rather to see how film could be fashioned as an instrument, what than were the experts of advertising and propaganda with the ends was a way that we should avoid condemning was a political opportunism, but that we should read that opportunism as parcel of one historical conception of the medium — and of the avantage role in shaping that conception — that has yet to be fully understood.

I. Absolute Advertising: Abstraction and Figuration in Ruttmann's Animated Product Advertisements (1922-1927)

Introduction

interwar Germany - including Ruttmann, Reiniger, Seeber, Richter and Fischinof all into the theories and discourses of consumerism that informed both the companies and contexts, into distribution and forms of screening, and not least val investigations suggested by Elsaesser: investigations into commissioning scholarship. And yet, the sphere is rife with possibilities for the kinds of archiing has received perhaps the least amount of attention in English-language Of all the domains of "sponsored film" recently rediscovered, product advertissilhouettes (Reiniger) to montage (Ruttmann, Seeber, Richter), which these artwith experimental cinema, from abstract animation (Ruttmann, Fischinger) to if not all, of this work employs the signature forms we have come to associate ger - collaborated with advertising producers such as Julius Pinschewer.2 Most, culture of the 1920s. Nearly all of the major proponents of avant-garde film in production and circulation of these films. Moreover, product advertising is a magazines.3 Nor would it be correct to describe this use of experimental aesists placed in the service of advertisements for products as diverse as chocolates. particularly relevant field for anyone wishing to comprehend avant-garde film sound and montage) were actually first tried out in advertising films.* in the 1920s and many of the major innovations in experimental film (in color, ago argued, advertising film provided a consistent forum for experimentation thetics for advertising as "secondary" or derivative; as Ingrid Westbrock long tires, alcohol, flowers, cigarettes, skincare products, pertumes and illustrated

Only recently has much of this work become available for researchers outside of archives, and only a handful of publications have devoted extended attention to its role within the avant-garde film culture of the interwar period. No doubt, this dearth of research is in part the result of tacit assumptions, in avant-garde history, that such advertising commissions represented a "compromise" of artistic integrity or simply a means of financing the artists more "serious" projects in visual music. But if we approach these films outside of such assumptions, a different picture begins to emerge, one suggesting – as Jacques Rancière has argued in a different context – that modernist formalism and advertising design in fact shared some fundamental goals and principles. In a well-known essay

comparing Mallarmé's graphic poetry and the trademark designs of Polymens, Ramcière has argued that modernism, in both its "high," and "low forms, was traversed by an ethos of design, where the "surface" (the Page, the poster or – we should add in this context – the screen) came to be seen as a space for proposing new modes of collective life: a space for forging "types that could help to reorder perception and redistribute the shared space of a world where the traditional forms of religious and courtly ceremony no longer held sway."

loss and retrieval of meaning that was part and parcel of early advertising theoabstract film, while ultimately blending abstraction and figuration to stage a show, Ruttmann's animated advertisements draw on these understandings of Ruttmann could lay claim to a certain type of professional expertise. As I will film's effect on spectators, and a nodal point around which a filmmaker like as a form rife with financial and industrial possibilities, a means for harnessing abstract film could and did appear both to filmmakers and advertising theorists Far from being understood uniformly as a resistance to the culture industry, modernist film culture, but also of the aesthetics of advertising film - and ina different understanding not only of the place of advertising film within deed of abstract animation itself, its uses and its possible meanings in the 1920s. tisements in both their contextual and formal dimensions, this chapter suggests advertisements that have been lost. 10 Examining the surviving animated advermade for Julius Pinschewer between 1922 and 1927,9 as well as other animated throughout the 1920s, including at least six animated product advertisements And advertising would continue to form a major part of Ruttmann's oeuve for Excelsior tires completed one year after LICHTSPIEL OPUS I in April 1922. Succes. Ein Film in Farben (The Victor. A Film in Colors), an advertisement along with Lotte Reiniger - to delve into product advertising with his film Dec publicly. But Ruttmann was also among the first experimental filmmakers screened in May 1921, is by many accounts the first abstract film ever shown one of the pioneering figures of abstract film, whose LICHTSPIEL OPUS I, first by designing advertising posters. 8 Ruttmann would go on, of course, to become graphic designer and poster artist and in fact made his living, at least in Part. the Munich art scene before the war, it is worth recalling that he was also a While histories of avant-garde film stress Ruttmann's beginnings as a painter in modernism for film and moving images, Ruttmann offers an ideal case study For anyone wishing to investigate the ramifications of Rancière's reading of



Stills from Ruttmann, Lichtspiel Opus I (1921) and Der Sieger. Ein Film in Farben (1922)

Absolute Film and the Psychophysical Image: Ruttmann's Orus Films

Its echoes of her early ornamental silhouette shorts) to Fischinger's cigarette makers, one can find similar correspondences in works ranging from alone here; examining the range of advertising work by experimental filmclimbs to health in Der Aufstieg (The Ascent), a 1926 advertisement for the round and angular forms from Lichtspiel Opus I becomes a struggle between Reiniger's 1922 Nivea advertisement Das Cehelmuis der Marquisin (with DENE PARADIES (PARADISE REGAINED); and the geometric shapes from Kutt-MIRACLE. A FILM IN COLORS); the spirals from Opus IV (1925) become the seradvertisement for Kantorowicz liqueur, Das Wunder. Ein Film in Farben (The shapes from LICHTSPIEL OPUS II (1922) become two arguing heads in the 1922 anthropomorphized spikes and Excelsior tires; similarly, the round and paisley into identifiable faces, bodies and objects. Thus in DER SIEGER, the dance of echoes of the forms operative in his Orus films, but those forms now morph recognizable objects and thus highlighting the fluid border between the two ality, constantly moving back and forth between abstract-elementary forms and "Cesolei" exhibition on health, welfare and physical fitness." Nor is Ruttmann mann's later Opus films become the stairs on which the ravaged German nation pent in the Garden of Eden in the 1925 flower advertisement Das wiedergefun-Seen against the backdrop of debates about Ruttmann's formalism, what makes Throughout Ruttmann's advertisements from this period, one finds precise seem to hover between abstract "absolute" formalism and denotative referentihis animated advertisements particularly interesting is the way in which they

Stills from Rultmann, Orus II (1922) and DER AUFSTIEG (1926)

advertisement Muratti greift ein (Muratti Steps In, 1934), which portends the aesthetics of his Komposition in Blau (1935).

In asking what made possible the translation of experimental forms from abstract film to advertising, it is worth reconsidering, here at the beginning, Ruttmann's "absolute" films themselves. In his 1926 study Expressionismus und Film (Expressionism and Film), the critic Rudolf Kurtz described the abstract work of Richter and Ruttmann, not surprisingly, as an effort to do away with the "psychological" dimensions of spectatorship – i.e. all of the processes of cognition, association and temporal ordering by which spectators normally identify things and people and piece together stories – in order to access elementary forms and laws of movement. But if abstract film emptied out the "psychology" of spectatorship, it nonetheless left room for, and even cultivated, a "psychophysical" dimension, in which the film elicits an elemental reaction from spectators. As Kurtz described it:

Despite its rejection of the possibility for psychological comprehension, absolute and doubtlessly exerts effects on audiences in certain cases. Only this is not an act of contemplation that perceives forms in their pure relations to one another, but rather a into the mathematical forms [fühlt sich in die mathematischen Formen ein] and answers them with corresponding sensations. This process occurs at an unconscious sensation in their directions, making him move with their movements and guiding that corresponds to the struggle, harmony or reconciliation of the forms on the screen. 12



Absolute Advertising

Stills from Lotte Reiniger, Das Ornament des verliebten Herzens (1919) and Das Geheimnis der Marquisin (1922)

cro-physiological level. 4 As late as 1927, a writer for the journal Filmtechnik, in such as sports.13 This emerging model of spectatorship also came to inform a nomena from telepathy to the predilection for popular spectacles of movement chophysical research, invoked by scientists such as Charles Féré and Théodule late 19th century, the idea that the sight of movement could provoke a tendency correctly, it 'hits' its target and infects us. [...] These are qualities that make man calls forth in us a need to produce our own movement in turn. When executed to argue that movement shown on the screen could elicit tendencies toward mechanics of the Spectator") could still rely on this psychophysical explanation an article entitled "Von der Psychomechanik des Zuschauers" ("On the Psychoaffect spectators psychosomatically inducing "counter-movements" at the miwidespread understanding of film as a medium of visual movement that could toward counter-movements within the spectator was a standard axiom of psy-Kurtz's reference to "psychophysics" here is hardly fortuitous; already in the other things as a field for cultivating the psychophysical power of moving as an effort to bracket out psychological "content" precisely in order to isolate could call forth counter-movements in spectators proved particularly attractive an appropriate object for film's effects." 15 But while it could theoretically be apelementary counter-movements in spectators: "When we see a movement, it Ribot - under the term "psychomotor induction" - to explain all sorts of phe-Badly Trained Soul"): "This film here offers no 'stopping points,' at which one images. As Richter explained in a 1924 text "Die schlecht trainierte Seele" ("The as Kurtz, but also practitioners such as Hans Richter saw absolute him among and amplify such psychophysiological mechanisms. Not only for theorists such for describing the desired effects of abstract film, which was widely understood plied to any form or genre of filmmaking, this notion that visual movement

1. Absolute Advertising

33

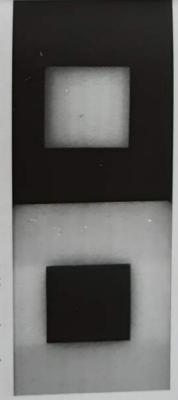
could look back through memory. The viewer is - exposed - forced to 'feel' - lo

go along with the rhythm."16

ered the importance of the white page for defining the black of letters, so Hans his Filmstudie (Film Study) of 1926. sal of figure and ground in his first rhythm film, a motif he would return to in Richter highlighted the relativity of black and white through the sudden reverous similarities between the modernist textual phenomena noted by Kittler and the visual experimentations of absolute filmmaking. Just as Mallarmé discovthe German psychotechnician Fritz Giese. 19 Indeed, one could point to numersuch as Methoden der Wirtschaftspsychologie (Methods of Economic Psychology) by telligence and aptitude testing, as suggested by their inclusion in publications sel" (color wheel) designed to test the perception of color combinations. Both children's education and in performance intelligence tests, or the "Farbenkredevices were still being used in the 1920s in the field of psychotechnics for inand scientists invented all sorts of apparatuses for testing them, such as the combinations, were standard components of psychophysical experimentation -"form board" devised by Edouard Seguin in 1866 and subsequently used in elementary forms, for example, as well as the effects of primary colors and color erates with many of the same parameters on the visual level. The attention to tween art and science can be observed in absolute painting and film, which opworks by Kurt Schwitters or Christian Morgenstern. 18 A similar relation bein the experimental "nonsense" poetry that emerged some 20 years later in of materialist media experience, one that would find its aesthetic continuation quantitative memory capacity as the paradigmatic incarnation of a new regime Kittler saw Hermann Ebbinghaus's use of meaningless syllables to measure into aesthetic production a "flight of ideas" inaugurated by psychophysics modernist poetry examined by Friedrich Kittler, moreover, these films carried visual consumption had become the new terrain of social power.¹⁷ Like the for whom the faculties of attention, sensation and affect mobilized in acts of med by Jonathan Crary, these films were created for an embodied spectator, one much recent media archeology. Like the visual practices and discourses exam. paradigm shift already begun in the 19th century, which has been the focus of solute film can be read, at least in part, as the culmination of a broader media to trade in psychological understanding for psychophysical effects. In this, ab motivations informing the very emergence of "absolute" film in the 1920s. That affect spectators. But such statements do tell us something about the ideas and emergence was motivated not simply by artistic questions, but also by a design My point, in terraining their assessment of abstract film's ability to Kurtz were empirically correct in their assessment of abstract film's ability to My point in rehearsing such arguments, is not to maintain that Richter or



Color wheel, illustration from Fritz Giese, Methoden der Wirtschaftspsychologie (1927)



Stills from Hans Richter, Rhythmus 21, reversal of figure and ground

Advertising Psychology and the Uses of Abstraction

chophysical testing rather than as a hermeneutic interpreter. It was precisely niques of spectatorship, where the viewer figures as an embodied object of psyresistance to mass culture than as one part of a broader elaboration of new tech-Seen in this light, the absolute film of the 1920s would appear less as a mode of

position, contrast, color, typography, letter spacing, image size and ad placetachistoscopes - the psychophysical effects of such material factors such as comadvertising spectatorship by meticulously testing - via rapid-flash windows of from 1912), theorists within this new branch sought to forge a new science of (particularly his Psychologie und Wirtschaftslehen [Psychology and Economic Life a host of books and articles on advertising psychology.20 Drawing explicitly on the pioneering research of figures such as Ebbinghaus and Hugo Münsterberg journals (such as Die Reklame, Seidels Reklame and Industrielle Psychotechnik), and nomic Psychology] founded in 1920 in Berlin), the proliferation of specialty and laboratories (e.g. the Institut für Wirtschaftspsychologie [Institute for Ecosearch during the Weimar Republic, one marked by the opening of institutes branch of psychotechnics to become a major field of independent scientific revertising psychology. That science emerged in the wake of World War I - aladopted the lessons and tools of psychophysics more enthusiastically than adwith advertising. For perhaps no other domain of applied science in the 1920s most simultaneously with the emergence of abstract film - from its status as a stract film, in the eyes of contemporary observers, an obvious realm to combine this status as a forum for perceptual experimentation, moreover, that made ab

attention. Thus in one of the earliest texts on advertising layout, the head of the early 1920s. Within this context, advertising theorists also assumed - long belore Benjamin and Kracauer - a new mode of distracted and divided visual erature already spoke of a "Reklamehochflut" or "flood of advertising" in the for advertising. "Where later observers would decry the "Bilderflut" or flood of contemporary observers, it seemed as if every surface had now become fair game images occasioned by the spread of illustrated magazines, advertising trade litfor projecting colorful slide advertisements onto walls ceilings or sidewalks. To strikingly cinematic, such as mobile advertising vehicles and special projectors with the invention of numerous new advertising technologies, many of them The period was also marked by a significant expansion of electric signage, along tram tickets, stamps and anywhere else a bit of surface space could be found along traffic routes, on postal delivery vehicles, construction fences, mailboxes, roots of tramways and the interiors of subway stations, at street crossings and columns - began to turn up everywhere: in train stations and rail cars, in the tising displays. As a result, print advertisements - once confined to street corner way, the post office, public transportation systems and streets to use for adveradvertising laws, which opened up public institutions such as the German railthe social democratic government was a thoroughgoing relaxation of prewar increased presence of advertising itself. Among other changes introduced by new experience of visual culture in the Weimar Republic brought on by the In conducting such tests, these advertising theorists were in part reacting to a



Advertisement for mobile publicity projector, from Die Reklame (1922)

new Institut für Wirtschaftspsychologie, Walther Moede, argued that all advertisements had to conform to the "principle of the fleeting glance" (Prinzip des flüchtenden Blickes), which stipulated that consumers would only perceive advertising content for a fraction of a second.²⁴

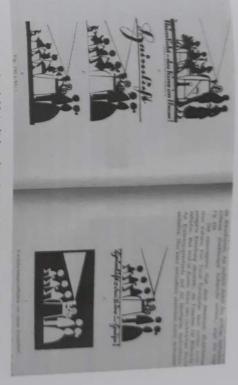
In reaction to this new configuration, these theorists called above all for a reductive visual aesthetic, one not a little reminiscent of the "elementary" forms of abstract film itself. Specifically, they argued that advertisements should strive for clarity and rapid recognition through the reduction of images to simple geometric forms, the adoption of streamlined typographies, and the strategic use of high contrast. ²⁵ Such principles were put to use in the trademark designs by Wilhelm Deffke and others, ²⁶ but they also came to characterize the aesthetics of poster design, most famously in the so-called "Sachplakate" (objective posters) of Lucien Bernhard, which simplified shapes and colors to the extreme to draw attention to the object advertised. ²⁷ A case in point can be seen in a celedraw attention to the object advertised. ²⁷ A case in point can be seen in a celedraw attention to the object advertised. ²⁷ A case in point can be seen in a celedraw attention to the object advertised. ²⁷ A case in point can be seen in a celedraw attention to the object advertised. ²⁸ A case in point can be seen in a celedraw attention to the object advertised. ²⁹ A case in point can be seen in a celedraw attention to the object advertised. ²⁹ A case in point can be seen in a celedraw attention to the object advertised. ²⁹ A case in point can be seen in a celedraw attention to the object advertised. ²⁹ A case in point can be seen in a celedraw attention to the object advertised. ²⁹ A case in point can be seen in a celedraw attention to the object advertised. ²⁹ A case in point can be seen in a celedraw attention to the object advertised to company, in which the family members, projector and light were reduced to company.



Advertisement for "Reklamemobil," from Seidels Reklame (1920)

was singled out for special mention in 1920 by the editors of Seidels Reklame, who lauded Bernhard's use of "spherical human figures" (Kugelmenschen) and the "effects of black and white" (Schwarz-Weiß-Wirkung). ²⁸ Looking back in 1927, Fritz Giese would also take Bernhard's advertising as a model of effective advertising layout in his *Methoden der Wirtschaftspsychologie*, where he walked readers through the simplification of a complex image through the reduction of detail and the reversal of black and white.

would then argue in 1922 that the greatest effect on consumer attention could tor of Seidels Reklame, Robert Hösel, described a series of experiments delength presentations of experimental advertising psychology, Theodor König hve contrast between text and background on posters.³² In one of the first booksigned to determine which color combinations would produce the most effecblack and white but also "Farbenkontrast" (color contrast).31 Similarly, the edias the key to effective advertising design and recommended not only the use of Walther Moede, for example, cited the "law of contrast" (Gesetz des Kontrastes) as a means of maximizing the advertisement's effect on consumer attention.30 Chevreul via late 19th-century experimental psychology and now understood tary and contrasting color tones derived from the theories of Michel Eugene cles. 39 But more often advertising theorists latched onto ideas about complimenthe brightness of adjacent colors, generated widespread interest advertising cirmous" color compositions could be achieved through the exact determination of trasting colors. Wilhelm Ostwald's color theories, according to which "harmoadvertising theorists also meticulously discussed and tested the effects of con-Such black and white reversals recall, once again, the work of Richter. But



Lucien Bernhard, Heimlicht advertisement (showing successive stages), from Fritz Giese, Methoden der Wirtschaftspsychologie (1927)

be achieved by contrasting the complimentary primary colors of green and red or yellow and blue. 33

terms of their effects on the attention. Ruttmann's awareness of the principles of at least minimally aware of the latest science on fashioning words and images in quently in Ruttmann's animated color advertising films, suggesting that he was even experimental film formed part of the school's curriculum. 4 Bauhaus teachadvertising design would, moreover, hardly be surprising when one considers desdorff, who would serve as Ruttmann's principal assistant on several Orus days as a student in Munich.36 Moreover, it was a Bauhaus student, Lore Leumembers of the Bauhaus including Paul Klee and Lyonel Feininger from his mary colors combinations of red, green, yellow and blue.35 Ruttmann knew mary forms - itself reminiscent of "form board" tests - employed the same pricolor combinations, and it is surely no accident that the well-known children's device developed by Ludwig Hirschfeld-Mack, who also screened abstract color ers frequently employed color wheels of the type described above (including a key role in the preliminary course, and courses in advertising, typography and where the study of color - often based on the theories of Chevreul - played a the intense research into color taking place simultaneously at the Bauhaus, films and advertising films in the mid-1920s. 37 According to Jeanpaul Goergen. block set designed by Alma Siedhoff-Buscher to familiarize children with priprojections at the "absolute film" matinee in 1925) to illustrate the effects of It is perhaps no accident that the same color combinations show up quite fre-

Rutmann in fact met Leudesdorff in the offices of Edgar Boyfuß, the head of the Use Kulturfilmsbeeilung, when Ruttmann was first working on securing a contract for his films with Dinschewer. 18 Leudesdorff herself would later reall bringing to Rutmann's advertising films specific knowledge gained from her Ruthaus coarses, including "new techniques of colors and forms" (das Neue an Earben und Formen). 19

of the new industrial consumer society,** class, alongside work scientists and psychotechnicians, within the management mate their own role as "experts" in mass psychology and as a key professional des. Advertising theorists capitalized on this newfound prominence to legiticrucial forces within the mediatized public spheres of modern mass democra-Weimar scientists and policymakers came to see advertising and propaganda as paganda as a means of mobilizing public opinion during the First World War, process of legitimation: having witnessed the new prominence ascribed to proman Advertising Experts. VdRJ) was centrally bound up with a question and sociation bore the title Verein deutscher Reklamefachleute [Association of Gercaste of "advertising experts" in the Weimar Republic (the most prominent as-'expert' culture. As Corey Ross has shown, the emergence of a professional laborations in fact signaled the filmmaker's entry into a very specific kind of frequent collaborations of avant-garde filmmakers with advertisers. Those col-Gestaltung (G. Material for Elementary Construction) - and it also informed the Richter, Werner Graeff and the constructivist journal G. Material zur elementmen circles of the Weimar avant-garde - one thinks here of the group around Hans of the artist as "expert" was particularly pronounced among the constructivist tions rather than a hermetic creator withdrawn from social concerns. 10 This cult redefine the role of the artist as a potential "expert" in social and media quesarest as "engance" formed part of a widespread bendency, during the 1920s, to ing among Baahaus artists, along with the predilection for the metaphor of the As Prederic Schwartz has argued, the interest in psychophysics and advertis-

It is against this background, moreover, that one can understand the transformations in the area of film advertising after 1918. Although filmic advertisements can be traced back to the earliest years of cinematography (the first known advertising film in Germany dating from 1897),⁴² the period after WWI panies operating in Germany alone by the end of the 1920s.⁴³ These companies and their major players stayed abreast of the latest developments in advertising filmed professional sphere of filmic advertising. As one writer described it in an is an expert in this field. Not every person can master the difficult instrument of

propaganda, and this goes especially for filmic propaganda, since this form must be treated in a very specific way."44

avant-garde advertising films in Weimar, beginning with his collaborations expertise analogous to that of scientific experts in advertising republic, and a confirmation of the filmmaker's status as a professional with od did - meant a legitimation of the public role of film itself within the new Pinschewer's company - as so many of the experimental filmmakers of the peritising in the mass-mediated public spheres of the new democracy, working with with Ruttmann and Reiniger in 1922. Given the increasing prominence of adver-3,000,000 spectators weekly.16 It was Pinschewer who inaugurated the trend of line (HAPAG). By 1926, Pinschewer could claim that his films were seen by board cinemas of the cruise ships belonging to the Hamburg-Amerika shipping schools, exhibitions and trade fairs throughout Germany, and even with the onnumerous contracts, many exclusive, with major cinemas, variety stages, duce advertising films after his flight to Switzerland in 1933).45 Pinschewer held ing enterprises of the Weimar Republic in 1918 (and he would continue to profilm during the war years, before founding one of the most successful advertisin the 1910s, Pinschewer went on to become a major producer of propaganda player was surely Julius Pinschewer. Having started making advertising films Within this new field of professional film advertisers, the most prominent

ceived in advertising circles. While we do not have record of the precise circulagathered, among other things, by the reception that his advertising films reexperts. This is suggested among other things by the attention Ruttmann's films we can assume that they were screened in large and mid-sized theaters tion of Ruttmann's advertising films for Pinschewer, based on what we know to figure more prominently within discussions of advertising in the mid-1920s, generated in the trade literature of the advertising industry. As film itself came tive advertising design - in trade fairs and other special venues for industry throughout Germany.⁴⁷ They were likely also shown - as examples of innovament Ruttmann's color films demanded from the commissioning companies), about advertising film distribution at the time (and on the considerable investgued, Ruttmann's films "exert a lasting hold on spectators" (fesseln nachhalot color film advertisement" (neuartigen Buntfilm-Werbung). With their "waveauthor praised Ruttmann as the most prominent representative of a "new type an article published in Die Reklame - the official organ of the VdR - in which the particularly high hopes for the films of Ruttmann. Typical, in this respect, was account of its perceived psychosomatic effects on spectators, and they held out advertising theorists took an increased interest in the use of abstract film on tig).48 Precisely what was at stake in this argument can be seen in another article like movement" (Wellenbewegung) and play of primary colors, the writer ar-That Ruttmann himself was understood at least partly in this sense can be

on advertising film for the journal Industrielle Psychotechnik (the journal of the Institut für Wirtschaftspsychologie mentioned above), in which the advertising theorist Käthe Kurtzig distinguished three prevalent forms of advertising film the humorous cartoon caricature (the most widespread form at the time), the graceful silhouette in the style of Lotte Reiniger, and what she dubbed the "absolute" advertising film – a designation she almost certainly took from the much discussed matinee Der absolute Film (1925), where Ruttmann's Optos II, III and IV had their public debuts a year earlier. You was Ruttmann's animated advertisements that formed the model for the final category, and Kurtzig duly illustrated her article with still from Der Aufstiec, Ruttmann's 1926 advertisement for the Düsseldorf Gesolei exhibition of body culture and social welfare. Such abstract film, she argued, drew its efficacy above all from the psychophysical power of rhythmical movement:

Absolute film, this latest type of artistic film, offers no rounded stories. Rather, it attempts to give visible expression to ideational content through the movement of ornaments and figures; it works above all through the rhythmical power of movement, which brings the spectator into resonance with its movements [den Zuschauer zum Mitschwingen bringt] and allows him not simply to see and understand events on the screen, but also to experience them. ⁵⁰

If Kurtzig's conception of Ruttmann's absolute film and its usefulness for advertising sounds like the descriptions of Rudolf Kurtz cited above, this is hardly a coincidence. Like the author of Film und Expressionismus, she held out the hope that absolute film, by peeling off the layers of narrative and psychological associations, could enhance film's psychophysical force, its ability to make spectators "move with" (mitschwingen) the images on the screen.

It was precisely this notion of "mitschwingen" that attracted advertising the orists to absolute film in their desire to harness spectatorial attention. The same year as Kurtzig's article for Industrielle Psychotechnik, another advertising theorist Fritz Pauli caused a small sensation in the advertising world with the publication of his treatise Rhythmus und Resonanz als ökonomisches Prinzip in der Reklame (Rhythm and Resonance as Economical Principle in Advertising). Drawing on contemporary research in work science and engineering, Pauli argued that rhythmical presentations of advertisements (in print, electric signage and film) ments of the spectators' nervous systems to the rhythms of the advertisements pression with no unpleasant side effects; for every consumer is immediately located the efficacy of abstract rhythm in the experience of "mitschwingen," the power of the advertisement to make spectators "move with" the rhythmical

Interestingly, Ruttmann himself would adopt similar language of "Schwingen" to describe the effects he sought to attain with his "optical music." Describing his Berlin film in 1927, Ruttmann wrote: "And if I have succeeded in bringing the audience into oscillation [zum Schwingen zu bringen], to make them experience the city of Berlin, then I have attained my goal." Scholars have often commented on Ruttmann's conceptualization of film as a means of provoking the experience of movement. Jeanpaul Goergen, for example, describes Ruttmann's project in Berlin as follows:

In fact, Ruttmann does not see himself [...] as a reporter, [...] He attempts rather to bring about a new artistic reality; he observes Berlin with an aesthetic gaze and attempts to transmit his artistic feelings to the spectator. He wants to intoxicate spectators, to set them into motion [zum Schwingen bringen], to trigger vibrations. ⁵⁶

opposed to reality, but rather the object of intense advertising research, which understood "Schwingen" and "Mitschwingen" as an eminently useful economnance with the waves of the radio. Although serving the immediate purpose of climbs back to health after the ravages of war and inflation, the character's re-STIEG, in which an allegorical "Michel" figure representing the German nation nenbau" ("Harnessing Mechanical Oscillations in Mechanical Engineering," von Schieferstein's "Die Ausnützung mechanischer Schwingungen im Maschthat Fritz Pauli explicitly adopted from engineering treatises such as Heinrich ical phenomenon. This was a form and a language of advertising expertise: one resonance with the rhythmical image was not simply an "aesthetic" endeavor As we have seen, however, the desire to provoke movement ("Schwingen") in via his radio headphones, smiles as he rocks back and forth in pleasurable reso-THE WAVES), a European listener, receiving the sound of an African drumbeat ment for AEG radio equipment from the same year, Spiel Der Wellen (Play of rhythmical waves flowing at the bottom of the image. Similarly, in an advertisestored vitality is marked by his ability to turn flips in resonance with the isohis later animated advertisements. In the 1926 Gelosei advertisement Der Aufating such forms of "resonating" spectatorship is also suggested by several of Pauli. 57 That Ruttmann understood animated advertising as a forum for gener-1925), and one that Ruttmann likely adopted from advertising experts such as



Still from Ruttmann, Spiel der Wellen (1925)

advertising radio equipment, the image also offers an intermedial corollary for the filmic *dispositif* Ruttmann sought to create with advertising film: one that – like Fritz Pauli's calibrated advertisements – would cause spectators to move in resonance with the representations unfolding on the screen.⁵⁸ Thus Ruttmann's abstract "Wellenbewegung" represented something more than a mere artistic phenomenon; it was, rather, part and parcel of an expert research on advertising design.

From Abstraction to Figuration: Ruttmann's Animated Advertisements in Context

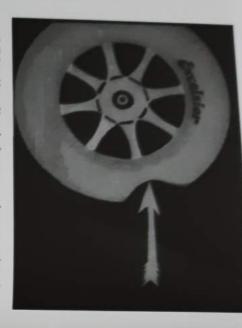
Interestingly, for all of their enthusiasm for abstract forms, colors and rhythms, none of the advertising theorists who discussed Ruttmann acknowledged the extent to which his advertising films had, in fact, deviated from the central precept of "absolute" cinema through the reintroduction of identifiable objects. This too, however, could find a justification in advertising theory. Indeed, the

and recognition. Theodor König, for example, in the same book cited above inaugurated by psychophysical testing was precisely the question of meaning one point on which advertising psychology contradicted the "flight of ideas" capture the attention more effectively because the objects thus recognized speak the qualities of familiarity (Vertrautheit) and meaningfulness (Bedeutsamkeit) to all three phases. First, while novel impressions can stimulate our curiosity, syllables for advertising research - that the use of identifiable objects was critical he extolled at length the benefits of Ebbinghaus's experiments in meaningless tention, producing pleasure and stimulating memory. And he argued - even as identified three principal goals for a successful advertisement: capturing the atcognizing something is easily transferred to that object itself."60 Finally, and in well-known psychological law, the pleasure we receive from the very act of refamiliarity of objects served to stimulate spectatorial pleasure: "According to a alongside other factors such as harmony of form or the use of humor, the very to spectators' interests.59 Secondly, in terms of pleasure, König argued that, ory, in actual practice, representations allowing for meaningful associations might provide the ideal zero-degree material for testing perception and memdirect distinction to Ebbinghaus, König argued that while meaningless syllables gued: "Trademarks should be meaningful, for the figures that are retained and drawing and diagrams that are, to the greatest extent possible, meaningful and moreover, applies to images: "Memory can and must be supported by images, of meaningless syllables [Verbindungen sinnloser Silben]."61 The same logic, ceive and retain meaningful words much more effectively than "concatenations were much more affective at stimulating memory. Customers, he argued, perof thoughts and a process of interpretation."63 distinguished from others are above all those that provoke an associative chain easy to perceive and understand."62 Similarly, for trademark design, König ar-

Within certain parameters, then, advertising theory actually sought to temper the evacuation of meaning that characterized both modern psychophysics and much experimental art. But I would hasten to add that this was not in order to return to any 18th-century model of spiritualizing or interiorizing hermeneutics. Rather, the call for "meaningful" associations was made in the very interest of increasing the advertisement's material efficacy with actual consumers: only a combination of signifiers and signifieds, only a mix of abstraction and identifiable content, could elicit the maximum productivity of the attention and of able content, advertisers sought and thus guarantee the advertisement's real-

world success.

At this point, we can better understand how Ruttmann's advertising films – At this point, we can better understand how Ruttmann's advertising theory as it had developed by the 1920s. Indeed, according to Rudolf Kurtz, Ruttmann's absolute films themselves already contained something



Still from Harry Jäger, Im LANDE DER APPACHEN (1919)

cess with an industry advertising film in this style."65 eagles. But Kurtz also sees it as a factor that lent itself particularly well to adverforms in movement can be seen in the fact that Ruttmann had considerable suctising. "Just how great a wealth of expression is contained in these colorful where his familiar abstract shapes morph into silhouettes of a falcon and two he created to depict Kriemhild's dream in Fritz Lang's Nibellungen (1924). thetics were adaptable to figurative animation, as for example in the sequence tain a wealth of organic associations."64 This tendency toward psychological associations might account for the ease with which Ruttmann's elementary aesare animated by a drama in which the actors are mathematical forms that congical impulses, which continually account for their efficacy. His compositions Hans Richter: "The strong attraction of Ruttmann's films lies in their psycholological operations - than in the reductive geometry of Viking Eggeling and reminiscences" (organische Anklänge) - and thus far greater room for psychoof this mixture of abstraction and recognition key to the successful advertise saw a far greater degree of what he called "organic associations" or "organic lating Ruttmann's films, as well as their lively interaction on the screen, Kurtz ment. In the endless multitude of rounded, wave-like and pointed forms popu-

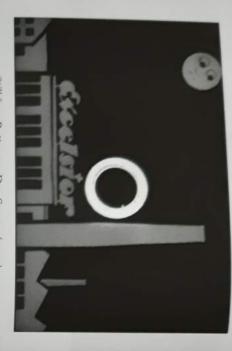
osely the line between abstraction and "organic" associations - associations Ruttmann's advertising films. For what those films repeatedly thematize is pre-Orus films and their effects on spectators, it does suggest what was at stake in While one may or may not agree with Kurtz's assessment of Ruttmann's



Stills from Rullmann, DER SIEGER. EIN FILM IN FARREN (1922) Tropical lagoon replaced by abstract forms

in Farben," the film opens onto a clearly identifiable image of a tropical landmen in an automobile being attacked by bow-wielding Indians but escaping in a black and white caricature style, Jäger's animated film showed a group of entitled IM LANDE DER APPACHEN (IN THE LAND OF THE APACHES, 1920). Drawn rowed motifs from a previous advertisement for Excelsior tires by Harry Jager sioned by the Hannover Gummiwerke Excelsion For his film, Ruttmann box-Ruttmann's first advertising film Dex Steces, a tire advertisement commisthey continually make and undo before our eyes. A case in point can be seen in colors of red, blue and yellow. drama of elementary forms. Following a title card reading "Der Sieger: ein Film film looks back to the design aesthetics of advertising posters to construct a when the Indians' arrows prove no match for the resistant Excelsior tires. Where trenetic explosions followed by a dance of circular and paisley forms in primary ately transformed by a dark and menacing storm cloud into an abstract neid of lanced composition of palm tree, sun, water and mountain - when it is immedihave we had time to absorb this harmonious image - with its static and bascape, over which a sun then rises, reflected in the lagoon below. But hardly Jaeger's film relied on a well-tried adventure scenario, however, Ruttmann's

ever, this circle - the dominant form of Ruttmann's film - will morph back into an object, namely the Excelsior tire, which rolls over abstract waves, geometrical a higher, industrial plane, and the Excelsior tire will form the agent of that subrecount precisely the effort to reinstate the lost idyll of the establishing image on rectangles, and finally a new industrial landscape, all presented in various ment among others in an abstract graphic conflict of colored shapes. Soon, howof the circle remains, no longer denoting a sun, but simply constituting one elelation. As the tropical lagoon disappears in the opening sequence, only the form This transformation has everything to do with pleasure. For DER SIEGER will



Still from Ruttmann, DER SIEGER (1922)

advertising itself with its constant claims on consumer attention. 67 shocks which, as Janet Ward has shown, included the exponential increase in sure of adapting to the perceptual shocks of war and industrial modernity a smooth ride; the pleasure this ad promises is one of psychic stability, the pleafound, Ruttmann's sunny tire is thus associated with much more than simply glowing yellow halo. As the culmination of a narrative of paradise lost and of the film, the tire will literally become a new sun, filling the screen with its from the kinds of storms that destroyed the former paradise. Finally, at the end the now encircles the sun itself, which smiles in glee as if happy to be shielded Freud's postwar description of consciousness as a protective shield, the elastic dents, explosions and dizzying heights. Indeed, in an image reminiscent of der to adapt to the jolts of the technological environment, with its traffic acci-Rubber"), that modern consciousness had to become as elastic as rubber in ortention, in his 1917 poem "Man muß Kautschukmann sein" ("One Must be Like this theme of elasticity takes on new connotations, recalling George Grosz's conspikes. But seen within Ruttmann's new abstract technological environment and its corresponding ability to withstand the shocks of Ruttmann's angry the tire - here recalling Jäger's scenario - is characterized by its bouncy elasticity combinations of red, green, blue and yellow. Throughout these transformations

echoes a tension between abstract shapes and meaningful forms (or "organic objects: the passage from the representation of familiar things to one of abstract school and back again. Such a back-and-forth movement, as I argued above. the formal level, by a drama of the disappearance and restoration of identifiable Most importantly, however, this loss and restoration of stability is echoed, on

> external world.68 Worringer attributed such an anxiety above all to "primitive" recall Wilhelm Worringer's theory of the dualism between "abstraction" and of Ruttmann's narrative of paradise lost and found, this tension cannot but also associations") already present in advertising theory itself. But within the context of the early 20th century (e.g. cubist painting), and compared it the signature cultures, but he also saw it at work in the burgeoning avant-garde movements ily undertaken in reaction to a sense of anxiety before a chaotic or threatening and its environment, while he understood abstraction as a compensatory activtion of trust and "familiarity" (Vertraulichkeit) between the observing subject Empathy, 1908). Worringer associated naturalistic representations with a relamodern pathologies discussed in the psychological literature of his day, citing tion, passing from an aesthetic of empathy to one of abstraction and back again canvas, Ruttmann's film rehearses, as it were, Worringer's conceptual opposiing and remaking the perceptual world of objects on the surface of the filmic the elimination of three dimensional space in the abstract surface. 59 In unmakthe well-known condition of agoraphobia ("Platzangst") as an explanation for "empathy" in visual art. In his study Abstraktion und Einfühlung (Abstraction and And the tire, as the successor to Ruttmann's abstract circle, figures as the agent

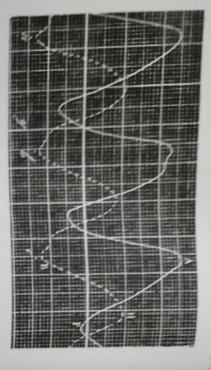
Riding the Curve of Modernity's Information Flows

al movement. In his much-discussed essay "Malerei mit Zeit" ("Painting with own transition from painting to film as an effort to introduce movement into that it occurs not only at the level of spatial forms, but also at the level of tempor-Of course, Ruttmann's abstraction differs from that described by Worringer in ception and a surplus of information: trajectories of movement, a project he understood as a reaction to a potentially visual art. But he also emphasized his desire to isolate and visualize abstract lime"), an unpublished text written shortly after WWI, Ruttmann described his "hostile" environment, namely one characterized by a the acceleration of per-

chines, etc. [...] have brought about a speed in the transmission of intellectual results mitted results in a state of continuous inundation by material that can no longer be Previously unknown. For the individual, this speed with which information is trans-Processed by traditional methods.70 Telegraphs, high-speed trains, stenography, photography, high-speed press ma-

train and the rotary press - would play key roles seven years later in Ruttmann's Nearly all of the media and technologies described here - most explicitly the

1. Absolute Advertising

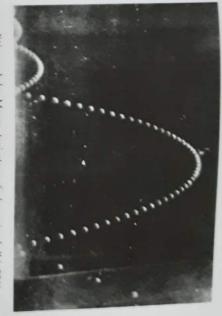


Marcy, curve showing the movements of a pigeon's wing, from La methode graphique dans les sciences (1885)

abstract animation. For it is above all in reaction to this sense of accelerated nological transformation as the key factor underlying his own explorations in blurred by acceleration. But already in his 1920 essay, Ruttmann saw this tech-Berlin film as the catalysts of a process in which perception literally becomes information flows, he argued, that art needed to abstract from the contingent details of individual images to focus on lines of movement:

is now diverted from individual contents to the overall trajectory of a curve formed continuous transformation, and no longer the static disposition of individual observation is now temporal development and the physiognomy of a curve caught in from the various points, a phenomenon that unfolds in time. Thus the object of our [A]s a result of the increased speed at which individual data is cranked out, the gaze

presentations of movement stretching back into the 19th century: namely the Ruttmann's language of "curves" here recalls a long tradition of abstract rescientific motion curves, by which 19th-century physiologists sought to represent abstract trajectories of movement and change. Such curves came in many forms: the rhythmical curves of breathing and heartbeat registered by pneumodynamometers: the paths of bodies isolated by Marey's geometrical chronopho graphs and sphygmographs; the trajectories of force and fatigue inscribed by effort to brack at the series of these "curves" shared a labor of simplification: the tography or the chronocyclegraphic studies of Frank and Lilian Gilbreth. But as elementary arc of a movement or a development. 73 However, this is not to argue effort to bracket the contingent details of individual bodies so as to visualize the



Etienne-Jules Marey, trajectory of a bouncing ball (1886)

curve's "continuous transformation" suggests, Ruttmann's motivation for temcentury motion "curves" onto film; on the contrary, as his description of the gical project, but rather an experiential one. This was, to be sure, a Bergsonian such as "wave-like" (wellenformig), "dance-like" (tanzartig). in time (Kuttmann goes on to provide a long list of such movements with names image, but to create a new vocabulary of abstract movement-patterns unfolding poral abstraction was not to isolate trajectories of movement for study in a static that Ruttmann sought simply to transpose the epistemological project of 19thwords, at stake, in Ruttmann's filmic abstractions, was no longer an epistemolo-(schlangenartig), "galloping" (galoppierend), "raging" (tobend), etc.) In other overwhelm subjective perception. While such a project clearly resonates with to adapt vision and spectatorship to the information overload that threatened to project, with precursors in the widespread use of color organs of the 1910s or in vironment is now defined explicitly by technology (mass media and rapid Worringer's view of abstraction as a reaction to a hostile environment, that en-Loie Fuller's light and electricity dances.74 But it was also motivated by a desire ing the fleeting attention of consumers caught between myriad impressions in advertising psychology itself, with its constant search for new ways of capturwas, we might recall, the same experience that informed the development of temporal one linked directly to the modern experience of acceleration. This transportation) rather than nature, and the central quality of its "chaos" is a movement.

a new trust in the world of things and three-dimensional space. sive abstraction, where the commodity and the trademark figure as the agents of repetitive back-and-forth trajectory between empathetic description and detenadvertisements thus constantly throw away the object only to reel it in again in a torms and figurative images of familiar things. Like Freud's child, Ruttmann's to the destruction of pleasurable origins through graphic conflict only to promise finds its parallel in the very tension between the unfamiliar world of abstract level, this back-and-forth between pleasurable stasis and unpleasurable conflict their restoration on a higher plane by means of industrial products. At the formal and hyperinflation. Thus, these films repeatedly stage moments of anxiety linked promises to restore the nation to its healthy state before the ravages of warfare can landscape transporting the latter into the protected space of a European radio-listener's headphones; or DER AUFSTIEG, in which the Gesolei exhibition 1926 film Stiel DER Wellen, where the AEG radio receives waves from an Afri as Das Wunder, where alcohol has the magical power to resolve conflict; in the paradisiacal pleasures." But the promise of pleasure is also present in film such the Garden to promise viewers that flowers will literally "awaken memories of FUNDENE PARADIES, which recounts a modified version of the expulsion from rative finds its most explicit expression in Ruttmann's 1925 ad Das Wiederce before the tension or conflict introduced by the play of graphic forms. This narthrough an eminently Freudian narrative of restoring a state of harmony existing Ruttmann's subsequent advertising films, in which pleasure is constantly evoked GER establishes a pattern that will be repeated in different variations in several of industrial plane. In this narrative of paradise lost and found, moreover, DER SIE sists precisely in its promise to navigate this new industrial world by overseeing the restoration, as it were, of the lost paradise of the opening image on a higher ised by Ruttmann's tire - an emblem of acceleration if there ever was one - con-Coming back to Der Sieger, one could thus argue that the real pleasure prom

Pleasure was, not surprisingly, a central preoccupation for proponents of the advertising film and their conceptualization of the audience. In a 1926 article for *Die Reklame*, for example, Fritz Pauli argued that the darkened movie theater had the unique advantage over billboards, newspapers or radio of completely monopolizing the spectator's captive attention:

[T]he audience has to register the advertisement, whether it wants to or not. One can deliberately oversee the advertisements section of a newspaper; one can more or less avoid the sight of traffic and electric advertisements; one can take off one's headphones during radio advertisements or simply turn off the receiver; but it is not easy to close one's eyes in the movie theater.⁷⁶

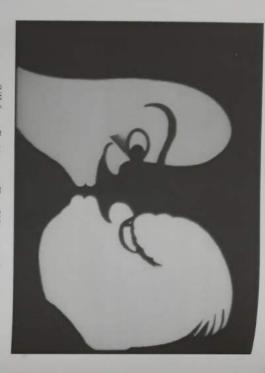
However, Pauli continued, such a compulsory claim on the attention could backfire if didactic or boring films failed to please spectators through humor or



Caricature of film audiences, from Die Reklame (1927)

interesting tricks: "Audiences do not wish to feel cheated, as it were, out of their time or their ticket price. [...] They wish to be amused, thrilled or educated in an interesting way. When this is the case, they feel entertained and regard the product being advertised with favor." Pauli's argument here was echoed more or less verbatim in numerous other books and articles from the time, and it found an illustration the following year on the title page of a special issue of *Die Reklame* devoted to advertising film, on which a caricature drawing compared bored, angry and entertained audiences to suggest that pleasure played a central role in the success of filmic advertisements. Nor was Pinschewer himself unaware of such theories, as he would later resort to the same argument to explain the prevalence of animation in advertising film:

A particular advantage of film advertising resides in the fact that spectators sitting in the darkened room cannot avoid paying attention to the film. Precisely for this reason, the advertising content should be presented in a pleasurable form. This is also the reason why people prefer to clothe advertising film in the form of animation [Trickfilm], for animation satisfies the need for relaxing entertainment.⁷⁹



Sill from Ruttmann, Das Wunder (1922)

It was also in the interest of stimulating such pleasure that product advertise ments resorted from the beginning to strategies of humor, a topic much discussed in the literature on advertising and one of the principal motivations for the widespread use of caricature animation in film advertisements of the 1920s. As one writer for Seidels Reklame put it in 1927, "Audiences today want humor. The animated film offers the possibility of conjuring up the most grotesque Chaplinades, the most fantastical improbabilities on the screen." In particular, advertisers called for the use of gentle humor typical of German print caricature traditions as opposed to the biting satire of Dada and expressionist cabaret. Typical, in this respect, was a 1927 article by the animator Lutz Michaelis, who argued that the advertising animator "should ensure that he does not develop aggressive humor (satire); rather, his figures should be based in a jovial humorous characterization. (To draw on a crass comparison, Wilhelm Busch's caricatures are funny and jovial, while George Grosz's every pen-stroke is caustic and aggressive)." "81

Although Ruttmann's experimental advertisements sought to distinguished themselves from the caricatures of animators such as Michaelis and Harry Jäger, he was not averse to employing such moments of gentle humor – for example in the Kantorowicz film, where the bickering faces begin to kiss one another lovingly after consuming the liqueur from the bottle conjured up by a magician. But as I have argued, his films also sought to produce pleasure at the formal level through the play of abstraction and empathy, by which Ruttmann continuing

which these advertisements were concerned. If Ruttmann's commodity objects promised pleasure, this was above all through their promise to navigate this new world of accelerated information, and more precisely to restore a sense of trust in the new landscape of people, objects and information in motion. Ruttmann's advertisements not only participated, with their targeted stimulation of attention through color and movement, in the shocks of this new media environment, but also promised to help spectators come to terms with that environment in and through acts of consumption.

Conclusion: Experimental Advertisements and the Governance of Perception

unique to his films, but found many imitators in the world of film advertising book, the play of abstraction and empathy I have followed here was not entirely In conclusion, I might add that although I am focusing on Ruttmann in this en the involvement of avant-garde and experimental artists in these films, one movement and recognizable objects, the alternation of abstraction and figuraand Oskar Fischinger (MURATTI GREIFT EIN, 1934), with their play of abstract AND SMOKE], 1933), Wolfgang Kaskeline (Zwei Farben [Two Colors], 1933) cigarette commercials by Hans Fischerkoesen (e.g. Schall und Rauch [Sound transform from abstract forms into personified dancers and back again, to the FLAMMENTANZ (DANCE OF FLAMES), where the flames produced by the gas fuel during the interwar years. From Ewald Schumacher's 1925 advertisement a Bergsonian realm of pure fluctuation or universal variation underneath.82 come territorialized modes of instrumental perception to attain - or "regain" could easily read them as neglected examples of what Gilles Deleuze has called tion constituted an important strategy of filmic advertisement in the 1920s. Givto Deleuze, a good deal of early experimental filmmaking attempted to over-"liquid" or "gaseous" perception in modernist experimental cinema; according is the genetic element of all perception."83 But in order to understand the full tion in the commodity, that the pleasure and efficacy of these films resided. stakes of the preoccupation with abstract movement in experimental advertis-Above all Vertov, Deleuze argued, sought "to reach 'another' perception, which abstraction and familiar objects, between the loss of meaning and its recuperaing pleasure. It was precisely in the back-and-forth movement between using culture - and more specifically to see their relation to theories of advertising films of the 1920s, it is also crucial to read them within the context of adver-



Still from Hans Eischerkoesen, SCHALL UND RAUCH (1933)

Far from challenging that efficacy or undermining the "usefulness" of the image, the avant-garde filmmakers who participated in product advertising in the 1920s affirmed it. If these filmmakers were attracted to advertising, this was not on account of a financial compromise or as part of a campaign of subversion, but because advertising provided a forum in which to demonstrate the filmmaker's expertise, and the relevance of that expertise for a technological-industrial society. Abstraction, movement and rhythm, that is, were not simply artistic elements, but also scientific and practical ones: the building blocks of "management images" that might regulate perception, attention and audience "absolute" film promised to harness this governing power of the image. As we will see in the following chapters, Ruttmann's subsequent turn toward photowill see in the following chapters, Ruttmann's subsequent turn toward photowill images and montage might have constituted a break in appearance from his abstract animation, but he would continue to fashion cinema as a tool for managing mass culture throughout his career.

The Cross-Section: Images of the World and Contingency Management in Ruttmann's Montage Films of the Late 1920s (1927-1929)

Introduction

In the last chapter, I argued that abstract design was never simply an aesthetic phenomenon, but also the object of psychophysiological research, much of it carried out within the new science of advertising psychology. The participation in advertising on the part of Ruttmann and other fillmmakers could hardly be written off as a compromise of aesthetic principles; it was, rather, a logical extension and application of their own experiments in abstract film design, which were carried out within a horizon of application. In a broader sense, we saw that Ruttmann understood reduction and abstraction as a potential answer to a problem of perception in modernity. Drawing on the convention of the scientific "curve," he saw the aesthetics of abstraction as a means of training perception to operate within the new technological and mass-mediated public spheres of the early 20th century, spheres defined above all by acceleration and the increasing accumulation of mental and visual "data."

that sealed Ruttmann's international fame in 1920s and since, his magnum opus metropolis from morning until nightfall.' As has often been pointed out, Rutt-CITY, 1927), in which Ruttmann used montage to depict the teeming life of the BERLIN. DIE SINFONIE DER GROSSSTADT (BERLIN. THE SYMPHONY OF A GREAT sic) to describe Berlin in his book Der Geist des Films (The Spirit of Film, 1930). miere, critic Herbert Jhering spoke of Ruttmann's "Bildmusik" (image music) in visual montage with the musical score by Edmund Meisel. Upon the film's premann's first full-length film, despite replacing animation with photographic BERLIN,2 and Béla Balázs would invoke the term "optische Musik" (optical muform, its division into five "acts" of varying intensities, and its calibration of images, retained a schematic "musical" quality in its imitation of the symptonic of the film. As Goergen notes, rather than basing the film on a linear script. quality, moreover, would appear to have informed Ruttmann's very planning Subsequent scholars have largely followed in the same path. Such a musical card included not only a description of the scene's content, but also, as one Ruttmann employed a kind of card catalogue for the individual scenes, each One could easily carry this analysis of "perception training" over to the film