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FOLEY GESTURE: TOWARDS A THEORY OF ACOUSMATIC FOLEY

Abstract: The research project "Acousmatic Foley" addresses common traits between foley art and Concrete Music, based on the idea that the foley artist is an acousmatic listener and, in turn, that acousmatic listening is a form of fiction. In this line, the study argues that both fields have similar treatment of the "sonorous object". For this purpose, the research builds on two lines of thought: the "son-en-scène" and the "mise-en-son". Firstly, the "son-en-scène" focuses on the sounds of the filmic mise-en-scène (and its sound props), from very early cases to contemporary instances. The focus on these sound-props provides a perspective of sound for film that emphasizes its role as a tool of fiction and, thus, foley as the craft that leads to that experience. Secondly, "mise-en-son" sheds light on the making of the sound itself by exploring the concept of musical gesture. Either in contexts in which the musical gesture is visible (as with instruments), more cryptic (as with electronic devices), or completely delegated (as in acousmatic music), gesture can be seen a form of agency. Given that foley consists of maneuvering a sound-prop, gesture is as central to foley as it is to musical practices. This paper focus on the idea that gesture carries the same conception as the "sonorous object", that of an "intentional unit". In line with this, and in particular when of acousmatic nature, the research argues that the sonorous object is analogous to the sound-prop. In the end, these two lines of thought (son-en-scènce and mise-en-son) bridge the poietic and esthetic, as in Nattiez's semiotic distinction, towards an experience of "acousmatic foley".

Keywords: foley, gesture, acousmatic, film, sound design

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Introduction

The research project "Acousmatic Foley" focuses on the common traits between this line of practice in sound for film (foley art) and the listening proposal that emerged in the early 1950s with the foundation of *Musique Concrète*, namely acousmatic listening. Although the formulation "Acousmatic Foley" seems oxymoronic, the argument is that every foley artist is an acousmatic listener, while acousmatic composition also carries a sense of fiction very close to the manufacturing craft of foley art. In this process of aligning the common ground between both practices, the concept (and practice) of *gesture* emerges in the shared domain between both fields because one of the central aspects of Foley Art (among other things) is manipulating a physical object, just like musicians need to do in order to produce sound with their instruments.

In foley practices, many times, this sound must match an action quite specifically, rather than being merely a reference. For that reason, the manoeuvre of the object is not to support a 'sonic quotation' but, instead, to signify a replica of the action. This manoeuvre shapes the sound, extracting possible textures and nuances to produce one of the possible definitions of gesture. As with most designations, 'gesture' carries extensive cultural baggage, particularly within musical studies. Even within musical studies, there are multiple incidences, implications and implementations of the term.[1]

However, there is a general contour agreed upon, which outlines an understanding of what gesture is or means. Indeed, the common traits between Foley Art and Acousmatic Composition come forward precisely throughout the scrutiny of the meaning behind 'gesture' – mostly by inheriting the general conventions of acousmatic practice and its development of the "sonorous object" from *Musique Concrète*.[2] In the end, the concept of the "sonorous object" becomes analogous to the proposal of "sound-prop" in Acousmatic Foley's perspective towards a theory that aims at enclosing both practices. Incidentally, both topics had to be studied separately.

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[1] Alexander Jensenius, Marcelo Wanderley, Rolf Godøy, Marc Leman, "Musical Gestures: concepts and methods in research", in: Rolf Inge Godøy, Marc Leman (Eds), *Musical Gestures: Sound, Movement, and Meaning*, New York, Routledge, 2010, 12–35.

[2] Pierre Schaeffer, *In Search of a Concrete Music*, transl. by Christine North and John Dack, Berkeley – Los Angeles – London, University of California Press, 2012.

Gesture in Music: a brief overview

Among multiple definitions and contextualizations, there is mutual agreement on a few general premises implied by "gesture". Broadly speaking, a gesture is "any energetic shaping through time that may be interpreted as significant".[3] In this case, interpretation can stand either for the musician or for the listener: a gesture is a way of manipulating either the object in use, or the way it is perceived. Thus, a gesture contains a temporal structure: just like the "sonorous object",[4] a gesture is also an "intentional unit".[5] Accordingly, intentionality implies a sense of agency,[6] carrying a relationship between "movement and meaning"[7] and thus a way to control shape over time.[8] It is "a physical phenomenon, [...] a communication channel that carries a unified or multidimensional elementary action", which also allows for the "visualisation of the signals".[9] In that sense, the gesture is a form of utterance.[10]

However, such approaches require a few caveats. The first is that the context usually makes the gesture visible. In other words, a gesture is systematically contextualised in the perspective of a musical performance; most likely an instrumental performance in a concert situation. In a manner of speaking, instruments do require a certain way of action in order to produce an intended sound: the way one stresses the instrument's strings or pushes the piano's keys will have a direct influence on the way these instruments will

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[3] Robert Hatten, "A Theory of Musical Gewsture and its Application to Beethoven and Schubet", in: Anthony Gritten, Elaine King (Eds), *Music and Gesture*, Aldershot – Burlington, Ashgate, 2006, 1.

[4] 'Sonorous object' is Dack and North's translation of Schaeffer's *object sonore*, and is identical to 'sound object' as used more commonly elsewhere (as for example in Brain Kane, "L'Objet Sonore Maintenant: Pierre Schaeffer, sound objects and the phenomenological reduction", *Organised Sound*, 12(1), 2007). See Pierre Schaeffer, *Treatise on Musical Objects: An Essay across Disciplines*, transl. by Christine North and John Dack, Oakland, University of California Press, 2017.

[5] See Rolf Godøy, "Gestural-Sonorous Objects: embodied extensions of Schaeffer's conceptual apparatus", *Organised Sound*, 11(2), 2006, 149–157.

[6] Elaine King, Anthony Gritten, op. cit.

[7] Alexander Jensenius, Marcelo Wanderley, Rolf Godøy and Marc Leman, op. cit.

[8] W. Luke Windsor, "Gestures in Music-making: Action, Information and Perception", in: Elaine King, Anthony Gritten (Ed.), *New Perspectives on Music and Gesture*, Aldershot: Ashgate, 2011, 45–66.

[9] Claude Cadoz, "Instrumental Gesture and Musical Composition", *ICMC 1988 – International Computer Music Conference*, Cologne, Germany, February 1988, 1–12. ⟨hal-00491738⟩

[10] Rolf Godøy, op. cit.

sound. And yet, there may be other gestures that anticipate those movements. The instrumentalist's body expression will have an immediate impact on the perception of that sound. It may be required for that production, or not, but it anticipates it – just as the gestures of an orchestra conductor similarly anticipate the action of the interpreter. This visibility produces an empirical understanding of the moment. In fact, this embodiment is one of Jensenius, Wanderley, Godøy and Leman's first statements: gesture as the interaction between body and mind, the process of articulation between movement and meaning, bypassing the "Cartesian divide between matter and mind".[11] Nevertheless, as mentioned above, this notion departs from the principle that gesture is a visible action. Needless to say, the acousmatic principle proposes a different challenge to that idea.

The second assumption questions whether the gesture is crucial to producing sound, or somehow merely accompanies that production.[12] Are there two different kinds of gestures? As stated, when the performer holds his or her own breath, and raises a hand or a bow; this is a 'gesture' of anticipation. The question is then not whether it is crucial to the production of the sound, but how it influences one's interpretation and perception of that gesture. It makes a difference precisely because this anticipation builds expectation. Conversely, there are also gestures that are not crucial to the sound itself. For example, when an artist destroys an instrument on stage, the gesture is crucial, not the sound. It may be a political 'gesture', but the intent is different because the sound is (almost) irrelevant. A well-known example is that of electric guitarist Jimi Hendrix, who burned his instrument on stage at the Monterey Pop Festival (1967). Here, it was not about the sound it might produce, but rather the act of rebellion it entailed; and because it was an act of rebellion, the sound (accompanying that gesture) was figuratively part of it, a part of a larger process. Or when Nam June Paik lifts the violin slowly to then smash it on the table (*One for Violin Solo*, 1962), the sound itself is just part of the performance's concept; it supports the gesture. Similarly, Annea Lockwood's "Burning Piano" (1968) is a "happening" in itself, with the gesture and sound forming layers in a complex event. In these cases, the gesture surpasses the sound. And yet, these are still gestures; that is, "a movement that can express something".[13]

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[11] Alexander Jensenius et al., op. cit.

[12] Rolf Godøy, op. cit.

[13] Fernando Lazetta, "Meaning in Musical Gesture", in: Marcelo M. Wanderley, Marc Battier (Eds), *Trends in Gestural Control of Music*, Paris, IRCAM – Centre Pompidou, 2000, 259–268.

In contrast to a conventional musical instrument such as a violin, there is no empirical relationship between the gesture and an electronic-generated sound. In spite of the gesture being absolutely necessary for the production of the sound, it seems to convey no meaning.[14] The claim is that a keyboard, a knob or a fader does not depend on the mode of operation. A midi-controller is seen by many as an inexpressive instrument. In sum, there is no direct relationship between the energy of the trajectory of the physical action and the energy of the trajectory of the sound. This is contentious for many reasons. First, each of these tools may comprise several different variables and indeed depend on articulating the movement in operation (especially when it includes sensors, of course). Second, Lazetta departs from Coker's definition of gesture, which adds "recognition" to the constellation of premises listed above. In Coker's words, a gesture is also a meaningful movement (mostly because it is intentional) but he adds that it "comprises a recognizable formal unit".[15]

According to these terms, a gesture would depend on the distinction between "simple movement" and "meaningful movement" but also on whether this movement is recognised as such. With an acoustic instrument or other sounding body, the relationship between the gesture and the sound caused is a direct consequence of its physicality.[16] But with an electronic device, this relationship must be mapped. It can be changed in many ways, it can be more or less gesture-oriented and even the typology of gesture can be more or less expressive/noticeable. Furthermore, if an electronic performer repeats a certain movement that movement will be directly associated with the sound it produces. Thus, a gesture comprises "action, information and perception" despite the instrument's nature.[17] In other words, a gesture is also a pattern that establishes the possibility for anticipation and recognition within the event itself, for example through repetition.[18] Ultimately, "what is perceived is the movement of a person".[19]

In summary, with an acoustic instrument, there is a causal relationship between the gesture and the sound, whereas with an electronic instrument,

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[14] Ibid.

[15] Wilson Coker, *Music & Meaning: A Theoretical Introduction to Musical Aesthetics*, New York, The Free Press, 1972, 18, cited in: Fernando Lazetta, op. cit., 14.

[16] See Denis Smalley, "Spectromorphology: Explaining sound-shapes", *Organised Sound*, 2(2), 1997, 107–126.

[17] W. Luke Windsor, op. cit., 45.

[18] Ibid.

[19] Ibid., 48.

there is an arbitrary relationship between the gesture and the sound – because one can decide what and how that relationship will be. However, this relationship is only significant if the gesture is visible, which is not the case in acousmatic music.

The Acousmatic Gesture

In this context, the acousmatic principles take the 'visibility' out of this equation of gesture, foregrounding a "theoretical disjunction between sound and source".[20] This causes a certain disembodiment, but still comprises movement (an intrinsic quality of sound) and intentionality (part of the communication process). There is an 'intention' in playing back a certain sound, and there is an intention in aligning those multiple sounds together. In this case, the agency is transposed from the performer on stage to a hidden agent behind the loudspeakers, so the "attention is shifted to more compositional causes".[21] However, can this still be framed as a gesture?

Technically, the core difference between a visible and an invisible gesture is that it lies in the processes that receivers (i.e., the audience) undertake when listening to the sound. As Windsor observes, "it is one thing to show how a musical signal can be decomposed to reveal a nested hierarchy of temporal trajectories that originate in the gestures of the human body, quite another to detail the extent to which these are perceived".[22] Since there are no visual cues in acousmatic music, the idea of gesture can only depend on the way a listener perceives this sound. Therefore, the emphasis falls on the way the sounds are perceived (and hence on the process of that guidance). For this reason, there are often "traces of information" left by the composer in an acousmatic gesture, advertent or inadvertent signs of their own presence.[23] Sometimes, their presence is audible in the recording. At other times, their agency emerges from the interventions made in the sounds. For example, by joining sounds that do not belong together in nature or at least in that kind of sequence. It can also be that the sounds are played in different conditions (repeated, filtered, de-contextualised). And at other times, the sounds are clearly fabricated.

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[20] Ibid., 58.
[21] Ibid., 60.
[22] Ibid., 62.
[23] Ibid.

In fact, one could claim that acousmatic music is a work of 'fiction',[24] conveying both a sense of manufacturing and a suspension of disbelief.[25] The goal is to create an illusory feeling of possibility no matter how artificial the process may be. In the same way that the film-spectator needs not necessarily be aware of the process that manipulates their own perception of the film-narrative, the same happens for the listener of acousmatic music. Just as a camera movement in a film conveys "perceptual realism" without the need for the general audience to recognise it as such. Acousmatic music does so too, by moving sound sources across loudspeakers. For, as stated by Windsor, "although an attempt has been made to show how even in acousmatic composition the human presence of the composer can be detected, it is another thing to show the extent to which this occurs and identify the invariant properties of sound that specify such human causation".[26]

In the context of electroacoustic music, Smalley addresses these issues partially in his conceptualization of "spectromorphology", which is a theory about the shape of sonic content. As he points out, "the 'working gestures' of the acousmatic compositional process do not carry perceptual information equivalent to an intuitive knowledge of the physical gestures of traditional sound-making".[27] If so, what is therefore meant by 'acousmatic gesture'? Arguably, acousmatic music occurs within a propelling trajectory of motion. This trajectory itself also builds a sense of expectation – just as the gesture of the pianist does when it anticipates attacking the keys. Furthermore, as Smalley states: "if gestures are weak, if they become too stretched out in time, or if they become too slow in evolving, we lose the human physicality".[28] Given the different nature of these two environments, Smalley actually divides sounds into two categories – gesture-carried and texture-carried sounds – based on the fact that one takes over in framing (shaping) the sound more than the other.[29] However, Smalley defines sound according to its structural function, almost like data. He thinks of gesture in acousmatic music as a surrogate for a physical action.

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[24] See Sara Pinheiro, "Acousmatic Foley: Staging sound-fiction", *Organised Sound*, 21(3), 2016, 242–248.

[25] Samuel Taylor Coleridge, *Biographia Literaria; or Biographical Sketches of My Literary Life and Opinions*, London, Rest Fenner, 1817.

[26] W. Luke Windsor, op. cit., 62.

[27] Denis Smalley, op. cit., 109.

[28] Ibid., 113.

[29] Ibid., 114.

Arguably, within the context of foley art, all gestures are texture-carried because there is no sound without one another. The sound does not precede the gesture: the gesture produces the sound and therefore its texture. For example, a "footstep" is the composite of a gesture (the movement), and a texture (the shoe and the surface) in order to match the image. Naturally, the gesture directs more or less energy in one or another part of the spectrum but that results in what is perceived as texture (a frequency structure). Therefore, gesture and texture are inseparable. In this sense, foley challenges the idea of gesture even further, for it is neither visible nor acousmatic while, at the same time, being both. It does have a common trait with instrumental music by making use of objects in an imitative and repetitive way, but its nature is more likely acousmatic music. In spite of spectromorphology offering an insightful perspective on sonic shapes – in particular through the contrast between extrinsic and intrinsic links in source bonding (which is almost analogous to a diegetic and non-diegetic perspective) – the "structural function" of these descriptions is still abstract and *unrelatable* in the "real" world. That is precisely what foley brings to the acousmatic equation because it aims at a relatable "in-this-world" kind of experience.[30]

Finally, the argument within acousmatic music is precisely that the absence of visuals turns *everything* into a gesture: every movement is noticed and perceived as an energetic event. For each event, there is a deductive understanding of the information. It is irrelevant if the majority of listeners try to figure out what is what, or not: deduction is the basis of proprioceptive perception, the gestural embodiment. Stemming from Badiou, Giannakopoulos explains that "an event is a rupture in the *knowledge* of a situation and it triggers a *truth procedure*".[31] In this case, it matters that through this trajectory, one is propelled along, relating one thing to the other and establishing a connection or relationship between the sounds and the listener's 'real world'. Such engagement is called "source bonding", which is also crucial for foley.[32]

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[30] Smalley describes a number of motions and growth processes that focuses on "directional tendencies" of sound (1997) that says more about the dynamics of the sound than of its content. For a discussion on "being-in-the-world" and sound, see Sara Pinheiro, Matěj Šenkyřík, Jiří Rouš and Petr Zábrodský, "Reflections on sonic digital unreality," *Digital Creativity*, 30(3), 2019, 196–205.

[31] Babis Giannakopoulos, *Stochastic Music as Metaphor*, Master's Thesis, Institute of Sonology, The Hague, 2011.

[32] Denis Smalley, op. cit., 110.

Foley, a brief introduction

Despite having only one moment with synchronised sound – the famous line "Wait a minute, wait a minute" from *The Jazz Singer* (Crosland, 1927) is frequently credited as the first sound film. You ain't heard nothing yet!" (00:21:58).[33] However, the first film to use synchronised music and sound effects was *Don Juan* (Crosland, 1926), while the first film to extensively record dialogue on set was in fact *The Singing Fool* (Bacon, 1928). In the meantime, while making *Wild Party* (1929), director Dorothy Arzner encountered a very nervous actress (Clare Bow), who could not handle the restriction of having to project her voice toward the microphone.[34] In the face of this problem, Arzner decided to hang the microphone on a pole to follow Bow's movements, and help her be more comfortable. Unfortunately, Arzner failed to patent her invention, so she is not credited often enough for it.[35] However this improvised solution turned into an extremely important development: recording sound was hitherto very restrictive on set, and the implementation of a boom-pole was the first step towards a craft that, through the years, would develop into sound design.[36] From the moment films included recorded sound, certain silences became less acceptable. In the case of musicals, for example, if one could hear the singing and the music clearly, one expected to hear other sounds too (dancing footsteps mostly).

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[33] Donald Crafton, *The Talkies: American Cinema's Transition to Sound, 1926–1931*, Berkeley – Los Angeles – London, University of California Press, 1999, 2.

[34] A struggle that is portrayed years later in *Singin' in the rain*: two silent film-stars (Don Lockwood and Kathy Selden – played by Gene Kelly and Debbie Reynolds) are facing the end of their careers until Cosmo Brown (Donald O'Connor) decides to include music in their films. The plot revolves around the fact that Selden is completely unable to sing and even her speaking voice is laughable. For that reason, she is dubbed by Lina Lamont (Jean Hagen). The big climax occurs when Kathy is singing in front of the audience and the real singer (Lina) is revealed behind the curtain. Without turning this example into anecdotal, the "curtain veil" analogy is unavoidable. See Brian Kane, 2014.

[35] Theresa L. Geller, "Dorothy Arzner – Great Directors", *Senses of Cinema*, 26, 2003. https://www.sensesofcinema.com/2003/great-directors/arzner/

[36] The term Sound Design is often attributed to Walter Murch, for being the first appearing as such in the final credits of Coppola's *The Rain People* (1969). The term was ultimately popularised later with another Coppola film, *Apocalypse Now* (1979). See Michael Ondaatje, *The Conversations: Walter Murch and the Art of Editing Film*, A&C Black, 2002. For valuable testimonies of early sound recording on set see Vincent LoBrutto, *Sound-on-film: Interviews with Creators of Film Sound*, Westport – Connecticut – London, Praeger Publishers, 1994.

Due to technological limitations, there needed to be a selection of sounds relevant to the narrative, or their absence would be more obvious. In this way, foley emerges as an attempt to cover all the other sounds that the on-set microphone was unable to capture. It began as a process of giving embodiment to the scene: a sense of physicality and credibility.[37] In other words, the presence of "direct sound" and the implementation of dialogue showed the absence of all other sounds. Thus, foley started from the need to attribute physicality and, more importantly, verisimilitude to the scenes – a concept very dear to story-telling. The term "Foley" refers therefore to an early practice of sound for film back when technological restrictions implied recording many sounds simultaneously and therefore limited options. It takes its name from the first-known practitioner: Jack Foley. Foley was a general assistant on film sets and when the need arose, he started performing sounds *live on tape* to complete the tracks.[38] Slowly, he established a room for that purpose (later on called the "Foley stage") where he would perform sounds in sync with the image and sometimes even simultaneously with the orchestra.

Naturally, in order to be able to reproduce many different sounds, this foley stage slowly became a storage of different sorts of props, growing into a very specific kind of studio that included different kinds of surface floors (foley pits), many different doors, and an endless amount of *junk* in boxes and shelves ready to be manoeuvered.[39] Not long thereafter, foley became a craft that resulted from having a choice: replacing the original texture of, for example, footsteps, with a texture that better suited the emotional intention of the scene. But, in sum, foley art emerged as a specific technique to add sounds to the [integrated] soundtrack.[40]

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[37] The idea of sound embodiment is a whole other discussion. See, for example, Iain Campbel, "John Cage, Gilles Deleuze, and the Idea of Sound", *Parallax*, 23(3), 2017, 361–378. DOI: 10.1080/13534645.2017.1343785 In the context of the topic hereby addressed, Pauletto summarises the idea very concisely: "if the voice delivers the threats, Foley delivers the punch", alluding to the physicality foley brings to the image. See Sandra Pauletto, "The Voice Delivers the Threats, Foley Delivers the Punch", in: Miguel Mera, Ronald Sadoff, Ben Winters (Eds), *The Routledge Companion to Screen Music and Sound*, New York, Routledge, 2017, 342.

[38] Jack Foley was something like what nowadays is credited as a "runner", but at that time the film credits were not fully formulated as such.

[39] For a complete contextualization of Foley Art see Vanessa Ament, *The Foley Grail: The Art of Performing Sound for Film, Games, and Animation*, Verlag, Routledge, 2014.

[40] The "integrated soundtrack" proposes an understanding of sound design and its elements as equal to the so-called "soundtrack", which usually only considers the music.

Figure 1: Screenshot of captions in *Schitt's Creek*
(CBC television series)

Furthermore, many times an object (the prop) used to reproduce the sound is not necessarily the object seen in the scene. In other words, on several occasions the foley artist needs to use another object to "make-as-if" it is the object on-screen but for manifold reasons.

First, the *original* prop might not sound *real* because the microphone's proximity might render the sound harsh and unnatural (making the sonic experience more alien and hence more artificial). Second, the object might be too big or impractical to bring to the studio, so the foley artist would need to come up with an alternative solution: an object that makes the *literal* sound but that is actually manageable in a studio. For example, as explained by Yewdal in his description of the epic battle sequence in *Spartacus*,

> Jack [Foley] was faced with the unique and exciting challenge in the scene where 10,000 battle-hardened Roman troops pressed forward in a deliberate rhythm as they approached the ridge [...] Foley [...] and his assistants stood together on the

Kulezić-Wilson proposes to reckon "the interconnectedness of all soundtrack elements: [...] score, speech and sound effects" in a less hierarchical manner. See Danijela Kulezić-Wilson, *Sound Design is the New Score: Theory, Aesthetics, and Erotics of the Integrated Soundtrack*, New York, Oxford University Press, 2020, 3. Alternatively see Sara Pinheiro, "The Audiovisual *Musique Concrète*: Towards the Integrated Soundtrack", *Iluminace*, 33(4), 2021, 69–74.

> Foley stage and rhythmically shook the [metal curtain] rings in sync to the sol-dier's feet, creating the extremely effective and frightening effect, uniquely under-lining the military might of Rome.[41]

Third, the *original* prop might defraud the image itself because there is a built-in culture within certain actions and/or images, almost like a dialect (and/or a cliché), that implies *sounds to happen* in a certain way. For example, in a car chase, tires always screech, squeal and/or squeak. Naturally, it is not about bringing a real tire to the foley stage to reproduce that sound (which is easily done with a rubber hot-water-bag instead) (Figure 2). Or, another ex-ample, handling a gun on screen rarely goes silent either because it is on a close-up or because it is meant to emphasise the action. But the prop used in the scene might not reproduce the expected sound because it might be a fake gun (plastic) or too smooth (not expressive enough) and thus in the foley stage one needs to create the "metallic" sound effect to make the gun appear more "authentic".

Figure 2: Mary Jeanne Wickmans using a rubber hot-water bottle to create the sound of a squeaking tire.[42]

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[41] David Lewis Yewdall, *Practical Art of Motion Picture Sound*, New York, Routledge, 2011, 427–428.

[42] Screenshot taken from https://www.youtube.com/watch?v=iP6_Rzg8L18&t=49s&ab_channel=FMBrussel

At the same time, some sounds *really* have to be made up: either because they don't exist in reality or because they can't be made for real (otherwise, there would be many bones broken instead of celery sticks). The dinosaur sounds in the *Jurassic Park* film franchise, or the *lightsaber* flights in *Star Wars* films, are famous examples. Given their fictional nature, such sounds had to be manufactured from scratch. As it was not possible to record it *naturally*, something had to be *made up* for it. In this way, foley art becomes also the craft of "making-believe".[43] As Drever puts it, it is "an ideal notion of sound or soundscape rather than an assiduous attempt of *authenticity*".[44]

Figure 3: Two sets of shelves in a foley storage room, at the Foley Stage in Prague. Courtesy of Petr Kapeller.

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[43] "Make-believe" is a core concept of fiction. Etymologically, fiction implies the making or manufacturing of something. It presupposes a creator. Additionally, as mentioned above, it requires "the willing suspension of disbelief" (Coleridge and Shaw, 1817), which suggests that it is not completely detached from reality despite being a construct. See: Gertrude Currie, *The Nature of Fiction*, Cambridge, Cambridge University Press, 2008 and Robert Stecker, "Fiction, Nature of", in: Stephen Davies et al. (Eds), *Companion to Aesthetics*, Chichester, Wiley-Blackwell, 2009, 275–278.

[44] John Levack Drever, "Sound effect – object – event. Endemic and exogenous electro-acoustic sound practices in theatre", quoted in: Ross Brown (Ed.), *Sound: A Reader in Theatre Practice*, New York, Palgrave Macmillan, 2010, 196.

In these early contexts, a few sound *amateurs* could be really involved in developing a specific aesthetic for the film for which they were working.[45] Walter Murch, for example, took a long time to explore multiple sounds and techniques in order to develop the soundtrack for *THX-1138* (Lucas, 1971). Eventually, it led to the foundation of sound design as we know it. Here lies also a common trait between sound for film and Concrete Music: these are studio activities of sound manipulation and expansion for which only repeated playback will allow.

At that time, Murch was interested in exploring sound properties, just as Schaeffer had been doing with *Musique Concréte* decades before. In fact, finding Concrete Music playing on the radio led Murch to realise that sound had many possibilities to explore.[46] For example, his process of developing the sounds for *THX-1138* was very similar to treating sound under the concept of sonorous object: sound as plastic material, handling the recording itself, an identity of its own.[47] Naturally, Murch became known as a sound designer not a foley artist, but the idea of foley in this comparison refers to a preoccupation with the sounds in the mise-en-scène, regardless of the technique to achieve them. In fact, no sound should be perceived as a foley sound because it should blend in with the image in a natural way – be it a completely artificial sound such as the lightsaber in *Star Wars*, or the banal sound of a character chewing gum.[48] In any case, the core idea is that of sound fiction: crafting and making-believe.[49]

From this point of view, foley is concerned with the materiality of the object on the screen, and if the initial focus was towards footsteps and other (more evident) actions or objects – such as doors opening/closing, for ex-

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[45] The term "amateur" refers to the literal sense of the word, as explained, for example, by Jonáš Gruska although in a different context (see https://rwm.macba.cat/en/sonia/sonia-318-jonas-gruska).

[46] See Vincent LoBrutto, op. cit.

[47] In LoBrutto, 1994, op cit. Murch explains many of his acoustic explorations at that time which led to the technique "worldizing". In simple terms, it consists of recording sounds back in *real* acoustic spaces to include that same acoustic propagation and turn them more organic. Another technique was also recording a few people screaming in a bathroom and using only the saturated tale to create abstract textures and atmospheres.

[48] I am referring to a specific character in the film Redux (Heimir Bjarnason, 2022), to which we added a proeminent shewing sound in order to make him even more annoying. See https://filmfreeway.com/Redux2021

[49] See note 39.

ample – from very early on, the narrative incorporated other elements to a point of turning sound into a story-teller.[50] As Lewis puts it, "a Foley artist knows that although they may not have produced the same sound in exactly the same way as the sound that they are being required to caricature, they can however replicate a gesture type that will match both the visual and aural gesture types presented in the cinema".[51] In this way, the concern is to manoeuvre the object in the right way to match the gesture on the screen.

Foley Gesture

Foley is a performative art. Foley artists perform the sounds of certain actions in sync with the image on display. For that, they need to combine different skills. In a manner of speaking, the foley artist needs to become an actor, a dancer, or a musician. They need to become *that* actor, whose actions are to be mimicked. They need to impersonate the physicality of a certain type of body with the specific emotion of the scene. Furthermore, foley artists need to be quite sharp in their reactions, with a choreographic sense of movement, just like a dancer. And, like a musician, the foley artist needs an acute sense of rhythm and tempo, following a score, reacting on time to cues, and being precise in their gestures. All summed up, the foley artist is a performer.

Other than that, each prop is an instrument, and each artist has their way to operate it – playing it. Every prop needs to be manoeuvered and gestured to create texture, dynamism, and rhythm to become animated. Clearly, each prop has a specific purpose simultaneously soundly and fictional. Each prop is, therefore, a sound-prop.[52] The idea of sound-prop extends the objecthood of the prop to its sonic properties because each sound-prop is chosen for the sound it makes, not for the *object* it is.[53] That is, in fact, the parallel with acousmatic listening: the prop is chosen according to its sonic traits in spite of what it means in its context. A sound-prop, like the sonorous object, is also

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[50] See Sara Pinheiro, "Acousmatic foley: Son-en-Scène", *International Journal of Film and Media Arts*, 7(2), 125–148. https://doi.org/10.24140/ijfma.v7.n2.07. 2022.

[51] Matt Lewis, "Ventriloquial Acts: Critical Reflections on the Art of Foley", *The New Soundtrack*, 5(2), September 2015, 117.

[52] As explained elsewhere, "a prop is part of the *mise-en-scène*: an adornment or another means of characterization, which contributes to the development of the action or the characters". Sara Pinheiro, "Acousmatic foley: Son-en-Scène", op. cit.

[53] Of course it is the *object it is* that makes the *sound it makes*, but the object is chosen for that sound, in spite of the social understanding of the object's purpose.

de-contextualised. Its identity will be shaped only by the sound it makes, and that occurs through the operative gesture applied to it.

As Lewis asserts, "the kinds of gestures associated with Foley are used to understand the physical properties of and therefore our relation to those objects are a crucial part of learning about our environment".[54] These physical properties concern "a taxonomy of causes"[55], which is in line with Smalley's source bonding mentioned above, but more than a relationship between sounds and listener: source bonding is the relationship between original physical sources and sound as heard. That is, foley is always 'source bonded', even more if the actual source is not really the thing that it appears to be. In foley's case there would always be two perspectives: the first one happens on the foley pit, with the sound being created in order to bond with the object on screen, and then on screen, with the sound being justified by the image.

In this way, the gesture in the studio must obey the expectations on screen. This concerns mostly movement: if the movement matches, most likely the sound will match too.[56] The context of procedural audio helps to inform this: understanding the physicality of the object and trying to synthesise those characteristics by replicating it in a heuristic way. The difference is, paraphrasing Hug and Kemper, that this process takes time and energy away from the sound-driven exploration itself.[57] That is, the focus moves towards decomposing the sound, understanding its structure, and then reproducing it, rather than on the sound itself. At the same time, synthetic audio lacks organicity, which is precisely what a foley gesture excels at. The gesture itself creates the envelope (the shape of the sound over time), but it includes variable texture, movement, and (more importantly) the dramaturgic weight of the scene (and therefore, meaning).

In the end, the treatment of the sonorous object is the most common ground shared between foley art and concrete music. However, if for concrete

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[54] Matt Lewis, op. cit., 108.

[55] Ibid., 109.

[56] Michel Chion called it "syncresis" which is "a word forged by combining *synchronism* and *synthesis*" — a phenomenon dependent on "contextual determinations". Michel Chion, *Audio-vision. Sound on Screen*, edited and transl. by Claudia Gorbman, New York, Columbia University Press, 2019, 64.

[57] Daniel Hug and Moritz Kemper, "From Foley to Function: A Pedagogical Approach to Sound Design for Novel Interactions", *Journal of Sonic Studies*, 2014, Vol. 6. https://www.researchcatalogue.net/view/237166/237167

music the challenge was to emancipate the sound from its source or meaning, the challenge for foley art is to make something that matches the image in spite of being a real object or not, or what is causing it. There are many anecdotes about this, from coconut shells mimicking horses' galloping, to leather gloves for flapping wings. Ultimately, the foley artist needs to *look* at objects beyond their real functionality and, instead, toward the sound they will make. Therefore, they are acousmatic listeners because they look at a scene for what it should sound like rather than for what is visually contained within. By the same token, they look out for the sonic properties of an object itself, regardless of its *reality*, scouting for the sonic properties of that object for what it can become rather than for what it is. Hence, foley art involves a form of acousmatic listening.

The Sonorous Object

The foundation of Concrete Music lies in Schaeffer's proposal of acousmatic/reduced listening and of *l'objet sonore*. Accordingly, the "sonorous object" is "an 'intentional unit' constituted by our own mental activity";[58] that is, as "an organised totality that one can assimilate into a 'gestalt'".[59] In other words, the sonorous object results from the ontological organisation of sonic elements as in a perceptual experience. In Schaeffer's words: "The sound object is the coming together of an acoustic action and a listening intention".[60]

Thus, the recent translation of an *objet sonore* as a *sonorous object* helps to clarify the acousmatic proposal. The sonorous object is an abstract partitioning of sound, rather than an *object that makes sound*. In other words, it thinks of sound as an object, in spite of its *objecthood*. In this case, the *objecthood* lies more in the possibility of replaying the sound and the affordance of repeated listening, as a region, rather than on the object recorded itself. For example, the sound of a bell is a sounding object when recorded, but the bell itself is a sound object as in an *object that makes sound*. At the same time, the sonorous object also signifies the sound object itself in this case. It opposes

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[58] Pierre Schaeffer, *Traité des objets musicaux*, Paris, France, Le Seuil, 1966, 263, quoted in: Rolf Godøy, "Gestural-Sonorous Objects: Embodied extensions of Schaeffer's conceptual apparatus", *Organised Sound*, 11(02), 2006, 149–157.

[59] Michel Chion, *Guide des objets sonores: Pierre Schaeffer et la recherché musicale*, Paris, Buchet/Chastel, 1983, 34; Joanna Demers, *Listening through the Noise: The Aesthetics of Experimental Electronic Music*, Oxford, Oxford University Press, 2010.

[60] Pierre Schaeffer, *Treatise on Musical Objects…*, op. cit., 213.

foley art in the sense that foley art pertains to *physical* sound objects, tangible, palpable and malleable towards their sonorosity. These are actually sound-props.

At the foley stage, the sound-prop is an instrument to *make-as-if* the one on screen. As with any instrument, it will deliver the necessary sound depending on how it is played (therefore, like an acousmatic gesture, both are concerned with the *making of* the sound). But, in a manner of speaking, its perception is also acousmatic because the *real* source of the sound (the sound object from the foley pit) should go unnoticed; the craft itself is also decontextualised, and one perceives the sonorous object as organised in the editing/mixing. It is almost as if it is not perceived because it is not perceived as it is, but as it seems to be. As Kane posits, "sound is always in danger of being apprehended as something other than itself"; and Foley Art uses that in its favour.[61]

Towards a Theory of Acousmatic Foley

In sum, the foley gesture acts as an agent for the point of audition: this "point of audition enables the rendering of action through the perception of an embodied protagonist by an auditor".[62] In other words, the foley gesture establishes the focus of the scene and directs the perception towards what is meant as a protagonist.

Unfortunately, much attention is given to footsteps and other common sounds, but foley actually covers every other individual sound: anything that moves, anything that is touched. Many times, it is done so in a very discreet fashion, and is therefore oblivious to most of viewer-listeners. For example, in *Battle of the Sexes* (Dayton and Faris, 2017), there is a crucial scene in which Billie Jean King (Emma Watson) is clearly "accepting the call for adventure" and, to emphasise the emotion of the moment, her clothes become very audible.[63] In short, she challenges a couple of male tennis promoters with her plans to make her own tournament in response to unequal pay. As

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[61] Brian Kane, "L'Objet Sonore Maintenant: Pierre Schaeffer, sound objects and the phenomenological reduction", *Organised Sound*, 12(1), 2007, 18.

[62] Sheldon Schiffer, "Footsteps, breath and recording devices: Abandoning a camera-centric construction of 'point of audition'", *The Soundtrack*, 5(1), June 2012, 16.

[63] Call for adventure is a reference to the 12 steps in the "Hero's Journey". See Christopher Vogler, *The Writer's Journey: Mythic Structure for Writers*, Seattle, Michael Wiese Productions, 2007.

she walks out of their office with Gladys Heldman (Sarah Silverman), they are petrified by what they have just done and their clothes' noises stand for the commotion in their minds. The foley accentuates both the physical and the narrative gesture. Usually, this kind of noise is diminished, hidden, or used to a minimum. In this scene, it is maximised precisely because it punctuates the moment (Figure 4).

Figure 4: Screenshots of *Battle of the Sexes* (Dayton and Faris, 2017)
Gladys Heldman: "Are we really gonna do this?" Billie Jean King: "Sure we're gonna do this." Gladys Heldman: "How are we gonna do this?" Billie Jean King: "No idea."

Last but not least, amongst the sound team foley as a technique is not concerned with the way the sound is perceived, but rather the way it is crafted. In fact, according to Ament:

> it is common for most cineastes to confuse an edited sound effect for Foley and vice versa. The simple explanation is that the foley artist is concerned with what the actor is doing, whereas the sound editor is editing in effects that deal with the action or environment. However, this is not always the case.[64]

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[64] Vanessa Ament, *The Foley Grail: The Art of Performing Sound for Film, Games, and Animation*, Routledge, 2014, XV.

In other words, the same sound can be assigned to the foley team in one project or to the sound effects team in another project, depending on how it is afforded. Within the foley team itself, there are different crafts and tasks. For example, the foley editor organises and perfects the dynamic balance between all the layers. Editing foley is a magnified experience of the film, as the screen is divided into so many different layers. In my experience, the first and last gesture on screen is one of the main things I focus on most when editing foley provided by the foley stage. By the same token, if there are multiple characters walking, for example, as an editor one has to choose what character to focus on. Performing and editing foley takes precision, like playing an instrument.

Finally, it is important to remember that no sound should be noticed as foley because all foley sounds should blend in with the image and seem originally recorded with it (while a sound effect can actually produce a certain "artificial" impact on the audience). Foley is rooted in story-telling for being, at its core, diegetic (concerned with the narrative) and fictional (manufactured). For its purposes, its instrument is the sonorous object, and its technique is gestural. In foley, any given object (a sound-prop) serves as its instrument and it is the gesture itself that *organises* the sound into a sonorous object, giving it shape and therefore meaning. In fact, both cases align with Coker's proposition mentioned above, that of a meaningful movement comprising a recognizable formal unit. If for concrete music that 'formal unit' is a sonorous object (plausible to create with), for foley art, it is a plausible sonorization of a given action. They are both *poietic* and a*esthetic* simultaneously, as in Nattiez's semiotic distinction, because they are part of the making of the artwork *and* of the experience of the artwork. In the end, the sound-prop is for foley what the sonorous object is for acousmatic music.

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Summary

The research project "Acousmatic Foley" addresses common traits between foley art and Concrete Music, based on the idea that the foley artist is an acousmatic listener and, in turn, that acousmatic listening is a form of fiction. It focuses on the common traits between this line of practice in sound for film (foley art) and the listening proposal that emerged in the early 1950s with the foundation of *Musique Concrète*, namely acousmatic listening.

For this purpose, the project is built based on two lines of thought: the "son-en-scène" and the "mise-en-son". Firstly, the "son-en-scène" focuses on the sounds of the filmic mise-en-scène (and its sound props), from very early cases to contemporary instances. The focus on these sound-props provides a perspective of sound for film that emphasizes its role as a tool of fiction and, thus, foley as the craft that leads to that experience. Secondly, "mise-en-son" sheds light on the making of the sound itself by exploring the concept of musical gesture. Either in contexts in which the musical gesture is visible (as with instruments), more cryptic (as with electronic devices), or completely delegated (as in acousmatic music), gesture can be seen a form of agency.

Furthermore, proposing an understanding of foley within the principles of Concrete and acousmatic music sheds light on the common traits of both practices. Given that foley consists of maneuvering a sound-prop, gesture is as central to foley as it is to musical practices. In that line, gesture carries the same conception as the "sonorous object", that of an "intentional unit" in both environments and, at the same time, both fields have similar treatment of the "sonorous object". In particular when of acous-

matic nature, the "sonorous object" is analogous to the sound-prop in their de-contextualised plasticity, conception and instrumentality.

In the end, these two lines of thought (son-en-scènce and mise-en-son) bridge the poietic (making of the artwork) and esthetic (experiencing of the artwork), as in Nattiez's semiotic distinction. By doing so, the research presents a theory of sonic-fiction that is specific in its dramaturgy and therefore, moves towards an experience of "acousmatic foley".