"Uprooted Sounds": International Electroacoustic Output of Spanish Pioneers in Times of Francoism

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ABSTRACT

While in the 1950s and 1960s the civilized world surrendered to the fascinating musical possibilities of the electronic medium, Spain was sunk in dictatorship. This article reviews that important part of the output of Spanish pioneers that took place in research centres and laboratories beyond Spanish borders during Francoism.

1. INTRODUCTION

Among exiled composers who approached the electronic medium Roberto Gerhard (1896-1970) is an outstanding figure. His proposal is fresh, critical of the stereotypes of the European avant-garde, and informed by his artistic and intellectual background as one of the most cosmopolitan Spanish composers in the XX century. However, this side of his work, as a pioneer of sound experimentation, fell into oblivion, perhaps as a result of his outlying position—both geographically and aesthetically speaking—, and undoubtedly for being unjustifiably bypassed by Spanish and British musicologists. Gerhard is a composer whose work reflects the reality of a sound space delimited and constrained by the sociopolitical circumstances of an era. The totalitarian system, the siren songs of the emergent schools, and the shortage of means encouraged Spanish composers to leave in search of better fortune. Their absence marked the uprooting of an important part of the electroacoustic output of this period: proposals that adopted technology rejecting the epidermal and picturesque, from the margin or the institution, the subversive as well as the problematic. This paper seeks to define this sound space, calling together the sounds imagined by those composers beyond Spain's borders during the dictatorship.

2. EXPATRIATE COMPOSERS

Roberto Gerhard (1896-1970)

Roberto Gerhard began to weigh up the musical possibilities of the new medium in theatrical, radio and television productions¹. Works like the staging of *King Lear* (1955) and the radio feature A Leak in the Universe (1955) are said to be among the first scores to use manipulated tape in the United Kingdom². It should be noted, however, that Gerhard's catalogue of "electronic music"³ (Table 1) encompasses a variety of commercial commissions in which the electronics is of little transcendence. Such is the case of minor works in which the tape plays a merely anecdotal role (All Aboard), or conventional scores in which it serves to add an exotic touch with modern taste (Pericles, The Overcoat, The Anger of Achilles). These works coexist with others that afford the perspective of a more active exploration of the medium (King Lear, Coriolanus, Asylum Diary). In his incidental music the tape part usually takes the shape of short episodes that, for their referential value, Gerhard called "sound images"⁴. These events, subordinate to the dramatic action, stand out for their simplicity and austerity: sonic textures such as a found sound, the mixture of two or three "ingredients" or other essentially simple elements. Recordings of all types are used in their elaboration, often of instrumental origin, eventually altered by Gerhard by means of manipulation of the tape recorder or the turntable⁵.

Concurrently, in the 1950s Gerhard followed very closely the achievements of the avantgarde⁶. The radio speech entitled *Audiomobiles* (BBC, 1959) helps to situate this interest in the composer's critical agenda⁷. Finishing off a sharp analysis on concrete and electronic music, in that program Gerhard showed a *Capriccio in the manner of Goya*—doubtless, a

⁵ Mainly modifying the original playback speed and direction.

 $^{^{1}}$ Up to 1959 Gerhard's experiences with manipulated tape are exclusively confined to the domain of incidental music.

² Special mention should also be made to the theatre play *The Prisoner* (1954), which the musicologist Hugh Davies considered "the first British score to involve tape" (DAVIES, Hugh. "The Electronic Music". *Tempo* 139 [1981], p. 35.) The role that electronic sound plays in this work, for which contradictory references exist, remains to be examined.

³ See DAVIES, H: "The Electronic Music".

⁴ Sound illustrations that the composer often linked to emotions and states of mind.

⁶ His work at the Electronic Music Studio of the SWF in Baden-Baden and NWDR in Cologne in 1955 or his presence at the *Semaine de Musique Expérimentale* at the Expo 58 in Brussels.

⁷ A programme devoted to the analysis of the strengths and weaknesses of the electronic medium, illustrated with compositions by Berio, Schaeffer and Stockhausen. See GERHARD, Roberto: "Concrete Music and Electronic Sound Composition (1959)". *Gerhard on Music. Selected writings*. Meirion Bowen (ed.). Aldershot: Ashgate, 2000, pp. 180-186.

biting satire of the prevailing aesthetic dogmas⁸ that the composer presented as the first work of a series designed to be listened to for its own sake. The warm reception of this speech, together with experiences like the *Semaine de Musique Expérimentale* at Expo 58 and the contact with the American artists collective ONCE in 1960, fuelled his interest and identification with the electronic medium. These experiences contributed to ratify his own standpoint⁹ and were a spur to setting up a home studio and strive for self-sufficiency¹⁰.

His first important work is *Lament for the Death of a Bullfighter* $(1959)^{11}$, for reciter and tape. This is a radio poem that explores the marriage of voice and electronic sound without losing a view of the poetic and human side of Lorca's text¹². A further work without concessions is Symphony No. 3 "Collages" (1960), possibly one of the most outstanding mixed media compositions of his time, apart from being one of the first to integrate the orchestra with the tape¹³. Also representative are the solo tape piece *Caligula* (1962), dedicated to the ONCE group, and the sound-track for the experimental film *DNA in Reflection* (1963).

Title	Year	Instruments	Function / Notes
The Prisoner	1954	Instruments, tape	Theatre play
King Lear	1955	Instruments, tape	Theatre play (Stratford)

⁸ In the same way that Goya's *Caprichos* are a critique of the dogmas and the established powers of their time. This concise and roughly-drawn composition opposes a nonsensical rhythmic sequence—an *objet trouvé*-like banged piano—to recordings of electronic sound borrowed from a record put together by Herbert Eimert played backwards.

⁹ Gerhard believed in a sound continuum removed from the dichotomy electronic-concrete, as well as in the possibility of the coexistence of figurative and abstract elements in music. See "Sonido y símbolo en «Lament for the Death of a Bullfighter» de Roberto Gerhard". *Quodlibet: Revista de Especialización Musical* no. 54 (2013), pp. 53-92.

¹⁰ The date considered as the official opening of Gerhard's home studio is November 1958, coinciding with a change of address. See GARCÍA-KARMAN, Gregorio: "Roberto Gerhard's Tape Collection: The Electronic Music." *Proceedings of 1st International Roberto Gerhard Conference*. Huddersfield: University of Huddersfield, 2010. pp. 107-122. The artists' collective ONCE, with whom Gerhard closely liaised from 1960, promoted an outlook based on self-sufficiency that aspired to independence from institutions.

¹¹ A BBC radio programme based on Federico García Lorca's celebrated elegy *Llanto por Ignacio Sánchez Mejias* (1934). GARCÍA-KARMAN, G: "Sonido y símbolo en «Lament for the Death of a Bullfighter» de Roberto Gerhard.

¹² GARCÍA-KARMAN, G. "Sonido y símbolo en «Lament for the Death of a Bullfighter» de Roberto Gerhard".

¹³ Both the historical recordings and the compositional sketches suggest that the importance given by Gerhard to the mixture of the orchestral and electronic textures could have well been underestimated in present-day renderings of the symphony. See GARCÍA-KARMAN, Gregorio: "Roberto Gerhard's BBC Sound Compositions". *The Roberto Gerhard Companion*. Monty Adkins and Michael Russ (eds.). Aldershot: Ashgate, 2013, pp. 345-346.

A leak in the Universe	1955	Instruments, tape	Radio drama (BBC)
[The Unexpected Country] ¹⁴	1957	Таре	Radio drama (BBC)
Pericles, Prince of Tyre	1958	Instruments, tape	Theatre play (Stratford)
All Aboard	1958	Instruments, tape	Commercial film (Bowater)
Your Skin	1958	Instruments, tape	Commercial Film (Unilever)
Asylum Diary	1959	Таре	Radio drama (BBC)
Coriolanus	1959	Таре	Theatre (Stratford)
[Capricho a la manera de Goya]	1959	Таре	Sound illustration for a speech (BBC)
Lament for the Death of a Bullfighter	1959	Reciter, tape	Radiophonic poem (BBC)
Sinfonía No. 3 "Collages"	1960	Orchestra, tape	Concert
Caligula	1961	Таре	Concert
The Overcoat	1961	Instruments, tape	Radio drama (BBC)
The Cherry Orchard	1961	Instruments, tape	Theatre play (Stratford)
Macbeth	1962	Instruments, tape	Theatre play (Stratford)
[Sculpture I]	1963	Таре	[?]
Audiomobile No. 2 "DNA"	1963	Таре	Soundtrack / concert
Macbeth	1964	[?]	TV
The Anger of Achilles	1964	Instruments, tape	Radio drama (BBC)
[Audiomobile No. 3 "Sculpture"]	[?]	Таре	[?]

Table 1. List of Roberto Gerhard's compositions involving manipulated tape¹⁵.

The heterogeneous nature of Gerhard's electroacoustic output and the inaccessibility of many of these works have hindered a global evaluation of his achievements with the tape. To these problems one must add the existing divergences between the composer's different catalogues. The list of works presented here (Table 1) takes, as a point of departure, the one published by Hugh Davies in 1981, to the drafting of which, Gerhard contributed¹⁶. Davies' list has been here amended on the basis of the analysis of primary sources carried out by the author. Some of the works included by Davies have, e.g., been discarded. Such is the case of the BBC radio drama *Caligula* (1961) (whose sound-track does not feature electronic

¹⁴ This is a minor work, realised in collaboration, regarding which Gerhard expressed doubt as to its authorship.

¹⁵ Source: Review of Hugh Davies's list based on the study of documentary and sonorous evidence carried out by the author.

¹⁶ Although Gerhard tacitly approved Davies' list, discrepancies exist between that catalogue and the evidence provided by the primary sources. The present article aims to clarify some of these inconsistencies. (See DAVIES, H. "The Electronic Music".)

sound¹⁷) and the 10 excerpts from *DNA in Reflection* (1963) (cuts from the homonymous work that were sold by Gerhard to be used in a commercial sound effects library). As for the existence of a series of compositions under the generic title *Audiomobiles*, the composer's magnetic tape collection supports the theory that Gerhard only completed two of them: the aforementioned sound-track for the film *DNA in Reflection* (= *Audiomobile No. 2 "DNA"*), and perhaps also, *Audiomobile No. 3 "Sculpture"* ([?])¹⁸. Also preserved in this collection are an important number of magnetic tape sketches (around 300 reels) whose philological study allows for an approach to the composer's working methods.

In retrospect, "sound composition" is a plural sound territory that embraces both pragmatic and subsidiary sound effects¹⁹ and adventurous musical exploration, rich in shades frequently moving in a seductive in-between field. This space is characterized by the appropriation and recycling of all kinds of materials, and, at the same time, by the austerity of their deployment. Both, the tension between the abstract and the figurative, as well as the composer's emotional implication and desire for communication are constants of this language²⁰. In this sense, one could state that Roberto Gerhard was a nonconformist pioneer

¹⁷ For the link between the BBC radio drama *Caligula* (1961) and the homonymous electroacoustic composition dedicated to the artists' collective ONCE, see GARCÍA-KARMAN, Gregorio: "Gerhard, *Caligula* and the ONCE Group." Forthcoming.

¹⁸ The correspondence between Gerhard and Hugh Davis reveals that, most likely, the idea of grouping together a series of works under the title Audiomobiles came about at a later point in time, subsequent to their inception. Among his achievements in the electronic medium, in 1963 Gerhard mentioned a work entitled "Audiomobiles", clarifying that they were "just a series of illustration-examples for a lecture" (I suppose, as Davies does, that Gerhard, was referring to the Capriccio in the manner of Goya and to the examples taken from Asylum Diary that Gerhard used in his speech "Audiomobiles" [BBC, 1959]). Later on, in 1967, Gerhard clarified for Davies that the last musical example of his speech Sound Observed (BBC, 1964) was in fact his Audiomobile 2 "DNA" (the sound-track of the film DNA in Reflection [1963]). Moreover, there is no evidence of a public debut of Audiomobile No. 3 "Sculpture" ([?]) in Gerhard's lifetime. Neither does this work appear in Davies' list supervised by Gerhard in 1967 nor are any other documentary references to this work known to exist. On the other hand, the level of sophistication and the variants (at least two) of a project labelled "Audiomobile No. 3 «Sculpture»" in the composer's tape collection suggest that it could be a relatively mature work. These variants of Audiomobile No. 3 "Sculpture" ([?]) are based to a great extent on a previous composition indeed mentioned in Davies' catalogue, named by Gerhard in 1963 as Sculpture I (1963), though there is also no evidence that it was presented publicly. Everything suggests that Audiomobile No. 3 "Sculpture" ([?]) is a late revision of *Sculpture I* (1963), a work that Gerhard probably never brought to light. There is also evidence that this revision was conceived to be included, along with other Audiomobiles, in an album proposal, never consummated, that Gerhard would have received from a record label in 1968. See the correspondence between Roberto Gerhard and Hugh Davies (filed at the Cambridge University Library and the British Library) and also the letter from Gerhard to Geoffrey Bridson, 23.4.1968 (Gerhard 14.51), Cambridge University Library. ¹⁹ All the same, Gerhard's incidental music is of great value in understanding the process of assimilation of the tape, and to positioning in the framework of Gerhardian musical thought what the composer called "sound composition"

²⁰ See GARCÍA-KARMAN, Gregorio: "Sonido y símbolo en «Lament for the Death of a Bullfighter» de Roberto Gerhard". *Quodlibet*, 54 (2013), pp. 53-92.

who contravened the prevailing values of his time²¹. His uncensored imagination continues to test our way of thinking about musical boundaries today.

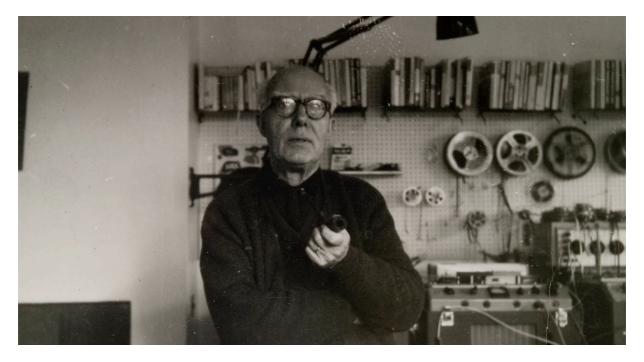


Figure 1. Roberto Gerhard in his home studio, Cambridge, March 1964. Photograph: Inés Bertrand Mata.

José Luis de Delás (1928-)

Jose Luis de Delás studied composition in Munich (1949-1954) in the midst of the reconstruction and economic rehabilitation of post-war Germany²². Nevertheless, Delás clarifies that his thirst for modernity is largely attributable to literature and painting as well as to the intellectual stimulus from the circles of Dau al Set and Club 49²³. After finishing his studies, Delás was set to make a name for himself in Spain but "Francoism's cultural suffocating atmosphere" instigated the composer's return to Germany in 1957—where he is still based to this day. In the 1960s Delás began to come closer to the musically and intellectually ebullient environment of Cologne, frequenting the series of concerts *Musik der*

²¹ Such as innovation and the rejection of the figurative.

²² From his training period Delás underscores the hardship of post-Nazi Germany, and the conservative environment at the Munich Conservatory, contrasting them against his studies with Waltershausen and the contact with composers like Karl Amadeus Hartmann. For a biography of the composer see METZGER, Heinz-Klaus and RIEHN, Rainer (eds.): *José Luis de Delás*. Munich: Text + Kritik, 1992.

²³ Unless otherwise stated, the account here presented originates from an interview with Delás carried out by the author, 17 March 2013.

*Zeit*²⁴. For the composer, this was a period of searching for his own language, free from the clichés of avant-garde music: a struggle that led him to identify himself with the style irregularities of free atonality and the spirit of surrealism, and to become closer to musicians like Ligeti²⁵ and to the critical thought of the Frankfurt School.

In Delás' music this desire for rupture is often captured in the opposition of musically contradictory facts. This peculiarity is already present in *textes* (1967), for soprano and tape²⁶, elaborated with sounds of very disparate origin²⁷. The richness of sound and the search for the unusual reach a climax in *Eilanden* (1967-68), for clarinet, celesta, harp, guitar, harpsichord, harmonium, percussion, 2 violins, viola, and magnetic tape. Here the tape combines field recordings of the city of Amsterdam²⁸, a text in Japanese that praises the beauty of Zen gardens, purposely made recordings of instrumental sounds²⁹ and recordings from the WDR radio archives (such as the clattering of storks). This enumeration further includes fragments of his own works such as *Obraz* (1965) and the appropriation of two musical hits of the moment³⁰.

The warm reception of *Eilanden* resulted in an invitation from Gottfried Michael Koenig to work at the Utrecht Institute of Sonology. He there composed *Nubes* (1969), for two-channel tape, a lengthy work (18'30") of disturbing surreal atmosphere. Conversely, *Aube* (1970-71),

²⁴ A platform for composers such as Karlheinz Stockhausen and Gottfried Michael Koenig where the latest achievements of the Studio für elektronische Musik of the WDR were presented.

²⁵ Delás alludes to a close friendship with Ligeti, in whose non-serial modernity and in whose ties with literature and painting he discovers a kindred world.

²⁶ This is the first work in which Delás adopts manipulated tape. It was carried out together with Margarita Sabartés in Radio Bremen and was first broadcast by this radio station on 05.07.1967 (METZGER, H. AND RIEHN, R.: *José Luis de Delás*, p.115). *textes* was first performed in Spain in October the same year in a private concert that took place in Riudellots de la Selva (Gerona).

²⁷ In *textes* the voice is entrusted by Delás with own texts in five different languages, in a way reminiscent of the Dadaist cut-up technique. The tape incorporates elements ranging from transformed instrumental sounds, to the scraping of corn ears and a choir of *Alytes obstetricans* (a small variety of Mediterranean toad). Relegated to a subliminal level is BBC news from the Vietnam War and the news bulletin from RNE (the Francoist regime's official radio), pronouncing the words "...democratic coexistence, national development and social justice..." superimposed with the sound of a *zambomba* (a traditional Spanish friction drum that is used to accompany the singing of carols). De DELÁS, José Luis: *textes*. [Limited edition of the score prepared by Modest Cuixart]. [Barcelona]: 1967.

²⁸ Recordings from Amsterdam's canals, voices, carillons, organ, etc. made by Delás with one of the first commercially available Philips portable cassette recorders.

²⁹ Recordings of the composer playing inside of the piano, percussion sounds, and a rickety harmonium.

³⁰ A Whiter Shade of Pale (1967), a smash single by the British rock band Procol Harum, and the musical hit When a Man Loves a Woman (1966) by Percy Sledge. The audacity and heterodoxy of Eilanden (premiered in Musik der Zeit, Düsseldorf, 14.2.1968, with Delás conducting), becomes clear if one considers that the first withdrawn version of Stockhausen's Hymnen (1966-67) had been presented in the same series of concerts scarcely two months earlier.

also for solo tape, is overtly a protest work with distinct political overtones³¹. Its title refers to a poem from Rimbaud's *Illuminations (Dawn)*. The list of significant works is completed by two compositions for ensemble and tape entitled *Cinco Sellos* (1972) and *Conjuntos* (1976).

Delás' electroacoustic catalogue comprises a number of notable works produced in laboratories both in Germany and Holland ³² coinciding with the closing stages of dictatorship. Delás reflects in these works the plastic and expressive features of the pictorial and literary worlds that are kindred to him. The spontaneity of gesture, the direct contact with the matter, and the coexistence of elements of unlike origin are features that shape a language marked by a strong subjectivism and oneiric ambiance, that surprises with its mixture of colours. The recorded sound, without giving up its own identity, acquires in his work an instrumental function that gives rise to a counterpoint of high poetic concentration; a superposition of different states that Delás conceives as bound to the reality of one's life. His sonic fantasy challenges indifference and invites listening.

Title	Year	Instruments	Function / Notes
textes	1967	Soprano and tape	Concert
Eilanden	1967-68	Ensemble and tape	Concert
Nubes	1969	Таре	Concert
[Episoden des Tages und der Nacht] ³³	1970	Orchestra and tape	Concert
Aube	1970-71	Таре	Concert
Klangobjekte [I]	1971?	Таре	Cues for a film
Cinco Sellos	1972	Ensemble and tape	Concert
Musik zu Gesualdo [Klangobjekte II ?]	1975	Таре	Cues for a film
Conjuntos	1976	Ensemble and tape	Concert

Table 2. List of electroacoustic works by José Luis de Delás up to 1976^{34} .

Enrique Raxach (1932-)

Composer born in Barcelona, regular attendant of the Darmstadt Summer Courses since 1958. Raxach definitively established his residence in Holland in 1962, taking Dutch

³¹ *Aube* contains allusions to several left-wing anthems, including revolutionary Cuban songs, *The Internationale* and the anthem of the International Brigades.

³² Radio Bremen, Utrecht Institute of Sonology, West Deutsche Rundfunk (WDR), Literarisches Colloquium Berlin, and Experimentalstudio of the Heinrich-Strobel Foundation in Freiburg.

³³ Withdrawn by the composer.

³⁴ Source: Compiled by the author with assitance from the composer, and METZGER, Heinz-Klaus, and Rainer RIEHN (eds.): *José Luis de Delás*. [Alcalá de Henares]: Universidad de Alcalá, Servicio de Publicaciones, 2001.

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nationality in 1969. Although perhaps not the most representative in his catalogue, Raxach produced several interesting compositions during the dictatorship that embrace the electronic medium. In *Chimaera* (1974), for example, Raxach confronts the bass clarinet with a static and imperturbable drone on the tape. Three types of material were used to create this tape: human voices, previously recorded sounds form the bass clarinet and purely electronic sounds³⁵. The musicologist Marta Cureses points out the composer's alienation and disconnection from Spain, and his stated desire of declining any kind of literary comment on his work³⁶.

Title	Year	Instruments
Inside, Outside	1969	Orchestra and tape
Cuarteto No. 2	1971	String quartet and electronic devices
A Rite of Perception	1971	Таре
Interface	1972	Таре
Chimaera	1974	Bass clarinet and tape

Table 3. List of electroacoustic works by Enrique Raxach up to 1974³⁷.

Gonzalo de Olavide (1934-2005)

The Madrid-born composer Gonzalo de Olavide was also a musician out of the so-called *Generación del 51* who had an independent career. Olavide left Spain when he reached legal age and his life was marked by moving home several times. As Belén Pérez Castillo tells in her biography on the composer³⁸, Olavide carried out studies in the Cologne Conservatory of Music in the 1960s. There he became familiar with electroacoustic techniques through the Studio für elektronische Musik of the WDR under the guidance of composers such as Stockhausen and Luc Ferrari. The tape of *Systems I* (1965-66) was produced during this period³⁹. Olavide settled in Switzerland shortly after, where he lived until his return to Spain in 1991. *Là tiens!* (1969-70) and *Clamor I* (1974), *II* (1975), and *III* (1979) were respectively

³⁵ SPARNAAY, Harry. Bass Clarinet Identity. LP. Amsterdam: Donemus CV7801, 1977.

³⁶ CURESES, Marta. "Raxach, Enrique". Emilio Casares, José López-Calo, and Ismael Fernández de la Cuesta (eds.): *Diccionario de la música española e hispanoamericana*. Madrid: Sociedad General de Autores y Editores, 1999-2002.

³⁷ Source: *Muziekbibliotheek van de Omroep*. Available at:

http://catalogueus.muziekbibliotheekvandeomroep.nl [Accessed 10 March 2013].

³⁸ PÉREZ CASTILLO, Belén. "Olavide y Casenave, Gonzalo de". Emilio Casares, José López-Calo, and Ismael Fernández de la Cuesta (eds.). *Diccionario de la música española e hispanoamericana*. Madrid: Sociedad General de Autores y Editores, 1999-2002.

³⁹ Ibid., 35.

realised at the Studio de Musique Contemporaine (SMC) and in the electronic music centre Art et Recherches Techniques (ART) at Geneva⁴⁰.

Title	Year	Instruments	Function / Notes
Sistemas I	1965-66	Variable ensemble and tape	Concert
Quatre sons	1968	2 vl, vla, vc, live electronics	Concert
Là tiens!	1969-70	Ensemble and tape	Concert
RUR	[?]	Таре	Theatre play
Clamor I	1974	Таре	Concert
Clamor II	1974-75	Orchestra and tape	Concert
Improvisación	1978	Piano and electronics	Concert
Clamor III	1979	Contralto, two pianos, percussion, tape	Concert

Table 4. List of Gonzalo de Olavide's compositions with electronics up to 1979⁴¹.

Ramón Sender Barayón (1934-)

This composer from Madrid, resident in the United States, is the son of the celebrated writer Ramón J. Sender. He began to receive attention in Spain following the publication of his book *A Death in Zamora* (1989)⁴², which reconstructs the history of the death of his mother, the pianist Amparo Barayón, taken as a prisoner and executed by the Francoist side in Zamora in October 1936⁴³. At the end of the Spanish Civil War, Ramón Sender Barayón escaped with his father to New York⁴⁴. He there studied Harmony with Elliott Carter, graduating later in composition at the San Francisco High School of Music, and broadening his studies at Mills College⁴⁵. With the cooperation of Morton Subotnik, in 1961 Sender set up a studio in the

⁴⁰ PÉREZ CASTILLO, Belén: "Semblanza de Gonzalo de Olavide". *Aula de (Re)estrenos*, 77. Madrid: Fundación Juan March, 20-X-2010, pp. 33-34.

⁴¹ Sources: PÉREZ CASTILLO, B. "Olavide y Casenave, Gonzalo de"; GONZÁLEZ, Dácil: "El Legado de Gonzalo de Olavide: Descripción de Fuentes Manuscritas". *Aula de Reestrenos*, 77. Madrid: Fundación Juan March, 20-X-2010, pp. 44-51. See also PÉREZ CASTILLO, Belén. "Verdad y Melancolía: La obra y el pensamiento de Gonzalo de Olavide en el marco de las corrientes musicales internacionales". *Cuadernos de Música Iberoamericana*, 12 (2007), pp. 169-172.

⁴² SENDER BARAYÓN, Ramón: *A Death in Zamora*. Albuquerque: University of New Mexico Press, 1989.

⁴³ Modern commentators agree in pointing out the particular importance of this book as a historical document. See, for example: ESPINOSA MAESTRE, Francisco: *Callar al mensajero: la represión Franquista, entre la libertad de información y el derecho al honor*. Barcelona: Península, 2009.

⁴⁴ Ramon J. Sender had been awarded the Spanish National Prize of Literature in 1935 and enjoyed a solid reputation as radical journalist, close to anarcho-syndicalism. At the beginning of the Spanish Civil War, Sender joined the Republican militia. In April 1939 he escaped to New York and later to Mexico, previously giving his son up for adoption to an American family.

⁴⁵ BERNSTEIN, David W. (ed.): *The San Francisco Tape Music Center. 1960s Counterculture and the Avant-Garde.* Berkeley: University of California Press, 2008, pp. 50-53.

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attic of the San Francisco High School of Music, where they were soon after joined by Pauline Oliveros. Originally intended as a workplace for composers and to celebrate concerts of electronic music, the San Francisco Tape Music Center eventually grew into a significant hub of artistic experimentation in the Bay Area and into one of the important centres of Californian counterculture in the 1960s and 1970s⁴⁶.

Title	Year	Instruments
Four Sanskrit Hymns	1961	4 S, 4 vc, db, harp, pf, cel, 3 perc, tape
Kore	1961	Таре
Traversals	1962	Таре
Kronos	1962-65	Таре
Worldfood I-XII	1964	Таре
Balances	1964	vl, va, vc, db, 4-channel mixer
Wagner	1964	Таре
Desert Ambulance	1964	amp. accordion, voice, tape (3 channels), screening
In the garden	1965	cl, va, tape, screening
Xmas Me	1967	Tape (Don Buchla's studio, Oakland)

Table 5. List of electroacoustic compositions by Ramón Sender Barayón up to 1967⁴⁷.

3. COMPOSERS AS TRAVELLERS

Juan Hidalgo (1927-)

For his *Étude de stage* $(1961)^{48}$ some authors claim, somewhat loosely, that Juan Hidalgo was "the first composer to create an electronic work in Spain"⁴⁹. Hidalgo describes the realisation of this composition as follows:

In 1961 I was hired by the ORTF in Paris for a period of six months to work in the Service de la Recherche under the direction of Pierre Schaeffer. [...] *Étude de stage* is a "concrete" composition for four magnetic tapes to be diffused through a four-channel playback system. [...] Schaeffer commanded

⁴⁶ RUIZ, Oscar: "Ramón Sender Barayón. Un largo y extraño viaje. La laberíntica aventura de un hombre libre". *Ulises. Revista de Viajes Interiores*, 13 (2011).

⁴⁷ Source: Compiled with the assistance of the composer.

 ⁴⁸ A CD recording of this work can be found in *De Juan Hidalgo, 1957-1997*. [Las Palmas de Gran Canaria]: Centro Atlántico de Arte Moderno, 1997.
 ⁴⁹ MARCO, Tomás: "Introducción". *Ars sonora: una experiencia de arte sonoro en radio*. José Iges (ed.).

⁴⁹ MARCO, Tomás: "Introducción". *Ars sonora: una experiencia de arte sonoro en radio*. José Iges (ed.). [Madrid]: Fundación Autor-SGAE, 2012, p. 10. On the understanding that it is pointless to designate a winner of this race, it would be in any case more appropriate to speak of the first canonical work of *musique concrète* created in Paris by a Spanish composer. On the other hand, Hidalgo himself abandoned that road immediately after composing the work, if not before.

us [...] not to use any electronic procedures to modify the recorded sounds [...] using only demagnetized scissors [...]; the technique of the "*barber shop*" as John Cage says.⁵⁰

Música en cinta (1961), for four sound sources and four magnetic tapes of 11 metres and 40 centimetres long, is an open-ended structure that already exhibits the critical detachment distinctive of Zaj⁵¹. This is a similar approach to that adopted in *Williams Mix* (1951-53) by John Cage, whom Hidalgo had met a few years before.

Title	Year	Instruments
Étude de Stage	1961	Таре
Música en cinta	1961	Tape (concept)

Table 6. List of tape compositions by Juan Hidalgo, Service de la Recherche, RTF, Paris⁵².

Cristóbal Halffter (1930-)

Cristóbal Halffter is the *Generación del 51* composer who (along with Luis de Pablo) had the greatest international impact, receiving particular attention for his electroacoustic output during the dictatorship. His first work with electronic sounds is *Líneas y puntos* (1966-67), for 20 wind instruments and two-track tape, carried out in the laboratory of electronic music at the University of Utrecht. In his works in the 1970s, the Experimentalstudio of the Heinrich-Strobel Foundation of Freiburg played an important role. Halffter collaborated with this centre in several ambitious works, notably *Planto por las víctimas de la violencia*⁵³ (1970-71) and *Variaciones sobre la resonancia de un grito* (1976-77), both for instrumental ensemble and live electronic transformation. The most emblematic piece of equipment in *Planto* is the

⁵⁰ "En 1961 fui contratado por la ORTF en París para realizar un «*stage*» de seis meses en su Service de la Recherche bajo la dirección de Pierre Schaeffer [...] *Étude de stage* es una composición concreta compuesta para cuatro cintas magnetofónicas difundidas por cuatro fuentes sonoras independientes. [...] Schaeffer exigió [...] que [...] no utilizásemos ningún procedimiento electrónico que modificase los sonidos grabados [...] usando solo las tijeras desmagnetizadas [...]; la técnica del «*barber shop*» como dice John Cage." *De Juan Hidalgo, 1957-1997*, p. 36.

⁵¹ The measures of sound and silence are accurately fixed, but the composer-performer of the score is free to choose whatever four sound sources he or she wishes to use. See Ibid., 268.

⁵² Source: "Cronología de obra". De Juan Hidalgo, 1957-1997, pp. 323-336.

⁵³ *Planto*, the *opera prima* of the newly established Experimentalstudio in Freiburg, was premiered at the *Donaueschinger Musiktage* on 17.10.1971 by the Orchestra of the SWF conducted by Ernest Bour. The first Spanish performance took place at the 2^a Semana de Nueva Música (7.2.1972, Teatro Real de Madrid) with the Conjunt Catalá conducted by Franco Gil. See GARCÍA-KARMAN, Gregorio: "A proposal for the restoration of «Planto por las víctimas de la violencia»". Actas del Primer Congreso Internacional de música y tecnología contemporáneas. Seville: Universidad de Sevilla, 2006.

Halaphon 406⁵⁴, a pioneering device designed to control the sound trajectories of the electronically expanded ensemble⁵⁵. Alongside the concern with space and timbral extension, this group of works is also notable for the recurrent topics of mysticism and non-violence. Those were Halffter's words on the occasion of the premiere of *Planto*:

Because of a historical fateful process that is taking place in my homeland, subversive and established violence face each other daily [...] Against this background, thus, the work being today premiered in Donaueschingen comes into being. [...] In those days of December I felt the inescapable necessity to speak against the violence of which we were protagonists and witnesses. Hence my PLANTO is a protest from my composer's world, the only one that, by my own nature, I am capable of. A protest against all those who resort to any form of violence⁵⁶.

Title	Year	Instruments
Líneas y Puntos	1966-67	20 wind instruments and tape
Noche pasiva del sentido	1969-71	Soprano, 2 percussionists, 4 tape recorders with feedback, and 5 microphones.
Planto por las víctimas de la violencia	1970-71	Ensemble and live-electronic transformation
Noche activa del espíritu	1972-73	2 pianos, 2 ring modulators
Variaciones sobre la resonancia de un grito	1976-77	Ensemble, tape and live-electronic transformation

 Table 7. Cristóbal Halffter's works with electronics composed outside of Spain up to 1976⁵⁷.

Luis de Pablo (1930-)

Most of Luis de Pablo's electroacoustic output is also concentrated in the 1970s⁵⁸. Within the remarkable international activity of De Pablo during this period, worth noting, despite their

⁵⁴ The Halaphon 406 is a pioneering instrument for live spatialization that was purposely conceived and built by Hans Peter Haller and Peter Lawo for *Planto*. This prototype allows for the programming of different sound trajectories that can be used to control the movement in space of the electronically expanded ensemble during the performance. Ibid.

⁵⁵ The interest of the live-electronic approach used in *Planto* is considerable. This work anticipates the paradigm of such representative works as *Répons* (1981) by Pierre Boulez or Luigi Nono's electronic oeuvre since 1979.

⁵⁶ "Aufgrund eines unheilvollen geschichtlichen Prozess stehen in meiner Heimat Tag für Tag subversive und etablierte Gewalt einander gegenüber [...] Vor diesem Hintergrund also entsteht das Werk, das heute in Donaueschingen uraufgeführt wird [...] In diesen Dezembertagen verspürte ich die unausweichliche Notwendigkeit, mich gegen die Gewalttätigkeit auszusprechen, deren miterlebende Zeugen wir waren. Daher ist mein PLANTO ein Protest aus meiner Komponistenwelt heraus, der einzige, der mir meiner Natur nach möglich ist. Ein Protest gegen alle, die in irgendeiner Weise Gewalt anwenden." HALFFTER, Cristóbal. "Selbstbildnis II". Donaueschinger Musiktage 1971. Joseph Häusler (ed.). Donaueschingen festival program, 1971, p. 31. Author's translation.

⁵⁷ Source: List compiled by the author.

⁵⁸ See DE VOLDER, Piet: Encuentros con Luis de Pablo. Madrid: Fundación Autor, 1998, pp. 226-229.

realization in Spain, at ALEA, are the premieres of works such as *We* (1969-70) in Paris⁵⁹, *Soledad Interrumpida* (1971) in Buenos Aires⁶⁰, and *Historia Natural* (1972) in Munich⁶¹. Towards the end of dictatorship, during his stay in Ottawa, De Pablo worked on several mixed compositions that exploit electronics along with a variety of instrumental ensembles (Table 8). Outstanding among these is *Chamán* (1975-76), for solo tape, elaborated with Ann Moschensky at the electronic music studio of McGill University, Montreal, between December 1975 and February 1976, which De Pablo referred to as his "most refinedly elaborated electronic work"⁶² so far.

Title	Year	Instruments
Visto de Cerca	1974	3 amateur musicians, tape
$[Al \ son \ que \ to can]^{63}$	1974-75	S, 4 B, 3 tpt, 2 perc, harp, Hammond org., piano (celesta), tape
Portrait Imaginé ⁶⁴	1974-75	12 voc (3.3.3.3), 2 fl, 2 ob, 3 tpt, 3 tbn, a Hammond org, 2 recorders, 2 kalimbas, 2 perc, 3 synthesizers, 2 tapes.
Chamán	1975-76	Таре

Table 8. List of Luis de Pablo's works with electronics composed in Canada $(1974-76)^{65}$.

Andrés Lewin-Richter (1937-)

Although Andrés Lewin-Richter (1962-1966) had already become acquainted with concrete and electronic music before his study trip to USA⁶⁶, he came across the Columbia-Princeton

⁵⁹ We (1970) was premiered in Paris, October 1970, and presented in Madrid in November of the same year. This work for solo tape represented the Sociedad Española de Radiodifusión (SER) at the Prix Italia 1970 in the category of stereophonic works. Prominent in We, aside from a wide diversity of world music fragments, is the leading role of distorted Gregorian chant and the use of excerpts from political speeches by Martin Luther King and the Nazi propaganda minister Joseph Goebbels. *Soledad Interrumpida* and *Historia Natural* also bring in political elements.

⁶⁰ Acoustic/plastic performance born of the collaboration between the painter, José Luis Alexanco, and Luis de Pablo. *Soledad Interrumpida* was presented at the Palacio de Cristal del Retiro de Madrid in December of the same year. See GARCÍA DEL BUSTO, José Luis: *Luis de Pablo*. Madrid: Espasa-Calpe, 1979, pp. 89-90.

⁶¹ *Historia Natural* had its premiere at the Musik/Film/Dia/Licht-Festival celebrated on the occasion of the 1972 Summer Olympics in Munich, again along with Jose Luis Alexanco's installation. The Spanish premiere took place in Madrid, June 1973. Ibid., 93-94.

⁶² Visto de Cerca / Chamán. LP. Hispavox, 1978.

⁶³ The author has been unable to confirm whether the realisation of the tape actually took place in Canada, although De Pablo states that he worked on this composition while staying in Ottawa and Montreal. See *Homenaje a Antonio Machado*. 2 LP. RCA, 1976.

⁶⁴ In the final revision of this work, carried out in 1994, De Pablo threw out the electronic parts. See GARCÍA DEL BUSTO, José Luis: "De Pablo, Luis". *Diccionario de la música española e hispanoamericana*. Madrid: Sociedad General de Autores y Editores, 1999-2002, p. 325.

⁶⁵ Sources: DE VOLDER, P. *Encuentros con Luis de Pablo*; GARCÍA DEL BUSTO, J.L: *Luis de Pablo*; GARCÍA DEL BUSTO, J.L. "De Pablo, Luis".

Electronic Music Center (CPEMC) by chance⁶⁷. He there worked in the maintenance of equipment and assisting composers such as Babbitt, Davidosky, Ussachevsky and Varèse⁶⁸. At CPEMC he also composed his own pieces, such as Study I (1964) and Study II (1965), that were presented in concert in New York and even released on vinyl⁶⁹. Other works were premiered later in Spain, such as 6 Cánones (1963) (Madrid, 1968) or Densidades (1963)⁷⁰ (Encuentros de Pamplona, 1972). His Study I (1964), for stereophonic tape, was elaborated with sounds from the RCA Mark II Synthesizer. In this composition Lewin-Richter acknowledges the influence of Mario Davidosky's Synchronisms, series in which Lewin-Richter worked as assistant⁷¹.

Title	Year	Instruments	Function / Notes
Densidades	1963	Таре	
6 Cánones	1963	Таре	Concert
Estudio I	1964	Таре	Concert
The Gondola Eye	1964	Таре	Soundtrack for a film by Ian Hugo
Sublimated Birth	1964	Таре	Sound track for a film by Frederic Martin
Sonoridades	1964	Таре	
Estudio II	1965	Таре	Concert
[Divertimento, Movimientos para Ballet, Antífona] ⁷²	1965	Таре	

Table 9. List of compositions by Andrés Lewin-Richter produced in New York (1963-65)⁷³.

Eduardo Polonio (1941-)

After studying composition at the conservatory in Madrid, Eduardo Polonio received a scholarship from the Juan March Foundation to work at the Institute for Psychoacoustics and

⁷² Unfinished works.

⁶⁶ Through the listening sessions that took place in the entourage of Can Bartomeu and Club 49 in the mid-1950s. The account here presented originates from an interview with Lewin-Richter carried out by the author, 20 February 2013.

⁶⁷ Lewin-Richter moved to New York in September 1962 as a result of a Fulbright scholarship for postgraduate studies in engineering and acoustics.

⁶⁸ See LEWIN-RICHTER, Andrés and LANZA, Alcides: "A Reminiscence of Edgar Varèse in the 1960s". Musicworks 81 (2001); LEWIN-RICHTER, Andrés and LANZA, Alcides: "A Reminiscence of Vladimir Ussachevsky in the 1960s". Musicworks 82 (2002); GLUCK, Robert J.: "The Columbia-Princeton Electronic Music Center: Educating International Composers". Computer Music Journal 31 (2007), n. 2, pp. 20-38.

⁶⁹ LEWIN- RICHTER, Andrés: "Study No. 1". *Electronic Music*. LP. Nueva York: Turnabout, 1966.

⁷⁰ Densidades was created from materials gathered for use in a collaborative project with composer Josep Soler (a *Cantata* for tenor, organ and electronics) that was never completed. ⁷¹ Lewin-Richter reports having assisted Davidosky in *Synchronisms No. 1* (1962), 2 (1964), and 3 (1964).

⁷³ Source: List of works provided by the composer.

Electronic Music of the University of Ghent (IPEM), Belgium⁷⁴. Rabelaissiennes (1969), for prepared guitar and two-channel tape, is conceived as a fixed work but can also be played in concert. For this latter version, the score provides instructions to produce the tape in advance, and asks for the amplification of the guitar, also suggesting the use "of filters or any other device that facilitates the manipulation of sound"⁷⁵.

Title	Year	Instruments
Primera Estancia	1969	Sound installation
Rabelaisiennes	1969	Guitar and tape

Table 10. Eduardo Polonio's electroacoustic compositions produced in Belgium in 1969⁷⁶.

4. CONCLUSION

This article confirms the existence of a significant number of electroacoustic works composed abroad during Franco's dictatorship and in very different circumstances. Some of these pioneering compositions can be counted among the most innovative proposals of their time. The stylistic freedom of these works and their focus on the search for individuality, together with their frequent extra-musical references, create the illusion of an impossible vernacular identity. At the same time, one's attention is caught by the plurality of creative personalities and their ways-sometimes contradictory-of understanding the composer's craft. Ultimately, the greatest appeal of this repertoire probably lies in its diversity and musical richness as much as in its value as a testimony of that period: uprooted sounds that concur in a disturbing and fascinating soundspace.

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 ⁷⁴ [Untitled]. Available at: http://www.eduardopolonio.com/bio.html [Accessed 1 March 2014].
 ⁷⁵ POLONIO, Eduardo: "Rabelaisiennes". *Llibre per a Guitarra*. Associació Catalana de Compositors (ed.). Barcelona: Clivis, 1992, pp. 348-253.

⁷⁶ Lista completa de obras 1965-2013. Available at: < http://www.eduardopolonio.com/trabajos.html> [Accessed 1 March 2014].

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