The Music that Children Listen to in Movies, Series and TV Documentaries. An Empirical Study on its Meaning

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The Music that Children Listen to in Movies, Series and TV Documentaries. An Empirical Study on its Meaning

Amparo Porta
Department of Education,
Àrea Didactics of Musical
University Jaume I,
CASTELLÓN, Spain
E-mail: porta@edu.uji.es

Abstract – Résumé
Numerous authors find that music in audiovisuals has a major impact, but little research has explored its repercussions for children. This article reports research on musical interpretations in children's films, series, and TV documentaries. It describes an observational experience based on 11 year-old children's favourite audiovisuals, the design and application of questionnaires, and the quantitative and qualitative results of the case study obtained from the audiovisual experience of sequences edited in three versions and applied in two public schools. The results reveal the meaning and sense of music in the selected audiovisuals, and also demonstrate how meaning is lost when the soundtrack is removed. The results confirm that music provides elements related to space, time, emotions and context that persuasively configure scenarios, characters and values. The study prepares the basis for educational interventions to foster understanding of the sound habitat through general education and musical education in particular.
Keywords: music education • childhood • soundtrack • audiovisual · film • television • communication • effects

Introduction

During childhood boys and girls develop their identity through immersion in what they find in their environment. In this life-long process, film and television form a major part of this reference landscape which, through a multimodal communication system, breaks down the boundaries between its various component languages. This paper addresses the effects of film and television music in childhood. We used the samples and research design presented here to identify these effects through a study, the results of which we report in this article. The study used edited audiovisual sequences, two questionnaires, interviews and discussion groups. The first questionnaire explored the children's audiovisual tastes and preferences; the second, in conjunction with interviews, examined their interpretations of the music, the image and the story in the audiovisuals. This study is part of a wider research project that aims to further understanding, from an educational perspective, of the sound context

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today's children inhabit. The focus of interest in this study lies in exploring some indicators of the meaning and sense of music applied in a selection of favourite audiovisuals. To this end we used audiovisual viewings, two questionnaires, preparatory meetings in the schools and open discussions with each group.

New Manifestations of Popular Music in Daily Life

Audiovisuals are part of the child's everyday environment, within which music and the media form an inseparable binomial that operates in a complex way and has effects on childhood that are not well understood. Children spend many hours in front of screens watching and listening to a world filtered by the media. Our focus is on the second action, listening. Our interest and final objective lie in understanding the ways children listen. Films and television programmes are made according to industrial production criteria and processes, but they are always listened to individually (Benjamin, 2006). They therefore form an irreversible part of the listener's perceptual, meaning and sensory framework, and are assimilated from the sonic environment into the social functions of popular music proposed by Frith: creation of identity, management of feelings, and organisation of time (Frith, 2002). We approach our research objective first by considering the soundtracks of children's films and television programmes as a form of text or discourse (Louis, Lawrence and Keith, 1994), and second, in relation to this, by trying to understand and find out more about their ways of listening (Porta, 2014).

Audiovisuals as Constructors of Reality

Various researchers have studied audiovisuals as constructors of reality in childhood (Vygotski, Hanfmann & Vakar, 2012; Hoffner & Cantor, 1991; Cook, 2000; Young, 2009; Shelemay, Chazir, Odetta, Connolly & Connolly 2006; Aronowitz, S., 1991). More specific research on music in this field includes Porta (2011; 2007), Aguaded (2010), Morley (2003), DeNora (2000), and Sloboda (2005). Music in film has been studied by renowned authors such as Chion (2013), Adorno (1976) and Hauser (1999). Tan describes the multiple functions of film music, such as the way it transmits emotions by intervening in the tension and in events and characters, and how all of this is associated with complex mental processes empirically identified in multimedia contexts (Tan et al., 2013). Different authors (Cook, 2009; Gorbman, 1987) distinguish between expressive functions and meaning/narrative functions in their work on the functional analysis of music. Likewise, Román (2008) takes a semiotic approach to study the meaning of audiovisual music from its initial sign position to the final meaning the viewer takes from it. This planning is also coincident with that of Porta, Peñaver and Morant pre-

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senting the analysis of the music of the opening ceremony of the London 2012 Olympic Games (Porta, Peñalver and Morant, 2013).

But above all, children's audiovisuals tell stories and create worlds. This perspective includes contributions by Wallace (1987) on music in film as a narrative tool, and studies by Cohen, Bryant, & Vorderer (2006), Davis, Hull, Young & Warren (1987), Altenmüller, Schürmann, Lim & Parlitz (2002) on emotions, with references to psychoanalysis, using open questionnaires and post-viewing interviews in their study. In childhood research, the Israeli educational psychologist Gavriel Salomon has developed some outstanding instruments and procedures to explore the cognitive effects of the mass media. Salomon establishes an empirical theory about the media as a mode of representation with its own symbolic systems. This author's interest lies in thought and learning processes, in the study of which he uses cognitive development, psycholinguistics and mass communication as a base for a series of case studies on the singularity of mental processes, their specific skills and symbol systems (Salomon, Perkins and Globerson, 1991).

Ways of Listening

The use of various semiotic modes in the design of an event or product – and the particular way they combine – fulfil complementary, ordered roles, thereby providing reinforcement, narrative and hierarchy (Kress & Van Leeuwen, 2001). The term 'modes' arises from the separate application of individual components (language, image, music, sound and gesture) in film and television studies, a system that is considered to be flawed (Kress & Van Leeuwen, 2001). Film and television soundtracks form part of children's everyday experience (Porta, 2011; 2014). For that reason, educational and academic approaches must analyse tastes individually in order to discover the way each person experiences and describes music (Frith, 2007). This approach has not appeared in isolation, but coincides with intercultural studies and critical pedagogy (McLaren & Kincheloe, 2007; Hargreaves & North, 1999). In music education Swanwick (2002) offers a new angle on the study of this phenomenon, establishing three modes for musical development related to listening: the *idiomatic*, the *symbolic* and the *systematic*. Of these three we highlight the systematic mode, through which the musical experience is transformed into conceptual schemas for complex comprehension and analyses. The third element we highlight comes from the work of Pelinski (2007), Wallin & Merker (2001), Deliège & Sloboda (2004), Deliège (1987), Clarke (2005), and Boal-Palheiros & Hargreaves (2001). Based on ethnomusicology and psychology, this author refers to three modes of listening in the sonic environment: natural listening, directly linked to sensation and the preconscious state; reduced listening, linked to perception, the state of alert consciousness and analytical and conceptual functions; and privileged listening, combining emotional and analyti-

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cal processes, direct pre-conceptual perception and awareness of the musical properties of the experienced object.

Exploring Interpretation of the Meaning and Sense of the Soundtrack

Meaning and sense are constructed through a process that begins by immersion in the reference habitat, and develops until it is understood. Thus, the act of hearing passes through the listening process by means of auditory perception. This first thought-generating element is constructed through a procedure of selective attention to certain elements governed by the laws of perception: the structural unit, perceptual constancy and figure-ground perception (Porta, 2014). In this way a cognitive 'footprint' is created and forms the base on which to build the structure of musical comprehension and sense of the sonic world. Audiovisual music is discursive and multimodal. It is a space that arises out of interaction in which a story is told with sound, music and moving images, and it all happens in a space-time where the characters create fictional worlds. This exploratory paper examines the meaning and sense of audiovisual music for children from an educational, cultural and musical perspective and must therefore take into account the facets and languages of this type of music (Ma, 2014).

We thus have three elements that are necessary to answer the questions underpinning our research design: 1) the territory, film and television as spaces of communication, 2) meaning and sense, as studied by semiotics, and 3) their comprehension in childhood, approached from a psychological angle with consequences for education. The first, communicative element will be studied through its discourse (Porta, 2007). The second is meaning and sense. According to De Saussure (2011), meaning is the mental content given to the linguistic sign, and according to Peirce, it is the interpretation of the sign (Peirce, Bonfantini & Grassi, 1980), whereas sense alludes to the presence of the viewer in the discourse (Greimas, 1970). Finally, we explore the third element, comprehension, with contributions from cognitive psychology applied to film and television. The first of these is the information processing approach, which follows elementary units of analysis; and the second, restructuring theories (Pozo, 1989). This second stream, clearly 'anti-associationist' in concept, is represented by Piaget (2013), Vygotsky (1996) and the Gestalt school (Koffka 2013; Perls & Stevens, 1969). These contributions take an analytical approach based on molar units that is valuable to our study. In sum, therefore, following this integration of perspectives the study design must take into account modes, it must use molar units of analysis, and it must be individually based. For the first, we create dissociated versions of the audiovisuals, for the second we use complete scenes or sequences from the children's favourite audiovisuals, and for the third we seek coincidences and differences through open and closed questions.

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Quantitative analysis was used for the numerical data, together with qualitative analysis in the form of content analysis to explore output from the open responses and the discussion groups. This paper describes the research design and the questionnaire results, with the following objectives:

Objective 1. To discover the favourite audiovisuals of a sample of 11–12 year-old children.
Objective 2. To learn what meaning and sense music has for them.

The case study was carried out among sixth year primary school children. The purpose of the paper is to find out the meaning and sense, based on their own interpretations, of the soundtracks from the children's favourite audiovisuals. We report the general design, the application of the questionnaire in two schools, the numerical results, and the content analysis of the open questions. The case study aims to explore the children's singularities and to establish a pattern for proceeding in future studies, in line with previous research by Gavriel Salomon, Ma (2014), Tan et al. (2013) and other authors cited in the introduction.

Method

Research design

The study combines descriptive and communicative elements based on quantitative analysis of preferences and qualitative analysis of musical and narrative content. The research first uncovered the audiovisual preferences of a sample of children, followed by further exploration of the meaning and sense of the soundtracks through indicators on listening and narrating from edited versions of the highlighted preferences. The sample was made up of children from schools in the researchers' locality.

Sample

Two groups of children and two groups of adults were designated different tasks. The first group of 115 children, aged between 10 and 12, was formed to learn about their tastes in audiovisuals, and the second group was the case study, made up of 48 sixth year primary school pupils from public schools in Castellón, Spain, to study the presence of music and its meaning in the audiovisual narrative.

Two groups of adults were involved in the preparatory and analytical tasks. The first group was made up of teachers from the schools in the study and the test administrators. Their role was preparatory and involved meetings to organise the

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protocol for watching the audiovisuals and administering the related question-naires. The second group was made up of experts responsible for the musical and narrative analysis of the selected audiovisuals.

Measurement instruments

Three instruments were used: for *objective 1* the favourite audiovisuals question-naire Q1, and for *objective 2*, 24 series of scenes, each edited in three versions (sound only, image only and total) and the associated observational questionnaire Q2.

Instrument 1. Favourite audiovisuals (Objective 1)

Following an initial discussion among the project researchers, an ad hoc questionnaire was designed, which after a revision stage was approved for application. The first section gathered general information about the respondent (age, sex, place of birth and residence), the researcher's identity, group character-istics and trial conditions. The second section contained questions on the children's preferences in films, series, cartoons and documentaries.

Instruments 2 and 3. Observational study (Objective 2)

Various stages and three instruments were introduced to pursue *objective 2*:
(1) The first stage involved training in observation techniques.
(2) In the second stage the sequences and scenes of the favourite, highest-scoring audiovisuals were selected.
Selection of 14 sequences from the children's favourite audiovisuals:

CODE	CLIP	TIME
F1	The Croods	1'52''
F2	The Lion King	1'51''
F3	Oz the Great and Powerful	2'10''
F4	Titanic	1'31''
F5	Toy Story III	1'57''
C1	The Simpsons	2'35''
C2	SpongeBob	1'46''
C3	Doraemon	1'54''
C4	Dragon Ball Z	1'54''
S1	Violetta	2'28''
S2	La que se avecina	1'24''
S3	Good Luck Charlie	0'50''
S4	iCarly	1'02''
D	Swamp Lions	1'57''

F: film; C: cartoons; S: series; D: documentary

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- Preparation, edition and codifying of the clips in series using the Pinnacle program
- Preparation of sequences in the three versions (sound only, image only and total).
(3) The third stage: measurement instruments 1a and 1b; series created in versions and associated questionnaire.

Instrument 1a. Series of three audiovisuals in three versions. Once selected, the scenes were chosen, taking into account their music, image and place in the story, and edited in the three versions: sound only, image only and total. The questionnaire on the audiovisual experience was then prepared with a focus on the listening, ensuring that the questions were age appropriate.

Instrument 1b. Observation questionnaire Q2. This instrument was designed to capture the children's attention while they watched the extracts; the factors that guided the questionnaire design were the same core elements identified as the base for the research: molar units of analysis, individual expression through open and closed responses, and interviews. Questionnaire Q2 was interpretative in that it sought to determine the meaning and sense in these audiovisuals. We used open questions, closed yes–no questions and items assessed on a Likert scale.

Questionnaire Q2

This instrument contained 164 items grouped into six categories and four sections:

Categories

Categories your items and description

- Space and time contextuals (1–7). Questions about orientation and situation
- Characters and story (8–22). Questions about the narrative
- Musicals (23–32). Questions on musical and sound references
- Genre (33–36). Questions on the type of audiovisual
- Emotional ítems (37–42). Questions related to their involvement in the story
- Evaluation (43–60). Asked them for a critical view of the experience

Sections

- Section (a) gathered sociodemographic information, data about the evaluator, the series, and the evaluation of the experience.
- Section (b) (sound only) was divided into the six categories described according to the reception of sound.
- Section (c) (image only) contained the same six categories (complementary to section b), according to the visual reception.
- Section (d) (total) asked for their interpretation of the audiovisual.

In this paper we examine 48 questionnaires using quantitative analysis for the results from the closed questions and content analysis for the open questions.

General observational study of the project in schools. General preliminary arrangements for the project were made covering the schools, groups, classroom, timetable, conditions for the trial and its application. Preparatory meetings were held with the music teachers and tutors about the screening, the questionnaire, the discussion, the conditions for the trial and the necessary authorisations.

This paper reports the results of the project in two schools in Castellón (Spain), which gave rise to the procedure to develop the line we begin here based on a collection of case studies.

Procedure

The procedure consisted of administering the questionnaires (Q1, N=115) and (Q2, N=48), preparatory meetings in the schools and open discussions with each group on particular aspects of each of the versions of the clips, and expert analysis of the musical contents.

A mixed method was followed. The questionnaire (Q1) was designed to discover the children's audiovisual preferences (numerical data). The preferences with the highest scores for certain scenes were then selected, and the music and narrative of the soundtracks were analysed following criteria established by the expert group. Three versions were then created from these sequences: 'sound only' 'image only' and 'total'. We then filmed a pilot session with two small groups of three girls and five boys from the immediate environment of the project researchers and collaborators. This recording was then studied and discussed by the expert group which identified three problems: the setting was not suitable; the children felt they were being observed; and the extracts did not hold their attention continuously. These problems would prevent us from obtaining results on how the children had received and interpreted the audiovisuals. The solution adopted was to design a questionnaire with open and closed questions, followed by discussion groups. The questionnaire was administered in the school context, after meetings with the teachers responsible. An ad hoc questionnaire Q2 was then designed with questions relating to each of the three versions. These were both closed yes–no questions or responses on a Likert scale, or open questions to which content analysis was applied.

Finally, the session was recorded and content analysis of the transcript was conducted, as initially planned.

In sum, to investigate the children's reception of the music, the sequences were selected, the versions edited, the audiovisual experience carried out, questionnaire Q2 applied and the meanings explored and debated in the discussion groups.

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The Session

The session took place on 12 June, 2014. In the first school the classroom was prepared at 9am and the session began at 9.30, and in the second, the classroom was prepared at 10.30am and the session began at 11.00. The two sessions lasted approximately one hour. Both cases took place in public schools: CEIP1 is located in the centre of Castellón and has a high immigrant population, whereas CEIP2 is in a middle-class neighbourhood, also in Castellón. The session involved 48 children from two groups of primary school year sixth grade (11 years). The class tutors accompanied the children and the sessions took place in the schools' multi-purpose classrooms. The questionnaires were handed out and initial information was completed with the name of the evaluator and the series reference number. A digital recorder and a digital video camera were used, to which the children paid little attention. The protocol followed in the session was as follows: an explanation of the activity was given; questions and comments were read out; the children watched the sequences; they filled in the questionnaire and discussed the experience. Each film, series and documentary extract was shown in the three versions of sound only, image only and the total version, and the questionnaire was then completed.

Schools and versions. The results were similar in the two schools, with differences in the temporal and most evocative variables in categories 1, temporal variables, and 5, involvement in the story. The study of the versions is explained in detail below.

Results

The results obtained for each objective are now reported.

Results objective 1. To discover favourite audiovisuals

The results from the 115 questionnaires on the children's favourite films, series, cartoons and documentaries were varied. Percentages are reported in the following Table I:

Table I. Favourite audiovisuals.
Series for young people set in a Spanish secondary school

Type	Title	%
1. Films	The Croods	6.1
	Oz the Great and Powerful	3.5
	The Impossible	5.2
	The Lion King	4.3
	Titanic	3.5
	Harry Potter	2.6
	Toy Story III	2.6
2. Series	Violetta	12.2
	La que se avecina	10.4
	Good Luck Charlie	4.3
	Code Lyoko	4.3
	Austin and Ally	3.5
	Big Time Rush	3.5
	iCarly	3.5
	Jessie	3.5
	Dragon Ball	2.6
	Física y Química	3.5
	The Simpsons	2.6
	Shake it up	2.6
3. Cartoons	The Simpsons	24.3
	Phineas and Ferb	20.9
	SpongeBob	8.7
	Adventure Time	6.1
	Doraemon	5.2
	The Amazing World of Gumball	4.3
	Dragon Ball Z	3.5
4. Documentaries	No titles were specified; the children only reported a preference for nature and animal documentaries	

Results objective 2. What meaning and sense does the music have?

Fourteen audiovisuals were used, selected from the previous section and prepared in the versions of sound only, image only and total. Three audiovisuals were used in the case study: the Disney film *Oz the Great and Powerful,* episode 20 of the series *Violetta* and the documentary *Swamp Lions.*

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I. The Film, the Series and the Documentary. The Stories and Their Music

Oz the Great and Powerful. 2013, Walt Disney Pictures (USA), 130'. Director Am Raimi. The film tells the story of the origins and transformation of a good, powerful magician. The classic soundtrack, by musical director Danny Elfman, includes contributions from artists such as Mariah Carey, among others. The scene selected (2'10") depicts a terrifying trip in a hot air balloon. Music: the scene begins without music, with background sounds of high wind, banging, shouting and whistling made by whipped strings. The protagonist is in danger; he asks for help and forgiveness. There is a dramatic switch to cosmic, electronic sound followed by fairground music with a barrel organ and then symphonic music again with wind and string instruments. The extract ends sequentially with the fluttering of a bird's wings, strumming guitar, gong and orchestra. Extra-diegetic music.

Violetta. Disney Channel. 2012. An Argentine international coproduction with countries from Latin America, Europe, the Middle East and Africa, starring Martina Stoessel, it tells the story of a teenage girl who returns to Buenos Aires where she finds love and discovers her passion for music. We selected episode 20 for the trial. The scene (2'28'') portrays the rehearsal for a television performance in which the characters must kiss. The scene is divided into three parts: it begins on the set with the duo Violetta and Diego rehearsing the recording of the song *Si es que yo soy así*. At the moment of the kiss the incidental background music comes in with an electronic pizzicato; this incidental music carries the dialogue with a leitmotif linked to the word 'kiss' repeated various times, ending suddenly and finally reappearing in a new design. Diegetic and extra-diegetic music.

Swamp Lions. Origin *National Geographic* (NatGeo) Documentaries TV USA**.** 2014. The scene shows lions hunting gazelles (1'57"). Music: the sequence is divided into three parts in which the narrator's voice is only heard in the last one. It uses low tessitures with very short high passages, designs of sustained notes and arpeggios played by string instruments; the orchestral timbre includes all instrument families with marked percussion. The sound planes are not mixed; each one has its own function: the narrator speaks and the music describes the scene and the emotional setting. Descriptive and incidental extra-diegetic music is used.

These three sequences were applied in the three versions at both schools in order to discover the children's individual interpretation of each audiovisual screened. The sequences and versions studied are reported below:

SEC 19 in School 1
F3S Oz the Great and Powerful 2'10' (sound only)
S1I Violetta 2' (image only)
DT Swamp Lions 1'57" (total)
Total sequence time 6'07''

SEC 20 in School 2
F3I Oz the Great and Powerful 2'10" (image only)
S1T Violetta   2' (total)
DS Swamp Lions 1'57" (sound only)
Total sequence time 6'07"

S: Sound; I: Image; T: Total; D: Documentary; F: Film; S: Series

In the observation sessions the children from schools 1 and 2 saw and heard the sequences and their versions in the order indicated: Oz the Great and Powerful, Violetta and Swamp Lions.

Each of the two groups watched and heard three sequences selected to coincide in audiovisuals and to be complementary in versions, in the version and order noted, with a break after each sequence to complete the corresponding section in the questionnaire and open up the debate.

We now describe some of the most notable results: 1) The sound only version by categories and 2) comparison of versions

Sound Only Version by Categories

The sound only sequences are accompanied by a black projector screen as part of the series in which children only watched, only listened, or watched and listened.

After watching the sound only version, the children completed the corresponding section in the questionnaire (pages 2 to 4).

Space/time contextuals: 79.2% said the story occurs during the day, and 62.5% said it takes place at various times.

Characters and story. The results show that 81.3% of the children perceived a place of danger from listening; 47.9% got involved in the story; and 70.8% were not indifferent to the story.

Musical: 91.7% agreed with the statement, *the story had music*, although only 54.2% remembered hearing instruments, and far fewer were able to say which instruments they had heard.

Emotional: 39.6% responded positively to the statement *I would like to be in this story*, and 47.9% to the statement *I imagined how I would feel*.

Evaluation of the experience: 64.6% enjoyed the activity, 54.2% said they were not indifferent to what they had heard, and 64.6% said the experience had not been difficult. When asked whether *it was disorganised* they said it was not/only a little in the following percentages by audiovisual types, *film* 52.1%, *series* 66.5% and *documentary* 89.4%.

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Comparing Versions by Categories

A more detailed study of the previous section reveals the relevance of sound in the experience.

We begin by reporting the results for the category *Evaluation of the experience (liking)* as an indicator of motivation towards the activity:

By Version (Figure I, p. 324)

It kept me interested: 83.3% said it was very / quite interesting for sound only and 70.8% for image only.

I was indifferent to what I heard: 54.2% responded not at all / a little for sound only, compared to 8.3% for image only.

I enjoyed doing this activity: 64.6% said they enjoyed the activity a lot for sound only, compared to 6.3% for image only.

I found this activity difficult: 64.6% responded not at all / a little difficult for sound only, compared to 83.3% for image only.

What I saw/heard was disorganised: 52.1% responded not at all / a little for sound only, compared to 50.0% for image only.

Evaluation of the Experience (Liking)

Selected items:

   It kept me interested.
   I was indifferent to what I heard.
   I enjoyed doing this activity.
   I found this activity difficult.
   What I saw/heard was disorganised.

The results show positive scores for the sound only version in all items, and higher scores than image only in four of the five items. The 64.6% positive response to *I enjoyed doing this activity* is notable for the sound only version compared to 6.3% for image only and 62.5% for the total version. Responses to the item *I found this activity difficult* revealed greater difficulty in the sound only version (64.6% said not at all–a little) compared to 83.3% for image only, with the highest score for the total version. The sound only version of the film obtained the highest scores for this item.

Space/time Contextuals
Selected items:
   In the story it was daytime
   It took place at various times

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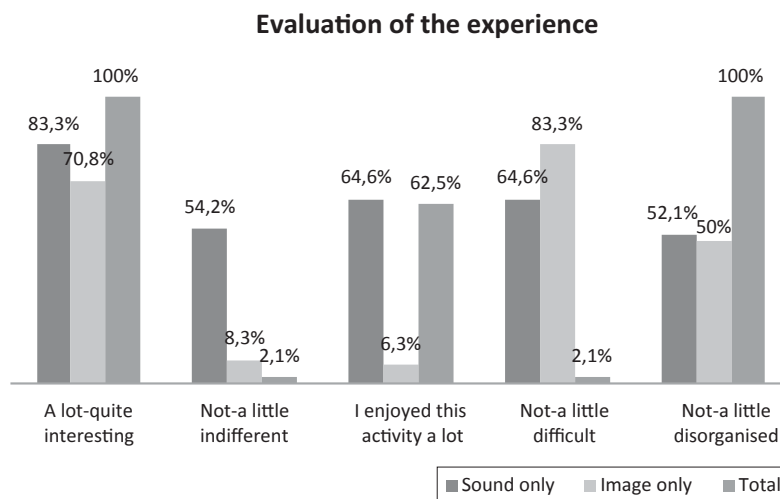
Evaluation of the experience

Figure I. Evaluation of the Experience. *Liking*

In this section we present the results by versions, highlighting the sound only scores for the two items: *In the story it was daytime* and *It took place at various times*. The score for the second item was 35 points higher: 62.5% in the sound only version compared to 32.5% in the image only version.

The highest percentage of responses to the statement *In the story it was daytime* by audiovisual was for the sound only documentary (52%), and to the statement *It took place at various times* the highest percentage was for the sound only version of the film *Oz* (37.4%).

Characters and Story
Selected items:
    The place where the characters are is dangerous
    I got involved in the story
    I was indifferent to the story I heard

The results by version relating to perception of danger item are subject to, and therefore depend on, each plot. The results for the other items were as follows:

In the sound only version, 47.9% of the children said they got involved in the story, compared to 58.3% for the image only version.

In the sound only version 29.2% said they were indifferent to the story, compared to 16.7% in the image only version.

By audiovisual, affirmative responses were as follows:

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The place is dangerous. Swamp Lions sound only 89.6%,

I got involved in the story: *Oz the Great and Powerful*, image only 57.1%; *Swamp Lions* sound only 47.8%.*Violetta* image only 68.0% *Swamp Lions* sound only 57.1%.

I was indifferent to the story: *Violetta* image only 68.0%; *Swamp Lions* sound only 57.1%.

Musical

We now present the results of versions and audiovisuals for musical content in Figure II:

Selected items:
The story had music
We heard/saw instruments

Musical by audiovisual
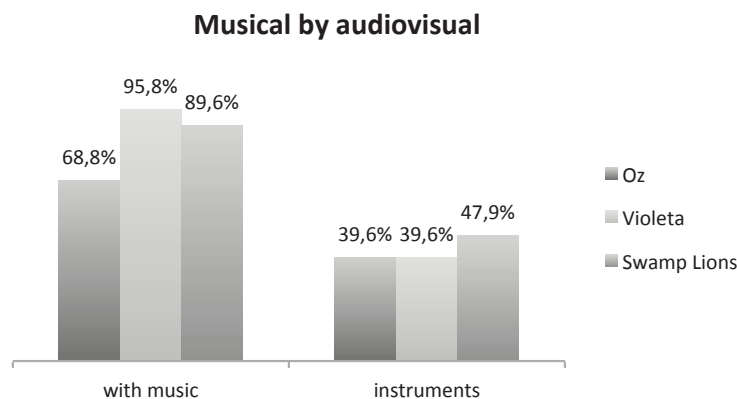
Figure II. Musical by Audiovisuals

Responses by version. 91.7% said they perceived the presence of music, and 54.2% noted the use of instruments.

Instruments cited. *Film: violin (3), trumpet, accordion (6), harp (2), piano, violin family, clarinet, piano (2), bass, violin, xylophone; Documentary: bongos (4), drum (2), bass drum, percussion instruments, violin and maracas.*

By audiovisual. 68.8% stated that they heard music, and 39.6% distinguished instruments in *Oz the Great and Powerful*; 95.8% heard music and 39.9% perceived instruments in the music in *Violetta*, and 89.6% heard music and 47.9% perceived instruments in the documentary *Swamp Lions*.

Emotional

We present the results by version and audiovisual to discover the emotional involvement with the series or film in Figure III:

Selected items:
I would like to be in this story,
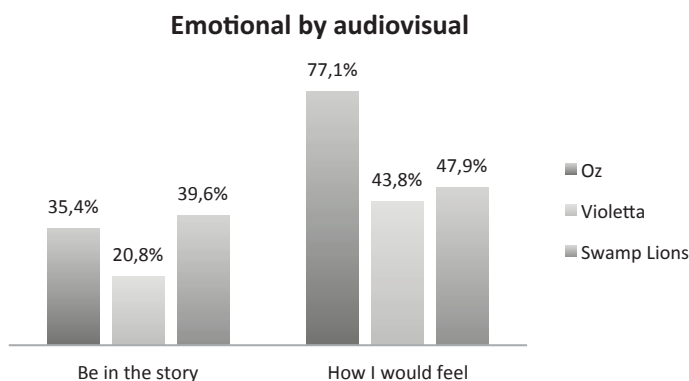I imagined how I would feel

Emotional by audiovisual

Figure III. Emotional by Audiovisual

By versions the results were influenced by the subject and therefore require a more detailed study based on the overall results shown here:

39.6% agreed with the statement *I would like to be in this story* for the sound only version compared with 31.3% for the image only version.

47.9 % agreed with the statement *I imagined how I would feel* for the sound only version compared with 66.7% for the image only version.

By audiovisual, the result of 45.9% in agreement with the statement *I imagined how I would feel* in the sound only version of *Oz the Great and Powerful* is particularly noteworthy.

Content Analysis. Open Questions

In this initial exploration we compared various versions using the sound only reference for each audiovisual:

In response to the question *What do you imagine the place is like?* referring to the film, the children spoke of natural phenomena such as storms, rain, wind or tornados; psychological phenomena such as the dark, dangerous, unhappy; and landscapes with water such as a river, forest, port, ship. For the documentary the

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results are influence by the narrator's discourse although the children use expressions that are obviously not direct quotes. Some of the descriptive and evocative expressions referred to are dry landscapes such as the savannah, the desert and Africa, and environmental factors such as a hot place, midday, open space, very hot, or weeks without rain. They use descriptive phrases such as *a little forest next to a herd of gnus that a lion wants to catch; A jungle at midday full of animals (birds, lions, gazelles); It tells the life of an animal; A dangerous jungle in Africa where the animals have a lot of problems.* The descriptions and evocations they mention in reference to the series *Violetta* are *classroom, studio,* and the *stage.*

We obtained similar results in the image only version, although with more descriptions of atmospheric phenomena and colours, and fewer references to situations and emotional climates.

In response to *What happens in the story you heard?* they said:

Documentary**:** *The animals hunt; A herd of animals is in a dangerous jungle in Africa and they are in danger; A lion appears chasing another animal; An animal runs through the jungle to hunt; I don't know, but it was interesting; At the beginning it seemed to be about the hunt, they were going to kill the lion and when they are on the point of catching it they start running.*

Film: *A ship sinks; they are in danger; they climb a mountain; they want to kill someone.*

Series: *descriptive aspects of the rehearsal.*

Musical. In response to the question *What do you think the music is for?* the children spoke of dramatic effect, feelings, emotions and intrigue.

Conclusions and Discussion

This article addresses the effects of audiovisual music in childhood through a research design involving listening modes and meaning and the individualised interpretation of 11 to 12 year-old primary school children studied in detail in two groups. The study of favourite audiovisuals met the first objective: the children stated their preferences in films, series, cartoons and documentaries in preparation for the second objective, namely, to learn what meaning and sense music has for them. The audiovisual experience involving three versions of selected scenes revealed some coincidences and differences. Broadly speaking, we demonstrated how the soundtrack lends meaning and sense to the audiovisual narrative. The study verifies the importance of sound, showing that it is what holds the children's interest even when the image is removed. For this reason, as a response to the second objective the case study shows that music has meaning for children in aspects related to the categories analysed, namely space–temporal perception, definition of characters and story, emotions and musical recognition. Exploring these categories enabled us to approach the audiovisual meaning by isolating its components, and demonstrating how the experience of sound makes sense and in

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many cases is more meaningful than the image. When the soundtrack is heard on its own, interest is sustained; this version demands greater levels of attention, but it raises children's levels of motivation more than the image only version. In their open responses, the children described the scenes they had heard, spoke of the music, sounds and silences with which they perceived the action, intrigue, and physical and psychological atmosphere. All these factors are transmitted through a soundtrack employing descriptive and incidental music diegetically (*Violetta*) or extra-diegetically (*Swamp Lions* and *Oz the Great and Powerful*), using a formal structure in symbiosis with the scene that blends timbres, registers, types of sounds and sound planes. In this paper we have explored one of the many possible case studies in a project in which we have undertaken numerous experiences. From this and subsequent studies we hope to obtain indicators of trends by extending the number of case studies once the efficiency and value of the present study have been demonstrated. We provided children with a voice to express their audiovisual experiences in terms of music in an attempt to develop a pattern with which to explore the process. This research design and the results from two primary schools, therefore, has produced a model for studying listening based on individual responses to audiovisual scenes previously highlighted as favourites in a sample of 11-year-old children.

The study has shown how the music in audiovisuals provides children with the spatial, temporal, emotional and contextual elements that are decisive in constructing their fictional world, a world that undoubtedly would not be the same if the music were different. We have also shown that the story loses some of its meaning when the soundtrack is removed. Music forms a significant part of the scenarios, characters and values, in which it has a persuasive, economical and convincing effect. Furthermore, we highlight the responsibility that education has in developing musical literacy as a constructor of meaning in childhood, enabling children to understand their music, ways of representation, codes, simulacra and intentionality. In future studies we hope to remedy the repetitions encountered and the errors and lacunas detected in the number of items, and to study conceptual and categorical focal points from the content analysis of the discussion groups. We have reported the results of this first case study that marks the beginning of an unprecedented line of research. This research line will continue by adding further individual interpretations, in an attempt to extend our knowledge about the communicative, emotional and musical tendencies in childhood and preadolescence. Learning about the effects of today's music in childhood directly concerns both general and music education, which must take decisions on syllabus and educational interventions in a prevailing sound environment that has a mass audience and globalising effects on culture. This environment is created through high-impact audiovisual products that, through their music, effectively contribute to the social and cultural imagination with contents and values that are constructed today and introduced tomorrow, a trend that is clearly on the rise.

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Sažetak

Glazba koju djeca slušaju u filmovima, serijama i televizijskim dokumentarcima. Empirijska studija njezina značenja

Mnogi su autori pronašli da glazba u audiovizualnim medijima ima velik utjecaj, ali malo je istraživanja istražilo njezine odjeke na djecu. U ovom se članku izvještava o istraživanju o glazbenim interpretacijama u dječjim filmovima, serijama i televizijskim dokumentarcima. U njemu se opisuje promatračko iskustvo temeljeno na omiljenim audiovizualnim uradcima jedanaestogodišnje djece, planu i upotrebi upitnih araka te kvantitativnih i kvalitativnih rezultata studije slučaja dobivene iz audiovizualnog doživljaja serijâ izdanih u tri verzije (samo zvuk, samo slika, cjelina) i primijenjenih u dvije javne škole u gradu Castellón u Španjolskoj. Rezultati otkrivaju značenje i smisao glazbe u odabranim audiovizualnim uradcima, te istodobno pokazuju kako se značenje gubi kada se ukloni zvučni zapis. Rezultati potvrđuju da glazba pruža elemente vezane uz prostor, vrijeme, emocije i kontekst koji uvjerljivo oblikuju scenarije, likove i vrijednosti. Studija priprema osnove za obrazovne intervencije koje potiču razumijevanje zvukovnog habitata putem općeg obrazovanja i glazbenog odgoja napose.