JoSSIT

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Sound Transit

Transformation and change processes in the Audiovisual

The scientific publication the Journal of Sound, Silence, Image and Technology (JoSSIT) grew out of the research group of the same name (SSIT), which is linked to the TecnoCampus centre as part of Pompeu Fabra University (UPF). The journal seeks to bring together academic debate and scientific research on the relation of sound as a broad concept with an audiovisual context.

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Presentation

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The journal seeks to bring together academic debate and scientific research on the relation of sound as a broad concept with an audiovisual context. The relation between sound and image is at the heart of the publication. As such, JoSSIT is concerned with sound, music and silence; their ontological properties and characteristics in relation to a communicative phenomenon and their technical, narrative, communicative and social interweaving in audiovisual products.

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· The evolution of how we listen to and interpret sound, silence and music
· Characteristics of the consumption and reception of sound and music in the 21st century
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"...a film of Charlot will be projected in the first scene..."
A cinematic opera

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ABSTRACT

The twentieth century was the backdrop to a sociological and aesthetic process in which the invention of film firmly established itself as an art form. It was not until the second wave of the avant-garde burst onto the creative scene during the 1920s that the aesthetic importance and transcendence of film began to be reconsidered. Few creative genres were impervious to its influence, but opera was and is one of them. This research reflects on how an opera, *Charlot*, by Bacarisse and Gómez de la Serna, used film as a valid aesthetic element for the first time; an action which enabled film to be seen as a transcendent event within the bounds of high European culture. In 1932, the aesthetic communion between Ramón Gómez de la Serna and Salvador Bacarisse resulted in an opera with not only a filmic plot line, but whose dramaturgy even dictated that projected scenes had to be employed. As part of the transition from silent to talking films, the opera *Charlot* is a work of vital importance when attempting to follow an unbroken line of research on the aesthetic interaction between film and music. The opera by Bacarisse expertly unfolds using a bold and contemporary neoclassical and polytonal language. Gómez de la Serna focused his plot on a conflict of aesthetic weight involving Charlie Chaplin the filmmaker, his character, and the issue of the disappearance of silent film.
Analysing the aesthetic aspects of *Charlot* and its intense relationship with film in depth is essential for film musicology as the two genres exist in a shared space that is as important as it is rare, and which therefore must be broached.

Introduction

> "Rustic furniture and, hanging across the stage from a cord, a sheet, on which a section of the film The Tramp should be seen and which will be projected during the first scene, and some women's undergarments (...)"

This annotation by Ramón Gómez de la Serna in the libretto of the opera *Charlot* is probably the first reference to the use of a film projection within a musical work, in this case specifically an opera, with real dramatic weight. This noteworthy event brought with it a series of aesthetic factors that elevate the opera by Bacarisse and Gómez de la Serna to the status of historiographical milestone in the worlds of both music and film. During the first decades of the 20th century, film was still a long way from being considered an Art in its own right, and so its inclusion within an art form of the resonance and aesthetic transcendence of opera had a significance that went beyond being used as a scenic effect, quite apart from the colouristic and contemporary angle it afforded the work. The modern audiovisual approach implied by this annotation positioned the work's creators at the forefront of both opera and theatre at the time, and its universal aspirations are clear as soon as the main character appears, played as he is by a world-famous celebrity.

Combining film with such a paradigmatic and increasingly rigid genre as opera[1] was in itself a hugely ambitious exercise in the avant-garde. Aspirations and an inertia towards the outside world

had always been part of the spirit of the Generation of the Republic, in contrast to the narrow provincial perspective that became the stylistic norm of Spanish nationalism. For this reason, the ill-fated episode that is *Charlot* represents a paradigmatic chapter that cannot be overlooked.

Ramón Gómez de la Serna. Film, literature and the avant-garde

As the dramatist himself says in his memoirs[2], in which he dedicates an entire chapter to *Charlot*, the idea and its development were entirely his own work. The writer from Madrid was no novice when it came to film, although he was unfamiliar with issues of musical dramaturgy, this being his first and last libretto.

Ramón Gómez de la Serna had the same poor, or at best uninspiring, relationship with music as most Spanish men of letters. His writing did not deal with music or musicians in any kind of detail, although he did make particular references to jazz and included his *Jazzbandismo* – a text with a clear connection to film – in his essay entitled *Ismos* (1931). At the première of *The Jazz Singer* (1927)[3] in Spain, paradoxically released in a silent version due to the

1 In the 20th century that same film industry would replace opera as a popular genre of entertainment par excellence. This brings about a cultural shift that positions opera at one extreme of the collective imagination.

2 (1970) *Nuevas páginas de mi vida*. Madrid: Alianza Editorial.

3 In the text entitled The traumatic transition undergone by Spanish film from silent to sound pictures, Román

lack of technical equipment necessary to reproduce the sound, Gómez de la Serna had to go on stage to give a talk focusing on jazz rather than film. This became his article entitled *Jazzbandismo* and was included in *Ismos* shortly afterwards. He soon became an advocate of sound pictures, as noted by an outraged Juan Piqueras in the magazine *Popular Film* (1929). The argument for sound in film been made during the famous gathering in Café Pombo, in the process sowing the idea of the plot for *Charlot*. In *Cinelandia* (1923), Gómez de la Serna had already presented a panorama of the world of film as godless and false.

There are also numerous references to film in Gómez de la Serna's *Greguerías* and throughout his written works, although there are fewer references to music.

Gómez de la Serna could be expected to be involved in any event involving technology. When Unión Radio was established he became a member of the discussion panel in addition to writing for the spin-off magazine *Ondas*. This magazine contained *Greguerías*; aphorisms by the writer dealing with the subject of radio and the media jostling for position in the new social order. It was most likely there, in the corridors of Unión Radio, that the professional relationship between Salvador Bacarisse and Ramón Gómez de la Serna began to take shape.

One document testifying to their good relationship has survived from the *El Sol* newspaper, started by Nicolás Urgoiti, in which Ramón Gómez de la Serna voices his literary and journalistic opinion of the performance by the *Grupo de los Ocho de Madrid* as an aesthetic group in his article *Los Ocho en pie y en fila*:

> "...The persistence of the artistic spirit is one of the miracles of modern life... Everything had seemed to be closed off to a new generation of Spanish musicians; but the new generation, standing by as if receiving an inalienable legacy, was near to emerging as the like-minded generation it was, made up of just enough, 8 as it happens. (...)
> ....It had to happen, they needed to take part in the new task at hand, and their names should appear in all the programmes to justify the legitimacy of the time, which without them would be barren and sterile. We now have professed brothers in the other art! (...)"[4]

Despite Gómez de la Serna's references to Charlie Chaplin being spread anarchically throughout his work, there is always a clear distinction between the character and his idi-

Gubern presents the story of the difficulties faced by the first North American sound, or partial sound, pictures in Spain at the end of the 1920s. There is no information available about the release of the film *Don Juan* (1926) by Alan Crosland, which was the first film to synchronise sound effects with moving images. There followed thwarted attempts to release *The Jazz Singer* (1927) by Alan Crosland in the *Cine Club Español* in Madrid in 1929 and finally shown under the title *El ídolo de Broadway* in 1931, and Love Parade (1929) by Ernest Lubitsch, which was released with sound during the musical numbers but was silent during the dialogue (in English and French because of the multi-language filming of the time). The first film released in Spain with full sound was *Innocents of Paris* (*La Canción de Paris*) (1928) by Richard Wallace, released on 29th September 1929 in the *Teatro Coliseum* in Barcelona. Retrieved from http://www.cervantesvirtual.com/obra-visor/la-traumatica-transicion-del-cine-espanol-del-mudo-al-sonoro--0/html/ff8a9d5e-82b1-11df-acc7-002185ce6064_2.html.

4 [Translated from the original.] Ramón Gómez de la Serna in the article "*Los Ocho en pie y en fila*" in newspaper El Sol, año XIV, nº 4156 from 7 December 1930, page 3.

osyncrasies and the aesthetic transcendence that he has over his time. There is a reference to the character in the novella *Cinelandia* (1923)[5]:

> –Make mine a Charlot[6] cocktail
> (Drinking the Charlot cocktail makes them start to involuntarily imitate Charlot; whoever drinks it becomes possessed by a terrible St Vitus dance in the style of Charlot, hooking a walking stick around the neck, the leg or the arm of an unsuspecting passer-by.)

Perhaps one of the most judicious moments related to aesthetics is when Gómez de la Serna coins the term *Charlotismo*, dedicated to Chaplin, in his book *Ismos* (1931, pp. 256-263). The first mention of *Charlotismo* appeared in the magazine *Le Disque Vert*[7] in 1924, the text showing Gómez de la Serna's obvious aesthetic appreciation of Chaplin and the revolution engendered by his artistic approach.
Nevertheless, it is probably in the opera *Charlot* itself that Gómez de la Serna is most seriously concerned with unravelling the spirit of Chaplin's character by providing a wide range of possibilities and perspectives. In his book *Ramón y el Teatro (La obra dramática de Ramón Gómez de la Serna)* Muñoz-Alonso upholds this hypothesis: "*...Ramón approaches Charlot with the intention of revealing the many facets that combine in this figure who blurs the line between man and artist*..."[8] (Muñoz-Alonso López, 1993, p. 222).

Bacarisse, a state musician

Although Salvador Bacarisse did not have as much contact with film en route to *Charlot*, he was involved with the new media that were starting to change society in the 1920s. Salvador Bacarisse (1898-1963) was part of the so-called Generation of the Republic, a group of young creatives with superior intellectual training to their teachers, which led them to get involved in issues outside music such as politics. A composer with a traditional training but clearly avant-garde aspirations, Bacarisse was a respected musician even during his youth. In the weekly publication *Tararí*, Conrado del Campo (1930) declared: *"...Salvador Bacarisse one of the most contemporary musicians in his avant-garde style, but underline that, truly avant-garde, not a sham, as it leaves a strong after-taste..."*[9]

5 [Translated from the original.] Gómez de la Serna, R., Cinelandia, Valdemar, Madrid, 1995. Specifically, in chapter 12: *Los cocktails absurdos*, p. 81.

6 [Translator's note: As mentioned in the title of the text, Gómez de la Serna uses the French name *Charlot* here to refer to Charlie Chaplin.]

7 The pretext of the original text, *Le Charlotisme*, was a homage to Charlie Chaplin promoted by the Belgian magazine Le Disque Vert, no.4-5 published in 1924. This article uses that contained in the text: Arconada, C.M, *3 cómicos del cine*. *Biografías de sombras*. Editorial Renacimiento, Sevilla 2007

8 [Translated from the original.]

9 [Translated from the original.] Interview with Conrado del Campo by Prudencio Muñoz Delgado in *section La Música y los músicos*. This was a weekly entertainment and sports magazine published in Madrid on Saturdays.

In an article entitled *Nuestro concierto del martes* [Our Tuesday concert] in the magazine *Ondas*[10], Gustavo Pittaluga introduced his peers in a familiar and even comic tone, referring to Bacarisse in these terms:

> Salvador Bacarisse, with Rodolfo Halffter, is the physical embodiment of the duo Stan Laurel and Oliver Hardy. All that is joyful, being apparently carefree, sincere, acting on a whim for the sheer pleasure of it, is evident in Bacarisse more than anyone... If in Bacarisse this new music is more disagreeable, it is because in this group of boys enjoying themselves, Bacarisse is the one who cries with most impertinence.[11] (Ondas, 1931)

Almost from the moment it launched with Ricardo Urgoiti at the helm in 1924, Unión Radio epitomised a type of broadcasting characterised by the essential role music played in the schedule. Salvador Bacarisse took an active part in scheduling at Unión Radio in the Music department from 1926 to 1936. There he often met with Ramón Gómez de la Serna, who worked as a correspondent and panellist (sometimes from his own home) for the station during the 1920s and 30s.

On 21st July 1931, The Second Spanish Republic issued a decree creating the *Junta Nacional de la Música y los Teatros Líricos* [National Board of Music and Lyrical Theatre]. The functions exercised by this Board had an immediate impact on the creative process, as state support provided a security unmatched since the times of royal patronage. However, political acrimony and partisan accusations did not take long to flourish; issues that only grew when the first financial aid, sponsorship, grants and prizes were awarded. Bacarisse managed to ensure that his own project, *Charlot*, was at the top of the list of projects given awards by the Board, of which he was a member. The grant[12] he received was one of several awards of 385,000 pesetas to subsidise new works of "comic opera" designed to promote the genre and undiscovered writers. Accusations of corruption partly arose from the fact that recipients of these awards were not exactly undiscovered; they included big names from the music scene and moreover, were all members of the Board allocating the grants. In addition to *Charlot* by Bacarisse and Gómez de la Serna, other subsidised works were *El Talismán* by Amadeo Vives and the Fernández Shaw brothers; *La bella durmiente* by Oscar Esplá and Alfonso Hernández Cata; *La montaraza* by Facundo de la Viña, Espresati and Pérez Dola; and *Fígaro* by Conrado del Campo and Tomás Borrás. As noted by Heine[13], all the

10 Spin-off programme guide of Unión Radio.

11 [Translated from the original.] This text is a summary of that written by Pittaluga himself and published in two parts in *Ritmo* magazine in editions 27 and 28 which came out in the last fortnight of December 1930 and the first of March 1931, pages 2-3 and 5-6 respectively, under the title *Música moderna y jóvenes músicos españoles* [Modern music and young Spanish musicians].

12 Dr Christiane Heine refers to this in her article: Heine, C., Charlot *de Ramón Gómez de la Serna con música de Salvador Bacarisse: El nuevo género de la "ópera cómica" española*, Journal of the Sociedad Española de Musicología, vol. XXI, 1998 no.1, pp. 37- 63, citing an article by Oscar Esplá, president of that first board at the time, published in El Sol, 16 October 1932, talking about the awarding of these grants.

13 *Ibid*.

works had their problems; the work by Vives was cut short due to his death and the rest, with the exception of *Charlot*, remained unfinished.
This erratic beginning hampered the development of the score, which was put on hold for a short while directly afterwards. In 1935, the Board was reconfigured as part of the right-wing coalition government and became CEDA. It should come as no surprise that the première of *Charlot* went no further than the published but thwarted notice in 1933 in the Teatro Calderón.

Chaplin-Charlot

Charlie Chaplin is without a doubt one of the central figures in this operatic escapade, both as an actor and for his defence of gesture over the spoken word, and so a historical approach would be impossible without examining this issue. Chaplin was undeniably the number one star worldwide during the 20th century, an era predisposed to creating idols. Until then, the magnitude and universality of the gesture had only been achieved through music, but silent film enabled a little tramp with a bowler hat and over-sized shoes to connect with the entire world. The production of a film with partial sound such as *The Jazz Singer* did not bode well for talking films, but in reality it was a resounding success; by January 1929, the main Hollywood studios worked entirely in sound.
Without question, only a genius such as Chaplin could have remained committed to his aesthetic ideas. His character, The Tramp, did not need to speak to express himself in his own language. Following the success of *City Lights* in the United States, Chaplin began a tour of Europe. In 1931, it was impossible to ignore The Tramp, whose incarnation may co-incidentally have been a reflection of the global middle class, which had lurched from the carefree 1920s to the much darker 1930s without time to shift its priorities following the financial crisis of 1929.
On 1st April 1931, the Spanish newspapers reported the big news of "*Charlot* in Europe". When *City Lights* premièred, Charlie Chaplin enjoyed a great deal of public attention and his status grew exponentially. There was widespread confusion in the press, and some journalists even expressed disappointment when noting the understandable differences between The Tramp and the real Charlie Chaplin (ABC, 1931, April 1). Chaplin's presence was front page news, and his fame meant the media followed his every move. The best example of the impact produced by Chaplin's quest for the validity of silent film was undoubtedly the opera, an opera in which the main character did not make a single sound.

A chronicle of thwarted first nights

In the chapter titled *Una ópera malograda* [An ill-fated opera] of *Nuevas Páginas de mi vida*[14], Ramón Gómez de la Serna, recounts how *Charlot* began:

14 This masterpiece and the key to understanding Gómez de la Serna's personality calls itself the second part of his idiosyncratic autobiography, *Automoribundía*. The part we are interested in appeared in the collected works of Alianza Editorial, Madrid, 1970.

> In 1932 Salvador Bacarisse suggested I create an opera in three acts, which he would set to music. So I came up with the opera Charlot in Free Operatic Verse in which I proposed that the famous screen comic, who at the time did not wish to speak or sing in films, should appear with a double or singing character who would follow him like a shadow and sing as if he were Charlie.[15]

The creative process advanced very quickly judging by the dates written on Bacarisse's original part manuscripts. These place his composition in Madrid from September 1932 to June 1933. The first act was finished on 15 January 1933, the second on 2nd May 1933 and the finale on 15th June 1933[16]. To this we have to add the completion of the orchestration, dated by Bacarisse on his own complete score as 10th July of that same year. The score is dedicated to Bacarisse's wife.

Next followed the first attempt to stage the work in the *Teatro Calderón* in 1933 according to the guides and press of the time, but interestingly not referred to by Gómez de la Serna in his memoirs. The second attempt directly involved Gómez de la Serna himself, as in 1935 the writer travelled to Buenos Aires for the opening of the *Libro Español* with the new opera under his arm. The librettist's friendship with Victoria Ocampo, director at the time of the prestigious Buenos Aires theatre *Teatro Colón*, led to a reading in the Argentine writer's house attended by musician Juan José Castro in which the three acts of *Charlot* were "hummed". This supposed reading in Buenos Aires is not supported by any documentation, nor does it appear in the Colón archives nor the memoirs or accounts of those who were there, with the exception of Gómez de la Serna, who also noted that during the gathering it was debated whether Chaplin should play the part of himself for the potential première of the work. What we do know is that the work was not staged.

The Civil War steamrollered over the Spanish and over *Charlot*. In the midst of the fighting a third attempt was made to stage the work that was directly linked to Bacarisse's activity in Barcelona from where he published *Música* magazine. The first performance of *Charlot* was planned for the 1938-1939 season in the *Gran Teatre del Liceu* in Barcelona. According to Gómez de la Serna, the offer arrived in a letter from his brother José in which he urged the writer to sign:

> (...) I don't know what, and it would be performed in the Liceu in Barcelona. I replied that I would not sign and the Charlot opera vanished into the dark night of the days to come. I don't know if Bacarisse will have it in Mexico. It was a gilt-edged dream, another grain of hope.[17] (Gómez de la Serna, 1970).

15 [Translated from the original.]

16 This information is written in ink at the start of the opera, in the first parts version (for piano or string quartet), on the start date and the completion date of each part the same as at the end of each double bar line in the score. These parts do not appear in the original orchestral version of the composition.

17 [Translated from the original.]

The document that had to be signed was undoubtedly an endorsement of the legitimate government of the Republic by the exiled writer. In reality, Gómez de la Serna protected himself in the event of a possible return, which would have been affected by this explicit endorsement.

The last chapter of the *Charlot* story to date took place in 1988, the centenary of the writer's birth, when the *Centro de Documentación de la Música Española Contemporánea* of the Juan March Foundation rescued the opera from papers Salvador Bacarisse left to his son, publishing the parts in a copy of the composer's edition and organising a first public reading of part of the opera with the aim of bringing it to public attention. This was an opportunity for the aesthetic nature of *Charlot* to be seen and for it to become known for its intended purpose: as a work for the stage; an opera.

Film in opera

Charlot has a score and libretto of undeniable quality, even if the feasibility of staging it is a pipe-dream that has never quite been realised. But it is also true that there are a series of inescapable aesthetic issues that should be brought to light. Using a film projection at the start of an opera was a rare event in theatres staging musical works during the 20th century.

From the very first forays into the seventh art, the commercial nature of film meant falling back on operatic plot lines as a dramatic device, but reversing this logic was a completely new idea. Although projection is documented as having been used for backdrops in some operas such as *Christophe Colomb* (1931) op. 102 by Darius Milhaud and Paul Claudel to show a dove in flight or an image of the cross, it did not have such an obvious dramaturgical presence as it did in *Charlot*. It should also be noted that projections were filmed on an ad hoc basis for opera, and so this device was used to project scenic effects rather than independent commercial material.

> The scenery represented a sort of large black cabin, a tumbledown bungalow where only the white window and door frames could be distinguished, two at the sides and one at the back. Rustic furniture and, hanging across the stage from a cord, a sheet, on which a section of the film The Tramp should be seen and which will be projected during the first scene, and some women's undergarments (...)[18]

The projection *in Charlot* directly affected the contemporary aesthetic universe in a very significant way. Both the libretto and the music abound with these keys to modernity, to which the reality of the storyline of the time must be added. In *Charlot*, therefore, we see a series of factors that were rare in musical theatre during the 20th century and that have rarely been repeated.

18 [Translated from the original.] Annotation on the original text of the Charlot opera in Obras completas XIII, Novelas V – Teatro de vanguardia. Galaxia Gutemberg, 2002.

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Software tools for musical performance

A methodological approach to uncover micro-agogics

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KEY WORDS: PERFORMANCE ANALYSIS | CASALS | SONIC VISUALISER | CELLO | AGOGICS

ABSTRACT

This article sets out a method of analysis for studying rhythmic flexibility in musical performance, with particular emphasis on the study of micro-agogics. With the help of the open-access software *Sonic Visualiser*, a practical example analysing a world-renowned performer, Pau Casals, and one of his most important audio recordings, the Cello Suites by J.S. Bach, is presented. The following paper examines the key points of performance analysis of micro-agogics in the interpretation of *Prélude* BWV 1007; an ideal work for this type of study as the prevailing notation is the repetition of semiquavers in 651 of the 654 notes. Five levels were analysed taking into account the compositional structure of the *Prélude*, levels that go from the duration of each note up to the duration of the bar. The small differences in timing that are produced between the notes of the same rhythmic value are the cornerstone of a *rubato* structure at different levels that make up the final resulting sound of this masterful performance. According to the results, Casals respects the written notation at the same time as producing a varied interpretation of the music by Bach.

Introduction

Over a century has passed since the introduction, diffusion and popularisation of recorded music as a format that enables a sound to endure in a lasting physical format. This important technological advance has created another element that may be studied in addition to the traditional musical score and other written texts. In recent decades, sound recordings have come to be considered important sources of knowledge and have started to be studied in depth, methodically and rigorously. Despite this research initially taking place in Anglo-Saxon countries, in the last ten years researchers and teams from all over the world, Spain included, have joined in. Different analysis techniques have been developed depending on the purpose of the research, which includes an area of knowledge known as "music performance studies", which is of great interest both to musicologists and performers, and encompasses both analysis of performance and also analysis for performance. An analysis covering these two facets would show how a particular player has played and recorded a work, and could also go a stage further by allowing another player wishing to emulate it to project this knowledge onto their own interpretation. This second musician could even go a stage further and use the performance as a starting point for their own. This type of practice comes under the category of "recordings-informed-performance", or RIP (Leech-Wilkinson, 2015), a term demarcating a variation on the well-known area of "historically-informed-performance" or HIP studies.

Along with other parameters of musical performance, these types of analysis are contributing to understanding how a particular eminent musician has approached their interpretation of the agogic nuances in a piece. Even though the most obvious characteristics may be clearly perceptible in a recording, there are a large number of minute nuances that usually go over the heads of most listeners, but which make all the difference to the end result. This aspect, which relates to the use of durations, could be called micro-agogics. Another factor to consider is the age-old difficulty in noting agogic nuances in the score in a minimally objectifiable way. Considering the essential role they play in the resulting sound in most cases, analysing the micro-agogics in a performance not only allows us to see data relating to durations starting with the shortest rhythmic value in the work, but also provides a commentary on these data in which the debate is as interesting as its conclusion.

This article summarises a method of analysis that aims to reveal how rhythmic flexibility is treated in performance and its projection onto another subsequent musical interpretation, which has been presented in detail in Saenz (2017b).

Analysis methodology

A complete and detailed system of analysis is outlined below to illustrate the commentary on the data with the most comprehensive understanding possible of the work and everything surrounding it from a semiological perspective. The interaction of four different analytical procedures is proposed in order to carry out comprehensive analysis of the rhythmic flexibility of the performance. Performance analysis should begin with the performer's ideas about musical interpretation, which leads us to the first step: a literature search. Any human interpretation of a work starts with the performer's style as its foundation. This is impossible to separate from the person's life story and is part of an evolution they undergo during their life as a performer. Whilst a truly holistic approach is a huge undertaking, it is possible to get to know the musician better by reading and studying biographies and other publications that provide information about them both as a musician and an individual. All this information helps the analyst to understand the performer in order to comprehend what they are listening to and find a reason why it is so. This is an approach akin to the performing arts when an actor or actress "gets into the role". Whenever a person's performance is studied, it should be remembered that any interpretation is imbued with its performer and the time in which it is performed, so getting as close as possible to their way of thinking is essential to understanding the subject being studied.

After this stage, the next two analytical procedures are conducted on the musical composition itself; these are a distributional and a harmonic analysis. For the structure, a distributional or paradigmatic analysis is ideal for this type of study. Visually very effective, the breakdown provided by the use of cells and their structural form makes the work easier to understand, as well as making clear its repeated and differential elements and the relationship between them. For the harmonic analysis, Roman numeral analysis is proposed instead of functional analysis, as it is more objective and leaves less room for interpretation by the analyst, although both methods can be complementary. These two analyses of the work can later be compared with the interpretative decisions to lengthen a note or series of notes for reasons of expression, such as to emphasise a harmonic shift or a structurally decisive moment in the composition.

The third stage is to analyse the recorded musical performance, in other words, the sound recording. The software Sonic Visualiser – an open source, free and user-friendly tool – is used to conduct a thorough study of the agogics as this analysis program can measure the duration of each note of a composition to the millisecond. Sonic Visualiser is designed to view, hear and analyse every detail of an audio file and allows a recording to be slowed by up to 12.5% without any other parameter of the sound such as the pitch, timbre or intensity being affected. Listening at such a slow speed gives rise to other analytical findings which, even if they are not related to agogics, should not be ignored as they can provide interesting information about the performance, such as the extension or projection of the sound of each note in the musical interpretation (Saenz, 2017c).

Multidisciplinary teams currently creating and sharing free plugins have developed applications specially designed to study the nuances of tempo by detecting the start of each note and inserting an onset, or sound marker. Together with the University of Alicante[1], Universitat Pompeu Fabra is one of two such Spanish universities to have created plugins for Sonic Visualiser. Specifically, Universitat Pompeu Fabra has shared the following applications developed by the Music Technology Group (MTG) on the Vamp Plugins[2] download site: HPCP - Harmonic Pitch Class Profile vamp plug-in[3], MELODIA - Melody Extraction vamp plug-in[4] and MIR.EDU[5].

In the case of bowed string instruments, it is not possible to automatically and exclusively detect the start of the note using a plugin as they currently lack the necessary precision. In some cases, the only option currently available is to mark the onsets semi-automatically, as recommended by Cook and Leech-Wilkinson (2009), and in most cases this has to be done completely manually. Plugins are, however, able to detect some key points, which can help to position a large number of onsets initially. From then on, manual corrections must be made in all cases. Applications may also record false markers, whilst others may be unmarked or displaced in relation to the real note change. To conduct a reliable analysis, all onsets must therefore be adjusted manually. The reason the applications currently available are unable to precisely detect the start of particularly problematic notes is mainly because the string does not vibrate fully from the moment the bow is drawn across it. In the case of a glissando, the analyst must decide when a note ends and the next one begins, so it seems unlikely that fully automatic detection will be achieved, although making predictions about technology is a fool's game considering the speed at which computer science is progressing.

With this in mind, an onset must be inserted at the start of each note. This manual positioning requires the analyst to invest a lot of time and a great deal of care to ensure the placement is precise and justified. This task should be conducted at 12.5% speed and with optimal listening conditions. Once all the markers have been positioned, a duration for each note that is accurate to the millisecond can be obtained. To broaden the scope of this information, the data can be exported to a data sheet to enable calculation of the totals, average durations by rhythmic value, differences between repetitions of the same musical material, and so on as required. By way of an example, in the analysis of Prélude BWV 1007 presented in Saenz (2017b, pp. 163-310), from which various examples will be cited in this article, of the 654 pieces of data obtained for the duration of each note, a total of 14,648 fields containing data had to be handled and subsequently interpreted, as far from being the con-

1 Plugins offered by the University of Alicante [consulted 2017]. Retrieved from http://grfia.dlsi.ua.es/cm/projects/drims/softwareVAMP.php

2 [consulted 5 August 2017]. Retrieved from http://www.vamp-plugins.org/download.html

3 [consulted 5 August 2017]. Retrieved from https://www.upf.edu/web/mtg/hpcp

4 [consulted 5 August 2017]. Retrieved from https://www.upf.edu/web/mtg/melodia

5 [consulted 5 August 2017]. Retrieved from https://github.com/MTG/miredu

clusion of the analysis in themselves, these data are simply the starting point for the analyst to begin their analysis.

A practical example: Prélude BWV 1007 performed by Pau Casals

Below is an example used to illustrate the method of analysis, with some of the results obtained from analysing Prélude BWV 1007 taken from the first of the six suites for cello by J.S. Bach and recorded in 1938 by the Catalan cellist Pau Casals. This recording is particularly significant as it was the first time the full six suites were recorded. Among other features of his particular sound and way of interpreting the music, Casals' particular use of rubato stands out. When interpreting rhythmic flexibility, Casals insisted on the need to seek a balance between the "natural rhythm" and the "rhythm on the score" in order to find "the sense of the timing in the space". By this he was referring to the performer's ability to apprehend the relationship between small units of time, and larger temporal units; groups of phrases and large structural features which make up a work (Blum, 2000).

In terms of literature analysis, publications by the following authors have been analysed in particular depth: Alavedra (1969 and 1975), Albet (1986), Baldock (1994), Ballester (2009), Blum (2000), Campbell (2004), Casals (1979), Corredor (1967 and 1975), García-Pérez (1983), Jean-Bernard (2009), Kahn (1977), Kaufman (2015), Kirk (1974), Lazo (2012), Llorens (2015), Mackie (2006), Reina (2009), Rubio (1979), Sibilin (2009), Tellez (2015), Vives (1966) and Zurita (2015) among others[6]. Information has been gathered from these sources on the aspects that provide the most important background to his performance style: his musical education and his role as a teacher (Saenz, 2017a). Other information has also been sought regarding Casals' relationship with Bach, the rediscovery of the suites and their dissemination, the historical context surrounding the recording of the work, as well as Casals' thoughts on issues of musical performance and specifically agogic nuances in interpretation.

In terms of a structural analysis of the work, it is a simple structure built on notation based around repetition. It is arpeggiated and in three voices, as can be seen in the way the composition unfolds and also in the final three-note chord. There are only two kinds of notation throughout the entire work: arpeggiated notation and another that is more melodic and directional. In most cases, the cells coincide with the bars[7]. In the Prélude there are only three rhythmic values: the quaver occurs twice, the semibreve at the end of the movement, and the recurring semiquaver, which is the rhythmic value used in the rest of the movement. This means that of the total 654 notes, 651 are semiquavers. The basis for the harmonic analysis was taken from Winold (2007a, pp.13-20 and 2007b, pp. 6-9).

In terms of the compositional structure of the work and bearing in mind the rhythmic recurrence discussed, we can observe 5 levels: level 1, note by note; level 2, created by group-

6 The information gathered from each of these is collected and commented upon in Saenz, 2017b.

7 The full distributional analysis and commentary on it can be found in Saenz, 2017b, pp.163-166.

ing two semiquavers; level 3, organised by beats; level 4, which groups together eight semiquavers; and level 5, which corresponds to the bar or cell. To transfer this information from an analysis of a performance to an analysis used for a performance, a graphic representation as per Cooper and Meyer (2007) has been used, applied exclusively to durations by using a horizontal line for long durations and a semicircle for short durations. The analysis headings described above have been used to transfer the data collected with Sonic Visualiser to the simplified score.

Below, a bar or cell from the Prélude is presented which has a high incidence of rhythmic flexibility. The part analysed is bar 7:

NOTE	BAR NOTE No.	DURATION	BEAT	2 SMQ. TOTAL	BEAT TOTAL	8 GROUP NOTE No.	8 GROUP TOTAL	BAR TOTAL
F#	1	0,213	1			1		
A	2	0,203	1	0,416		2		
D	3	0,201	1			3		
C#	4	0,178	1	0,379	0,795	4		
D	5	0,240	2			5		
A	6	0,186	2	0,426		6		
G	7	0,191	2			7		
A	8	0,209	2	0,4	0,826	8	1,621	
F#	9	0,291	3			1		
A	10	0,206	3	0,497		2		
G	11	0,149	3			3		
A	12	0,159	3	0,308	0,805	4		
D	13	0,208	4			5		
F#	14	0,243	4	0,451		6		
E	15	0,165	4			7		
D	16	0,281	4	0,446	0,897	8	1,702	3,323

Table 1: data relating to durations of the notes in bar 7.

Table 1 includes the following information: in column 1, the name of each note. In column 2, its position within the bar. In column 3, the duration of the note in level 1 taken directly from Sonic Visualiser. Column 4 shows the beat within which each note occurs. Column 5 is the sum of the group of two semiquavers or level 2, and column 6 refers to the duration of the beat or level 3. Column 7 places the notes in the two groups of eight notes the bar is comprised of, and column 8 shows the data relating to the grouping of these groups. The last, column 9, shows the total duration of the bar or level 5 in the last cell. Image 1 shows the notation of the same bar with the five levels represented by the graphic representation:

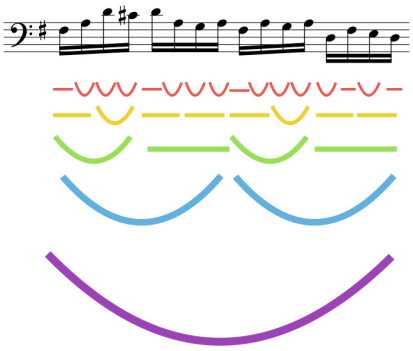

Image 1: bar 7 with the graphic representation of the levels.

This bar is a perfect example of employing micro-agogics in a performance; it shows continuous rhythmic flexibility as we can see by the fact that some of the ritardandi and accelerandi are strung together. To note this, the durations in column 3 must be looked at to the millisecond. In this way, level 1 has a melodic character belonging to cell B (bars 5 and 7). and shows convergence in the first three beats. As melodically important notes, the first notes of the three first beats stand out for being long, whilst in the fourth the notes No.14 F-sharp and No.16 D are notable.

A progressive four-note accelerando can be seen in the first beat, although the difference in increases between the four notes is not very large. Between No.6 A and No.9 F-sharp there is a progressive ritardando of four notes with a greater range between the notes that is therefore more evident. From this No.9 F-sharp to No.11 G, Casals again plays an accelerando in which he makes up the lost time, in this case with three notes and with more significant differences between them. From No.11 G, he again plays a four-note ritardando until No.14 F-sharp, executing the progressive and gradual decrease in speed in a regular fashion.

These fluctuations introduce different patterns in level 2, whilst in levels 3 and 4 we see convergence both in the interpretation of the beats and between the two halves of the bar. In level 3, the long-short pattern can be seen twice, a pattern that is not repeated in the other reason for cell B. Despite the prevalence of long values in level 2, the length of the bar is short overall. This bar reveals something very important about Casals' agogic control: despite all these fluctuations, there are converging patterns in levels 2, 3 and 4.

In Table 2, corresponding to bar 13, another example of micro-agogic mastery can be seen, where despite five accelerandi being played practically back to back with three-note ritardandi from the first to the last note, there is no significant difference in duration between the length of this beat and the others:

NOTE	BAR NOTE No.	DURATION	BEAT	2 SMQ. TOTAL	BEAT TOTAL	8 GROUP NOTE No.	8 GROUP TOTAL	BAR TOTAL
D#	1	0,365	1			1		
F#	2	0,188	1	0,553		2		
D#	3	0,165	1			3		
F#	4	0,166	1	0,331	0,884	4		
A	5	0,200	2			5		
F#	6	0,178	2	0,378		6		
A	7	0,172	2			7		
F#	8	0,198	2	0,37	0,748	8	1,632	
D#	9	0,235	3			1		
F#	10	0,188	3	0,423		2		
D#	11	0,175	3			3		
F#	12	0,179	3	0,354	0,777	4		
A	13	0,190	4			5		
F#	14	0,181	4	0,371		6		
A	15	0,182	4			7		
F#	16	0,188	4	0,37	0,741	8	1,518	3,15

Table 2: data relating to durations of the notes in bar 13.

In this case, there are repeated patterns in levels 1, 2 and 4 as can be seen in Image 2:

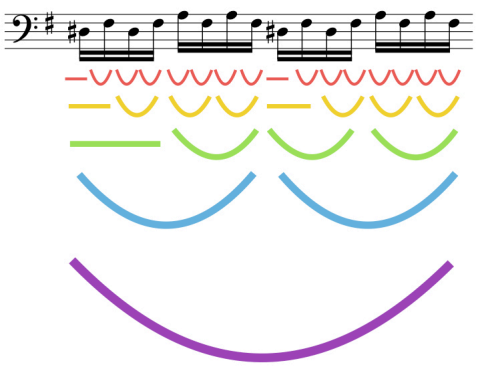

Image 2: bar 13 with graphic representation of the levels.

In the graphic representation of the levels, the almost complete symmetry between the two halves of the bar is notable in all levels except level 3, in which the long duration of the first note of the bar affects everything that comes after. Conversely, the third beat as a whole is not significantly longer than the second or fourth, so it is not a long beat. The equivalence between the durations of the notes should be noted, especially those that are not the first note of the beat.

In Table 2 an accelerando from the first note in the bar, which is also the longest, can be seen. This accelerando endures until No.3 D-sharp, whose duration is less than half that of the first note. After No.3 D-sharp, Casals plays a three-note ritardando until No.5 A, which is not as significant as the previous progressive increase in speed. From No.5 A, he goes back

to a three-note accelerando until No.7 A, and from here to a three-note ritardando until No.9 D-sharp. To this he once again links a three-note accelerando until No.11 D-sharp, and from here to another three-note ritardando until No.13 A. From the following note, No.14 F-sharp, he plays a final three-note ritardando to No.16 F-sharp, at which point the bar ends.

Conclusions

The analysis described in this paper has brought to light interesting information on the way in which Casals' performance employs rhythmic flexibility and which could subsequently be applied to another performance. In the Prélude, the aspect that particularly stands out is the way in which the regularity of the rhythmic values used by J.S. Bach in the score are interpreted freely by Casals, but without ever changing the composer's original notation. The data obtained using Sonic Visualiser and expanded into a data sheet have allowed us to see information that goes unnoticed in real time, but which is crucial to the recording of this performance having such historical importance. Deciding what should be done with each and every note is the kind of analysis that Casals used to conduct with his students (Blum, 2000, pp. 111-112), so it is safe to say that each duration reflected in the analysis was a conscious decision. Each of the five levels functions independently, even if there is some convergence. In short, we can say that the high number of agogic combinations employed by Casals shows the wealth of interpretations that are possible when playing Prélude, whilst still respecting what J.S. Bach wrote in the original score.

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The arrival of the first film sound systems in Spain (1895-1929)

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ABSTRACT

During the final decade of the 19th century, inventors such as Thomas A. Edison and the Lumière brothers worked assiduously to find a way to preserve and reproduce sound and images. The numerous inventions conceived in this period such as the Kinetophone, the Vitascope and the Cinematograph are testament to this and are nowadays considered the forerunners of cinema. Most of these new technologies were presented at public screenings which generated a high level of interest. They attracted people from all social classes, who packed out the halls, theatres and hotels where they were held. This paper presents a review of the newspaper and magazine articles published in Spain at the turn of the century in order to study the social reception of the first film equipment in the country, as well as to understand the role of music in relation to the images at these events and how the first film systems dealt with sound.

Inventions and the importance of sound

The first years of the cinema are generally considered the era of silent film, although it cannot be said that cinema as a whole and with all its complexity was completely devoid of sound during its beginning. What is clear is that 1927 marked a turning point for sound within the film industry and established a before and after, as this year saw the release of the first film considered as "sound film", *The Jazz Singer*[1]. That said, there is evidence of inventions and devices that sought and achieved – albeit unreliably – synchronisation between sound and moving images going as far back as the end of the 19th century. The fashionable motion picture devices of the period were very different from each other, and although it is widely accepted that the Lumière brothers' Cinematograph was the prevailing medium for filming and reproducing moving images, there were in fact dozens of contemporary inventions offering different ways of seeing (and hearing) the moving image. Nevertheless, it is true to say that silent film was indeed pre-eminent during these years and the fact that sound pictures did not make an impact beforehand can be attributed to "the poor synchronization, inadequate amplification, and a lack of commercial savvy (and capital) on the part of their inventors" (Altman, 2004, p. 158).

The importance the inventors of the first film equipment placed on sound was reflected in their desire to create systems that were able to synchronise the moving image with sound. Edison refers to this in an interview with the *Montreal Daily Star* in 1895[2]:

> For myself, I have no doubt whatever of the outcome. Before many years we will have grand opera in every little village at 10 cents a head. And the very highest grand opera - you will see and hear Patti in your own parlor. She will be heard a hundred years after her death, and seen and will move and thrill her auditors in 3010. The president's inauguration can be treated in the same way. Pope Leo and his cardinals may be seen and heard for unnumbered centuries to come.

1 This film was directed by Alan Crosland and the leading role was played by the Broadway star Al Jolson. It was the first feature-length sound picture to synchronise moving images with the human voice, also known as a "talkie", or "talking picture". It should be noted, however, that both a short film, *A Plantation Act* (1926) and the feature-length *Don Juan* (1926) had been released the year before. These were the first to use the Vitaphone system, which standardised sound in Hollywood films.

2 Edison and the Kinetograph (1895) Montreal Daily Star, 20 April 1895. In *Film History*. Malaysia, 1999, Volume 11, pp. 404-408.

International reception and initiatives in Spain

International developments in the world of film reached Spain fairly quickly considering the time it usually took to disseminate news and innovations during that period. The first references in the Spanish press to many inventions such as the Kinetoscope, the Cinematograph or the Animatograph came only a few months after they were presented for the first time in the countries where they were produced[3].

The number of systems designed to establish a sound picture industry during these years is almost too many to count, but yet many were simply failed experiments, some were not well received and so were limited to one or two public screenings, and others did not even get beyond the private screening stage[4]. At the same time, a large number of both national and international patent applications were filed for devices that combined sound and moving images[5].

A detailed study of all these devices would exceed the aims of this article, so we will focus on the three sound and moving image systems that featured most in the press between 1895 and 1929[6]: the Kinetophone, the Chronophone and the Phonofilm. It should also be noted that even though this article focuses on systems imported from abroad, there was substantial production in Spain itself which deserves to be looked at in depth in a separate study. Ramón del Rio, an entrepreneur and one of the leading figures in Spain at the time, deserves a mention. In 1896 he presented the *Monvógrafo* (or *Mouvógrafo*), a device designed to work in conjunction with the Phonograph; and a few years later, in 1900, he began to "roll the first musicals – billed nationally as *Cronofotogramas* – by connecting up to six phonographs to his projections"[7] (Martínez, 2001, p. 29) using the *Fonocromoscop* system. Finally, another Spanish device, the *Filmófono*, should also be mentioned. This was a sound system created by Ricardo Urgoiti in collaboration with the renowned director Luis Buñuel (Gubern y Hammond, 2012, pág. 188-189). When it became obsolete, its creators used the name for one of the most important Spanish production companies during the period that began with the Second Republic and ended with the Spanish Civil War, when Urgoiti and Buñuel went into exile[8].

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3 The arrival of the Animatograph was advertised on 12 May 1896 in the Madrid newspaper *La Época*, the same year it was presented in Great Britain. In addition, the international début of the Cinematograph is recounted by the press in June 1895 (*El Correo Español*), and there are references to it being used for the first time in Spain just one year later (*La Época, 14 May 1896*). The Kinetoscope will be looked at in more detail in the relevant section of the article.

4 This was the case for systems such as the Biophonograph, the Chronophone, the Talking Cinematograph and the Orchestophone (Pulido & Utrera, 2001, p.162).

5 Some of the patents registered in Spain can be consulted in the historical database of the OEPM archive (Spanish Patent and Trademark Office), and include a "sound transmission device for talking film equipment", filed by Walter Glenn Hammack in 1913, and a "improved arrangement to combine the talking machine or other sound reproduction machine with the animated images projection equipment", by Alfonso Cortella in 1920.

6 The release date of the first Spanish sound picture, *El Misterio de la Puerta del Sol*, directed by Francisco Elías and produced by Feliciano Manuel Vítores.

7 [Translated from the original.]

8 The *Filmófono*, despite its undeniable significance, will not be looked at in this article, as it was introduced to Spain

The Kinetophone

The Kinetophone was one of the first inventions to result from the quest to synchronise sound and moving images. It was presented by Edison's team in 1895; a team that (as previosly mentioned) had spent the last few years of the 19th century attempting to create a system that combined these two elements. To create the Kinetophone, Edison made changes to his previous invention: the Kinetoscope. This system was released on the market in New York in 1894 (Arce, 2009, pág. 136), and consisted of cabinet roughly a metre high containing the spooling film strip. It had an individual peep-hole on the outside near the top which spectators could look through to see the images pass before their eyes. A year later, he created the Kinetophone based on this system, but modified "with a phonograph in the spot where the battery had previously been located" (Altman, 2004, pp. 81-82).

Before considering its reception in Spain, the confusion surrounding the term Kinetophone should be addressed, as this same word is used to refer to two different systems that were introduced almost fifteen years apart. The first Kinetophone was created by Edison in 1895 but was not particularly significant to the markets so its inventor put it to one side, taking it up again years later and presenting it in 1913. This updated version preserved the idea of synchronising music with moving images but this time projected onto canvas. The literature on these two systems throws up information relating to either one without distinguishing between them, so it is important to carefully check the dates to avoid confusion.

In Spain, the first references to the Kinetoscope in the printed press are from 1894, the same year it was officially presented in the United States, and there are reliable reports of screenings until at least the end of the following year (Arce, 2009 pág. 142). Despite the fact that the system only played moving images, Edison expressed his intention to complement this with sound early on in letters and interviews[9] and it was soon picked up by the Spanish press:

> Until now, the kinetoscope has been no more than a toy, but Edison proposes to improve it so it can project animated photographs onto a sheet with a magic lantern, and by combining the phonograph and the kinetoscope, make the photographed people speak and move in such a way that the audience in the room could hear, for example, a speech by a Member of Parliament at the same time as they see the movements used in their oratory[10].

in 1930, after the time period within the scope of this article.

9 The most famous letter in which he makes a reference to music is reproduced in its entirety in DICKSON, W.K. Laurie: DICKSON, Antonia. *History of the Kinetograph, Kinetoscope, and Kinetophonograph*. New York: Crowell, 1895. At the start of this article, it is also transcribed from an interview with Edison in 1895.

10 [Translated from the original.] El Kinetóscopo, *La Unión Católica*, 30 March 1894

Numerous news items corroborate the arrival and use of the Kinetoscope in Spain[11], but the same cannot be said of the first version of the Kinetophone, as press reviews of this device that was invented and advertised in the United States in 1895 are non-existent with no information available until 1910; the decade in which the remodelled Kinetophone projector was presented.

The first incarnation of the Kinetophone never reached Spain for several reasons. The first, as already mentioned, is that a Kinetophone essentially consisted of a Kinetoscope connected to a Phonograph and so business owners may have thought it unnecessary to buy new and costly equipment as most already had the two components in their screening rooms. Several Spanish newspapers provide evidence that Kinetoscope shows were usually accompanied by a Phonograph, although as Julio Arce states: "despite the Kinetoscope and the Phonograph being together in the same space, it is difficult to establish whether there is any connection between the two devices"[12] (Arce, 2009 pág. 138).


Por mayor, PRECIADOS, 56, PRAL.

SALON EDISON

KINETOSCOPO-FONÓGRAFO

Ultimos días de exposición, hasta

EL DOMINGO PRÓXIMO

1-PUERTA DEL SOL-1

Image 1. Press cutting of the front-page advertisement for Edison's Kinetoscope and Phonograph exhibition. *La Correspondencia de España.* 11 December 1895, no. 13,823, p. 1[13].

Just like almost all the first forays into "talking movies" (as these early sound pictures were called in the United States), the Kinetophone was initially well received by the public, but this success lasted just a few short weeks and it subsequently fell into disuse. Added to this was the lack of accuracy and inferior quality of the synchronisation, which only roughly matched what was happening in the images and meant the invention was quickly forgotten. The fall in demand in the United States led Edison to try to enter the international market, but the *North American Phonograph Company* had filed a lawsuit against him in the following terms, according to the *New York Times* on 30 June 1895:

11 The following are some of the many sources that can be consulted: *El liberal* (Madrid), 28 May 1895, p.4; *El País* (Madrid) 19 July 1894, p.2; and *El Correo Español*, 10 April 1894, p.2.

12 [Translated from the original.]

13 http://hemerotecadigital.bne.es/issue.vm?id=0000409996, retrieved from the website of the Hemeroteca Digital, Biblioteca Nacional de España [Consulted: 4 January 2018].

> The complaining Company holds an assignment from Edison of all foreign rights for the sale and use of the phonograph, with the exception when it is used in connection with toys, dolls, &c. They allege that Edison has infringed on the right by combining the phonograph and kinetoscope under the name of kinetophone, and placing it in foreign market. The defense holds that the kinetophone is a toy (Wierzbicki, 2009, p. 74).

Edison wanted to avoid being dragged through the courts, and so temporarily put the idea of the Kinetophone and its export to one side, reviving it in the decade after 1910 when he modernised and improved its specifications and added a projector, which was essential to compete in the film market.

The "new" Kinetophone was presented in the United States in January 1913 when, despite having resolved many of the technical issues that plagued previous systems, Edison "failed because of a faulty exhibition strategy and outdated conception of film subject and format" (Altman, 2005, pág 358), and the fact that it was exclusively distributed to vaudeville theatres. Despite its extremely limited final commercialisation in the end, the international press picked up on the invention, writing about it three years before it was introduced, with witness accounts of the first Kinetophone tests in Edison's studio even being found in Spain.

> Edisson (sic.) has invented a new system, called the "Kinetophone", in which the movement of the film strip is connected to the gramophone disc, establishing an isochrone mark, thanks to which figures from film are given words. This apparatus is not completely perfect, but the inventor hopes to make it so soon[14].

This brief mention in the newspaper *El Día de Madrid* is not particularly reliable, as it mentions the Kinetophone being connected to gramophone discs, using "gramophone" as a generic term to express any piece of sound equipment even though in this case it must surely be a phonograph. Another prior and more technically accurate reference was printed in 1911 in the newspaper *La Hormiga de Oro*:

> In this way, at the same time as the projector throws moving images onto the screen, the phonographic mechanism makes them speak, giving the spectator the illusion that they are living beings. [...] Those lucky enough to attend the first experiments in Edison's laboratory confirm that the movements of the lips of the characters projected on the screen completely match the sounds issuing from the phonograph.
>
> In a scene showing a game of cricket, each strike of the bat was accurately accompanied by the dry sound particular to it [...][15].

14 [Translated from the original.] Por el mundo. Invento de Edisson. *El día de Madrid*, 12 September 1910, p.12

15 [Translated from the original.] Las maravillas del Kinetófono. *La Hormiga de oro*. 11 February 1911, p.96

From this news item it can be seen that the quality and accuracy of the synchronisation was measured by the sounds emitted by objects or the spoken word and not by the music. With the first Kinetophones, music had been used as a way to cover up a lack of synchronisation, and "instead of offering speeches or opera arias, the Kinetophone was regularly outfitted with films featuring dancers or marching bands" (Altman, 2004, p. 81). As such, one of the sought purposes of these new inventions was the ability to synchronise the spoken word so that the systems could be used to broadcast speeches by political figures, and specifically in terms of Edison's own interests, plays and operas.

The Kinetophone arrived in Spain towards the end of 1913, and one of the first reports on it is the review by *El Imparcial* of a private screening in Madrid at a property belonging to the Count and Countess of Romanones:

> In the ballroom of the hotel belonging to the Count and Countess of Romanones, before an audience of exceeding beauty and elegance, last night the new and prodigious invention of the brilliant Edison was unveiled and which is destined to revolutionise cinematography. [...] What was thought impossible has been achieved: completely simultaneous sound and image, giving the illusion that the characters speak and sing by themselves. A marvel. [...] When the interesting session ended and the lights went up, we felt doubly dazzled by both the electric rays being scattered around the room and the incomparable beauty of the young people brought together there by the Countess of Romanones[16].

This clipping provides evidence that the Kinetophone which reached Spain in the 1910s was clearly Edison's new model, as this was the version incorporating a projection system and the text specifies that the "lights went up", presumably after being in the dark for the show. However, this was an isolated event, and the next time the Kinetophone was mentioned in the Spanish press was in commemorative publications recalling the inventor's achievements on the date of his death[17]. It could be that the invention's lack of success in the United States had negative consequences for its export potential and that the screening in Spain was simply seen as a scientific curiosity used by the Count and Countess of Romanones to entertain their guests.

16 [Translated from the original.] *El Imparcial*, 20 December 1913

17 Some of the articles are: "Una gran pérdida para la ciencia. Tomas Alva Edison ha muerto", *La Energía Eléctrica*. 25 October 1931, no. 20, p. 12., and Las Grandes Fechas de Edison, *El Inventor* (Madrid). October 1931, no. 7, p.11.

The Chronophone

The Chronophone was initially designed by the French inventor León Gaumont, who patented it in July 1901. This early system "consisted in essence of a simple pairing – first mechanical, then electrical – of independent playback devices for film and sound" (Wierzbicki, 2009, p. 74). Unlike the Kinetophone, it was not originally a single viewer system but was designed to be able to project from the very beginning. In this case, the problems with the device were that it could only play short films of around twelve minutes, and the connection between the two systems was frequently lost. Aware of its limitations, Gaumont tried to improve his invention over the next few years, creating several models such as the Chronomegaphone, a term he used for the Chronophone model employed for projecting with sound in large venues (Herbert, 2000, pág. 4); and the Chronophone Mixte, which he introduced in 1908 and which appeared to solve the problem of synchronisation and amplification. Gaumont tried to sell his system in the United States during the 1910s, but the fierce competition and several technical failures and mistakes in his presentations hindered its progress (McMahan, 2002, pág. 69-70). Added to this, there was little investment in inventions related to cinema in Europe during the First World War, forcing Gaumont to focus his efforts on other ventures.

News of the Chronophone first reached Spain in 1903[18], although these were simply reports or articles about inventions that were still to come. Two more years would pass before it debuted in the country thanks to the Zaragoza photographer Ignacio Coyne, who bought the use and distribution rights. He renamed it *Cine Parlante Coyne* (González López, 2005, pág. 47) [Coyne Talking Cinema] and used it to project "fragments of operas, Spanish operettas, dances, popular songs, duets, arias and comic skits"[19] [Image 2] in a room on San Miguel street in his native city. Films were not exclusively imported; renowned Spanish directors such as Ricardo Baños, Antonio Tramullas and Fructuoso Gelabert produced films that used this system (González López, 2001, pág. 67).

18 "Crónica Científica. Inventos y Novedades". *Ilustración artística*. 12 January 1903 p.14-15

19 [Translated from the original.]

Image 2. Poster advertising *Cine Parlante Coyne*, 1905. A representation of the Chronophone can be seen on the left of the image[20].

The Chronophone first appeared in the press with its original commercial name three years later -in 1906- when *La Vanguardia* announced the system's début in a venue on Barcelona's Rambla del Centro[21]:

> Inauguration of the Chronophone, Gaumont's latest invention, an admirable cinematographic invention that plays the voice and movements in unison. The first and only one in Barcelona.

The Chronophone remained on the bill for four months until May that same year, and reappeared in 1909 when it was advertised as the "improved talking device"[22]. News of the launch of the latest Chronophone did not reach Madrid until May 1912, but despite being late to cover it, several newspapers reported the success of its début, commenting that it was "the first time a film [is] repeated", and that "the Company had to use the 'Sold out' sign"[23]. Notable among the films shown at the Madrid sessions was one featuring *cuplés* [short, light-hearted songs] from the Spanish operetta *El perro chico*, sung by the famous cuplés artist Consuelo Tamayo, known as *la Tortajada*. The cuplé was widely used in these types of films just as it would be with the later Phonofilm, as both the musical style and the performers were a big draw for audiences. Success was largely due to the fact that the same venues were used to hear cuplés and to watch films, making this a cheap way for audiences to enjoy their favourite singers and cuplés artists "live".

20 Image from the DARA Archive (Documents and Archives of Aragón), Zaragoza Provincial Council, reproduced with permission of the GAZA project (Gran Archivo Zaragoza Antigua) http://adioszaragoza.blogspot.com.es/

21 [Translated from the original.] *La Vanguardia*, Sunday, 15 February 1906, p.11

22 [Translated from the original.] *La Vanguardia,* Monday, 14 July 1909, p.5

23 [Translated from the original.] *El Heraldo de Madrid,* 23 May 1912, p.4; *La Correspondencia de España*. 24 May 1912, p.4

The Phonofilm

The Phonofilm was one of the main sound picture systems during the 1920s. The invention was presented in 1923 by Lee de Forest in New York theatres Rivoli and Rialto under the auspices of musical director Hugo Riesenfeld. Like most inventions of this era, it enjoyed great success when it made its début but was quickly forgotten (Altman, 2004 pág. 178). Nevertheless, the technology he used, which recorded sound on the film strip itself, set the precedent for subsequent sound-on-film systems still used to this day (Chion, 1997, p. 67). The Phonofilm reached Spain in 1927, five years after being presented in the United States, which coincided with the screening of the aforementioned sound picture *The Jazz Singer* in American theatres[24]. Even so, the Spanish press widely reported the activities and demonstrations carried out across the country in reviews that referred to the Phonofilm as "the marvellous invention [...] that solves the problem of talking films"[25], and "an extremely interesting invention"[26].

Although many newspapers heaped words of praise and astonishment on the new system, some less positive reports can be found, such as the example from *El Heraldo de Madrid*, which emphasises the scientific value of the device but also states that "it has not yet reached the level of perfection necessary to be truly artistic in nature", and specifically highlights the following flaws in the sound quality:

> Furthermore, apart from the major problem with reverberation, which so affects listening to anything through speakers, the system's biggest drawback is that by bringing all the waves together simultaneously into one, which is recorded, it is then impossible to untangle them. This gives a result which is always confusing and makes it impossible to distinguish the different timbres from each other as should be the case[27].

Equally, due to early technical problems and the short length of the films it was able to play, Phonofilm was not initially considered a potential replacement for silent film, but was thought of as a complementary form of entertainment to be used at screening sessions or in the theatre, and was known as "a beautiful show to end the party"[28]. The length of the films available could not compare to silent films and a Phonofilm session was generally made up of several short films including "sections of opera and Spanish operettas, songs, concerts, speeches, dialogues, [which were] reproduced; seeing and hearing the charac-

24 The liberties journalists took with the names of the recently arrived systems in their columns and reviews should be noted. There are therefore references to the name in English, Phonofilm, in the press of the time as well as several translations into Spanish. The most literal of these is *Fonofilm* (replacing *ph* with the more Spanish *f* which is closer in pronunciation) but there were also freer translations such as *Cinefón* or *Cinéfono*.

25 [Translated from the original.] *El Sol* (Madrid), 9 October 1927, p.8

26 [Translated from the original.] *El Imparcial* (Madrid) 5 October 1927, p.5

27 [Translated from the original.] *El Heraldo de Madrid*, 2 March 1927, p.4

28 [Translated from the original.] Pasa la cinta. El Fonofilm y su inventor Dr Lee de Forest. *Popular Film*, 14 July 1927, p.13

ters and orchestras as if they were on the stage at the same time as the projection"[29].
Several journalists also sowed doubt about the viability of the invention, as explained in the magazine *Popular Film* in an extensive and critical report by Antonio Suárez with a title that revealed these concerns: *Lee de Forest and his Phonofilm: will this invention be worth it?* [30]. Another criticism levied at this invention (and at sound pictures in general), was the issue of the linguistic difficulties and limitations it would bring, as, according to a report in 1927 in the *La Revista de Oro* dedicated to the *Phonofilm*:

> [...] foreign films, for example, could not be shown in Spain, because only a tiny number of the audience would understand what the actors are saying, and having replaced the current listings, bills should consist exclusively of Spanish films that can be understood by everyone. Translation does not work because if we see an actor on the screen talking in English or German, when we get swept up in the scene and hear the voice through a phonographic translation in Spanish it will be an unpleasant surprise to see that the movement of their lips does not match the words that reach our ears and will destroy the whole effect of the action.[31]

As previously mentioned, the Phonofilm was officially presented in Spain in 1927, but this was not the first time the system was mentioned in the Spanish press. On 15 December 1923, the newspaper *La Época* published an extensive review reporting the début of the Phonofilm on the other side of the Atlantic:

> We believe the Phonofilm's role is none other than to complete film by enhancing its natural resources for expression. For example, we have all seen how deflated, how unintelligible, how dead a dance appears on screen. Without the sustaining commentary provided by music, movements lose their gracious eloquence. Illustrate the projection with a Chopin waltz or some authentic sevillanas, not with an orchestra but using a system that ensures synchronisation, and the effect is absolutely beautiful[32].

This was an isolated mention in the newspapers at the start of the twenties which meant the invention could be presented a few years later as a new system, as it had not previously been widely reported in the Spanish press.
The Phonofilm was promoted in Spain in 1927 by its inventor, Lee de Forest. It is reasonable to assume that the timing of its arrival in Spain was due to the fact that the inventor had started to look for new markets across the Atlantic following its moment of glory in the United States and subsequent fruitless presentations in Cuba and Mexico (Fernández Colorado, 1995). The inventor may also have decided to present his invention in Spain because

29 [Translated from the original.] La Libertad (Madrid) 12 October 1927, p.6

30 [Translated from the original.] Lee de Forest y su Fonofilm ¿Valdrá la pena este invento? *Popular Film*, 10 November 1927, p.4

31 [Translated from the original.]

32 [Translated from the original.] La Voz en el cinematógrafo. El Fonofilm. *La Época*, 15 December 1923, p.5

some of the films already produced using the system starred the singer and actress Concha Piquer, who was a big star in the United States in the twenties. These films, despite being produced for the North American audience, were acted in Spanish and made cultural references to Spain, so could be expected to be well received on the peninsula.
It should be noted that despite confirmation that Concha Piquer's films date from 1923 (Vernon y Peiró, 2012, pág. 295), in several press interviews both she and Lee de Forest date them to 1925[33]. They may have agreed to bring forward the original recording date to make the invention seem more relevant, as a delay of two years before its presentation was acceptable, but five would have made it obvious that it was no longer a recent innovation.
An inventor coming to Spain to promote his own system was unusual, and conflicts between celebrities in the world of show business in search of stardom soon followed. One example appears in the news published by the *Heraldo de Madrid*, whose expansive title reads:

> Collision of the Stars
> Conchita Piquer says she made films for phonofilm before Raquel Meller.
> Forest, inventor of the phonofilm, confirms Conchita Piquer is right
> Raquel Meller says she does not know Mr Forest[34]

In spite of the questions the invention raised in the press, and following several private demonstrations of the Phonofilm system, Lee de Forest managed to convince a group of Spanish entrepreneurs to sell his system in Spain. They bought the rights to it and created the *Hispano de Forest Phonofilm* company (Arce, 2009b, pág. 641, 642). Over the course of two years they organised screenings in several cities in Spain in which they showed the short films made by Lee de Forest in the United States and others produced domestically. Two years later, *Hispano de Forest Phonofilm*, already in crisis after garnering little success with audiences, made a final investment to try to keep the company afloat by producing the first feature-length Spanish sound picture, *El misterio de la puerta del sol* (1929). Box office figures were low, it was strongly criticised in the press and, despite incorporating some technical improvements, it brought the final curtain down on Phonofilm in Spain.

33 VALVERDE, Salvador. VALVERDE, Salvador. Conchita Piquer, estrella de la pantalla y de la escena frívola, nos habla del "cine", de las "varietés" y del amor... *Crónica*, 11 May 1930, p.14; Colisión de Estrellas, *El Heraldo de Madrid*, 1 March 1927.

34 [Translated from the original.] *Ibid*.

Conclusions

Numerous inventions and new film systems that purported to offer revolutionary sound picture shows arrived in Spain at the start of the 20th century. World-famous inventors such as Edison, Gaumont and De Forest sold their innovations in the country, preceded by the at times excessive enthusiasm of the Spanish press. Nevertheless, most of these systems were quickly forgotten by the public just a few weeks after they were presented.

Audiences' disillusionment with these devices was due to a combination of factors: the lack of accuracy and inferior quality of the sound synchronisation, frequent mistakes when setting up the apparatus and the short length of the films themselves. The public's high expectations also did not help; the films were seen as shabby compared to the modernity of silent films, which were enjoying their so-called "golden age" at the time. The material these systems played was often fragments of Spanish operettas, cuplés, comic sketches and other items similar to those on the bill at the vaudeville theatres popular at the start of the century. By using this content, the first sound pictures sought to emulate the fashionable shows of the day, with the added value that they could provide the stars of the time on the screen even if the venue was small. Nevertheless, and unfortunately for investors, this early cinema became no more than an anecdotal element used to complement classic film projections; one whose costs also vastly outweighed any profits that could be made for business owners.

This article has tried to establish a theoretical framework for the first sound systems in Spain based on press cuttings from the end of the 19th and beginning of the 20th century with the aim of being a platform for future research into music practices in filmic spaces during the period prior to the arrival of sound pictures.

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Plastic Hits

Tween music consumption habits and their relationship to music production

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ABSTRACT

The dynamic nature of contemporary society has revealed the emergence of groups that need to be considered from a perspective that transcends evolutionary, formative or folkloric analysis. Today, thanks to the combination of a broad ethnomusical perspective and new observational perspectives on minors deriving from gender studies, we are able to observe the shades of complexity within children as a group. But who are tween girls and boys? What kind of music products do they consume? Aged between 9 and 13, tween girls and boys possess specific evolutionary and psychological characteristics that predispose them to specific habits of music consumption that differ from those of other digital natives[1]. From our perspective, these habits have a close relationship with the characteristics of the sound, production and distribution of the items consumed and whose useful life span is limited by their functionality. This article puts forward an initial analysis of the characteristics of some music products designed for tween girls and boys as part of a project looking at consumer habits of this group in the Barcelona metropolitan area. In doing so, it seeks to complement Tyler Bickford's research (2008, 2012 and 2014) on identity and music listening habits of tween girls and boys from a new angle that examines both the sound itself and the new context of Web 3.0.

* For our purposes we understand the concept of digital natives as defined by Prensky (2001) in a broad sense. Having said this, and going beyond the nuances the author added in 2009, we agree with the criticism focusing on overestimating the technological abilities of those born into the digital world.

Tweens: the age between

Authors such as Natalie Coulter (2014) maintain that the category of tween emerged as a product of the industry during the 1980s. Others such as Tyler Bickford (2008) argue that it was not until the 1990s that the category was established to identify a particular niche in the market. Beyond the chronology of becoming visible as a group, it is important to note that these individuals, who are approaching adolescence, possess specific biological, psychological and evolutionary traits marked by hormonal, psychological and cognitive and social changes (Aberastury, 1970). This stage is therefore characterised by a child-like outlook coexisting alongside incipient puberty and an awakening interest in sex: Sponge Bob and Paw Patrol sit side by side with the eroticised bodies seen in tracks such as *Felices los cuatro* by Maluma. In terms of cognition, there is a shift from concrete to abstract, hypothetical, multidimensional and relative ways of thinking during this stage (Piaget, 1985). In the social sphere, they begin to exhibit signs of a different culture to that of their progenitors (Benet & Pitman, 2001), which is usually shared by their peer group (Silvestre & Sole, 1993). As maintained by Stone and Church (1970), this desire to belong is made clear in fashions and trends that are legitimised by the reference group. Positioned between childhood and adolescence, the collective experience of cultural phenomena acts as a bridge between the family group and a teenager's own choices. Music and its epistemic potential (Martí, 2000) is an essential part of this process. Individuals gradually start to abandon the repertoire of the family group – children's songs and the culture consumed as a family – and begin to build a collective repertoire that offers elements to help them create their own perception of reality (Frith, 1987; Martí, 2000; Cook, 2001).

Methodology

We used a mixed methodology in our study. This first involved two complementary surveys five months apart with a sample of 170 primary and secondary school students from Santa Coloma de Gramenet and Cerdanyola del Vallès[1]. This sample included participants of both sexes ranging from 10 to 13 years old. This information was complemented by a short field study of 30 hours of observation and discussion with class groups and 10 interviews of open-ended questions with family members and teachers. Once the initial information had been collected, we interpreted the results according to the musicological analysis model proposed by Alan Merriam, completing the musical aspects with the observation model proposed by Bruno Nettl.

1 The surveys and observations were conducted with students from the fifth and sixth year of primary education (ages 10-11) and the first year of secondary education (aged 12) at two schools: Escaladei in Cerdanyola del Vallès and FEDAC in Santa Coloma de Gramenet. All surveys were completed anonymously, with the consent and authorisation of the head teachers at the centres involved.

Tween music listening habits

Due to their psychological traits, digital native tween girls and boys have different music listening habits to younger children and teenagers (Rey & Roquer, 2018). In our study, we have classified these habits under five interrelated headings:

Temporality	Frequency, timescale and validity
Attitude	Approach to listening
Socialisation	Ways of consuming and interaction
Device	Relationship with devices, environments and media
Sound	Sound characteristics of the products

Figure 1 – Systematisation of tween music listening habits

In terms of temporality, it is important to note that listening to music is a central activity for tween girls and boys[2]. When asked about its importance, participants responded that it has a similar status to sports or rules-based games. In relation to validity, both the analysis of the rankings extracted based on the answers of the participants surveyed and observation of the number of views on YouTube and of the charts of the preferred stations[3] reveal a high turnover of products[4]. When asked about this aspect, tween girls and boys were unequivocal: their music has an expiry date. These data, which are firstly unthinkable for other groups for whom music is a fundamental part of their identity, lead us to believe that tween girls and boys establish a kind of functional relationship with music; they consume and use the products, but after a short time they replace them with other music with similar characteristics. As regards their attitude, we can distinguish four types of listening: exclusive (only listening to music), inclusive (as a parallel activity), social (shared), and participative (singing, dancing, playing on platforms, etc.), with inclusive being the preferred category. As shown by the work of Bergh and De Nora (2014) and Bickford (2014), the socialisation of tween music consumption is a lengthy topic in itself. In keeping with the interests of this article, we are going to limit ourselves to highlighting two aspects: the consumption of concerts and ways of accessing the repertoire. Regarding the first, participants stated they were not frequent consumers of live music[5]. Moreover, they stressed that those who do attend concerts do not tend to share their musical tastes. We recognise this situa-

2 When asked about how often they listen to music, 87 % of participants said they listen to music more than four days a week. Even though our age group is excluded from the *Encuesta de hábitos y prácticas culturales en España* (Survey of cultural habits and practices in Spain) undertaken by the National Institute of Statistics, the results obtained are in line with its results curve insofar as the individuals who listen most frequently are also the youngest.

3 Data on YouTube views and plays on Spotify obtained from www.kworb.net. Data on the national radio station charts obtained from www.promusicae.es.

4 After five months, only 6 % of the audio products for tween consumption are still found in the rankings. This timescale seems to be related to two elements: they are either tracks that are part of the music consumed as a family and are therefore relatively cemented in the individual's identity, or they achieved very high market penetration and continue to remain in the charts in a residual fashion.

5 Even though 67.7 % of participants said they had been to a concert, less than 2 % had done so in the last year.

tion as essential to understanding the relationship tween girls and boys establish with their preferred products and which is built on the virtual experience. Considering the dominance of this medium in which the imaginary is made plausible, in addition to tween girls and boys being psychologically mature but lacking any real-life experience, we can see how easily a virtual conception of reality can creep in. As regards repertoire, participants stated they mainly access products through suggestions from their peer group and by its virtual extension on social networks. For the most part exempt from parental control thanks to the freedom of Internet access and the penetration of mobile devices within the age group[6], tween girls and boys shape a repertoire that allows them to break the rules and that provides information on the context at the same time as it strengthens ties within the group. Regarding devices, the family car radio and listening online using mobile devices are their preferred methods. Smartphones and computers have replaced Mp3 and Mp4[7] players and YouTube[8] has become the main search engine for content. In relation to radio, even though the extremely high level of penetration in the segment shows its validity, the comparative information between the number of views and access to the charts seems to show that the Internet is the way into the repertoire, whilst radio is the space that legitimises most of the products as well as being a place where they are shared with other individuals from different age groups. Another piece of information to bear in mind is that CDs have become a format solely for music screened by parental control, resulting in a fossilisation of the repertoire contained on this format.

I've got a pen, I've got an apple: childhood, preadolescence and commercial music

Bickford refers to two strands when considering the historical evolution of music aimed at children in post-war USA: educational and commercial (2012). According to him, commercial music aimed at preadolescents began to gain a foothold in the mainstream during the first decade of the 21st century. This came about due to the impact of products such as *Hannah Montana* and *High School Musical* – promoted by the Disney Channel – and the volume of sales achieved by adapting *Kidz Bop*[9] pop products for children. With the exception of some products and cultural nuances, this division can be extrapolated to our present-day

6 According to data from *the Encuesta sobre Equipamiento y Uso de Tecnologías de Información y Comunicación en los Hogares* (Survey on Equipment and Use of Information and Communication Technologies in the Home) conducted in 2017 by the National Institute of Statistics, the use of mobile devices (smartphones and tablets) among minors showed an increase compared to previous samples.

7 Despite 95% of participants stating they own an Mp3/Mp4 player, only 2% stated this as their preferred type of device.

8 While it may seem that tween girls and boys consume music visually, the predominance of YouTube as a playback format is attributed to its search engine being simple and intuitive to use, given tweens' superficial technical skills, and not down to its functionality for video playback.

9 Defined by Bickford as "pop filtered by parental control", Kidz Bop has no direct equivalent in Spain. To find similar examples of adaptations of the repertoire for children we have to go back to songs such as *See you later alligator* by Bobby Charles, recorded by the group Parchís in 1982 with the title *Hasta luego cocodrilo*.

context, or at least to the widespread access to the Internet. Hereafter, the proliferation of mobile devices among tweens and the consolidation of Web 3.0, which is built around user searches, has paved the way for a type of product that individuals can access independently, in many cases allowing them to subvert parental control and access products other than those offered by the big labels. Promoted by the Internet itself[10], some products invert the traditional production processes, although they eventually become absorbed by the standard industry model.

When analysing this evolution it becomes obvious that the industry – from the first record companies and publishers to major distributors of Internet content – has been keen to legitimise children as consumers. From the adult-centric perspective of educational products to hypersexualisation, childhood has become the target market. During this process, the industry has discovered that children's potential as consumers is not limited to their ability to absorb products designed for their age group. Also experts on their consumption habits in the new online context, the industry can offer a model that can be extrapolated to an adult audience (Barber, 2008). As mentioned in the previous section, when it comes to consuming music, tweens are guided by its virtuality, speed and (given their functional relationship with the products) are unconcerned by issues of authenticity arising from its homogeneity. These elements are the ideal basis for a consumer model based on product obsolescence. By expanding the market at both ends11, the music and entertainment industry not only legitimises tween girls and boys as a niche consumer market, they can also project this model of fast, homogeneous material that quickly becomes obsolete towards a large section of the adult audience, to some extent infantilizing them in the process[12].

Stage	Description	Example
'70 - '90	Groups of children or young people	Jackson 5, Parchís, Menudo, NKOB...
'90 - '05	Boy bands and adaptations of mainstream products for children	Backstreet Boys, Take That, Kidz Bop...
'05 - '10	Disney Channel: emergence of the tween market	Hannah Montana, HSM, Violetta...
'10 - ...	Tween artists hit the mainstream – YouTube	Justin Bieber, Miley Cyrus, PSY...

Table 2 - Historical evolution of commercial groups aimed at young people and tweens

10 In this new era marked by the rise of reggaeton and Latin music, artists promoted by big labels such as Maluma and J. Balvin sit alongside independent products that have come directly out of the Internet itself such as Bad Bunny and Ozuna.

11 *Trolls* (Walt Dorhn, 2016): a deluge of colours and mainstream pop singers to attract parents and children to the cinema; *Swalla* (Jason Derullo, 2017): lollipops, repetitive beats, clichés and the same deluge of colours, this time dancing across eroticised bodies. Both examples conform to the model of broadening the reach of the products.

12 By talking about the process of infantilization we do not wish to undermine the culture of children, which requires careful and respectful consideration from a musicological point of view. Quite the opposite, the use of this term attributes value to childhood as culture and, at the same time, tries to describe a process through which adults or those with superior cognitive development acquire behaviours from earlier stages of cognitive development.

Tweens and music: sound

We have taken the model proposed by Bruno Nettl[13] (1973) as an initial reference on which to base our analysis of the sound. With this in mind we have supplemented the sections in line with the context and purpose of our study by defining the following categories: beat, song structure, harmony and modality, instrumentation, timbre, lyrics and texture.

For tween girls and boys, the beat is the most important aspect when choosing a track, ahead of lyrics and melody. The comparative analysis of the products preferred by participants reveals a monopoly of 4/4 bar, as well as the predominating patterns of reggaeton, hip-hop and trap. At the same time, a tempo approaching *moderato* is most common. When asked about their perception of the beat, participants' answers point to the idea that a "rhythmic song" is not linked to a high BPM – as evidenced by trap tracks – but rather to the repetition of a pattern. In terms of structure, the standard pop song format that increases in texture and intensity predominates: introduction – generally instrumental and colourful aimed at positioning the song around a character, time, or place –, verse, pre-chorus, chorus(es), post-chorus and bridge. In this section the frequent use of rap as a bridge should be noted. This creates a section of greater tension and contrast not only provided by the narrative of the text (the language tends to be more explicit) but also by the vocal timbre[14]. The harmony is distinguished by the use of simple loops of no more than four chords and harmonic clichés. Most striking is that the chord sequence Im / bVI / bIII / bVII is present in a high number of chart tracks[15]. This leads us to reflect on the concept of authenticity. As previously noted, the relationship between tween girls and boys and the products they consume is functional, meaning that instead of being a disruptive factor, the repetition of elements allows products to be easily replaced without having to assimilate significant changes. This functionality is also clear in their relationship with the idea of product creation: they are indifferent to who created it or how original it is.[16] They also do not place much importance on the singer, as can be seen in the high turnover of products and their brief time in the charts. For tweens, it is sufficient for a product to speak to them through references to elements in their immediate environment such as football, celebrities, the aesthetics of video games or brands.[17] Shifting the traditional rock or pop model in this way indicates that instead of setting themselves up as role models, musicians aiming their products at a

13 In his suggested methodology for the ethnographic study of Western folk music, Nettl lists the following analysis parameters: sound and style of song, form, polyphony, rhythm and tempo, melody and scale.

14 *Swalla*, Jason Derullo ft. Nicki Minaj & Ty Dolla $ign (2017); *Havana,* Camila Cabello ft. Young Thug (2017); *Despacito,* Luis Fonsi ft. Daddy Yankee (2017) or *Bailame Remix* by Nacho, Yandel & Bad Bunny (2017) are examples of this.

15 *Bailando*, Enrique Iglesias ft. Descemer Bueno & Gente de Zona (2014), *Hey Dj*, CNCO & Yandel (2017), *Súbeme la Radio,* Enrique Iglesias Ft. Zion, Lennox & Descemer Bueno (2017) or *Bailame remix* and *Despacito* are some of the most striking examples. The case of CNCO is intriguing. The similarity between their signature track *Hey DJ* and *Súbeme la radio* by Enrique Iglesias has not prevented them being his support act on the USA 2017 tour.

16 Being original or different was not positively evaluated by the participants, who rated this factor after other elements such as choreography, the music video and humour.

17 Analysis of the images portrayed in music videos deserves detailed attention and will be the subject of future research.

tween audience actually wish to assimilate with their audience. In terms of modality, the minor key predominates. The instrumentation is marked by a heavy presence of stock sounds and the scant use of acoustic instruments. These are usually restricted to being used as ethnic or geographic markers and tend to be found in the introduction or coda of the track. As regards voice, two patterns can be discerned: melismatic and broken. These patterns tend to be associated with stereotypes related to gender and attitude. The widespread use of autotune as an organic element brings us back to the theme of authenticity and virtuality as it does not appear to undermine the products' value. In terms of lyrics, content concerning love and sex is plentiful, as are consonant rhymes and repeating phonemes. These elements are linked to tweens' interests and their psychological development. However, they also relate to the partial listening caused by non-linear attention that comes from not fully understanding the text and a multitasking approach to listening. Finally, in terms of texture, an accompanied melody that becomes increasingly more textural similar to electronic music is the prevailing model.

Conclusions

After analysing the data collected, we believe that evolutionary and contextual characteristics lead tweens to establish a functional relationship with most of the music they consume. For tween girls and boys, most sound products have a limited life span and are no longer valid after 4 or 5 months. This time period is conditioned by the high number of products available and which are accessible at low cost and free from parental control, facilitated partly by consumption over the Internet but mainly by the products' functional relationship within the peer group. The music industry understands this situation and distributes products for tweens notable for their homogeneity and which are churned out quickly in order to be consumed voraciously. In parallel, the relationship between the evolutionary characteristics of the group, their functional relationship to the tracks and the obsolescence of the products translates into a specific perspective on the concept of creation. From this it can be surmised that tween girls and boys do not experience the same conflicts around authenticity usually found in other age groups and demographics. Because of this, the industry, ready to respond to the insatiable rate of consumption, is not required to innovate and can simply recycle content. Experts in the consumer behaviour of tweens and producers of products designed to become obsolete, the music and entertainment industry aims to extend this model of consumption to a large section of the adult audience, whom, according to Barber (2008), it infantilizes. Understanding tweens' relationship with music is a challenge with implications that extend beyond this group alone and that provides information on other sectors of society. The new musicology must pay attention to this and respond dynamically to the challenges of the 21st century.

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The figure of the sound engineer in the film industry: leading technicians at the beginning of Spanish sound pictures

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ABSTRACT

The origin of the figure of the sound engineer has scarcely been touched on from a historiographical perspective. This research aims to focus on the origins of this profession as a leading actor in a specialised work environment that can take different forms as a film studio, post-production studio or a dubbing studio. The desire to synchronise sound to picture goes back to the very origins of film itself and defines the story of many inventors whose projects were abandoned due to problems with their commercialisation. Sound's ultimate incursion into film production compelled film studios to adapt acoustically and technologically, and led to the creation of the sound department and the first prominent technicians. It was during this period that the names of specialised sound technicians first appeared, such as José María de Guillén-García, Ricardo María de Urgoiti, Adolfo de la Riva, Rosendo Piquer, Federico Gomis and León Lucas de la Peña. During the early years of sound pictures, sound engineers usually came from a scientific rather than an artistic background and were highly versatile, changing medium primarily from radio to film.

The first film studios and the long road to synchronising sound and picture

From the very beginning, film's close relationship to technology has meant a continuous struggle between technological innovation at the service of narrative discourse, debates about authenticity that derive from any cultural manifestation in which technology is an important part of the creative process, and the threat that each new technology poses for the industry "establishment" at that time. As reflected in much research undertaken prior to that presented here (Gubern, 1977; Gorostiza, 1993; Falcó, 1995; Arce, 2009), sound has been a concern since the very beginnings of film. In light of this, it is appropriate to review the list of the main figures who focused their research on trying to introduce a workable system that would allow a sound recording to be synchronised with the picture. The repeated attempts to integrate the images with the usual musical performances, effects or dubbing that sometimes accompanied "silent"[1] films in an enduring way not only came up against technological difficulties, but also faced problems in terms of commercial exploitation due to the lack of investors. In some cases, this was an insurmountable barrier that meant a particular system was introduced while the rest were relegated to anonymity.

There were many attempts at synchronisation during these early years. Thomas Alva Edison developed the Kinetophone by combining the Kinetoscope – a single-viewer system for watching moving images – with a wax-cylinder phonograph. The Lumière brothers' standardisation of the *Cinématographe* in 1895 led to numerous other attempts to combine this device with different sound systems such as Edison's phonograph and Berliner's gramophone. One example of this is the synchronization system presented by León Gaumont at the Paris World Fair in 1900, which, like Edison's, was based on a cylinder phonograph connected to a film projector[2]. In 1910, Gaumont exhibited the Chronophone, a system that substituted the wax cylinder for a flat ebonite disc.

The *Cinéfono* was another system that appeared during the early years of the 20th century, patented in 1910 under number 49039 by José Salvador Ropero, an artist from Almería who had settled in Barcelona. Ropero's *Cinéfono* worked by synchronising a gramophone with the projector, but it was never used commercially due to its complexity. Preserving both the picture and the sound in an enduring format was therefore a challenge from the very early days of film, although the problems created by synchronization did commercially consolidate a "silent" format that would endure until the technical problems and commercial viability of the new systems were resolved, at which point both film studios and screening rooms had to be refurbished.

1 According to Arce (2009), the term "mute" is preferable to "silent" to refer to film before the standardisation of sound systems, bearing in mind that film screenings have always been accompanied by different sounds. [*Translator's note: unlike English, Spanish uses the terms "mute film" and "silent film" interchangeably, although this author suggests the term "mute" due to the fact that the absence of a human voice in a projected film does not necessarily mean it is devoid of sound. Whilst this is true, this article will use the term "silent film" as this is the widely used term in English*].

2 In 1908, Gaumont's sound system was demonstrated a few times in the Coyne cinema in Zaragoza.

It is only possible to talk about the existence of film studios during the era of silent film in Spain, with other venues such as phonography and radio studios being used for sound recording. The distinction between film studios and sound and dubbing studios takes on transcendental importance bearing in mind that film studios were specifically built for producing moving pictures from the start. For this reason, at the very least we should establish an initial "pre-sound" era and a later "sound" era during which film studios had to adapt to capture the "sound events" in addition to images, and find a way to synchronise them. Sound and dubbing studios, on the other hand, emerged as a new business model required by the film industry in the face of the inroads sound was making into moving pictures. Under "studios" in the *Diccionario del Cine Iberoamericano*, Delgado Cavilla (2011) addresses the origins of film studios and their initial boom in Spain between 1895 and 1931. These buildings designed for filming were at first called galleries and contained fairly rudimentary sets made of painted cloth on wooden frames:

> "In 1908 Fructuos Gelabert built one of these galleries in La Granja Vieja, a large house in the Horta district of Barcelona. It measured nine metres long by six wide; [...] it was probably the first structure in Spain to be used as a place for filming."[3] (Delgado Cavilla, 2011, p. 612).

There seems to have been a desire to establish permanent spaces for filming besides outdoor locations right from the beginnings of film, which also led some production companies from Madrid, such as Patria Films, to look for enclosed spaces with similar characteristics: small spaces with understated decoration. These small studios were spaces within existing buildings and were not financially worthwhile in the end. Some, unable to adapt to the changing times, went bankrupt in the face of competition from other studios which were acoustically and technically equipped to make films using the new sound technology. In an age when film research was focused on the issue of synchronisation, acoustic refurbishment of spaces to be used for recording was more of a concern for the phonograph and the gramophone industries, whilst film production and distribution companies were concerned with commercially exploiting "silent" films.

Lee de Forest – who would go on to revolutionise the field of radio broadcasting and lay the foundations for electric recording with his invention of the thermionic valve – presented his optical recording system called the Phonofilm in 1923, which imprinted sound information on the film itself (analogue optical recording). Whilst minimising the synchronization errors that had typified the first film sound systems, it did not manage to win over the film production companies, who were reluctant to incorporate sound with moving pictures[4]. Ultimately, Phonofilm was one of the many sound systems that regularly appeared from

3 [Translated from the original.]

4 In 1925, Lee de Forest began to tour Europe looking for financial assistance to market his invention, leading him to Spain. At the end of 1927, he exhibited his device at the Callao cinema in Madrid followed by an outdoor demonstration in Parc Güell in Barcelona the following year, but was unable to attract interest from either of the major cities.

the start of the century, although it was not until Warner Brothers' Vitaphone in 1925 that things really "took off, not so much in terms of talking films but in terms of big production companies' willingness to adopt new sound synchronisation systems"[5] (Arce, 2012, p.17). Talking films, despite reservations from some sectors which saw them as a threat to the very essence of film itself, were inevitably a commercial success in the end. By 1929, American production companies had fully adopted sound pictures, which had obvious consequences for the Spanish industry in terms of film production and importation.

New work environments in the era of sound: the first dubbing and sound studios

As in other countries, the advent of sound in Spain brought with it the creation of new and essential work environments: sound and dubbing studios. Sound and dubbing studios meant performances could be decontextualised from their original location. Sound studios completely disassociated the sound from the visual discourse and brought it into a completely acoustically neutral space whilst providing controlled acoustic conditions that provided benefits such as making dialogue more intelligible. This way of working has a great deal in common with the later development of the production process in the music industry and enables us to talk about "inherited practices" and professional crossover between different media.

It is important to link the origin of recording studios in Spain to the appearance of the first film sound and dubbing studios from the end of the 1930s. Despite pioneering attempts by phonography studios at the start of the century, soundproof and acoustically-designed spaces for recording equipped with a control room and with built-in recording equipment seem to have reached the world of radio first, followed immediately by film, before they reached the music industry. It was common practice in the world of music production during the first decades of the 20th century to go to wherever the orchestra or soloist was performing and record in situ during rehearsals. The world of radio, due to its inherent characteristics as a broadcast from the intimacy of the booth with the potential to reach a large number of listeners, and the introduction of dubbing and the requirements resulting from sound post-production in film, paved the way for the development of small spaces optimised for recording.

It is not the aim of this research to debate the whys and wherefores of dubbing or its subsequent role during the Franco dictatorship, but rather to focus on the technological issues that went with this new way of working and how this influenced the emergence of the first sound professionals. The dubbing industry developed to solve the American film industry's problems selling their films internationally by translating them into other languages. Production companies initially responded to the challenge of selling their talking films worldwide by making multi-language versions, as at the time it was technically impossible

5 [Translated from the original.]

to implement a system that enabled dubbing into the language of each country. This gave rise to Hollywood productions in Spanish, French, German and Italian, a situation which could have derailed a Spanish film industry which lacked technical and financial resources and so was unable to react to this new development.

Multi-language versions, however, merely represented a brief period of transition before the first dubbed films were made. Curiously, the first dubbing in Spanish was done in France rather than Spain, in the Des Reservoirs studios in Joinville-Le Pont – a town near Paris that was home to the European offices of Paramount[6]. The start of dubbing in Spain was controversial given that the first dubbing into Spanish was done outside the country. On 1 February 1933, Mauricio Torres – editor of the film section in the *Heraldo de Madrid* newspaper – demanded that politicians introduce a dubbing protection bill and condemned "the invasion of a host of films 'dubbed' in Spanish, most of which – 98% – have been synchronised in foreign studios". Torres demanded immediate regulation, positing the absurdity of "Spain having several studios equipped to 'dub' films and yet receiving 'dubbed' films from abroad"[7].

Devil and the Deep (*Entre la espada y la pared*) by Marion Gering was the first film dubbed into "Castilian Spanish" in 1932 in the Joinville-Le-Pont studios[8] and would be followed by a significant number of dubbed films – Broken Lullaby (*Remordimiento*) (1932), Six Hours to Live (*Seis horas de vida*) (1932), and many others – until the opening of the TRECE (*Trilla-La Riva Estudios Cinematográficos Españoles*) studios in Barcelona in July 1932, which pioneered working exclusively with dubbing and collaborated with the actor Félix de Pomés[9].

Just a year later, in 1933, the Italian businessman Ugo Donarelli opened the *Sociedad Fono España* in calle Claudio Coello no. 124 in Madrid. It had three recording studios where, as stated in an advert in *Cinegramas* magazine (no. 8 from 4 November 1934), the "best artists and technical support in Spain"[10] with Western Electric sound could be found[11]. A fledgling industry around dubbing and rivalry between recording studios was by now firmly established.

6 It was Paramount engineers who, in 1928, managed to record a dialogue synchronised with the actor's lips for the first time for the film The Flyer.

7 [Translated from the original.] Published in the *Heraldo de Madrid* on Wednesday 1 February 1933. Available at: http://hemerotecadigital.bne.es/issue.vm?id=0001019719&search=&lang=es [Consulted: 21/12/17].

8 The first dubbing into Spanish was recorded in 1929 for Luther Reed's film Rio Rita, which used Hispanic American actors in what was the first attempt to dub into "neutral Spanish".

9 Heinink (1998) cites the Trilla-La Riva studio as the first known permanent sound and dubbing studio, tracing its activity back to September 1931.

10 [Translated from the original.]

11 Western Electric, together with Bell Laboratories, was behind the introduction of sound pictures (in collaboration with Warner Brothers, Inc.) as well as some of the most important advances in recording.

Leading technicians at the beginning of Spanish sound pictures: consolidating the figure of the sound engineer

The origins of the sound engineer in the film industry have scarcely been considered from a historiographical perspective. The isolation of the camera led to the creation of the "specialised technician" responsible for recording the sound during filming. The origin of the technician specialising in the capture and subsequent post-production of sound that adds meaning to the visual discourse undoubtedly goes back to the introduction and subsequent consolidation of sound pictures during the 1930s, although we have to go back at least a decade further to establish the connections to other media such as radio, the music industry and film itself. But the figure of the engineer should not be looked at in isolation; they were a cog in a nascent film industry that required certain facilities, both during filming and the later post-production phases that both the picture and the audio had to undergo. López Martín (2009) cites three possible backgrounds that gave rise to these "specialists" in charge of operating the apparatus employed in the sound recording process during filming and post-production: the first was radio, where some had previously worked as operators; the second was phonographic recording, and finally, the electricity and telephone companies and technical schools.

The link between the worlds of radio and film is clear in the case of Orphea studios, which was created in Barcelona in 1932. It is important to link the activity at Orphea to engineer José María de Guillén-García, who founded the first legal radio station in 1924 (Radio Barcelona EAJ1). As the technical director of Orphea Film on the new version of *Carceleras* in 1932 (the first film shot with live sound), de Guillén-García should be considered one of the pioneering engineers in sound pictures in Spain.

Ricardo María de Urgoiti, director and engineer at Madrid Unión Radio, SA, also came from a radio background. At the end of 1929, Urgoiti opened a studio to industrialise the *Filmófono* system[12], using synchronised gramophone discs and two turntables[13].

But as Romà Gubern says, "the colonial dependence on foreign sound technology would come to typify the nascent Spanish talking film industry"[14] (Gubern, 1977, p.18). In the area of screening, in Spain Western Electric had overtaken German company Tobis-Klangfilm and was training sound engineers in short intensive courses. Gubern adds that: "sound engineers had huge power in the days of early Spanish sound pictures; they had the right to reject films whose sound quality they judged unsatisfactory and were paid their salary in dollars."[15] (Gubern, 1977, p.18). Despite the fact that in theory Fono España had the exclusive right to use the Western Electric sound system, its technical director Ugo Donarelli

12 Although the *Filmófono* was initially a film synchronisation system developed by Ricardo María de Urgoiti in 1929, in 1935 it became a film company.

13 For the first time, Urgoiti used his system to add music and comedy noises to Florian Rey's comedy *Fútbol, amor y toros* [Football, love and bulls] in 1929.

14 [Translated from the original.]

15 [Translated from the original.]

ended up championing an in-house recording system known as F.E. (the letters of the company Fono España), which was lower quality but more cost-effective. Sound engineer Adolfo de la Riva – together with his brothers Carlos and Enrique, who also had a background in radio like so many others – also designed their own system; the *Rivatón*, which introduced better recording technology and began to be used in the TRECE studios in 1935. In addition to the Riva brothers, some of the sound engineers related to this studio include Rosendo Piquer (the engineer in charge of studio 2) and assistants Jaime Estela, Pedro Rovira, José Vallverdú and Enrique Llort.

Another important figure in early sound pictures in Spain was Federico Gomis, technical director and sound engineer at the Ballesteros studios located at calle García de Paredes no. 53 in Madrid. The 30th edition of *Cinegramas* magazine, published on 7 April 1935, included an interview with Gomis stating that he "did a science degree and studied in the industrial school", also indicating his specialisation in the world of radio, like many other engineers at the time; and his ambition, also like many of his contemporaries, to design his own recording system, declaring: "He specialised in the secrets of radio, and has just built a device with a new system for recording sound that has been patented in several other countries."[16]

Nevertheless, the recording system from Spain with the greatest international circulation during these years was patented in 1932 by the engineer and professor of electricity at the School of Engineering, Canals and Ports of Madrid, Alberto Laffón; and Doctor of Science, Ezequiel Selgas. This was a new "multitransverse" system to photoelectrically print sound. It was a remarkable improvement on previous systems that made Spain the third country in the world to have its own photographic sound system, after Germany and the USA. Even though the Laffón-Selgas system would have a great impact in specialised media and be recognised by the most important sound engineers worldwide such as Santini, director of Alex laboratories; and Certes, technical director of Pathé-Cinema, it did not manage to displace the American technology that was already widespread and dominant in the industry. Despite the difficulties of competing on the international market, the system created by Laffón and Selgas continued to be developed, and in 1943 *Primer Plano* magazine published a short interview in which the inventors drew attention to the increased dynamic range and its implications for recording orchestras:

> *Could you tell me about the new improvements you have made to your apparatus?*
> Quite simply, it can now faithfully record the sound of an orchestra of considerable size.
> As you know, recorded music never gives the feeling of a big orchestra because recording equipment offers little amplitude.

16 [Translated from the original.] "Ángulos nuevos: Los técnicos del cinema nacional", Cinegramas [no. 30, 7 April 1935, p.14]. Available at: http://hemerotecadigital.bne.es/issue.vm?id=0004941183&search=&lang=es [Consulted: 14/12/2017].

> *In other words, there is no difference between recording a concert by a large orchestra or one with only fifteen or twenty musicians.*
>
> Exactly right, and we have channelled our efforts into improving this problem with this in mind.[17]

Expanding the dynamic range and frequency spectrum was one of the challenges faced by the different sound recording systems, and the Laffón-Selgas system made an important qualitative leap forward in this respect. The system was still used on some films in the 1950s, such as *Parsifal* (1951), even after the introduction of tape recording in the music and film industries[18].

Other leading names came from two of the most important film studios of the 1930s: ECESA and CEA. ECESA studios in Aranjuez (Madrid) were associated with sound engineers Miguel López Cabrera and Alfonso Carvajal. At CEA studios (*Cinematografía Española Americana*) in Madrid, León Lucas de la Peña was the most senior technician in charge of the sound equipment. Luis Marquina is one of the few sound engineers that made the leap to become a film director. An industrial engineer trained as a sound technician in the Tobis-Klangfilm studios in Paris and Berlin, Marquina returned to Spain in 1933 to take up the post of head technician at CEA studios, and made his directorial début in 1935 with *Don Quintín el amargao* under the supervision of Luis Buñuel, who himself would direct this same film in Mexico in 1951.

The work of foreign sound engineers living in Spain should also be noted: for Orphea Films, the work of French sound engineer René Renault, who imported new technology from France, should be mentioned alongside that of José María de Guillén-García; the German engineer Luis Linnartz, who in 1933 created Linnartz studios on the Conde de Barajas plaza in Madrid using portable Lignoise sound recording equipment; and the Hungarian sound engineer Foldbary, who was linked to the dubbing and sound studios set up by Metro-Goldwyn-Mayer in 1933 in Barcelona, and who designed a recording system that used Telefunken microphones placed at different distances from the source sound; a pioneering approach to close and distant miking techniques[19].

17 [Translated from the original.] Interview with Alberto Laffón and Ezequiel Selgas by Pío García Viñolas for *Primer Plano* magazine, no. 162, 21/11/1943.

18 Recording took place in the *Palau de la Música Catalana* with the one hundred and sixty two performers required to record the music by Wagner.

19 Capturing sound with microphones based on the combination of different sound planes depending on the distance between the microphone and the source is common practice both in the music and film industries.

Conclusions

Every new technology related to the world of sound or image has provoked uncertainty and a crisis around the existing business model. The ultimate incursion of sound recording into the film industry enabled a consumer product to be created for the entertainment sector, but also presented a threat to the existing business model, which had to adapt by creating new professional profiles and working environments. We can identify two stages related to sound engineers' contribution to the world of sound pictures: the first when the challenge was to create a technically and commercially viable system of synchronisation, and a second characterised by rivalry between the sound and dubbing studios through their engineers, who also competed to produce their own sound systems. Although there is an ongoing relationship between the worlds of film and music, the latter eventually using film as an important means of promotion, the first prominent technicians specialising in capturing sound to accompany moving images mostly came from the field of radio. At first, sound engineers working in film usually had a more scientific than artistic background, in many cases combining their sound recording work with research aimed at improving the quality of recordings. Despite several innovative devices such as that developed by Laffón-Selgas being introduced during this era, the commercial power of brands such as Western Electric would irreversibly turn Spain into an importer of technology.

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A symphonic apologia for horror: music, sound and narration in *Who Can Kill a Child?* (1976)

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ABSTRACT

Who can kill a child? (Narciso Ibáñez Serrador, 1976) has long held a prominent position among Spanish horror films in large part due to the dialogue it established with the context of the time it was made and an ongoing comparative reassessment between it and contemporary productions of the genre. Critical attention bestowed on the film has dealt with historical and interpretative issues but has excluded its music and sound as a tool for analysis. This article takes a look at the film through its soundtrack, beginning with its general characteristics and finally examining the specific details of the two main musical themes. The analysis in this paper allows new aesthetic and historiographical information to be incorporated, in addition to emphasising the essential elements of the narrative coordination and the characterisation of the central factions in the film, the children and the adults.

Who can kill a child? in the context it was received

Comparisons between Narciso Ibáñez Serrador's second film, *Who can kill a child?* (1976) and the rest of his short filmography and his television work are inevitable. Similarly to his first film, *The house that screamed* (1969), the film expressly aims to achieve the necessary production standards to make it easy to sell abroad by using foreign actors in the main roles and filming it in English. Moreover, he once again chooses to adapt a work of literature – in this case Juan José Plans's novel *El juego de los niños* (1976) – and to make a child the architect at the centre of the tragedy; an aspect noted as a recurring theme in Ibáñez Serrador's work (Mendíbil, 2001).

Discussion surrounding the film has identified different precedents both regarding the apparent tragic pessimism of the plot and its resolution (Torres, 1999; Sala, 2010) as well as a child being the central character driving it forward (García, 2002a; Cordero, 2007; Lázaro-Reboll, 2012). However, despite these prior connections, the theme of violence against children and the questions raised by the title of the film alone, judging by the reaction when it was released, were a new and striking element in Spanish film making at the time. As with his début film, Ibáñez Serrador's new cinematic venture provoked real controversy. At a time when Spain found itself transitioning towards democracy, intellectual and moral questions about the present and the future being built for the youngest in society seemed utterly relevant from any standpoint. Nevertheless, the only intentional position taken by the film is to expressly condemn the violence that armed conflicts inflict on children, in which adults are their executioners (Torres, 1999). Although this is expressed simply in the film, the timeless paradigm of this idea has kept the plot line relevant throughout the years, and possibly contributed to it becoming a cult film. In 2012, the republication of Plans's novel and a new Mexican film adaptation – *Come out and play* (Makinov, 2012), produced the same year – appear to confirm the enduring validity of the issues raised in this work.

Who can kill a child? was released on 21 April 1976 in the *Proyecciones* cinema in Madrid. Total box office sales amounted to 868,396 tickets totalling 63,319,411 pesetas (380,557.32 euros), making Ibáñez Serrador's renewed foray into cinema one of the most-watched Spanish fantasy films (García, 2002). All the same, the figures achieved for *Who can kill a child?* were less than a third of those for *The house that screamed,* and the film received a similarly indifferent reaction from the industry to any potential innovations it offered; suggesting there may have been a lost opportunity to rejuvenate the genre in Spain. Sala says that: "Ibáñez Serrador's film had a tremendous impact for the horror genre, which unfortunately was not followed up by the directors and producers of the time"[1] (Sala, 2010, p. 163). Contemporary criticism was less hostile to the film than *The house that screamed*, although negative references to the film were still plentiful. This relative failure has been blamed on the fact that the film was released at a time when the genre was at the point of saturation and

1 [Translated from the original.]

burnout in Spain, with audiences and critics eager for a new kind of film (Agudo, 2009; Cordero, 2007). Lázaro-Reboll notes the words of critic Diego Galán, for whom, looking back, the lack of success was due to the film being removed from the political tensions of the time and its lack of aesthetic propriety in the treatment of childhood (Lázaro-Reboll, 2012). According to critic and historian Miguel Ángel Barroso, far from attributing this to factors outside the film, it is clear that the film did not succeed because "it was mutilated during filming due to the lack of comprehension of a producer who was not versed in the art of film making"[2], directly citing this as what ultimately caused Ibáñez Serrador to move away from film (Barroso, 2009, p. 12).

Regardless of the circumstances suggested to explain the limited recognition received by *Who can kill a child?*, growing interest following its release made it clear that in time the film would go on to re-establish a dialogue with audiences, and ensured its position as a benchmark within the paradigm of contemporary horror productions. Today, it is considered a cult film in Spain and abroad, praised as one of the unique masterpieces of the genre and recognised as one of the many Spanish films that still deserves extensive critical attention.

The musical soundtrack by Waldo de los Ríos

Ibáñez Serrador entrusted his regular collaborator and the composer on his previous film, Argentine Waldo de los Ríos, with the creation of the soundtrack for *Who can kill a child?* De los Ríos's work for *The house that screamed*, despite being completely overshadowed by the criticism focusing on the film's pretensions, was undoubtedly in line with the innovative ambition the director wished to convey to his first film as part of the New Spanish Cinema (Sapró, 2013). It perfectly matched the oppressive nature of the film's setting and enriched the plot by creating sound identities rarely used in horror films in Spain, positioning the film closer to the European avant-garde films of the time. The resulting score in *Who can kill a child?* preserves these qualities and once again manages to be a comparatively notable point of reference; one which contemporary criticism once again chose to ignore. The precision with which the music integrates and works with the images to develop the narration is clear. Although such an intense level of characterisation is perhaps not achieved on this occasion, nor is there such a significant influence on the structure of the filmic unit itself, the quality and complexity of the musical structure could be said to exceed that heard in *The house that screamed*.

Unlike the soundtrack for *The house that screamed*, *Who can kill a child?* was released as an LP on the Hispavox label, for which De los Ríos had an exclusive contract. Nevertheless, the record was largely the initiative of the composer, who used the work for the film to create a record that, despite being intrinsically linked to the film, could be listened to in its own

2 [Translated from the original.]

right (Benítez, 2009). The way the musical themes unfold therefore lend the record a certain narrative quality, the sound even being interspersed with the children's recurring laugh to add a heightened sense of drama to the listening experience. The musical soundtrack includes orchestral fragments around a recognisable key interspersed with long atonal passages, as well as specific music and electronic resources showing the composer's extensive interest in this area and reflecting his time in Cologne's famous *Studio für elektronische Musik*. The record also contains a vocal version of one of the film's central themes, with lyrics written and sung by Raúl Rafecas, but this did not appear in the final edit. Producing a record around the time of the film's release was a common practice in the record industry with direct links to film, not with the aim of fulfilling any dramatic or narrative criteria, but simply to profit from sales of the record (Benítez, 2009; Larson, 1996).

The LP was sold under the subtitle *Apología sinfónica del horror* [a symphonic apologia for horror], declaring the record's intent independently of the film and at the same time stressing the composer's intention to offer a personal recording showing his understanding of horror music and allowing him to use his extensive composition skills. This unusual subtitle cannot avoid evoking F.W. Murnau's original choice for his film *Nosferatu* (*Nosferatu, eine Symphonie des Grauens*, 1922). In the same way that the subtitle *eine Symphonie des Grauens* [a symphony of horror] seems to allude to the director's conscious desire to show how horror characterisation can be achieved in film (Prawer, 1988), De los Ríos's composition could be considered from a similar point of view thanks to the musicalization of this cinematographic mood. As mentioned, *Who can kill a child?* was released at the end of a period during which Spanish horror films had flooded the market following a boom from 1971 to 1973 (Aguilar, 1999). Audiences now wanted new ideas and as a consequence, film makers wishing to preserve their prestige or to continue being successful during these times had to offer something different and innovative (Sala, 2010). This paradigm may also have something to do with Ibáñez Serrador's decision to return to film making by adapting Plans's unusual story, but, importantly, this also gave De los Ríos the chance to make his own mark in the world of horror music composition. Considering the assessment of the end product today, we could say that De los Ríos achieved his aim. The soundtrack for *Who can kill a child?* became "one of the undisputed masterpieces of Spanish film music"[3] (García, 2002b, p. 149).

The sound in *Who can kill a child?*

One of the aspects that most stands out when listening to *Who can kill a child?* is the distribution of its soundtrack. After the opening musical block, the first part of the film is scored with distinct sobriety in its use of incidental music. This leaves a special space for the ambient sound, which is full of the hustle and bustle of local festivities in the fictitious town of Benavís and preserves the bangs of rockets, fireworks, the original sound of the festival

3 [Translated from the original.]

music, and other sounds which become more significant as the plot progresses; the sounds of the children's games and shouts of joy. This excess of diegetic sound becomes a key contrast with the foreboding silence the main characters find when they arrive on the island of Almanzora, and which they draw attention to through the dialogue. Likewise, given the film's anti-war slant, the level of agitation reached paradoxically manages to emphasise how local festivals in Spain often involve recreating the sights and sounds of a battle, including the image of children running about with imaginary weapons.

In contrast to these sounds, the soundscapes of Almanzora are initially dominated by a silence befitting the sense of solitude and isolation they were intended to convey. The combination of this absence of expression together with José Luis Alcaine's cinematography and the decision for the action to always occur in broad daylight, together with the obvious heat the actors are enduring, only intensifies their exposure and their deliberate vulnerability when faced with the elements and the humans who stalk them. During this first part they are accompanied by ominous, albeit still day-to-day, noises: white noise from an untuned television, the slow creak of a spit roast, or the slight sound of a blind being closed suddenly. Only after this last incident and the resulting suspicion it arouses in the male character – Tom – does the score start to provide clues about the threat on the island. The film's main theme, with its association with the children and their 'innocent' homicidal games, plays at once, and the musical soundtrack starts to be distributed in the normal way of a horror film.

It could be said that the music takes as long to actively participate in the horror as the characters themselves take to accept the real threat presented by the children, demonstrating its particular coordination with the narrative. Yet silence is never absent from the film's scenes. It can be heard gliding relentlessly over the body that Tom fails to notice in the grocery store, or ending an incipient musical crescendo when he approaches the confessional in the church only to discover that it contains nothing more than a smiling child, presenting the viewer with the flip side to seeing them as a threat and adding weight to the moral dilemma posed by the film. Silence also accompanies the surviving father and his daughter on the slow journey towards what will surely be the adult's inevitable death, it abruptly halts the children's attack on the customs office when the first of them is killed and it also marks Tom's death after his last, desperate attempt to flee. Removing the music that usually guides the viewer's feelings has an immediate effect of emotional suspension that prolongs the prevailing feeling of anguish until it is resolved by the viewer or the elements of the film themselves.

The soundtrack by De los Ríos also abounds with electronic elements combined with orchestral passages, although they are occasionally heard alone to give specific meaning to some key sound structures. It is commonly noted that there is a natural tendency to associate interstitiality with perceiving something monstrous. This also applies to music, which

has traditionally favoured resources such as dissonant intervals, atonality or electronic elements for the musicalization of horror (Link, 2010). Including elements such as these allows De los Ríos to employ a simple reference to show anguish and the sinister as and when those moments appear as part of the orchestral landscape. But his parallel allusion to the supernatural – understood as something outside of or unknown in nature – is also useful to now and then introduce important narrative elements through the sound. In this way, the extrasensory communication between the children, which borders on telepathy, is acoustically constructed using a set of electronic frequencies and a sound echoing a human heart beat. When put together, it brings to mind a complete system of transmission and reception. This system is essential to understanding and giving credibility to the situation that results in the death of the female character – Evelyn – and its persistence at some moments when the children act together, and makes their oneness, their determination and their sense of a shared will plain to see, in contrast to the uncertain, uncoordinated and individualistic picture painted of the adults.

The children's theme. The breakdown of innocence

The combination of the opening musical block and the images during the credits is a simple but compelling part of the production design. Against a black background, a child's voice hums the first few bars of the film's main theme. At the end, the notes blend with children's laughter whilst an old black and white photograph takes shape; it is of a child with arms raised, in the stance of a prisoner of war in what is obviously an armed conflict. The second part of the musical theme follows in exactly the same way with the opening credits presenting the title of the film over the photograph. From thereon, clips narrated in a documentary style begin to play, in a format that has been said to recall the old Spanish *No-Do* newsreels (Steinberg, 2006). These clips show a selection of recent atrocities one after the other, such as the horrors discovered during the liberation of the Auschwitz concentration camp, the wars in India and Pakistan, Vietnam, Korea, and Nigeria; with a particular focus on the child victims of these conflicts. With each new clip, there is a pause broken by the voices and laughter of the children together with the main theme repeating over still images of these horrors. For this theme, De los Ríos composed a melody similar to a lullaby (Figure 1) with a simple triple-metre waltz, exactly as he had for *The house that screamed*, which easily evoked the innocence, simplicity and carefree nature of childhood.

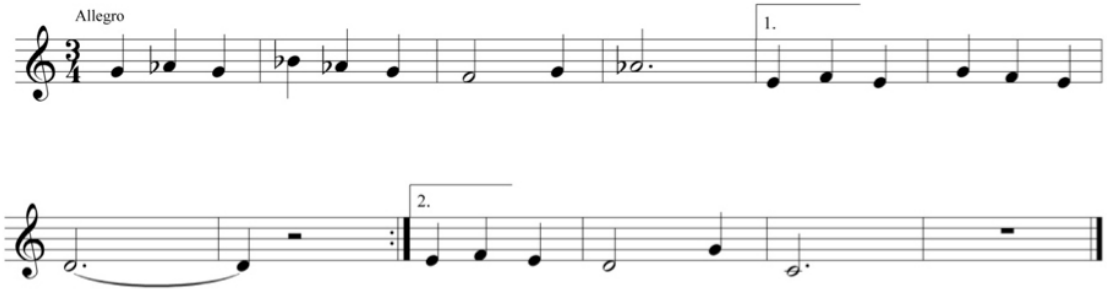

Figure 1. *Who can kill a child?* The children's theme.

The immediate result of this audiovisual design for the opening block is a clear contrast between horror and innocence, between the atrocities deriving from the savage behaviour of the adults and the consequences for the children trapped in these terrible 'games'. This establishes the core precepts of the plot and the suggestion of the children's motivation for rebelling and coming up with their own 'games' is reinforced. Despite the fact that Ibáñez Serrador would later label this opening sequence "an error"[4] (Torres, 1999, p. 252) – and in fact it did become the focus of much contemporary criticism – he did achieve a unique and effective characterisation of the children, which is subsequently borne out throughout the rest of the film. He coherently places them in the context of the adult world, which the main characters – just like everyone else as yet unaware of the events on the island of Almanzora – take for granted and even help to reinforce by turning a blind eye to its horrors. A tangible example of this approach is revealed later on in the photography shop, when the very serious conversation between the main characters and the shopkeeper about the hardships children have to endure at the hands of adults ends with him cheerfully exclaiming "a good day for photos, eh?"[5]. Reinforcing this idea during the opening sequence of the film by alternating horrific images with children's voices impassively humming their innocent songs whilst the adults turn them into the victims of their dispute creates a striking anempathetic effect. This correlates with the children's indifference in the film, as they show no desire for revenge or signs of evil even when they are enacting the most violent crimes. As stated by Chion, in this way the suggested emotion is reinforced in the viewer, accentuating the horror of what they are seeing (Chion, 1993).

De los Ríos also composed an interesting and unsettling piece of music to use with the images taken from the documentary clips by using the technique mentioned above of combining orchestral music and electronic sounds. In the final edit, however, it was decided to replace this with pre-existing music by Beethoven and Wagner, although the reason for this is not known. Perhaps, if we believe there was an intended purpose behind the opening

4 [Translated from the original.]

5 [Translated from the original.]

block, it may have been felt that the Argentine composer's score would quash the feeling of realism provided by the images and introduce a patina of fiction that would have reduced their impact. Pre-existing music was commonly used on the *No-Do* documentaries and using it here therefore differentiated the images from fiction, separating the creativity of a horror film from what are ultimately real events. Or perhaps, as suggested by Benítez, "this hybrid of orchestral sound and fascinating electronic music was too daring for Chicho [Ibáñez Serrador]"[6] (Benítez, 2009, p. 8). In any event, De los Ríos's original version did survive in full-length editions of the soundtrack produced in Spain; a rare example of film music heritage being preserved.

The children's theme becomes the central core around which the rest of the film's soundtrack is built. Its simplicity makes it perfectly malleable for film composition, whilst its metre and timbre are unmistakeably reminiscent of the mixture of candour and suspicion of childhood. This had already been done in the similar and compelling lullaby in *Rosemary's baby* (Roman Polanski, 1968). With these underlying properties, from the first time it appears in the storyline and throughout the film thereafter, the theme moves between registers that reflect the extremes of that first innocence and the distortion of this idea by employing different harmonic alterations. This introduces a touch of the sinister and shows valuable versatility. With the exception of the opening musical block, the theme is not played at all during the first part of the film, which is consistent with the absence of the characters associated with it. Only when there is an inkling that the children are a unit with a shared and perverse will – first of all hidden in a wardrobe in the bedroom and later making the fatal contact with Evelyn's unborn child – does the main theme emerge to establish this unambiguous and ongoing link. The next time the theme appears it is for the musicalization of the first murder. Here, the theme's malleability, De los Ríos's versatile treatment of it and the careful coordination with the images and narration are perfectly illustrated, as this article will attempt to show.

The appearance of a girl playfully running through the village streets, glancing in different directions as if participating in a game of hide and seek, is accompanied by the music mentioned above in a carnivalesque, festive style which aligns with the visual impression of the scene. The discovery of an elderly man, the struggle between them, and finally, the fatal blows she inflicts on him with his own stick steer the tune's harmonisation off course and begin the progressive accentuation of dissonant intervals that signal a crossover from the equilibrium of innocence into the disturbing. The culmination of this progression coincides with Tom's intervention; he snatches the stick from the girl, who looks at him, amused and impervious to his anger, before running away laughing. The children's theme returns with the image of the bloodied old man, this time with a certain lyricism seeming to reflect Tom's incomprehension of the horror resulting from a child's game. In this way the music com-

6 [Translated from the original.]

municates the character's moral duality as he struggles for the first time with the horror of the event and the culpability of a child who was just playing, up to a point justifying his next act and his decision to hide the episode from Evelyn. Right after leaving the body in a nearby barn, Tom witnesses the children stringing it up to play with it as if it were a human piñata. The theme is heard once again with its unnatural carnivalesque sound, the first four bars repeating over and over before reducing to two in an *ostinato*. Unable to stand the denouement, Tom tries to get away but cannot escape the laughs and cries of the children, and the viewer the frenetic repetition and crescendo of the musical theme, until the children's outburst of jubilation signals the end of their game and the macabre episode. Here, the soundtrack has a dual effect. On the one hand, the minimalist and repetitive musicalization heightens the perception of the image, bringing it closer to the mind-set of the traumatic event itself. According to King, just as our mental state is affected by an unresolved conflict, the audience is immobilised by continuous repetition of the same event, generating a potential state of anxiety that may be prolonged as long as the sound is present (King, 2010). Besides this, the progression of the children's voices acts as an ellipse that allows us to imagine the graphic denouement of the scene, despite not actually seeing it. Minutes beforehand, both the characters and the audience have seen what the piñata game in Benavís is all about, taking in the children's outburst of jubilation when it bursts open, scattering its contents on the ground; the children hurling themselves upon it to collect their prize. The perfectly-judged sound that accompanies this episode in the barn in Almanzora allows both Tom and the audience to imagine any similarly horrific outcome of the scene. The theme reappears at other times in the film to represent the identity of the children, and occasionally with variations that add specific meaning to the narration, as in the scene described above. It appears during the local survivor's account of the children's rebellion, with the same air of compelling lyricism that hung around the image of the old man's corpse. It is not surprising that the character continues to repeat that the children "looked like they were playing", echoing the lie Tom tells Evelyn when she asks him what happened before: "the girl was playing with the old man", he tells her. In this situation, with the aggressors' status of being children still counterbalancing the facts, the last interval of the entire theme (G →C) imbues the melody with an innocent, luminous brilliance, whereas at more serious moments the interval is noticeably reduced (F →C) for a more sombre resolution. Variations in instrumental register can also be heard in addition to the melodic variation. Once Tom has decided that he is prepared to hurt the children in order to ensure their escape, he crosses the island by car with Evelyn to return to the village, only to immediately be met by the children in the middle of the road. The extremely low brass rendition of the theme that accompanies this meeting – and which is unique on the soundtrack – attests to his fierce determination. Lastly, just as the film opens with the theme, the way it closes should be noted; this time with a full orchestral version that is openly optimistic and completely differ-

ent to that heard throughout the drama, embodying the children's triumph, their innocent joy and the promise of a new future. The musicalization of the images, with the children happily cheering and waving goodbye to the boat with their playmates aboard destined for the continent to continue their crusade, completely breaks free from the expected conventions of the genre and provides an original and worthy ending to the film and its musical soundtrack.

The adults' theme. An end to hope

There is also a counterpoint to the children's musical theme associated with the adult characters in the film. This is secondary to the film's central themes and, like its predecessor, is used to create a recognisable identity that enables meaningful elements to be added to the narration. Tom and Evelyn's theme (Figure 2) unfolds in four-bar phrases and achieves a certain level of complexity compared to the children's theme. It is worth considering that this more sophisticated production may be an intentional way of also reflecting the greater complexity of the adult world, although it may also have been conceived for a simple practical reason: producing fewer variations compared to the children's theme would have given the composer the freedom to use greater metric richness. In any event, it preserves the same sweetness as its predecessor yet is more openly romantic in nature, and it matches the apparent simplicity of the main couple.

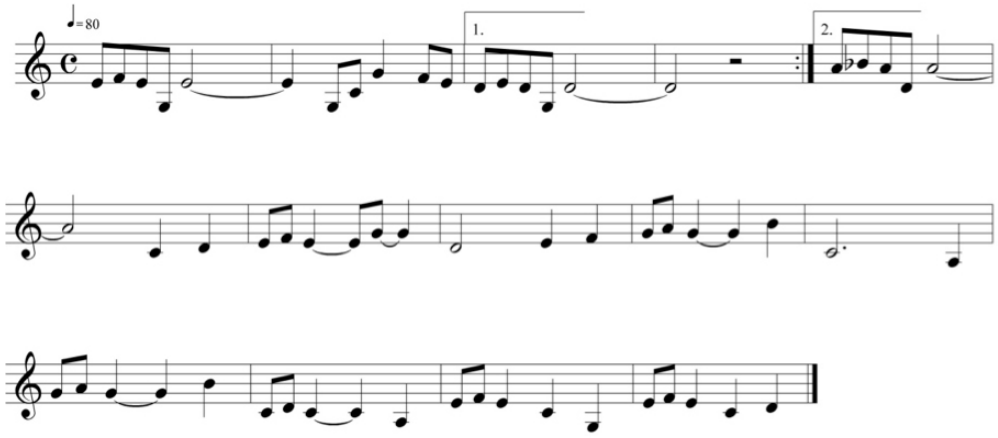

Figure 2. *Who can kill a child?* The adults' theme.

The adults' theme is not played the first time we see the characters; its modest inauguration is delayed until their first moment of privacy, in the bedroom at the Benavís guest house where they have found accommodation. It unfolds timidly, barely audible, whilst at the same time the couple's internal world is revealed and their fears and flaws laid bare; their fears for children living in the adult world and Tom's initial wish that Evelyn should have an abortion are disclosed. With the same hesitancy with which these issues are revealed, the musical theme is heard faintly on a secondary layer of sound, eventually suc-

cumbing to the sounds of normality and abstraction provided by the noises of the local festival, with the main characters rounding up the conversation by joking about Fellini and the idiosyncrasies of Italians. The delay in introducing the musical theme draws special attention to these intimacies and offers an interpretation as to why the couple seek out solitude on their trip; possibly to overcome the conflict brought about by differing reactions to the forthcoming birth of what will be their third child. This interpretation would also introduce an additional layer to the plot, as in addition to completing the characters' psychological characterisation and their motivations in the film, a heavy dose of macabre irony is added when the horrific events on Almanzora begin and we witness what fate ultimately has in store for the unborn child. The musical motif reappears a few minutes later when Tom and Evelyn set off for the island in a rented boat. The build-up of the theme is then complete. Now in the foreground and fully orchestral, together with the light-hearted, animated conversation between the characters it encourages us to believe they are now free from the apprehensions expressed in the room at the guest house and that these are the first steps back to normal life.

By comparison, this musical theme appears much less than the children's theme. It plays during the two events just described, after which it leaves the starring role to those who at the end of the day are central to the title of the film and most of the moral issues presented. It vanishes from the scene just as Tom and Evelyn's earlier worries that it alluded to, which now seem trivial and have been replaced by new and more pressing fears about the inhabitants of the island. It does not appear again until the last sequence in the film, when it accompanies Tom from the moment he kneels to kiss his wife's body and during his grief-stricken walk until he once again confronts the image of the children gathered in the village streets. Resigned, the character raises his gun, ready to face down the moral issue at the centre of the film, while the camera moves over the smiling faces of the children, their expressions as innocent as ever. The sound of gunshots brings a swift end to the theme and marks the start of the frenetic musicalization of the final escape. The languid, melancholic nature of this last time it appears is in sharp contrast to the version during the boat trip, both in terms of the viewer's perception and in the character's eyes, which gently flow with tears. The music allows us to guess at the thoughts running through the mind of the main character; his memories of Evelyn, the now distant hopes of returning to their life together and the still challenging conflict between his principles and the angelic image of those responsible for her death. The title of the track on the musical soundtrack LP produced at that time – "Sunrise without Evelyn" – appears to confirm this was the intention of the design.

Conclusion

Who can kill a child? is without a doubt a masterpiece of film making that stands out among contemporary horror film production in Spain. Different film history sources have taken it upon themselves to emphasise this position, trying to place it appropriately according to its role in the development of the genre, and some have even decided to undertake a deeper critical approach to its unusual content. The status the film has achieved both in Spain and abroad and the recent academic attention it has drawn have taken account of its visual impact, plot line and historical issues, confirming the attributes that make it unique and helping to gradually unravel the details that explain the real reasons behind the special reception it has enjoyed. As this article has tried to show through the preceding paragraphs, the soundtrack of *Who can kill a child?* can be an invaluable complement to these interpretations. It can help it break free of the usual and straightforward aural and atmospheric perceptions in order to build structures of meaning that are hard to achieve using other media, increasing the textual richness of the film and its inquiry into its surroundings.

Considering the admirable audiovisual structure it supports, the music has not gone completely unnoticed in the different critical accounts of the film, although no more than a brief admiring mention of the work by Waldo de los Ríos has been made, perhaps pointing to prejudice towards horror music composition in Spain. This being one of the composer's last compositions for film, it seems fair to recognise his obvious contribution to its success when evaluating it nowadays, and to reclaim the portion he was responsible for back from the visual domain. If, like Lázaro-Reboll (2012) we identify the real start of *Who can kill a child?* as the fleeting image of the child prisoner of war, then the first bars of the main theme sadly go unnoticed, and with them the extraordinary contrast between what the audience might imagine upon hearing the sweet, childish melody on its own and the subsequent rawness of the image. If any of these prejudices are to be overcome, it should be possible to recognise the score by De los Ríos as a valuable compilation of compositional resources for the musicalization of the disturbing, which is as notable among contemporary productions in Spain as the position of the film itself, and that perhaps, within its very bars, there resides a true symphonic apologia for horror.

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