This double issue focuses on the artisanal and industrial settings that characterised music and sound production processes in Italian cinema during the period 1950-75.

By addressing cinema from the vantage point of sound and music, we frame it as a ‘technological milieu’ that opens up two complementing research threads: (1) understanding the history of sound technologies and production processes in local film industries; (2) analysing how musicians related to film technologies, and the degree to which such technologies come to bear on composition processes. In line with this twofold perspective, we have attempted to identify particular traits of the Italian production system that might become useful reference points for other contexts.

It is widely acknowledged that within the area of (especially cinematographic) sound technologies there lies a tension between local and global instances, and yet scholarship in this field is still young and not evenly distributed: besides Hollywood, in fact, inquiries on the history of sound technology in European cinema have only recently begun to come to light. As regards research in Italy, along with oral accounts, much progress has been made possible by the recent surfacing of archives and private collections that preserve the work of composers, technicians and studios. The time would seem ripe to combine archival, philological, historiographical, technological and ethnographic approaches and this very prospective inspired the conception of this double issue.

International research is beginning to document the existence of rich and multifaceted practices that vary according to their historical and geographical context. Even when faced with standardised procedures, as is often the case with cinema, the history of cinematographic sound and film music is characterised by a plurality of adaptive processes: different contexts engender original practices and technical solutions that are intertwined with the specific artistic and stylistic conception underpinning each production system. In other words, whereas, the rapid diffusion and use of a given

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1 The authors conceived this introduction in close collaboration and by agreeing on its content, methodology and outlook. However they distributed the writing as follows: Ilario Meandri wrote paragraphs 4-7 and 10-11; Maurizio Corbella wrote paragraphs 1-3, 8-9 and 12-16.
technological innovation might at first glance appear to be a global phenomenon, upon closer examination, the same process often reveals itself as essentially glocal, brought about by a conflation of older practices that respond to technological innovation with creativity or resistance and in any case through processes of atypical assimilation.

The methodological difficulties faced by a historiography that intends to account for this kind of stratification are significant. One must in fact maintain a delicate balance between two opposite perspectives, which we label as technological determinism and excess of particularism. According to the first, the history of technological change has an etiological priority over the study of actual practices. As for the second, only a deep understanding of the way in which a pre-existing praxis is progressively adapted can shed light on a particular usage of a given device, because the use of machines takes on distinct nuances, and at times structural characteristics, according to the relations that arise between technicians, directors and composers in a given production context. The reciprocity of these two perspectives must be evaluated in each single case. Let us try to exemplify the way in which these two divergent attitudes were played out with respect to both practices and processes of sound and music post-production in Italy.

As far as practices are concerned, one might examine the case of sound effect synchronisation: the Italian school of Foley artists (rumoristi) that took shape in the years following the Second World War was strongly conditioned by the limitations imposed by optical sound (among the many: it was possible to record a maximum of two takes – one per track – and it was necessary for scenes to be sonorized by segmenting the film into several loops). This accounts for the artists’ ability to produce precise syncs at the first take, and to create Foley stage sound effects using very few sound objects, compensating for the technological limitations with an inventiveness that is rarely encountered in the higher-budgeted film sound practices of other countries². At the same time, one can also observe how a limit that progressively consolidates, together with the ingenious solutions conceived to remedy it, becomes a stylistic trait that persists over time even when these very limitations are theoretically overcome, for example, by the introduction of the ‘rewind’ function on projectors and the punch-in on the recorders used in Italian film sound post-production since the late 1960s. Local practice, in this case, displays an inertia that mitigates the discontinuity introduced by technical innovation. On the other hand, the introduction of punch-ins on 35 mm tape recorders used in dubbing (see Appendice tecnica, Figs. 4-5) represents a good example of how technology unequivocally determines a change in practice³. When this innovation was introduced, the film reel ceased to constitute a unit that had to be taken in its entirety, as was the case when the dubbing mixer was forced to memorise the entire chain of fader movements from beginning to end. From the late 1960s onwards, it became in fact more practical for dubbing mixers to break the film reel down into shorter segments: punch-in devices made each sequence, if not each single scene, more autono-

³ Ivi, pp. 64-69.
mous and the discontinuity within each reel became a recognisable trait. Technology had an enormous effect in this case, and produced a highly evident breach in practice.

Similar observations can be made with respect to macroscopic aspects of production processes. Consider, for example, the introduction of electroacoustic procedures of sound synthesis and manipulation, which had a global impact on post-production, by bringing about a mutation in practice and a renegotiation of the roles assigned to directors, composers and technicians. Running the risk of oversimplification, one can observe a tendency in the USA that started when experimental composers destabilised the traditional distribution of post-production tasks between the Sound and Music Departments by introducing electronic music in watershed films such as Forbidden Planet (F. M. Wilcox, 1956) and The Birds (A. Hitchcock 1963), and setting up extemporaneous configurations that only lasted for the duration of a single production but constituted important precedents for future developments;\(^4\) this progressively led to the creation of middlemen between composers and the post-production personnel, until the notion of *sound design* emerged in the 1970s\(^5\). In Italy this phenomenon occurred in different ways, due to a variety of local factors: the more ductile and less industrialised nature of the post-production chain, the influence of directors in shaping production processes, as well as the different socio-cultural role that composers had, when compared to their colleagues across the Atlantic. Paradoxically, Italian composers produced a remarkable amount of theoretical writings in which they proposed audacious solutions to the limitations imposed by production cycles and conditions, and yet practices continued to proceed to a certain extent untouched by these theorisations. This implies that almost every film of that period demands to be investigated case by case, against the backdrop of the tense intellectual debate of the time.

The introduction of artisan or ‘home-made’ systems of electroacoustic synthesis, often handcrafted by a single composer or technician and provided with various degrees of complexity and functionality, has not hitherto been given adequate historiographical attention, undoubtedly because of the lack of sources and oral accounts: suffice it to recall cases such as the Mixerama developed by Mario Nascimbene, the Fonosynth by Gino Marinuzzi Jr (discussed in this issue), Paolo Ketoff’s Synkét – used in cinema by Egisto Macchi and Ennio Morricone with the fundamental collaboration of a composer-performer such as Walter Branchi – along with handcrafted generators (e.g. the circuits pioneered by Franco Potenza, the «scopacordo» [broom-string] or the electronic accordion developed by Marinuzzi, and so on) that often come up in anecdotes but have limited chances of becoming true subjects of research. At the same time, we are only just beginning to grasp the degree to which commercial synthesisers such as the Moog became part of routine film sound production between the late 1960s and the early 1970s, often serving as ‘noise machines’ and sometimes difficult to identify.

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by ear, as was the case with electroacoustic instruments from the previous generation, such as nationally or internationally produced electronic organs, or the Theremin and the Ondes Martenot. On a different note, yet equally characteristic of Italian praxis at the time, mention should go to the construction of ‘hybrid’ and temporary formations, typically made up of two or more composers and aimed at meeting the needs of one film project or director, often in order to adapt post-production practices to the changing soundscapes that appeared in the public sphere: alongside ‘auteur’ cases that have been documented to a certain degree – such as the music for *Il deserto rosso* (*The Red Desert*, M. Antonioni 1964) that was entrusted to Vittorio Gelmetti and Giovanni Fusco, or the extreme case of *Zabriskie Point* (M. Antonioni 1970), in which the figure of the ‘composer’ was taken over by the director himself, who commissioned, chose and edited a number of improvised performances – a wide range of more nuanced examples exist, in which composers with different backgrounds were tasked with complementary aspects of film music production.

Faced with such a proliferation of potential subjects of enquiry, that is inversely proportional to the documented sources that have surfaced thus far, this double issue is structured as to pinpoint the premises for a historiographical analysis able to account for the dual line of research (technical and compositional) described above. The issue is therefore made up of two complementary sections: the first two articles are dedicated to aspects of sound post-production respectively from the standpoint of industrial history (Biondo-Meandri) and biographical testimony (Savina); the following three (Cecchi, Corbella, Cosci) deal with three individual composers’ approaches to technology and its pertinence to their poetics; the final article (Calabretto) concentrates on the way in which specific modalities of integration of electronic music and cinema technology stemming from Eastern Europe were received in Italy. The issue concludes with a technical appendix that brings together a number of documents that have recently emerged concerning International Recording and Fonolux – two leading sound post-production companies in Rome at that time –, that allow us to observe the evolution of the main audio technology used in sound post-production facilities.

Ilario Meandri and Paolo Biondo’s joint contribution reconstructs the biography of an entrepreneur who highly influenced the industrial layout of Italian cinema, Giuseppe Antonino Biondo – the founder of both RCA Italiana and International Recording. This reconstruction relies mainly on archive material and the oral testimony of Paolo Biondo, Giuseppe Antonino’s son, who for many years was the head of the studio in Rome. G. A. Biondo’s professional itinerary sheds light firstly on the problematic interconnections between radio, cinema, the recording industry and the early phases of television, and secondly on the way in which, as of the end of the Second World War, attempts at shaping Italy’s mediascape were at the centre of industrial strategies and political-economic choices (for example, the links emerging between discography and the Marshall Plan).

Federico Savina is one of Italy’s best known sound technicians, and his oral accounts are frequently referred to in the three articles that form the central section of this double issue, dedicated to composers who had a close working relationship with him. His role as a first-hand informant has become fundamental and indeed seminal
for reconstructing the state of cinema sound technology in Rome in the 1950s and 1960s and often paved the way for accounts of other protagonists of that period to come to the fore. The inclusion of his essay is an acknowledgement of the need to recognise and legitimise sound technicians’ perspectives, balancing the vision composers have to offer. We were particularly interested in knowing how Savina listened to, received and participated in the work of the «Maestri» – as he still calls them today, indicating a relationship of respectful distance and hierarchy, even within the spirit of an «artisan’s atelier» that he recurrently evokes in his essay.

The central section singles out three composers chosen as case studies and arranged into chronological sequence in order to understand how figures born at a distance of almost an entire generation – 1909: Lavagnino; 1920: Marinuzzi; 1928: Macchi – brought different contributions to a single period of cinema history, based on their distinct attitudes towards the technological means available. We have expressly avoided treating either particularly celebrated composers whose work in the field of film music has long been consecrated, or those who have recently been regarded as outstanding representatives of the relation between the musical neo-avantgarde and cinema. The first category naturally includes Nino Rota (1911-79) and Ennio Morricone (b. 1928), who for decades were the only figures admitted, not without a certain reluctance, into the canon of composers studied by historically oriented musicology. The second category – which was created recently and retrospectively, once it became clear that the importance of cinema had been neglected in the study of the musical neo-avantgarde – includes Vittorio Gelmetti (1926-92), the most prolific theorist to have considered the use of cinema as an instrument for musical experimentation in Italy in the 1960s, who can boast prestigious collaborations with ‘auteurs’ and underground filmmakers, including Antonioni, the Taviani brothers, Ansano Giannarelli and Romano Scavolini. In an attempt to react to authorial paradigms that tend to inhibit the penetration of a historical terrain that remains largely unexplored, we have chosen to investigate composers who consistently represent the variety that musical research witnessed in the realm of cinema in Italy during the years in question. Each composer’s relationship with technology has been dealt with on the basis of archive materials, emphasising different features according to the state of the sources and the kind of musician.

In the case of Lavagnino, Alessandro Cecchi scrutinises a subject that could be considered para-technological, i.e. the forms in which the notion of audio-visual synchronisation is expressed in the compositional processes of a musician who dedicated himself to cinema rather late in his career (the first score for a feature-length film ap-

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peared in 1948) but rapidly became a specialist, thanks to the techniques he forged ad hoc to adapt to the requirements of cinematographic post-production.

Gino Marinuzzi Jr is probably the least known composer among the three, but he best exemplifies the central role played by technology as a juncture between sonorization procedures in cinema and experimentation in the field of electronic music. The almost complete disregard of this composer in music historiography, anticipated by his spontaneous ‘self-effacement’ from the music scene in Rome, where he had been a reference point for some years, is seized by Maurizio Corbella as an opportunity to gather the threads of a research on historical electronic music that is not biased against, but rather imbued with, audio-visual media.

Egisto Macchi, on the other hand, was one of the leading and renowned figures of the musical avant-garde in Rome. Seen from the point of view of cinema, an area in which Macchi was extremely prolific, especially in light of his hundreds of scores for documentaries, the technology he employed takes on particular characteristics that bring out his need to control all layers of the soundtrack. In addition to highlighting an approach to composition in which tape sources are given the same status generally accorded to paper sources, Marco Cosci explores this musician’s unpublished theoretical reflections on film as a medium, confronting them with a case study that is significant for the unusual degree of freedom enjoyed by the composer: *The Assassination of Trotsky* (J. Losey 1972).

The fact that sound synthesis is genealogically indebted to optical film can be traced back to the experimentations carried out as early as the 1920s. Optical sound synthesis has a history of its own, somewhat parallel to that of electronic music, and has often been the prerogative of filmmakers and, although more rarely, composers. And yet, in the Soviet Union, which along with Germany was one of the cradles of optical sound synthesis and drawn sound, electroacoustic experimentation developed organically alongside the medium of cinema, leading to the creation of the optical sound synthesiser ANS at the Moscow Studio. In the West, the vicissitudes of the ANS are mainly known through indirect channels, mainly owing to Eduard N. Artem’ev, who used the synthesizer in a few celebrated collaborations with Andrej Tarkovskij. Roberto Calabretto’s contribution considers instead a novel connection with the Italian scene, in probing the accounts that surfaced during the analysis of a hitherto little-known event: the Convegno Internazionale dei Centri Sperimentali di Musica Elettronica (Florence, 1968), in which Evgenij A. Murzin presented the ANS and clearly stated its structural ties with cinema.

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