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## Sound Design: Emergence and Rise of a 'Technically Ordinary' Term<sup>1</sup> Maurizio Corbella

It is quite likely that the occasional cinemagoer would not know how to begin defining the job of a sound supervisor, a boom operator, a Foley artist, or a rerecording mixer. At the same time, it is all the more probable that he or she would have at least a vague idea of what a sound designer is or should be. Guided either by the resonance the term 'design' has come to exert in different domains of ordinary life—with its diffusion in the realms of fashion, graphics, and architecture—or because of a familiarity with newly introduced 'do it yourself' sound apps, our hypothetical cinemagoer would not miss to sanction the aura that the notion of 'sound design' has come to acquire in the past decades.

Today, sound design is unmistakeably a practice that is commonly addressed by people who come from a broad range of contemporary media backgrounds (cinema, television, radio, theatre, videogames, and so forth), advertised as a job, discussed on websites (such as *filmsound.org* and *designingsound.org*, to cite Google's top-listed results), and taught at professional and academic levels. The statement that follows, taken from the Sound Design programme of the Yale School of Drama, gives us a taste of this last aspect:

Students applying to the program should be innately musical, even if they do not play a musical instrument. They should have a love for the spoken word, an appreciation of all music and sound, and be on their way to developing good critical listening skills. A sound designer must have a natural sensitivity to the entire aural environment. A familiarity with contemporary design tools is also valuable. This program is populated with a variety of individuals who are willing and able to share their perspectives and who can listen to and respect other opinions.<sup>2</sup>

<sup>&</sup>lt;sup>in</sup> This article expands and re-elaborates a working paper published on the WAV research group's website (www.worldsofaudiovision.org), see Corbella 2010. Although this version is considerably different from the original, I would like to express my gratitude to the colleagues of the group that back then reviewed my paper multiple times and helped me improve it with their valuable suggestions. I whish to dedicate this article to the memory of Mark Weir.

<sup>&</sup>lt;sup>2</sup> Excerpt of the description of the "Sound Design" programme of the Yale School of Drama, < http://drama.yale.edu/program/sound-design> (accessed: July 2014).

From the profile sketched in this passage, it emerges that sound design carries with it a certain 'elective' aura (e.g. «innate musicality», «natural sensitivity to the entire aural environment») which is, however, blended with connotations of open-mindedness and a 'democratic' attitude. It is not so much necessary to be musically trained as it is to demonstrate the «will and ability to share perspectives», while «listening and respecting other opinions». This passage deserves closer attention. The purpose of this article is to argue that, among the reasons for the term's success as an 'umbrella concept', is precisely the stress of particular connotations of the notion of 'sound', which, somehow opposed to traditional concepts of 'music', appeals to social horizons that are particularly popular in contemporary (western) cultural discourse. The fact that 'sound design' has come to fill-in a social need to re-appropriate sonic dimensions of living by 'ordinary' people, whom Philip Tagg would call 'non-musos' (Tagg 2012), and that such an appropriation is complementary and partially antagonistic to 'academic' musical practice, constitutes the basis of my brief survey.

In our age of ubiquitous listening (Kassabian 2013), a qualification like sound designer attains appeal and 'respectability' on a sociocultural hierarchy in that the skill of 'designing sound' (with all its entailed side-meanings: projecting, manufacturing, embodying, manipulating, controlling, disposing of, etc.) is perceived as a valuable handhold for the subject's creativity to resist against the spectrum of anonymity and standardisation. To take on Anahid Kassabian's inspirational terminology, sound design is a powerful means for «distributing subjectivity» (ibid., "Introduction") in the domain of medial experience. Film semiotician Ruggero Eugeni has explained that medial experience (esperienza mediale) differs from ordinary experience in that it is «suprapersonal and [to a certain extent] serial», «is activated and regulated by technological devices [and] has its trends and articulations preconstituted from outside» (Eugeni 2010, 43; translation is mine). For Eugeni, medial experience is subjected to operations of 'projectual designing' (design progettuale), «an activity of pre-planned regulation of some areas of ordinary experience» (ibid.) in which media are involved as 'generators' and 'catalysts' of experience. If we confront the idea of sound design to Eugeni's category of projectual design, we can infer how sound design becomes a means of projecting (sound) experience and a channel through which listeners and producers connect as subjects belonging to the same media environment.

To put it bluntly, it is safe for the 'ubiquitous listener' to know that someone out there can imprint some 'meaningful direction' in the dispersion of everyday soundscape, as if they stood for something like a modern shaman and a storyteller:

Storytelling has used sound to invoke myth, suspend reality, and create emotion since the times of fire circles in protective caves. Sound designers in the 21st century have the same job—to combine sight and sound for enrapturing their audiences. Both the shaman of old and the sound designer of today must develop their perceptive ability, meaning the two sides of creative intelligence: impression and expression (Sonnenschein 2001, xvii).

But, it is even more reassuring to be told that *anyone*, provided a dose of «natural sensitivity» and some «technological familiarity», can potentially access this qualification, as foreshadowed by the Yale statement above and more colourfully maintained by sound designer David Sonnenschein:

Yes, learn the basics, then you know when to break the rules. Mistakes can also become the genius of error, so have no hesitation about trying things out. If it works, use it! [...] It may seem like an exalted goal, but the path from sound "janitor" to sound designer can evolve from being a "techie", to an "artiste", and finally a storyteller (*ibid*.).

Seen in this light, 'composing music' stood for the Romantic and Modernist ideology of aesthetic authorship as 'designing sound' might stand for a postmodern ideology of subjective agency. As we shall see, the passage from authorship to agency is central in the evolution of the notion of 'sound design' within the fields of cinema and popular culture. It is in this sense that I will review the historical emergence of the term and its original semantic ambivalences in order to frame my final discussion of some of the latest configurations of sound design in the contemporary digital era.

### THE HISTORICAL ORIGINS OF CINEMATIC SOUND DESIGN

In the cinematographic sound production chain, sound designer is probably the vaguest and most controversial of all titles, working as «a loose but overarching label for the artistic components of the audio post-production process, including (among other tasks) developing the soundtrack's arc across an entire film, creating unique sounds and effects, and deciding which sounds will go where in the multi-channel soundscape» (Kerins 2011, 11; see also Weis 1995 and Whittington 2007, 20-27). Just like the term 'director', the title 'sound designer' does not denote specific, well defined competences but rather a broad and negotiable area (and aura) of agency.<sup>3</sup>

This designation was originally created to describe a single person who would oversee the creative aspects of a film's sound from start to finish. Today, though, the 'sound designer' credit may mean a number of things, which is why some within the film industry dislike it. Sometimes it labels the person with ultimate creative control over the soundtrack, but it may instead be used for the person who created a film's signature sound effects, or for something else entirely (Kerins 2011, 12).

Yet, unlike the film director, the sound designer has not always existed, at least not in terms of a recognised profession. The emergence of this label went hand in hand with the New Hollywood phenomenon of the 1970s, and, as we will see, even in its early uses it exhibited the ambiguities enlisted above by Mark Kerins.

In strictly historical terms, the expression 'sound design' was, if not spoken, at least first written in 1979 in the credits of Francis Ford Coppola's Apocalypse Now where the film editor Walter Murch appears responsible also for «sound montage and design». This first occurrence of sound design appears in conjunction with 'montage', another term begging a number of questions. Murch had taken on the credit 'sound montage' since The Rain People (F. F. Coppola, 1969), and later in some films recognised as establishing the movie brats movement (Pye and Myles 1979), namely George Lucas's THX 1138 (1971) and American Graffiti (1973), and Coppola's *The Conversation* (1974) and *The Godfather*, *Part II* (1974).<sup>4</sup> For Murch, the formula 'sound montage' worked as a marker for identifying and acknowledging creative operations covering recording, manipulating, layering, and editing hours and hours of audio material he had accumulated, drawing on procedures he had become familiar with in the 1950s and 1960s as a listener of *musique concrète* and as an experimenter with magnetic tape (LoBrutto 1994, 84; Ondaatje 2002, 6-10). In other words, his idea of sound montage posited a musico-compositional aura around the film's sound

<sup>&</sup>lt;sup>3</sup> It does not sound surprising that the Wikipedia entry on "sound design" demands «help to improve this article». Even more interesting are the criticisms attached to the entry: «This article relies on references to primary sources; a major contributor to this article appears to have a close connection with its subject; this article possibly contains original research [and] may be unbalanced towards certain viewpoints», <http://en.wikipedia.org/wiki/Sound\_design> (accessed on July 2014).

<sup>&</sup>lt;sup>4</sup> In each of these films Murch is credited with various other roles referring both to aspects of sound and visual editing (Ondaatje 2002, 314-315).

content by specifically suggesting that the sound construction of each film was musically tailored to the requisites of its dramaturgical conception. As Whittington noted with regard to *THX 1138*, «[Murch's] approach to sound revealed a constant tension between musicality and functionality within the genre of science fiction and underscored a shift in sound style» (*Ibid.*, 20). A number of anecdotes, such as the helicopter sound in *Apocalypse Now* being obtained by means of (what I understand to be) a synthesizer's voltage control, confirm this emphasis on musicality:

It was musical rather than technical. Richard Beggs loaded the real helicopter sound in a synthesizer, and his task was to synthesize the *thwarp* and all the other elements. He just started playing with wave forms until it evolved into something convincing and emotional (Murch in LoBrutto 1994, 91).

While sound montage aimed at differentiating a series of procedures from the traditional operations of sound editing which were familiar in Hollywood since the 1930s, the term 'design' is closely connected to the quadraphonic format of *Apocalypse Now*. Moving from monophony directly to quadraphony,<sup>5</sup> Murch had to partially revolutionise his approach to sound: «This early multichannel format gave Murch the means to deploy the film's sound effects with an attention to frequency, sound separation, and placement within the spatial quadrants of the theater» (Whittington 2007, 22). He exploited the spatial implications of the new format and realised, through a complex 'preparatory score', an audio and 'musical' configuration that evoked the idea of architectonic design (*i.e.* shaping sound objects and placing them in space), leading him to adopt the label 'sound design' (LoBrutto 1994, 91-92).

Parallel to Murch's meaning, another equally relevant meaning started making its way in the late 1970s, namely the idea of sound design as «creating unique sounds and effects» (Kerins 2011, "Introduction"). Again one key name, that of Ben Burtt who created an array of legendary sound effects for the *Star Wars* cult trilogy,<sup>6</sup> can be symbolically associated with the rise of this second meaning: «These sounds rapidly formed the lexicon of sound designs used in a host of Lucasfilm ancillary products from audiobooks to computer games, reaching far beyond the borders of cinema» (Whittington

<sup>&</sup>lt;sup>5</sup> «For me, *Apocalypse Now* was not only the first quadraphonic film, it was the first stereo film I ever worked on» (Murch in LoBrutto 1994, 91).

<sup>&</sup>lt;sup>6</sup> Star Wars: A New Hope (George Lucas, 1977); Star Wars: The Empire Strikes Back (Irvin Kershner, 1980); Star Wars: Return of the Jedi (Richard Marquand, 1983).

2007, 24). This second meaning of sound design is much less effective than the first in marking a difference from the traditional praxis of sound effects construction, which had been in use since the classic days of sound cinema (Hanson 2007). No inherent distinction can in fact be posited, between the special effects used in *Star Wars* and those used in any sci-fi movie of the 1950s. What was instead considerably novel, besides the time, budget, and technology invested by Lucasfilm in the personalisation of sound effects, was the fact that sound effects were extremely enhanced by the new Dolby Stereo format, making them stand out in all their hyper-realistic nuance and unprecedented emotional impact (Sergi 2004, 26). This resulted in elevating carefully crafted sound effects to trademarks of a new era of filmmaking and making them noticeable for the mainstream, «as if the Hollywood "star system" had finally discovered the sound world» (Whittington 2007, 24).

From this overview stems that sound design can be considered a historically contingent response that Hollywood offered to a generally mutated sensibility towards sound, matured on a large scale throughout the 1960s. Such a response also had structural origins in the financial crisis that affected Hollywood's major studios during the 1960s, which led to a reconfiguration of sound and music departments (Whittington 2007, 27-28). In the wake of European new waves and American underground cinema of the 1960s, the new Hollywood directors (Coppola, Lucas, Martin Scorsese, Brian De Palma, and Steven Spielberg, among others) called for a new role of authorship and encouraged the creation of the sound designer as «analogous to the cinematographer and production designer controlling the look of the film» (Beck 2008, 73). This suggests caution when extending sound design as a historical [retroactive] category to non-American contexts. In Italy, for instance, authorship of postproduction sound was, for a certain period, claimed and theorized by directors in cooperation or competition with music composers while at the same time companies of sound professionals [rumoristi] where establishing cartels and sound libraries.<sup>7</sup>

Yet, as recent scholarship has not missed to remark, this authorial conception was hardly realised in the 1980s and 1990s due also to the scepticism of the Hollywood unions against «privileg[ing] individual sound specialists over the entire sound team» (Whittington 2007, 26). In Jay Beck's words, «unlike Murch's conception of a sound designer as an individual who can control and shape the sound strategies in both production and

<sup>&</sup>lt;sup>7</sup> The period I am referring to ranges from the mid-1960s to the early 1970s. Expanding on this subject would exceed the purposes of this article, so I refer to Corbella and Meandri 2014-15.

postproduction, major resistance on the part of the sound union IATSE<sup>8</sup> Local 695 prevented this idea from becoming a widespread reality» (Beck 2008, 73-74). This does not mean that sound design was abandoned as a catchy label. On the contrary, the resistance exhibited by Hollywood sound departments against revolutionising their structure entailed two kinds of subtler consequences in the cultural discourse: (1) the retroactive recuperation of sound supervisors, the traditional heads of the sound departments, as if they were ante-litteram sound designers, an operation that, by constructing «an artificial teleology between past practices and present definitions» obscured «the shift from a rigid hierarchical division of labor in the late classical Hollywood period to the central organizational role assigned to the sound designer in the 1970s» (ibid., 74); (2) the germination of figures dedicated to the creation of special sound effects fashionably called 'sound designers'. If the first position led to reify authorship without actually realising it (with significant exceptions), the second dispersed the disrupting import that the original conception of sound designing could have had.

#### Sound design and the cultural discourse

«[The] term sound design swiftly entered the mainstream discourse dealing with cinema and sound, but [...] even Murch, who coined the term, could not contain its meaning—on or off the screen» (Whittington 2007, 23)

My goal is not to suggest that we should take a position in favour of or against one definition of sound design or that we should abandon it. I aim instead to read through the cultural values attached to this handy notion and interrogate their sense in contemporary experience. Some help comes from Beck who suggests that «a different way of looking at the question of 'sound design' is to recognize that the true designers of sound are either those who are able to dictate what technology will be used or those who adapt the existing technology to suit their particular aesthetic needs» (*ibid.*, 75). This definition bridges us back to Eugeni's idea of projectual design discussed in this article's introduction. Perhaps in its broader sense, sound design has become a way of setting technologies in such a way as to enable particular

<sup>&</sup>lt;sup>8</sup> The International Alliance of Theatrical Stage Employees, Moving Picture Technicians, Artists and Allied Crafts

kinds of experience and thus it does not have to be necessarily tied to a single individual (an author) nor to a single medium (film), but rather to a set of functions (an agency) that can take on different media at the same time. This is what current investigations about the permeability of sonic formats and configurations occurring among film and videogame industries seem to suggest.

If sound design can be understood as the tip of the iceberg in a sea-change in the way western society at large conceives, produces, and exploits sound, and if cinema can be retained as one of its most powerful catalysts, origins of such a shift cannot be sought in cinema alone, but in the broader context of popular culture. Although conflating the histories of cinema, popular music, and the musical avant-garde might appear a risky operation, it can have positive effects insofar as producing the impression that sometime between the 1960s and 1970s technologically reproduced sound started to matter in the public sphere insofar that its aesthetic, economical, and emic implications started to be openly challenged in the cultural discourse. One need just think of the influence of audiovisual expressions of late-1960s popular music, such as psychedelic rock (Whittington 2007, 6-7; see also Auslander 2013), as well as a new sensibility grown around issues of acoustic environment and ecology in the same period.<sup>9</sup> Undoubtedly, the musical avant-garde played a great role in the research threads of the electroacoustic and computer music milieu. A thorough historiographic survey of those years, especially if directed to unearth the liaisons between the mentioned disciplinary fields, may certainly contribute to nuance this otherwise all too general assumption. This is what scholars coming from different backgrounds have started to do more and more frequently.

On the other hand one should resists the perspective fallacy which consists of putting sound design at the top of a teleological vision of cultural history, as if it had represented the natural way out for a series of tensions to solve. We have already addressed the contingency of this phenomenon as a problematic geo-cultural specificity of Hollywood. We should also keep in mind the recurrence of narratives and mythologies about sound (especially reproduced sound), which have accompanied the history of performance arts since the beginning of 20<sup>th</sup> century and even before that with mechanical sound.

<sup>&</sup>lt;sup>9</sup> The World Soundscape Project was founded by R. Murray Schafer in the late 1960s at Simon Fraser University (British Columbia).

Since the early days of sound cinema, sound film has been strongly imbricated with issues that are both technical and ordinary, whose elaboration and articulation resulted in the creation of an audiovisual vocabulary (with its standards and deviances) shared and challenged at a time by filmmakers and audiences, and, of course, produced a professional organization of sound departments that reflected industrial specificities on a local scale (Lastra 2000). As an ontological property of sound film, Buhler and Neumeyer pinpoint the uncertainty of placing music and sound in the imaginary audiovisual space of sound film.

As Paolo Cherchi Usai reminds us, the aesthetic of silent cinema was based on maintaining "a clear distinction between an apparatus producing images and a sound source in front of or behind the screen" ([Cherchi] Usai 1994, 52). [...] This sort of fantasy space was also open to the silent film with its live music in a way that would be denied the sound film. Indeed, the synchronized film *eroded this distinction*—music, dialogue, and effects were all emitted from the loudspeaker—making the placement of music and sound uncertain (Buhler and Neumeyer 2014, "The concept of synchronization in sound cinema"; emphasis added).

With the displacement of the main sound source in the imaginary middleground between the audience's real world and the film's fictional world, we are approximating the notion of ubiquity discussed above, especially if we consider to what extent such uncertainty between audiovisual and auditory space increased with the developments of cinematic sound design. Ubiquity demands assessment and thus an agency to rely on: in the field of 'classical' sound film such agency was constituted by synchronization, «the structure of sound film is governed fundamentally by a relation of image to sound based on the expectation of sync points» (Ibid., "Synchronization and an ontology of sound film"). This explains why, especially those sounds capable of destabilizing synchronization through the means of their uncanniness in terms of source localization and of emotional affordance, stimulated, since the earliest days of cinema, the production of narratives and mythologies that found place in genres such as horror and science fiction (Corbella and Windisch 2013).<sup>10</sup> It was the case of the proto-synthetic sonorities of the Theremin, the Ondes Martenot, the Trautonium and drawn sound in the late 1920s; of tape manipulation and electronically generated "tonalities"<sup>11</sup> in the

<sup>&</sup>lt;sup>10</sup> For an extensive investigation of structural links between sound design and science fiction refer to Whittington 2007.

<sup>&</sup>lt;sup>11</sup> «Electronic tonalities» is the credit accorded to composers Louis and Bebe Barron for their electronic soundtrack of *Forbidden Planet* (Fred M. Wilcox, 1956).

1950s and 1960s; and eventually of those practices that were first addressed as sound design in the 1970s.

In post-sound design cinema, synchronization might not be the only key factor at play; at least this is what recent studies on digital contemporary cinema suggest. Even if synchronization retains its original drive, empowered by the sophistications that sound design affords,<sup>12</sup> contemporary audiovisual aesthetics seem to put a new emphasis on sensory appeal, at least in those films that exploit multi-channel environments such as digital surround.<sup>13</sup> To hypothesize a shift from narration and content to sensory appeal does not mean that the former are insignificant today or that the latter was absent in earlier cinema, but that it «has become much more pronounced» in digital cinema (Chion 2013).

Already in a seminal non-digital example like the opening sequence of Apocalypse Now, this aspect can be detected. A musical piece (The End, The Doors, 1967) was literally sectioned and its spatial potentials were reassessed within the 70mm format, not only in terms of mere dislocation of the sound elements (the original mix was re-opened, the spatial positioning of the original instruments changed, Jim Morrison's voice enhanced, sound effects added), but rather in terms of the entailing of new 'affects', that is «the circuit of bodily responses to stimuli that take place before conscious apprehension» (Kassabian 2013, "Introduction"). In short, Murch's sound design, in concourse with the visual vocabulary employed by Coppola (e.g. circular and lateral pattern movements of the shots, colour temperature of the photography, cross-fade editing techniques, etc.) transformed the space of the audio-spectator into a «pathemic space», as Giacomo Albert has acutely illustrated with reference to more recent films like Inception (Cristopher Nolan, 2010), The Hurt Locker (Kathryn Bigelow, 2008), The Dark Knight (Cristopher Nolan, 2008) (Albert 2011) and *The Ring* (Gore Verbinski, 2002) (Albert 2012):

A function of sound design is [...] the direct manipulation of the audiospectator's subconscious, not mediated by conscious cognitive processes based on representation. [Sound design] does not exert only a mimetic function, but also a function of psychological pressure. [...] It is then possible to maintain that the space in which the

<sup>&</sup>lt;sup>12</sup> A landmark of sound design such as the Club Silencio scene in *Mulholland Dr* (David Lynch, 2001) can be understood in many respects as a treatise on synchronization's effects (Corbella 2007).

<sup>&</sup>lt;sup>13</sup> For the most complete examination of digital surround sound in contemporary cinema, see Kerins 2011.

audience sits has a pathemic nature, emotional rather than descriptive or representational (Albert 2011, 220-221; translation is mine).

In this immersive setup conjured up by sound design techniques in conjunction with contemporary multi-channel surround formats, music gets, so to say, 'swallowed'. It participates as an essential ingredient of the multimedia environment, but it disperses its specificities as an autonomous medium, from which follows a certain impression of predictability of contemporary Hollywood mainstream action and horror film scores.<sup>14</sup> In this statement I am not implying that other ways of making music or of conceiving film that are less related to the issues conveyed by sound design no longer bare a vital role in contemporary society;<sup>15</sup> nor am I neglecting the importance of contemporary music research in driving issues of immersion, multimediality, or interactivity towards directions that are not contemplated by sound design.<sup>16</sup> I am instead registering that a large part of the multimedia production that pervades our everyday is indebted to the pathemic schemata set forward by cinematic sound design and that perhaps what we keep on calling 'music' in universities and conservatories has already mutated into something different outside those classrooms, something more similar to a multimedia compound (Cook 2013, Tagg 2011) that we as cinemagoers and ubiquitous listeners experience and sense before or despite focusing on it as scholars.

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<sup>&</sup>lt;sup>14</sup> Even when Hollywood mainstream adopts music which is not traditionally linked to or explicitly scored for cinema, the described effect does not seem to diminish; I am thinking of Scorsese's use of 20<sup>th</sup> century avant-garde music by Ligeti, Scelsi, Cage, Marshall, Penderecki, Paik, Feldman and several other composers in *Shutter Island* (2010).

<sup>&</sup>lt;sup>15</sup> See on this topic the paragraph "DSS and specific cinematic forms" in Kerins 2011, "Conclusions".

<sup>&</sup>lt;sup>16</sup> Albert's comparisons of sound in video-art and installations to contemporary mainstream cinema are in this sense illuminating (Albert 2011 and 2012).

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