refer to these shorts as six-second loop films, several Wintergarten films – including *Italian Peasant Dance* and *A Wrestling Match between Greiner and Sandow* – are approximately twelve seconds in length (almost 180 frames), prior to being looped. Is there more to the Skladanowsky *Wintergarten Program* than initially meets the eye? In what follows, I would like to reevaluate the Skladanowsky variety theater cinema, again taking as my point of departure our two paradigms of alternation and attraction, which also frame the important history of the combination lantern-scope.

Although it was a sideshow-sidestage attraction and a concluding act or chaser[30], the *Wintergarten Program* enjoyed a very sophisticated billing. The entire film program was advertised in the journal *Der Artist* as a fifteen minute spectacle. The presentation included German intertitles (projected onto a transparent screen using a magic lantern), orchestral music, and an apotheosis or concluding act of the Skladanowsky brothers bowing to their audience – both live and on celluloid. According to eyewitness accounts and archival documents, on November 1, 1895 seven circus acts and one finale were screened on the Wintergarten "kleine Bühne":

1. *Italian Peasant Dance by the Children Ploetz-Larella*
2. *Brothers Milton (Comic Bar Exercise)*
3. *The Juggler Paul Petras*
4. *The Boxing Kangaroo (Mister Delaware)*
5. *The Gymnastics Family Grunato or Acrobatic Potpourri*
6. *Kamarinskaja (Russian National Dance)*
7. *Wrestling Match between Greiner and Sandow*
8. *Apotheosis, Max and Emil Skladanowsky*[31].

One immediately notes striking similarities to Edison's kinetoscope material[32]. There are vaudeville and variety theater performers in both the kinetoscope shorts and the Skladanowsky films: boxing cats-kangaroos, wrestlers, clowns, and folkloric dancers (Figs. 3 - 4). Yet in the Skladanowsky films there appears to be a far more limited notion of cinematic space. The

Fig. 3

Fig. 4

Fig. 5

actors/circus performers weave in and out of a lateral axis of movement and do not fit neatly into the frame. There is no deep staging in the Skladanowsky films, only the difficult task of staying on screen (Fig. 5). And although the Skladanowsky films fall squarely in the camp of the "cinema of attractions"[33], directly bowing to the audience or engaging the spectator, the Edison films such as *Boxing Cats* (1894) or *Cockfight, no. 2* (1894) have an extra "twist": they often interiorize or emphasize the act of looking. These performances are staged for a diegetic audience which gawks at and/or controls the spectacle. The look in these scenes is motivated. We see, for example, how men are exchanging bets and money behind the arena before, during, and after a cockfight.

The Edison films encapsulate a more defined and refined "scene", anticipating what Ben Brewster has defined as "deep staging". In the kinetoscope shorts one often finds not only a distinct foreground and background, but also movement that is staged both laterally and in depth – moving from foreground to background. Furthermore, the kinetoscope shot length varies according to actor and "scene" or "attraction". Also with the Edison films there is a noticeable slight tilt to the camera – a lot of floor is visible, in comparison to the Skladanowsky films, where it appears that it is the position of the head rather than that of the feet that indicates the depth of placing the characters[34].

Even when we turn to the Wintergarten film that grapples most with foreground/background, in the context of staging a complicated multi-layered attraction, the *Acrobatic Potpourri*, *or The Gymastic Family Grunato*, we are struck by the almost disorienting lack of depth in the Skladanowsky frame. In this short, the eye of the spectator is forced to alternate, to simultaneously address not only background and foreground, but also left and right, on and off screen. An acrobatic family performs three separate acts – a pyramid or primary attraction, as well as two separate side acts where children perform handstands and flips (Figs. 6, 7 and 8). Skladanowsky himself seems to acknowledge the technique of "internal alternation"[35] in his description of this circus act "scene" writing:

> *The* Gymnastic Family Grunato*, consisting of husband, wife and five children, builds a pyramid, wherein the wife climbs onto the shoulders of her husband and two children move to the side. The youngest holds fast to his father's neck, while to the right and left of the pyramid the latter two [children] turn flips. Finally the entire troop bows and takes in the applause*[36].

Skladanowsky's memory of the film is however, vague at best. Simply put, he irons out the inconsistencies and creates symmetries where there are none. First, there is no closure or final

Fig. 6

Fig. 7

Fig. 8

bow before the camera. The symmetry Skladanowsky describes, with two women flipping in the background, is also lacking on the screen, where the "side" acts – recall here that the Bioscop itself was a side stage attraction – seem to spill off frame.

It is as if the cinema of attractions camera or lens is simply not mobile or wide enough to capture "competing attractions" – the simultaneous, moving display of the varieté transgresses the one shot structure. Yet there is new film material, recently discovered in the Bundesarchiv-Filmarchiv in Berlin, that redefines how we view the limited mobility of this cinema of attractions material. In addition to the eight separate attractions, acts or performances (approximately ten seconds in length) that are looped to present the illusion of a longer take – the boxing kangaroo, dancing Italian children, etc. –, there is also photographic evidence that an additional sequence was shot for this film of a gymnastic family performing a pyramid. These photographs show a single female who is performing acrobatics, a series of flips, in front of a painted backdrop of a forest (Fig. 8).

A sequential narrative is suggested: one actor from the dancing family is highlighted, moving from right to left within the frame. The painted backdrop provides an elaborate frame for a female star who is again featured in the loop film, where she performs within a larger act or community of the gymnastics family, yet still remains separate, as a side attraction. The two formal spatial elements (painted backdrop and plain backdrop), in addition to the opposition between single act and actor (A) and a larger ensemble or group performance (B), suggest a more diversified *mise-en-scène,* complicating our understanding of the single-shot cinema of attractions. The two terms, single actor and group, are finally united in the loop-film of the 1895 program, where a single actor performs "behind" the family pyramid, maintaining the motif of a two term "internal alternation", to use the term of Raymond Bellour.

Did Skladanowsky originally intend for a longer take? Was Skladanowsky's intention to create a multi-shot film that merges sequentiality (single performing) with simultaneity? In the early 20th century, Max Skladanowsky will again utilize theatrical set design to formalize a film experiment with simultaneity, creating the comic "split screen" of the burlesque entitled *Die Rache der Frau Schultze* or *Eine Fliegenjagd* [*The Revenge of Frau Schultze* or *Fly Hunt*][37]. This film, distributed by Max Skladanowsky's company "Projektion für Alle!", showcases a theatrical perspective, a two-bedroom set design separated by a thin wall that divides the unfolding "narrative" of the revenge of Frau Schultze into two "scenes". While her neighbor, a young composer is testing out new musical ideas, Frau Schultze desperately tries to fall asleep. Finally, she manages to slip a buzzing fly into her neighbor's room, using the key-hole of the bedroom door. The composer, annoyed by the incessant buzzing, begins to wreck havoc on his surroundings, shoots his bedroom mirror and spills ink on his music notes. Stylistically, the film makes use of highly innovative close-ups and a masked key-hole shot, which opens up the point of view of the active female protagonist. The key-hole motivates the diegetic passage of the fly from one room to the next and allows a subjectivization of filmic space. *Die Rache der Frau Schultze* thus enacts the sequential logic of cause and effect while still maintaining a theatrical principle of simultaneity. We have two simultaneous images, separated by a wall instead of a cut: *mise-en-scène* is utilized to alternate or divide the shot.

In a conscious and deliberate manner, *Die Rache der Frau Schultze* narrativizes and structures the "internal alternation" already somewhat haphazardly enacted in the Grunato family "acrobatic potpourri" of the *Wintergarten Program*. But is haphazard not another codeword for modernity itself? Are there other flickering moments of modern perception and alternation on the side stage of the Wintergarten varieté? It seems useful here to also consider the comic bar exercise with the Brothers Milton, two male performers – dressed up as husband and wife – who enact an

Fig. 9

intriguing display of gender roles that both follows and inverts the classic paradigm of Bellourian symmetry-rupture-resolution (Fig. 9).

In this bar exercise, the Brothers Milton perform a cross-dressing act for the camera. On the left side of the frame, we see two actors poised, ready to leap, their arms stretched high above their heads (feet hardly visible). The body of the actor dressed up as a woman in a dirndl hides the figure of the second performer. Both performers spring forward in a synchronized movement and swing around the bar. After the first flip they take complementary positions on the opposite sides of the bar. This is the first time the "male" of the Brothers Milton becomes visible. Finally, the "male" flips to the ground and turns around, inviting his partner to jump onto his shoulders. Then we have the final comic twist: the "female" impersonator tackles the male and brings him down. This cross-dressing narrative moves from an imaginary unity where no sexual difference is apparent to interruption where difference becomes visible and finally ends in the skitting performance of a heterosexual "coupling". Its comic effect is due to the gendered logic of heterosexual cross-dressing that can only imagine female impersonation as a parody of a domineering, "out of control" female masculinity[38].

Skladanowsky's memoirs and Joachim Casten's biography both linger on this moment of cross-dressing and the "strong" overbearing female, a role the younger Skladanowsky brother Eugen often played in Max Skladanowsky's *Projection for All!* flip-book parodies[39]. Eugen was also "Frau Schultze" in the film *Die Rache der Frau Schultze*. Casten writes: «The Brothers Milton started to perform [*turnten*]. One of the Brothers was dressed up as a woman. After a huge leap, this *woman* sprang onto the other's head and knocked him over». This rudimentary story of coupling goes beyond the "simple bit of action or movement" often captured by series-photography: the staging of gender difference demands resolution – even if this difference itself is "turned".

There is another narrative of "resolution" acted out as playful exhibitionism that is nestled within the *Wintergarten Program*: the dancing Italian children, who slowly move from left to right and back, within the frame. The young girl lifts her skirts in a playful manner and the boy gives her a quick kiss. She then hides her face in her skirts and finally the two embrace. What is rather remarkable about this scene is the now you see it, now you don't gaze. The girl hides her face, while the boy stares directly and purposively into the camera.

Although there is no real internal spectator within the text, the Skladanowsky films are self-reflexive and playful nonetheless. Directly gazing at the audience or bowing is a 'cinema of attractions' trick and a rhyming effect which culminates in a grand showmanship gesture, a film-

maker's apotheosis. The Skladanowsky brothers are serious showmen and their series of attractions is carefully framed. On the program level, the Skladanowskys had already mastered the "rhyming effect" or repetition with a difference in their magic lantern presentations, where imperialist leitmotifs were used to create a new narrative of German empire-building. In the Wintergarten, there is a new leitmotif: the play between authenticity and copy.

One should point out that the Skladanowsky films were also looped attractions, a technique that originated with magic lantern culture. In the *Wintergarten Program*, looping is not an A-B repetition, but an A-A pattern that plays with the copying power of the apparatus. Film is displayed here as a device of mechanical reproducibility that eradicates the auratic. With a second "turn" the apparatus and its possibilities shine all the more glorious.

In the *Wintergarten Program*, movement is never exhausted. But there is a moment when it is silenced. To enter this silent *mise-en-scène*, let us study one of the most important rhyming effects in more detail. Bowing to the audience is repeated twice: the juggler bows at the end of his act and at the conclusion of the film program, there is a final act of the brothers themselves who step into the frame, bow, and then exit, leaving an empty blank on the screen. This blank space seems to be a self-reflexive gag, evoking the never-ending play on copy and original. The blank space at the end of the film invites the brothers to come out in person, from behind the screen. The signature of the auteur or auratic is finally restored, as significantly this is the only film of the *Wintergarten Program* that is not looped. The apotheosis of the *Wintergarten Program* is thus the showmen stepping out live in the same manner as they did on celluloid, again bowing to their audience.

In 1896, Skladanowsky shot a second "Apotheose II" with another playful twist. In this film, the brothers again enter from opposite ends of the frame only instead of bowing, Emil Skladanowsky trips on the carpet, and Max has to help him to his feet. Do the Brothers already know that their fame is waning and instead of "bowing" to their audience to take credit for their invention – they parody their own act? Whatever the case may be, with an eye to the complicated film history of the Skladanowskys, one can say that they either bow or fall into the early cinema arena of copying, reproducing, and doubling.

In a later varieté program in Sweden, which also featured the Brothers Skladanowsky, audiences also saw a special doubling, the Kamarisaka brothers (act two of the Bioscop film program) performed live after the spectators had already seen the shadowy cinematic version or copy of their real bodies on the screen. This language of "copy" and "original" also plays into how the film debut had been framed in the press. On October 27, mere days before the Wintergarten debut a newspaper reports: «Skladanowsky's already mentioned Bioscop is almost perfected. The same (apparatus) will have an exceptionally original character, in that it reproduces the Wintergarten production in bluffingly true, life-size copies»[40].

Yet what the audience did not know in advance was that within the Skladanowsky *mise-en-scène*, their less than perfect pictures, there also lurked a somewhat baffling second layer of action-attraction. Due to the light-insensitive film material, the over exposure to sunlight and the camera angle, the Skladanowsky films were literally bathed in shadow, which formed a subtextual layer of movement within the scene. As noted in contemporary reviews, the shadows produced a second uncanny presence on the screen. Some reviewers subsumed the cinematic performance under the term «mere shadow play» (Fig. 10). Skladanowsky was shocked that the shadow could be seen as a second projection within the film; this was clearly not the primary feature, in his eyes, although it might become primary in the art of expressionism. Yet today it is these shadows that remain for all to see, part of the enigma of Max and Emil Skladanowsky, an enigma that takes us back to the history of the alternating machine.

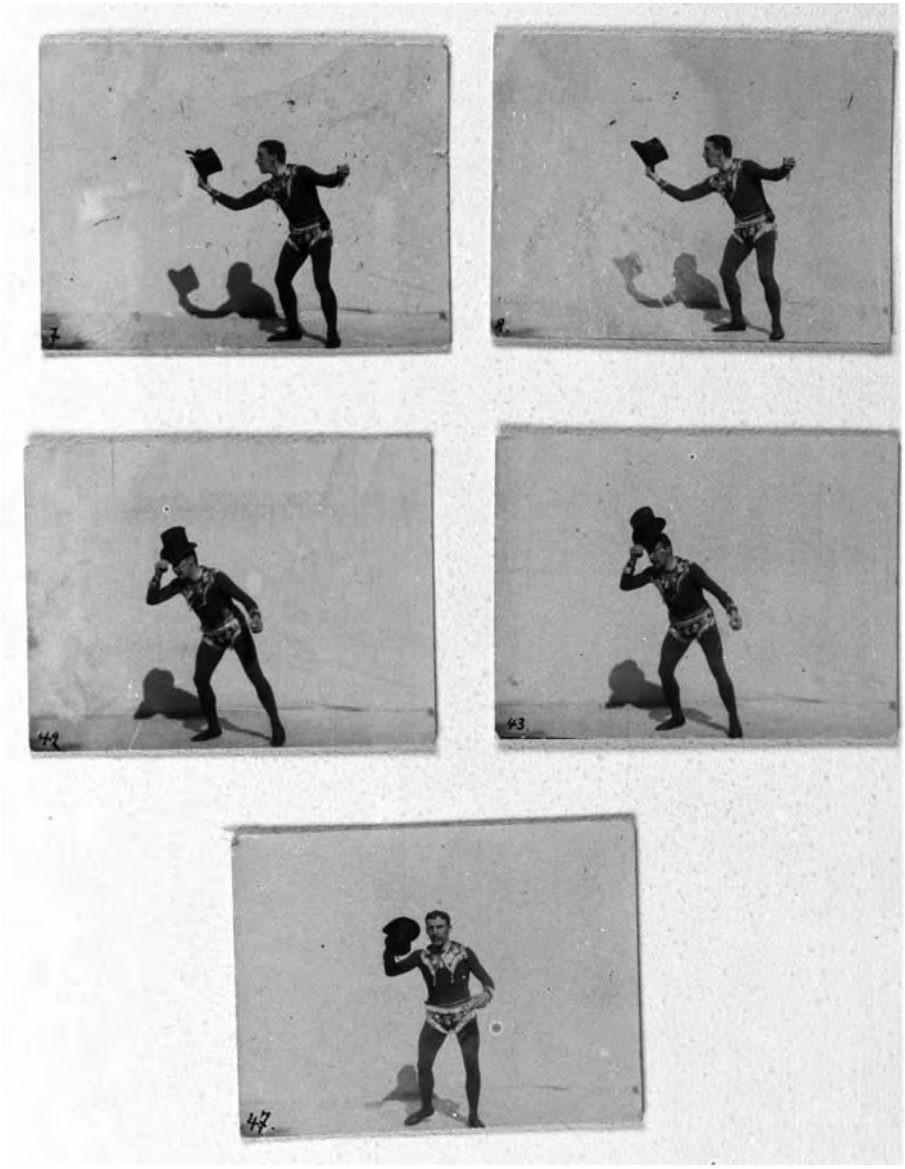


Fig. 10

In this essay, I have pointed out how porous the boundaries between magic lantern culture and early cinema were in the first decade of film history. Instead of assuming a linear development and teleology that places the Skladanowsky dual projector as a logic outcome or revision of the magic lantern, it is tempting to read early cinema through the refined lens of "late magic". The lantern itself was even used as a platform to narrate the story of technological progress, including – and thus containing – the rise of the cinematograph in a triumphant gesture (Fig. 11).

In order to understand how these two technologies complement one another and interact, it is illuminating to turn to the "tricknology" of alternation, which informs both the exhibition strate-


THE PHANTOSCOPE.

A mechanical arrangement to enable a Slide to represent Figures executing Changes imperceptibly.

Price, with 1 Slide, $10.00 each. Extra Slides, $1.75 each.

The following is a list of subjects:—

Dancing skeleton	Dr. discovers and fly
Ballet dancer	The gardiel
Dancing sailor	The botanist
Clown tumbling	The enthusiastic angler
The tune tom player	Dancing clown

IMPROVED WHEEL OF LIFE FRAME.

$3.50; Subjects for ditto, 50 cents.

CHROMOTROPES.

Chromotropes—3-inch diameter, best quality	$4.00 each
Chromotropes—3-inch diameter, best quality, with photographic portraits, motions, views, etc., in centre, i.e. "Good night" with wreath of flowers; Landscape by moonlight; Sea Scenes by day and night; Photo views of Scotch scenery, etc., etc. ...	$4.00 each
Chromotrope Carrier Frame with 6 pairs of painted Discs, which are readily interchangeable	$8.00 each
Discs, per pair, separately	$1.00 each

(958) RULE BRITANNIA. (A)

1 When Britain first,
2 (Oh) Britons never will be slaves
3 The dread and envy of them all
4 Serves but to rear thy native oak

5 Thus, haughty tyrants ne'er shall tame
6 Thy cities shall with commerce shine
7 Rule, Brit! With matchless beauty crowned

(959) THE ZUYDER ZEE. (A)

1 There came a merry Dutchman
2 He carried low and said
3 They must smoke on de Zuydar Zee

4 They must work on de Zuydar Zee
5 Do they never shake their husbands
6 You may go ——— to the Zuydar Zee

Song 2/-. Enoch & Sons, 14, Gt. Marlborough St., W.

(960) THE VICTORIAN ERA. or 60 YEARS OF PROGRESS. (A)

Reading 25 Cents.

1 H.M. the Queen in 1837

The Social Condition of Great Britain.

2 Factories, male and female, in 1837
3 The Parish Beadle
4 Hackney Coaches
5 Lighting the street lamps
6 Smoking in the stable
7 The penny post and frogging
8 Boy chimney-sweeps
9 A Dame School
10 A modern Board school
11 Sempstresses
12 Modern sewing machines
Tailoring

Industrial Progress.

14 The mail coach
15 "Puffing Billy" of No. 1
16 A modern express engine
17 The "Britannia" leaving Boston, 1840
18 The "Locomo," 1937
19 A three-decker, 1837
20 A modern ironclad
21 Laying the electric cable
22 A telephone switch room
23 Photography
24 The Kinetigen or X Rays
25 The Cinematograph
26 The use of electricity
27 A modern newsboy

Fig. 11

gies and narrative longings of this transitional period. The contemporary meaning of alternation oscillates between apparatus and exhibition, as seen in patent protocols and trade journals. Within this shadowy terrain of early cinema, alternation could refer to both the apparatus and the staging of attractions, providing a constant source of innovation and technical expertise for showmen and exhibitors. Alternation thus speaks to us as double, reminding us that the attraction of film itself was always multiple, subject to an elaborate structure of difference and repetition.

1 William Charles Hughes, *The Art of Projection: By an Expert*, E. A. Beckett, London 1893, p. 6. The book was revised in 1898-1903.
2 "40 Jahre deutscher Film: Max Skladanowsky und sein 'Bioscop'", in *Schwäbischer Merkur*, March 31, 1935; italics original to essay.
3 "Die Rache der Frau Schultze: Max Skladanowsky erzählt von der Erfindung des Kinos", in *Stuttgarter Neues Tagesblatt*, March 30, 1935. Riefenstahl's propaganda film *Triumph des Willens* premiered on March 28, 1935 at the Berlin Ufa Palace.
4 Correspondence, Max Skladanowsky to Oskar Messter, Bundesarchiv N 1435, May 30, 1933.
5 See Alan Williams, *The Lumière Organization and "Documentary Realism"* in John L. Fell (ed.), *Film Before Griffith*, University of California, Berkeley CA 1983, pp. 162-175.
6 Max Skladanowsky (1863-1939) was the son of the German projection artist Carl Skladanowsky (1830-1897). From 1879 to 1890, Max, his father and older brother Emil toured Germany and Central Europe with dissolving view magic lantern shows. Max was apprenticed in photography, glass painting and optics and frequently hand painted chromatropes and mechanical slides for *Skladanowsky & Sons*. In 1894 he also published an essay in *Der Artist* on color harmony for variety theater costumes. The same magazine in 1895 ran a half page advertisement on Max and Emil Skladanowsky's Bioscop and its lightning-fast "living photographs".
7 See Raymond Bellour, *The Analysis of Film*, Indiana University, Bloomington IN 2000, p. 193.
8 See Raymond Bellour, "Alternation, enunciation, hypnosis", an interview with Janet Bergstrom, in *Camera Obscura*, no. 3-4, Summer 1979, pp. 71-103. Tom Gunning has also explored the relation to the spectator that the avant-garde shares with early cinema. See his *The Cinema of Attractions: Early Film, Its Spectator and the Avant-Garde*, in Thomas Elsaesser, Adam Barker (eds.), *Early Cinema: Space, Frame, Narrative*, British Film Institute, London 1990, pp. 56-62; see also Tom Gunning, *An Unseen Energy Swallows Space: The Space in Early Film and Its Relation to American Avant-Garde Film*, in John L. Fell (ed.), *Film Before Griffith*, cit., pp. 355-366.
9 See Tom Gunning, *The Cinema of Attractions: Early Film, Its Spectator and the Avant-Garde*, cit., p. 57.
10 Stephen Bottomore, *Shots in the Dark: The Real Origins of Film Editing*, in Thomas Elsaesser, Adam

Barker (eds.), *Early Cinema: Space, Frame, Narrative*, cit., pp. 104-113. Bottomore also writes that cinema in the late 1890s was often seen as an extension of the lantern and that «"cinematographic slide" was a common term for film» (p. 105). The exhibitor would often string the film and slides together into little episodes, with a succinct plot, argument, or story.

11 William Charles Hughes, *The Art of Projection: By an Expert*, cit., p. 6. In 1898 Hughes added a supplemental section on the cinematograph to his catalogue on projection. As late as 1910, Ernst Planck was producing amateur-cinematographs for the projection of 35-mm film and lantern slides. See the photographs in Gerhard Kemner, Gelia Eisert (eds.), *Lebende Bilder: Eine Technikgeschichte des Films*, Deutsches Technikmuseum, Berlin 2000, pp. 26-27.

12 The term "chaser" was prevalent in vaudeville, where continuous 24 hour shows were advertised. A final "chaser" act of questionable quality was thought to chase the audience out of the auditorium. But the term is often used in the context of the variety theater or film palaces to signify a "final act" or "filler" used to provide light-hearted entertainment, after a more somber or serious program. See also *Encyclopedia Britanica*, Vol. XIV, p. 856, and Carl Niessen, *Der "Film". Eine unabhängige deutsche Erfindung*, Heinr & J. Lechte, Emsdetten 1934, p. 15.

13 William Charles Hughes, *The Art of Projection: By an Expert*, cit.

14 Paul N. Hasluck (ed.), *Optical Lanterns and Accessories: How to Make and Manage Them*, Cassell and Company, London 1901, p. 25.

15 *Ibidem*.

16 *Ibidem*.

17 See Stephen Bottomore, *Shots in the Dark: The Real Origins of Film Editing*, cit.

18 Paul N. Hasluck (ed.), *Optical Lanterns and Accessories: How to Make and Manage Them*, cit.

19 A second dissolving view presentation featuring "Prof. Morieux" took place in Stockholm on September 9, 1896, again under the direction of M. and E. Skladanowsky.

20 Circus Varieté program, April 25, 1896, BA N 1435 76.

21 See Janelle Blankenship, "Leuchte der Kultur. Imperialism, Imaginary Travel and the Skladanowsky Welt-Theater", in *KINtop: das Jahrbuch zur Erforschung des frühen Films*, no. 14-15, 2006, pp. 37-52. The surviving lecture for the Skladanowsky "Projection for All!" lantern program, "Der Kampf um den Nordpol" [The Struggle for the North Pole] also reproduces an anthropological discourse on dying races. As I emphasize in my essay on imperialism and imaginary travel, this lecture and the Skladanowsky program on "Our Colonies in Africa" provide valuable insight on the elaborate use of the magic lantern to promote overseas expansion and military intervention. As Charles Musser has aptly written, what we find in such lectures and also in the sequencing of the slides are «disturbing meanings and assumptions about imperialism and racial and cultural superiority». See Charles Musser, *The Travel Genre in 1903-1904: Moving Towards Fictional Narrative*, in Thomas Elsaesser, Adam Barker (eds.), *Early Cinema: Space, Frame, Narrative*, cit., pp. 123-132. On the term "monstration" for lecturing and the debate on showing vs. telling in early cinema, also see André Gaudreault, "Narration and Monstration in Early Cinema", in *Journal of Film and Video*, Spring 1987. As late as 1910 a combination program of slides and cinematograph displays with monstration was used in Wilhelmine Germany to present a recent expedition to the Pole. According to a newspaper advertisement, the famous British explorer Sir Ernest Shackleton visited the city of Aachen with his "light images" (slides) and a cinematographic presentation on November 2, 1910. The advertisement points out that Shackleton's lecture on his recent trip to the South Pole was in German, with the title 'Meine Südpolarreise' mit Lichtbildern und kinematographischen Vorführungen nach Original-Aufnahmen" ("My South Pole Expedition with Light Slides and Cinematographic Presentation based on Original Photographs").

22 For a full taxonomy of the elaborate art of late 19th century mechanical slides – including slipping, lever, rackwork, chromatrope, pandiscope, kaleidotrope, chroeutoscope, cycloidotrope (invisible drawing master), wheel of life or zoetrope – and their effects (lightning, snow, dissolving, etc.) see Walter D. Welford, Henry Sturmey (eds.), *The "Indispensable" Handbook to the Optical Lantern. A Complete Cyclopaedia on the Subject of Optical Lanterns, Slides and Accessory Apparatus*, Ilife & Son, London 1888.

23 What if one failed to "register" lantern images? As one technician argued in a catalogue on the art of projection, this often met with disastrous results. In this handbook the question is raised: «What does registering imply?». The answer is simple: the two images «should appear perfectly coincident to the preceding picture in size and shape. Take two effects for instance, day and night of the same place, when the two are on the screen together, the buildings, etc., must superimpose over each other, with such precision that they have the appearance of one slide, likewise the circles or edges of the picture should supe-

rimpose to a minute degree» (p. 41). As an important lesson for showmen, this author also includes a glimpse into a nightmare scenario of unregistered images: «Effects bobbing up and down on the screen, as the operator endeavors to get them into their proper position» (*ibidem*). Registering images was also a challenge for the chrono-photographer. In 1893 Ludwig Mach (son of physicist Ernst Mach) published an essay on time-lapse photography or "Zeitverkleinerung" which featured several frames illustrating the growth of a pumpkin plant. Mach writes with dismay that «due to an oversight, the reproduced images do not follow a standard format or size, which projected images would naturally have to possess» (Ludwig Mach, "Über das Prinzip der Zeitverkürzung in der Serienphotographie" [On the Principle of Time Compression in Series Photography], in *Photographische Rundschau*, April 1893, pp. 121-127).

24 See Joachim Casten, *Max Skladanowsky oder der Beginn einer deutschen Filmgeschichte*, Füsslin, Stuttgart 1995, p. 46.

25 *Berliner Zeitung*, November 5, 1895.

26 Skladanowsky also made the important point that he exhibited film strips, not glass plates or slides. One month later he sued Ottomar Anschütz in Germany (Einspruch; BA 1435/194). The Bundesarchiv-Filmarchiv in Berlin remains the best source on this technical debate. Also see Deac Rossel's vivid historical account of Anschütz' "electric wonder" or *Schnellseher*, which preceded the kinetoscope and other exhibition devices, in Deac Rossel, *Ottomar Anschütz and his Electrical Wonder*, The Projection Box, London 1997.

27 Protocol of a radio interview with Max Skladanowsky [1933] housed in the *Stiftung Deutsche Kinemathek* 4.3.-80/45-3; 74.

28 *Encyclopedia Brittanica*, cit. and Carl Niessen, *Der "Film". Eine unabhängige deutsche Erfindung*, cit.

29 During the early days of the Third Reich, Skladanowsky ephemera of early cinema filled not only film theaters (the 1895 films were screened with Riefenstahl's *Triumph of the Will*), but also the display cases of popular museum exhibits commemorating the German contribution to film history.

30 There is a theory that within the vaudeville tradition, early motion pictures often served as "chasers" or "dumb acts" to conclude a program. The idea is that the cinematic spectacle as an act without sound, could be screened while patrons where noisily exiting the theater. However, the Skladanowsky Wintergarten Program with its elaborate orchestral accompaniment was not "dumb" and certainly not a "chaser" in the traditional sense. Moreover, film was rarely silent in the early period.

31 Bundesarchiv N1435/191. Although the Bundesarchiv-Filmarchiv in Berlin added a digitally restored version of the Serpentine Dance to the *Wintergarten Program*, this act was not original to the program. See Joachim Casten, *Max Skladanowsky oder der Beginn einer deutsche Filmgeschichte*, cit., pp. 57-58; 73. My comments in this essay are based on the restored *Wintergarten Program* (Germany, 1995, silent w/sepia tint, 6 min).

32 It is likely that the Skladanowsky Brothers had studied the Edison films and the kinetoscope device while touring Europe with their magic lantern theater. The kinetoscope peep hole films were also on display at a popular Berlin panopticon two months prior to Max Skladanowsky's outdoor shooting of the *Wintergarten Program*.

33 Again see Tom Gunning, *The Cinema of Attractions: Early Film, Its Spectator and the Avant-Garde*, cit.

34 On "deep staging" in french filmmaking, from 1900-1914 see Ben Brewster, *Deep Staging in French Films 1900-1914*, in Thomas Elsaesser, Adam Barker (eds.), cit., pp. 45-55.

35 My use of this term "internal alternation" is indebted to Raymond Bellour, *To Alternate/To Narrate*, in Thomas Elsaesser, Adam Barker (eds.), *Early Cinema: Space, Frame, Narrative*, cit., p. 370.

36 Joachim Casten, *Max Skladanowsky oder der Beginn einer deutsche Filmgeschichte*, cit., p. 56 (my translation).

37 There are two extant versions of *Die Fliegenjagd* or *Die Rache der Frau Schultze* housed at the National Film and Television Archive (London) and at the Bundesarchiv-Filmarchiv (Berlin). The second version (5 min 33 seconds) has more sophisticated camera movement and German intertitles. My comments are based on this lengthier print. See the censorship protocol BA N 1435/116 (Pruf-Nr 24376).

38 Here one is reminded of the obvious ideological implications to Raymond Bellour's textual analysis: since Hollywood narrative circulates around the anxiety of male castration, the distribution of oppositions also enables the male mastery of the oedipal trajectory through progressive play of interruption and resolution on the screen.

39 "Projection for All!" was the name of the production and distribution company founded by Max Skladanowsky in 1897. This company produced and marketed flip books, stereoscopic views, lantern slides, as well as commercial film such as *Die Rache der Frau Schultze*.

40 “Berliner Pressestimmen über die Weltaufführung des Bioscops im Berliner Wintergarten am 1. November 1895” [“Berlin Press Reviews of the World Premiere of the Bioscop in the Berlin Wintergarten on 1 November 1895”], *Nationalzeitung*, no. 618, October 27, 1895, BA N 1435/250.