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## Children's responses to 20th century 'art' music, in Portugal and Brazil

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### **ABSTRACT**

*Several studies have investigated how children of different ages respond to diverse musical styles. Age seems to be a determinant factor in the development of musical preferences. Although many teachers advocate the use of a wide variety of musical styles at different school levels, most of them seem to rarely include 20<sup>th</sup> century 'art' music in their lessons. Very few studies have examined children's responses to this musical repertoire. In addition, most of the research on children's musical preferences has been carried out in Europe and North America, with few cross-cultural comparisons. This study investigated the responses to and preferences for 20<sup>th</sup> century 'art' music of children from Portugal (n=119) and Brazil (n=135) at two age levels (9-11 and 12-*

*14). At their local schools, in Porto and Curitiba, they listened to 13 excerpts from 20<sup>th</sup> century works. They were asked to rate their preferences and describe each excerpt. They also indicated if they knew the composers' names from a given list. The results suggested that overall both Portuguese and Brazilian children knew very few composers and gave low or moderate ratings to all excerpts. The responses of both groups fell within predictions of most theories of musical preferences, with younger children showing more openness to novel excerpts than older children. Age differences were also evident in both the quantity and the types of verbal descriptions of the excerpts, with younger children producing fewer descriptions than the older ones. Musical characteristics also seemed to play a role in their preferences, as they overall liked or disliked particular excerpts, regardless of age or nationality. Our conclusion is that school aged children are rarely exposed to 20<sup>th</sup> century 'art' music. When listening to it for the first time, many children question whether some excerpts represent 'real' music. Thus, they tend to be rather conservative towards this repertoire. Some implications for music education, in both Portugal and Brazil, are drawn at the end of the paper.*

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## INTRODUCTION

### Children's musical responses and preferences

Several studies have investigated how children of different ages respond to diverse musical styles, and how age affects their musical preferences and taste (Gardner, 1973; Hargreaves & North, 1999; Russell, 1997). Age seems to be a determinant factor, with younger children being possibly more 'open-eared' and tolerant than the older ones to different musical styles (see LeBlanc et al, 1996).

Music learning depends on the socio-cultural context in which children develop, in and out of school, at home and within their communities. Familiarity with a musical style or a particular repertoire is said to be determinant for the emergence of musical preferences (see Berlyne, 1974; Hargreaves & North, 1999; LeBlanc, 1982). Family, peers, friends and the media play an increasing role in children and adolescents' musical preferences. For example, the music broadcasted on radio and television has a major influence in the emergence of preferences and in shaping musical taste, from a rather early age (Russell, 1997; Zillman & Gan, 1997).

Another determinant factor in musical preferences appears to reside in the specific listening context and the emotions associated with it. Sloboda and Juslin (2001) suggest that whereas *intrinsic* emotion is determined mainly by music structures, *extrinsic* emotion is strongly determined by contextual factors. The *appropriateness* of music for a given situation also seems to be important (North & Hargreaves, 1997) for both children and young people. Thus, the listening context directly impacts on children's responses to music and it implies different modes of listening to it (see Boal Palheiros & Hargreaves, 2001).

Musical characteristics also influence children's musical preferences (LeBlanc, 1987). Children tend to like fast tempo, distinctive rhythms, well-defined meters, and 'smooth' melodies. They also prefer consonance to dissonance, and vocal to instrumental music (Finnäs, 1989). This somehow justifies their preferences for pop, rock and 'easy listening', which normally have melodies that are easy to sing, regular meters, tonal harmonies, are repetitive and exhibit few contrasting themes. In addition, these styles are constantly played in the media, which turns them into 'fashion' music.

### Twentieth century 'art' music / 'contemporary' music

By contrast, 20<sup>th</sup> century 'art' music and, in particular, 'contemporary music' display musical characteristics that are almost opposed to those found in children's preferred styles. Perhaps due to its musical features, 20<sup>th</sup> century 'art' music is not as 'fashion' as other styles are. And because it is not much played in the media, children are often unfamiliar with it.

The definition of 20<sup>th</sup> century 'art' music is complex, due to the multiplicity and variety of composers and styles associated with it. Stravinsky, Schönberg, Bernstein, Cage, Lopes-Graça, Boulez, Ligeti, Gubaidulina, Reich and Rihm are some of the many well-known 20<sup>th</sup> century composers. Yet, it is notable that the contexts, experiences and idiosyncrasies of the older generations are not fairly the same as ours. Therefore, many gaps might exist between their musical worlds and ours.

The term 'contemporary' music (here defined as 'new' music from the 1950's onwards) also suggests 'new' or 'shocking' music as theorized by Adorno (1982). According to him, this is music that often struggles against aesthetic and social standards, that critically uses new materials, enabling a development that extends far beyond 'all abstract and rigid forms imposed by the outside' (Adorno, 1982, p. 294).

The shock was and remains, for many musicians, a social and aesthetic process. It questions the basis, the developments and the assumptions of our culture, our ways of living in society and of being in the world. Yet, shock can become 'fashion'. When integrated into society and assimilated by a market, it becomes an exchangeable value, assuming a substantial role in the market of cultural goods. The works of Duchamp, Cage and Warhol, for example, soon became products in a sophisticated and increasingly prosperous market.

Notwithstanding, in arts education of school-aged children, shock interventions – in Adornian social-aesthetic terms – are rare. Educational institutions often deliberately exclude the less common from the mainstream artistic products. Therefore, composers such as Schönberg are likely to become strange names among the upcoming generations.

### Music education and 20<sup>th</sup> century 'art' music: searching for connections

But what is so ‘shocking’ about 20<sup>th</sup> century ‘art’ music that turns it away from the classrooms? Here are some of its musical features:

- Melodies extend far beyond the limits of the human voice and are often difficult or even impossible to sing;
- Rhythms and meters that are often irregular;
- Many unconventional sounds, that overrun the limits of the instruments (treating them as objects), as well as electroacoustic sounds;
- If they exist, harmonies are often non-tonal;
- Sounds that extend the thresholds of hearing: too strong or weak, too slow or fast, and with many contrasts;
- Performance has gained new possibilities, including free improvisation or live interaction with the audience, among others;
- In many cases, ugly becomes valuable;
- Mixtures of contrasting genres, styles and expression modes (speech, song, whisper), as well surprising sound effects.

The combination of the abovementioned features often disturb a sense of balance in aesthetic appreciation, making the pretty, nice, easy to dance, soft music, and, moreover, the appeal for a passive listening, disappear. When listening to many of the 20<sup>th</sup> century ‘art’ music works, it is often difficult to listen and tap to the beat, or easily learn the melody and whistle it. Apparently, 20<sup>th</sup> century ‘art’ music requires much more from the listener; that is, more concentration, time, effort, knowledge, and perhaps more training.

Not surprisingly, the 20<sup>th</sup> century saw many efforts to include ‘contemporary’ art into education. Murray Schaeffer, Boris Porena, François Delalande, Georg Self and John Paynter are some examples of composers/ educators who brought the discussion of ‘contemporary’ music into the classroom. Yet, despite their efforts, 20<sup>th</sup> century ‘art’ music continues to be scarce in most classrooms. Some very few schools tend to associate it with the exploration of environmental sounds and the production of ‘soundscapes’ (see Schafer, 1997), with very little advancement into the study of composers and their works. In addition, most music teachers have been trained in music schools and conservatoires that often emphasize the repertoire from the 18<sup>th</sup> and 19<sup>th</sup> centuries, neglecting other historical periods and styles. Therefore, children often hear 20<sup>th</sup> century ‘art’ music as foreign sounds, as they do not have many opportunities to familiarize with it at school.

To this date, very few studies have investigated children’s responses to 20<sup>th</sup> century ‘art’ music. As far as we know, there are no studies comparing the responses to 20<sup>th</sup> century ‘art’ music from two cultures that share a same linguistic background. For this reason, the present study investigated children’s responses to and preferences for 20<sup>th</sup> century ‘art’ music in Portugal and Brazil. We hypothesized that children from both countries would have few experiences with this repertoire and would therefore give moderate to low ratings to it. Because of the novel nature of the repertoire, we also hypothesized that younger children would respond more positively than older children to 20<sup>th</sup> century ‘art’ music.

## METHOD

### Participants

The sample consisted of Portuguese (n=119) and Brazilian (n=135) children, aged 9 to 14 years. All children were attending regular public schools in Porto (Portugal) and Curitiba (Brazil). Brazilian children had one 50 minute music class per week, taught by a specialist music teacher. Portuguese children also had a music class per week, during 30 minutes (younger) or 90 minutes (older).

### Procedure

In each country, children were recruited at two public schools. In order to get access to them, a request was sent to the principals of the schools, who sent invitation letters and consent forms to parents.

All children were tested together in their classrooms, during either music or mathematics, Portuguese and English classes. While or soon after listening to each excerpt, children were asked to rate how much they liked it, by using a five-point scale, with 1 representing ‘not at all’ and 5 representing ‘very much’. They were familiarized with the test, by rating an example, the data for which were subsequently excluded from the analysis. After rating their preferences for each excerpt, they were given some time to write freely about their listening experience. At the end of the test, children were also asked to indicate if they knew any of the 13 composers listed. This was done to check their familiarity with 20<sup>th</sup> century composers.

Due to space constraints, this paper will report solely on children’s preferences for 20<sup>th</sup> century

'art' music. Qualitative data will be reported in another paper.

### Musical material: the excerpts

The musical material consisted of 13 instrumental or electroacoustic excerpts by 20<sup>th</sup> century composers, including a Portuguese (Pires) and a Brazilian (Villa-Lobos) composer. The music chosen was unlikely to be familiar to the children. Vocal music was ruled out in order to avoid possible associations with text and language. The selection was based on Adorno's concept of 'new' music. The excerpts were taken from the following works:

- Music for strings, percussion and celesta - 2<sup>nd</sup> movement – B. Bartok (example)
- Uirapuru – H. Villa-Lobos
- Lyrical Suite – 3th movement – A. Berg
- Piano piece op. 23, n4 – A. Schönberg
- Ionisation – E. Varèse
- Concerto op. 24 – A. Webern
- Symphony Turangalila – O. Messiaen
- Akronos – F. Pires
- Le marteau sans maître – P. Boulez
- Tetra – Y. Xenakis
- Lontano – G. Ligeti
- Kontakte – K. Stockhausen
- Valley flow – D. Smalley
- Piece for prepared piano – J. Cage

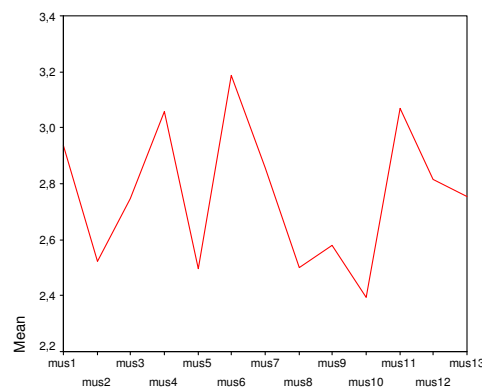
Each excerpt lasted approximately two minutes, and was played in one of two random orders to control for order effects.

## RESULTS

### Effects of age and nationality

A product-moment correlation between the two random playing orders was calculated on the participants' mean ratings on each of the 13 excerpts for the preference scale, in order to check for potential order effects. The coefficient was positive and significant. Therefore, presentation order was disregarded in all subsequent analyses. ANOVAS were calculated for overall preference ratings (13 excerpts' average) over age and nationality. The interaction between overall preference and age was significant [ $F(9,244) = 6,714, p=.000$ ], whereas that between overall preference and nationality was not [ $F(1,252) = .441, p=.507$ ]. These results suggest that nationality did not affect the way children

responded. Rather, age appeared to be determinant in children's responses to 20<sup>th</sup> century 'art' music. We also checked whether any effects of learning occurred throughout the test. We calculated the overall means for each excerpt and compared them across time. Figure 1 shows that children's ratings of 20<sup>th</sup> century 'art' music were quite stable throughout the listening task.



**Figure 1.** Overall rating means for the excerpts throughout the test (order 1)

Means and ANOVA main effects were calculated on the raw scores over each one of the 13 musical excerpts for the preference scale with age and nationality as the between group factors. These results are shown in Tables 1 and 2.

**Table 1. Means and ANOVA main effects for age, for each excerpt**

	Excerpt	Younger	Older	F
1	Villa-Lobos	3.33	2.43	31.25***
2	Berg	2.83	2.13	22.14***
3	Schönberg	3.09	2.30	25.37***
4	Varèse	3.33	2.70	15.256***
5	Webern	2.92	1.94	39.40***
6	Messiaen	3.37	2.95	6.05**
7	Pires	3.15	2.48	16.21***
8	Boulez	2.91	1.96	35.19***
9	Xenakis	2.97	2.07	27.68***
10	Ligeti	2.80	1.86	35.21***
11	Stockhausen	3.38	2.66	17.31***
12	Smalley	3.11	2.43	17.70***
13	Cage	3.12	2.27	25.62***

\*\*\* significant at the .000 level

\*\* significant at the .010 level

**Table 2. Means and ANOVA main effects for nationality, for each excerpt**

	Excerpt	Brazil	Portugal	F
1	Villa-Lobos	3.07	2.78	3.02
2	Berg	2.62	2.41	1.89
3	Schöenberg	2.70	2.80	.34
4	Varèse	2.91	3.23	3.68*
5	Webern	2.50	2.50	.00
6	Messiaen	3.27	3.09	1.16
7	Pires	3.04	2.65	5.66**
8	Boulez	2.63	2.35	2.71
9	Xenakis	2.53	2.63	.30
10	Ligeti	2.39	2.39	.00
11	Stockhausen	2.96	3.20	1.94
12	Smalley	2.87	2.76	.44
13	Cage	2.87	2.63	1.83

\* marginally significant at the .05 level

\*\* significant at the .010 level

According to our results, age played a determinant role in children's preferences for 20<sup>th</sup> century 'art' music. Significant differences were found for all excerpts. These responses are in synchrony with previous studies that suggest younger children to be more open-eared to diverse styles than their older peers. However, when nationality was examined, significant differences were found for only two excerpts. Therefore, despite cultural and educational differences between the two countries, Portuguese and Brazilian children responded to 20<sup>th</sup> century 'art' music in similar ways.

The children in our study showed very little knowledge of 20<sup>th</sup> century composers. Only 19% of the Brazilian children had heard about Villa-Lobos, and one child indicated Bartok. All the other composers were totally unknown to them. Similarly, Portuguese children had not heard from any of the composers, except for Bartok. Some older children mentioned that they had listened to a piece by Bartok in one of the music lessons.

### Effects of musical characteristics

Further analysis of children's preferences for the music suggested that, regardless of either age or nationality, some particular excerpts were more strongly liked or disliked. In order to define their aesthetical and technical characteristics, in particular of those excerpts significant to modern (avant-garde) music of the 1950's, we asked nine professional musicians to evaluate them. These music teachers, instrumentalists, and composers, who were all familiar with contemporary musical sounds and techniques, responded to a 'yes-no' questionnaire. This asked whether the excerpts (a) possess *non-singable* melodies; (b) dissonant

harmonies; (c) structures and sounds difficult to hear; (d) frequent or sudden contrasts; (e) ugly or repulsive material; (f) question the 'classical' musical discourse; and (g) are 'shocking' music?<sup>1</sup>.

The results of the musicians' responses (Table 2) were then compared with those of the children's responses, in order to search for the musical characteristics that were most liked or disliked by children. The categories of children's ratings were analysed, by grouping the two highest (4 and 5) and the two lowest (1 and 2); the middle category (3) was seen as undefined. It seems that children overall clearly preferred the more conventional excerpts, especially that by Messiaen. This has the highest ratings in Brazil and one of the highest in Portugal. It is also the highest rated excerpt by the younger children and the least disliked by the older ones. The overall results do show clear age differences: whereas the older children do not seem to really like any of the excerpts, the younger ones respond positively to all of them, although sometimes by expressing a moderate rating. According to the musicians' panel, the excerpt by Messiaen has the lowest number of 'avant-garde' characteristics. The excerpts by Smalley and, especially, that by Stockhausen, also deserve attention, because: children's ratings of both excerpts are fairly well distributed among the five rating categories; these excerpts were evaluated as having 'structures and sounds difficult to hear', by the majority of the panel's members; as having '*non-singable* melodies' and 'questioning the 'classical' musical discourse', by all members; they were rated as 'shocking' music, by 8 of the 9 members; only these excerpts have electroacoustic sounds.

**Table 3. Evaluation of the 13 musical excerpts by the nine professional musicians**

Excerpt		a	b	c	d	e	f	g	yes	no
1 Villa-L.	yes	1	4	1	6	1	4	1	18	
	no	8	5	8	3	8	5	8		45
2 Berg	yes	8	7	3	5	2	8	5	38	
	no	1	2	6	4	7	1	4		25
3 Schöenb.	yes	5	5	2	2	1	4	2	21	
	no	4	4	7	7	8	5	7		42
4 Varèse	yes	8	0	0	6	1	7	3	25	
	no	1	9	9	3	8	2	6		38
5 Webern	yes	5	6	1	7	1	8	3	31	
	no	4	3	8	2	8	1	6		32
6 Messiaen	yes	1	0	0	3	0	1	0	5	
	no									

<sup>1</sup> 'Shocking music' in Adornian terms.

	no	8	9	9	6	9	8	9		58
7 Pires	yes	7	8	2	8	1	7	4	37	
	no	2	1	7	1	8	2	5		26
8 Boulez	yes	7	8	3	3	1	8	6	36	
	no	2	1	6	6	8	1	3		27
9 Xenakis	yes	8	6	4	5	3	9	7	42	
	no	1	3	5	4	6	0	2		21
10 Ligeti	yes	5	7	1	1	1	8	5	28	
	no	4	2	8	8	8	1	4		35
11 Stockh.	yes	9	7	6	9	4	9	8	52	
	no	0	2	3	0	5	0	1		11
12 Smalley	yes	9	6	5	6	1	9	8	44	
	no	0	3	4	3	8	0	1		19
13 Cage	yes	3	6	1	5	1	7	5	28	
	no	6	3	8	4	8	2	4		35
<i>Total</i>	<i>yes</i>	76	70	29	66	18	89	57		
<i>Total</i>	<i>no</i>	41	47	88	51	99	28	60		

Thus, children tended to like more conventional – tonal – music, with clear-cut melodies and rhythms, and rich instrumental sounds; but they also responded positively to ‘shocking’ music with electroacoustic sounds, which is somewhat far from the Western tradition.

In spite of the consistency of children’s ratings in terms of age and nationality, there were some national discrepancies: Portuguese children liked the excerpt by Varèse more than the Brazilian did. This may come as a surprise as, theoretically, Brazilian children may be used to hearing much more complex and rich percussions in Brazilian popular music.

Children didn’t really like the excerpts by Berg, Webern, Boulez, Xenakis and Ligeti. The decisive characteristics common to these excerpts are the fact that 8 of the 9 professionals think that they ‘question the ‘classical’ musical discourse’. Yet, this feature is also common to Stockhausen and Smalley: these excerpts (much more appealing to the children) do have sounds or structures that were difficult to hear for the majority of the professionals. Finally, it is also interesting that the excerpt by Villa-Lobos, although characterised by the panel as very conventional, was not especially referred to by the children.

## DISCUSSION AND CONCLUSION

Overall, this study confirmed our prediction that age seems to play a stronger role in children’s responses to unfamiliar music (i.e., 20<sup>th</sup> century ‘art’ music) than nationality. Concurrent with previous studies and theories on the development of musical preferences, the younger children

responded more positively to the unfamiliar pieces than their older peers.

Furthermore, the results suggest that 20<sup>th</sup> century ‘art’ music remains unfamiliar to both Brazilian and Portuguese children. Despite all efforts of prominent educator-composers (e.g. Schafer, Paynter, Delalande), 20<sup>th</sup> century musical works are apparently not reaching the music class in our schools. Music teachers, in both Brazil and Portugal, continue to perpetuate conservatory traditions, by teaching primarily 18<sup>th</sup> and 19<sup>th</sup> century music. In the case of Portugal, this is consistent with a previous research suggesting that Portuguese teachers rarely use 20<sup>th</sup> century ‘art’ music in their classrooms (Boal Palheiros, 1998). Even in Brazil, where music is not yet a mandatory subject in schools, the few schools that offer music seldom include 20<sup>th</sup> century works in their curricula. Thus, in spite of all modern teaching techniques and materials, music teachers are still quite conservative in their approach to repertoire. In fact, some authors appear to believe that contemporary works are perhaps inappropriate for young children (see Dalla Bella et al, 2001).

One solution for this curricular ‘gap’ in schools is to have children experience contemporary music not only through listening activities. They should also be encouraged to compose and manipulate sounds, as previous studies suggest that liking for contemporary music (i.e., electroacoustic) may be increased through practical experiences (Costa-Giomi & Pennycook, 1997; Keane, 1986). Keane (1986) and Smalley (1992) both suggested that electroacoustic works have a great potential in music education, as they may function as an artistic artifact to enhance exploratory listening behaviours in children. We believe that other styles of 20<sup>th</sup> century ‘art’ music may have a similar potential. Therefore, we recommend teachers not to be afraid of ‘shocking’ their students, when presenting contemporary works to them. These experiences may be useful to help children understand and develop their own definitions of music, an issue that came up, time and again, as we collected our data.

Interestingly, many children in our study questioned whether the excerpts were actually music. Concurrent with another study (see Ilari, 2004), many children attempted to bring the music they heard to their own reality, by searching for everyday objects, animals and situations that produced similar sounds. We are currently analyzing children’s descriptions of the excerpts, which will obviously complement the data presented here. However, it seems clear to us that

the inclusion of 20<sup>th</sup> century 'art' music is really necessary in school curricula in both Brazil and Portugal, at all age levels. Given that children are not likely to listen to this music outside school, the need for a change in school music education is here reinforced.

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