MULTIPLE LANGUAGE VERSIONS AND NATIONAL FILMS, 1930-1933. STATISTICAL ANALYSIS, PART I

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The aim of this paper is to explore ways in which a statistical analysis of national trends in conversion-era film editing might illuminate the film-historical significance of the multiple-version phenomenon of the early 1930s.

A statistical analysis concerned with stylistic trends for the major film-producing countries of the time can suggest causal relations between multiple-version production and national filmmaking practices in general that complicate familiar characterizations of multiple-version production as a phenomenon of temporary and marginal film-historical importance. Moreover, in enabling comparisons that reveal novel patterns of evidence, statistical findings may defy the historian's expectations, and thus stimulate new research and analysis. In any case, the task here is not to substitute statistical analysis for other film-historical methods but rather to explore what the project of situating multiple versions within film history might gain from new combinations of archives and methods, statistical and otherwise. Also, I must acknowledge at the outset that a conclusive demonstration of statistical analysis' possibilities for multiple-version study will require considerably more data than I have been able to gather so far, as well as further methodological experimentation.

Regarding specific possibilities for additional research, a comparative analysis of statistics pertaining to different language versions of the same script appears promising in respects indicated in the Conclusion below. In the meantime, the findings and interpretations presented below are intended as a first step in the use of statistics in clarifying the significance of the multiple versions of the early 1930s for the film-style currents of the time.

Multiple Versions and Film-Editing Practice

With sound-film style so evidently a function of technical constraint, and certain recording methods more or less necessitating certain editing methods, film editing during the conversion years is often characterized as a function of recording technique.[1] In the context of the new sound cinema's technical requirements, questions arise regarding the effect of multiple-version production on film style.

For instance, did the technical requirements of multiple-version production in Germany and the United States condition the stylistic and technical development of the German and American film industries during the early 1930s? Or, to approach the topic from a perspective encompassing a wider range of types of national film industry, how do aesthetic trends in the export-oriented film industries of the United States and

Germany compare to analogous developments in countries such as France, where the film industry was oriented to making films for domestic rather than international consumption?

The question as to how multiple-version production affected national film style as a whole seems particularly imposing in the case of the German cinema during 1930-1932, when multiple versions were estimated to have made up roughly one-third of the German film industry's entire output during this time.[2] Did the demands of multiple-version production on such a large scale affect German sound-film technique generally? One factor to consider here is recorded sound's impact on the project of making films for export, a project crucial to the economic survival of the German and American film industries during the early sound years.

Key requirements in the export-cinema context concerned scripting and pre-production planning. As producer Erich Pommer had noted in 1930, *à propos* of Ufa's plan to produce multiple versions on an industrial scale, synch-sound cinema required sound-era producers to decide in advance of a film's production whether the film was to be distributed internationally or domestically, on the grounds that international productions during the sound era – multiple versions, specifically – required unprecedented preparation with respect to film technique.[3]

Much less amenable to subsequent modification for foreign markets than silent films, sound movies had to be conceived from the start for export. Because "[e]ine Liebesszene hat in Berlin, Paris oder London nie die gleiche Färbung," a sort of technical modularity was needed to facilitate minute adjustments for each version in light of forces and conditions defining the target market(s).[4] Given sound-era technical circumstances, the making of multiple versions implied a certain stylistic path for early sound film, one diverging from that exemplified by many of the period's talkies. Rather than offer recordings of actors' performances, multiple versions amounted to constructions whereby various component parts were assembled in accord with producers' expectations regarding the target market's taste formations, censorship policies and practices, and other distribution- and reception-related factors.

Statistical Analysis of Film Style

With respect to national style differences, an inevitable starting point for statistical analysis is the work of Barry Salt. Focusing on the early 1930s, my presentation juxtaposes my own findings on the average shot lengths of conversion-era films from France and the United States with analogous findings by Salt. My figures were gathered in the context of a research project concerning the familiar notion that sound conversion produced a homogenization of film style worldwide during the 1930s.[5] In this regard, the recycling of the same sets, narratives, and production personnel in the multiple versions looks like an ideal-typical manifestation of the period's dominant film-style tendency. At the same time, multiple versions can also show up as something of a special case, particularly when the inquiry expands to cover not only image techniques such as editing and cinematography but how the aesthetic function of such techniques may change in light of the sound accompaniment. For example, sounds recorded separately from the image and then dubbed in during post-production may work phenomenologically very differently from sounds recorded simultaneously with the image, as techni-

cians involved in the difficult challenge of dubbing were keenly aware. Recorded sound open many new possibilities with regard to sound-image relations; so, if editing and cinematographic practice, in fact, became standardized worldwide during the 1930s, it doesn't necessarily follow that film-stylistic homogenization also occurred, given that the same editing and cinematic techniques might serve new aesthetic functions, and produce different artistic effects, depending on the nature of the sound technique, not to mention other decisive factors, such as exhibition circumstances. To cite a case in point, the period's numerous "filmed theatre" productions, with their evident simulation of live-entertainment, offered a viewing experience differing vastly from films inspired by the cinematic modernisms of the 1920s, as René Clair, for one, had observed.[6]

For an inquiry into the significance of multiple versions for the period's broad stylistic trends, the "average shot lengths" for films comprising a national film industry's output for a specific period provide a place to begin. A film's average shot length, or ASL, can be computed by dividing its total running time by its total number of shots.[7] Once the individual ASLs for films comprising a national sample have been generated, they can be averaged to produce a national mean, which can then be compared and contrasted with means for other national samples. According to Salt's analysis, based on a sample of several hundred American and European films, sound conversion coincided with an increase in the mean ASL in both Europe and the United States, with sound-era technical conditions reducing the amount of cutting on both continents.

Although the American film industry remained committed to an editing-based narration, the number of cuts per film dropped during conversion as the American ASL more than doubled, climbing from a norm of 4.8 seconds for 1924-1929 to 10.8 for 1928-1933. The number of cuts for European films also fell significantly, as reflected in an increase from the European mean ASL of 6.6 seconds for 1924-1929 to roughly 11.1 seconds for 1928-1933.

In light of the history of silent-cinema practice, this decline in the cutting pace – a reversal of a twenty-year trend – would seem to count as a major film-historical event: whereas the cutting pace of films increased worldwide beginning circa 1905 and continuing up until sound conversion, during conversion, the direction of change effectively reversed, as the cutting pace for films made both in Europe and in the United States dropped substantially. In light of the fundamental change in editing practice during the 1930s, a homogenisation of film style is said to have occurred, with the technical demands of synchronous-sound filmmaking pushing filmmakers everywhere away from the sophisticated, theory-informed editing experiments of the 1920s and toward a long-take aesthetic whose history traced back to the cinema of the years before World War One. With the talkies often cut to the rhythm of actors' speech, many critics saw the new sound films as a return to the filmed theatre of the 1910s, precisely the type of cinema that the modernist and avant-garde film movements of the 1920s had appeared to supplant.

Nonetheless, a more differentiated picture of conversion-era film style, attuned to the period's wide diversity of film-style options, is suggested by statistics regarding the impact on film editing of national differences in sound technique. For instance, when the French cinema is examined relative to the American cinema, a significant national divergence in the direction of stylistic change becomes evident.[8]

Whereas Salt's figures show that the ASL for Hollywood films gradually dropped

during 1934-1939, to reach a low of 8.7 seconds late in the decade, the figure for European films during the same period went up slightly, to yield a norm of 12 seconds; among European countries during the latter half of the decade, France featured the slowest cutting, with a mean ASL of 13 seconds. With respect to French films of 1930-1933, my own statistics, based on a sample of fifty-four films, yield a mean figure of 11.2; the latter, when juxtaposed against Salt's figure of 13 for 1934-1939, indicates that French shot duration increased, on average, by nearly two seconds during the 1930s [see Table I].[9] At issue, then, appears to be a significant national difference in the direction of change, with the cutting pace for French films evolving in a direction opposed to that for the contemporaneous Hollywood cinema: whereas Hollywood films were cut with increasing rapidity in the course of the decade, editing in French films, on average, slowed down and at a rate slightly greater than that for European films as a whole.

Table I. Statistics on national film-style trends during 1930-1933

country/ region	Source	dates	#films in sample	natl. mean ASL	natl. median ASL	ASL range	ASL std. dev.
U.S.	Salt	1928-1933	136	10.8	11	5 to 25	3.4
Europe	Salt	1928-1933	60	12	10	2 to 22	4.1
France	O'Brien	1930-1933	54	11.2	10.7	3.7 to 30.5	5.5
Germany	O'Brien	1930-1933	11	14.5	14.2	10.2 to 20.2	3.1
U.S.	Salt	1934-1939	184	8.6	8	4 to 18	2.3
France	Salt	1934-1939	64	13	11	5 to 22	4.2

National Differences in Data Range and Dispersal

Suggestive of the impact of multiple versions on film-editing technique are national differences in the dispersal of the average-shot-length data cited above, with the French cinema of the early 1930s exhibiting a data range and standard deviation much wider than that for the contemporaneous American cinema. Concerning the range for films of 1930-1933, my analysis of French films records a low of 3.8 and a high of 31.7, which yields a range of nearly 28, the widest of the national samples listed in Table I. Salt's findings show a range for American films of the same period of 20, roughly twenty-five percent less than for the French films comprising my sample. A similar national difference obtains for the standard deviation, a common statistical measure for determining a data sample's degree of internal variation. As Table I indicates, the standard deviation for the French sample remained significantly higher than for the American throughout the decade, thus suggesting greater variety in editing technique in France than in Hollywood.[10]

A closer look at the films comprising the sample reveals that the wide range for the French films cuts across differences in genre, with even films falling within the category of commercial film theatre exhibiting a broad spectrum. Thus, the genre expected to exhibit a standardized approach to editing – the commercial stage adaptation – instead turns out to feature remarkable variety in editing technique.

For instance, ASLs for some examples of *théâtre filmé* register at double the mean national figure while those for others fall well below it. For instance, *On purge bébé* (1930, Jean Renoir), a boulevard-play adaptation, yields an ASL of 26 seconds, an exceptionally high figure, more than double the contemporaneous national norm for the early 1930s of 11.2. At the opposite end of the spectrum are films such as *Le Roi du cirage* (1931, Pierre Colombier) and *Le Chien qui rapporte* (1931, Jean Choux), whose narratives are organized around performances by stage-identified actors, and whose liberal use of multiple-camera shooting facilitated very rapid cutting, with ASLs well under half the national average. While these films count as examples of filmed theatre, and feature extensive use of direct sound, they also exhibit great variety at the level of editing technique.

One 1934 account attributed wide variations in a French film's total number of shots to specific sound-film production methods: a post-synchronized "film reposant sur la technique 'cinéma'" might comprise up to 900 shots (in which each shot was filmed separately, in silent-era fashion) whereas a direct-recorded "vaudeville filmé" might include 400 shots or less.[11] At a general level, this sort of technical breakdown among types of sound films can be helpful. It seems generally true, for instance, that high shot counts are likely in films made by directors with modernist or avant-garde backgrounds, disposed perhaps to practice "la technique 'cinéma.'" For instance, *Le Parfum de la dame en noir* (1931, Marcel L'Herbier) has 844 shots, some three hundred more than the national feature-film norm for 1930-1933 of 547.[12] *La Fin du monde* (1930, Abel Gance) another celebrated film-modernist, likewise features an unusually high number of shots, as do the first three films that Clair directed at Tobis Films Sonores, all of which feature ASLs under nine seconds. Indicative here also are films such as *Fantômas* (1932, Pál Féjos), *Le Chien qui rapporte*, and *Le Triangle de feu* (1932, Edmond Gréville), all with exceptionally low ASLs (i.e., under five seconds), as well as cutting patterns familiar to silent-era modernist montage.

The French film industry appears to confirm characterizations of sound-film technique as a function of the filmmakers' intentions with regard to distribution, although in a national rather than international context. Geared to making films not for export but for the domestic film market alone, French film companies of the early 1930s – notably Pathé-Natan, the country's largest production company, but also other firms, such as Braunberger-Richebé – adhered to an understanding of sound-film technique that differed from that in Germany and the United States, an understanding according to which fiction filmmaking was seen in terms of recording rather than assembly.

Conclusion

The figures and analysis presented above suggest some possibilities offered by statistical analysis for multiple versions study. But statistical analysis can also constitute research phenomena on a smaller scale than the broad style trends considered here, most typically, the hundreds of shots comprising a feature film.[13]

In allowing for precise comparisons of different versions of the same title, micro-level analyses of this sort may offer possibilities for an improved understanding of the multiple version phenomenon. One place to begin is with how differences in cutting pace may imply producers' assumptions concerning the tastes of particular national audi-

ences. Consider, for instance, English and German language versions of *Der blaue Engel* (1930, Joseph von Sternberg), which feature an average-shot-length difference – 12.2 seconds for the German version, versus 10.2 for the English – homologous with the two-second difference in American/European averages for the early 1930s discussed above. Comparable differences in editing pace between English and German versions are evident in other multiple versions during this period. For instance, *F.P.1 antwortet nicht* (1932, Karl Hartl) features an ASL of 8.5, whereas the English version yields an ASL of 6.3; likewise, the German *Die singende Stadt* (1931, Carmine Gallone), with its ASL of 25.9, is cut much more slowly than the English *City of Song* (1931, C. Gallone), whose ASL works out to 15.8.[14]

Are these differences between German and English versions simply accidental, or do constitute a pattern or trend? If they suggest a pattern, what does the latter imply concerning the filmmakers' intentions? Do these figures indicate, for instance, an understanding on the filmmakers' part that English-speaking audiences, accustomed to American films, preferred relatively rapid cutting?

In the meantime, an implication of the research presented above is that industrial-scale multiple-version production in the United States and in Germany opened the way in those countries' film industries for a pre-designed modular film-sound technique, whereby scenes were assembled, according to plan, from separate and interchangeable components. In contrast, the French film industry's domestic-market emphasis seems to have allowed for an ongoing commitment to improvised simultaneous sound-image recording throughout conversion, and hence to evolve in a stylistic direction different from that of the export-oriented German and American film industries, a direction entailing the widespread use of direct-sound techniques largely abandoned in Hollywood and in the German film industry during 1930-1932, the peak years of multiple-version production.

1 With respect to recorded sound's impact on editing technique, see Don Fairservice, *Film Editing: History, Theory and Practice* (Manchester-New York: Manchester University Press, 2001); Karel Reisz, Gavin Millar, *The Technique of Film Editing* (London: Focal, 1968).

2 Concerning the extent of the German film industry's commitment to multiple-version production during 1930-1932, see Joseph Garncarz, "Making Films Comprehensible and Popular Abroad", *Cinéma & Cie.*, no. 4 Nataša Ďurovičová with the collaboration of Hans-Michael Bock (eds.), *Multiple and Multiple-language Versions/Version multiples* (Spring 2004), pp. 72-79; Sabine Hake, *German National Cinema* (London-New York: Routledge, 2000).

3 Concerning Pommer's ideas on the sound-era "international film," see: Ursula Hardt, *From Caligari to California: Eric Pommer's Life in the International Film Wars* (Providence, Rhode Island: Berghahn, 1996), p. 128; Wolfgang Mühl-Benninghaus, *Das Ringen um den Tonfilm: Strategien der Electro- und der Filmindustrie in den 20er und 30er Jahren* (Düsseldorf: Droste, 1999), p. 243.

4 A variety of dubbing-related examples of this sort of modularity are examined in Nataša Ďurovičová, "Local Ghosts: Dubbing Bodies in Early Sound Cinema," in Anna Antonini (ed.), *Il film e suoi multipli/Film and Its Multiples* (Udine: Forum, 2002), pp. 83-98. The quote from Pommer appears in Corinna Müller, *Vom Stummfilm zum Tonfilm* (München: Wilhelm Fink, 2003), p. 297.

5 An expanded version of the research presented in this paper can be found in my book *Cinema's Conversion to Sound*, forthcoming from Indiana University Press.

6 See René Clair, "The Art of Sound," in Elisabeth Weis, John Belton (eds.), *Sound Film: Theory and Practice* (New York: Columbia University Press, 1985), p. 95.

7 For alternative approaches to computing the ASL, see Barry Salt, "Statistical Style Analysis of Motion Pictures", *Film Quarterly*, Vol. 28, no. 1 (1974), pp. 13-22.

8 See Barry Salt, *Film Style and Technology: History and Analysis* (London: Starword, 1992²), pp. 214-216.

9 Salt doesn't provide an ASL average for French films during 1930-1933. The figures reported here are based on my own analysis of a sample of fifty-four French films made during these years.

10 The standard deviation figures cited for Salt in Table I are not provided by Salt but derived from my own computations, based on data extrapolated from graphs in B. Salt, *Film Style and Technology*, cit., p. 214, p. 216.

11 In Arthur Hoerée, "Le Travail du film sonore", *La Revue musicale*, no. 151 (December 1934), p. 64.

12 This figure was generated from a sample of twenty French films of 1930-1933 whose running times exceeded sixty-five minutes.

13 With respect to the statistical analysis of individual films, see the writings by Barry Salt listed in these footnotes; and also Thomas Elsaesser, Warren Buckland, "*Mise en scène*, Criticism and Statistical Style Analysis", in *Studying Contemporary American Film: A Guide to Movie Analysis* (London: Arnold, 2002), pp. 80-116.

14 The ASL computations reported in this paragraph were based on a study of films and videos shown at the MAGIS Gradisca International Film Studies Spring School, and ought to be verified by a second examination. For films viewed on Pal or Secam video, the ASL figures were multiplied by 1.04 to compensate for the slight speed increase (i.e., 25 rather than 24 frames per second).