

**FWF**

Der Wissenschaftsfonds.



*Listeners' informal vocabulary  
for emotions and free associations  
in piano music*

**Erica Bisesi, Marlies Bodinger & Richard Parncutt**

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# Motivation

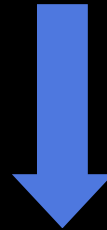
Literature about music interpretation is mostly written by performers, e.g.

- **A. Brendel**, “Musical Thoughts and Afterthoughts” (1976);
- **A. Brendel**, “Paradosso dell’interprete. Pensieri e riflessioni sulla musica” (1997);
- **A. delle Vigne**, “Viaggio nell’intimo di un pianista” (2006);
- ...

But does not necessarily reflect the way musicians think in their everyday life.

# Goals

- perform a close analysis of the vocabulary concerning **music performance** and **interpretation**
- explore the multiple **relationships** between these meanings
- focus on **subcategories of meaning** and their inter-relationships



to map out how musicians think about interpretation

# *Our project*

**Aim.** We investigate the relationship between structure, emotions and free associations in piano music.

**Participants.** 21 participants (7 musicians, 7 amateurs and 7 non-musicians)

**Stimuli.** 8 piano pieces in different "classical" styles

**Procedure.** Participants are asked to describe their experience of the music, focusing on musical aspects, emotions and free associations (or abstract images).

**Methodology.** We are exploring qualitative relationships and quantitative correlations between subcategories of emotions and images by grounded theory, correspondence analysis and multidimensional scaling.

# Background

## Emotions:

- ◆ classical approach: the **Hevner Circle** (*Hevner, 1935; 1936; 1937*)



# Pre-test for stimuli selection

## Procedure

35 pieces from the whole classical piano repertoire (from Baroque to Modern music):

- ◆ BACH – *Prelude no. 4 in C# min BWV 849*
- ◆ BACH – *Prelude no. 8 in E flat min BWV 853*
- ◆ BACH – *Prelude no. 15 in G major BWV 860*
- ◆ BACH – *Fugue no. 22 in B flat min BWV 867*
- ◆ BACH-BUSONI – *Chaconne in D min*
- ◆ BARTOK – *Mikrokosmos no. 149*
- ◆ BEETHOVEN – *Sonata op. 31 no. 2 (2<sup>nd</sup> Mvt.)*
- ◆ BRAHMS – *Intermezzo op. 116 no. 4*
- ◆ CHOPIN – *Prelude op. 28 no. 8*
- ◆ CHOPIN – *Prelude op. 28 no. 11*
- ◆ CHOPIN – *Sonata op. 58 (Allegro maestoso)*
- ◆ DEBUSSY – *Images (Cloches Feuilles)*
- ◆ DEBUSSY – *Children's Corner Suite (Golliwogg's Cakewalk)*
- ◆ HAYDN – *Sonata Hob. XVI no. 52*
- ◆ LISZT – *Sonata in B minor*
- ◆ LISZT – *La lugubre gondola*
- ◆ LISZT – *Hungarian Rhapsody no. 9 (Peszter Carnaval)*
- ◆ MENDELSSOHN – *Rondò Capriccioso (Andante)*
- ◆ MILHAUD – *Scaramouche (Brasileira)*
- ◆ MOZART – *Theme K 501*
- ◆ MOZART – *Allegro K deest*
- ◆ RACHMANINOV – *Elegie op. 3 no. 1*
- ◆ SCARLATTI – *Sonata K 11*
- ◆ SCHÖNBERG – *Klavierstück op. 19 no. 3*
- ◆ SCHUBERT – *Impromptu op. 90 no. 3*
- ◆ SCHUBERT – *Klavierstück D 946 no. 1*
- ◆ SCHUBERT – *Grazzer Fantasie (Introduction)*
- ◆ SCHUBERT – *Wandere Fantasie (Adagio)*
- ◆ SCHUMANN – *Dauidsbündlertanz op. 6 no. 10*
- ◆ SCHUMANN – *Dauidsbündlertanz op. 6 no. 14*
- ◆ SCHUMANN – *Dauidsbündlertanz op. 6 no. 17*
- ◆ SCHUMANN – *Carnaval op. 9 (Valse Allemande)*
- ◆ SCHUMANN – *Fantasiestück op. 12 no. 7 (Traumes Wirren)*
- ◆ SZYMANOWSKI – *Prelude op. 1 no. 5*
- ◆ TCHAIKOVSKY – *Morceau op. 19 no. 1 (Rêverie du soir)*

# *Pre-test for stimuli selection*



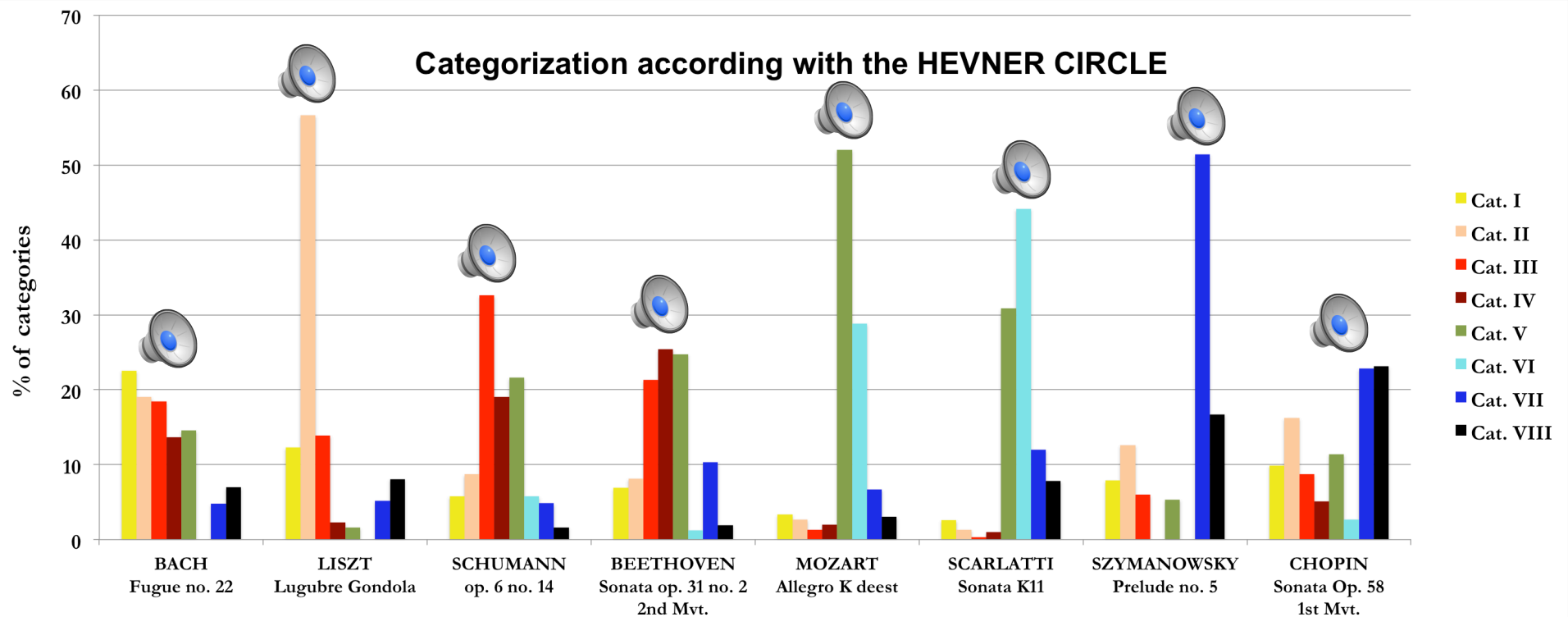
Please evaluate now the 5 words which you think better describe the piece. After having evaluated all the 5 words, the experiment will automatically continue.

agitated	doleful	gloomy	longing	playful	satisfying	sprightly
key, click	key, click	key, click	key, click	key, click	key, click	key, click
angry	dramatic	graceful	lyrical	pleading	sensational	tender
key, click	key, click	key, click	key, click	key, click	key, click	key, click
awe_inspiring	dreamy	happy	majestic	ponderous	sentimental	tense
key, click	key, click	key, click	key, click	key, click	key, click	key, click
bright	emphatic	heavy	martial	quaint	serene	tragic
key, click	key, click	key, click	key, click	key, click	key, click	key, click
calm	exalting	humorous	melancholy	quiet	serious	tranquil
key, click	key, click	key, click	key, click	key, click	key, click	key, click
cheerful	exciting	impetuous	merry	relaxed	soaring	triumphant
key, click	key, click	key, click	key, click	key, click	key, click	key, click
dark	exhilarated	joyous	mournful	restless	sober	vigorous
key, click	key, click	key, click	key, click	key, click	key, click	key, click
delicate	fanciful	leisurely	passionate	robust	solemn	whimsical
key, click	key, click	key, click	key, click	key, click	key, click	key, click
depressing	frustrated	light	pathetic	sacred	soothing	yearning
key, click	key, click	key, click	key, click	key, click	key, click	key, click
dignified	gay	lofty	plaintive	sad	spiritual	yielding
key, click	key, click	key, click	key, click	key, click	key, click	key, click



# *Stimuli selection*

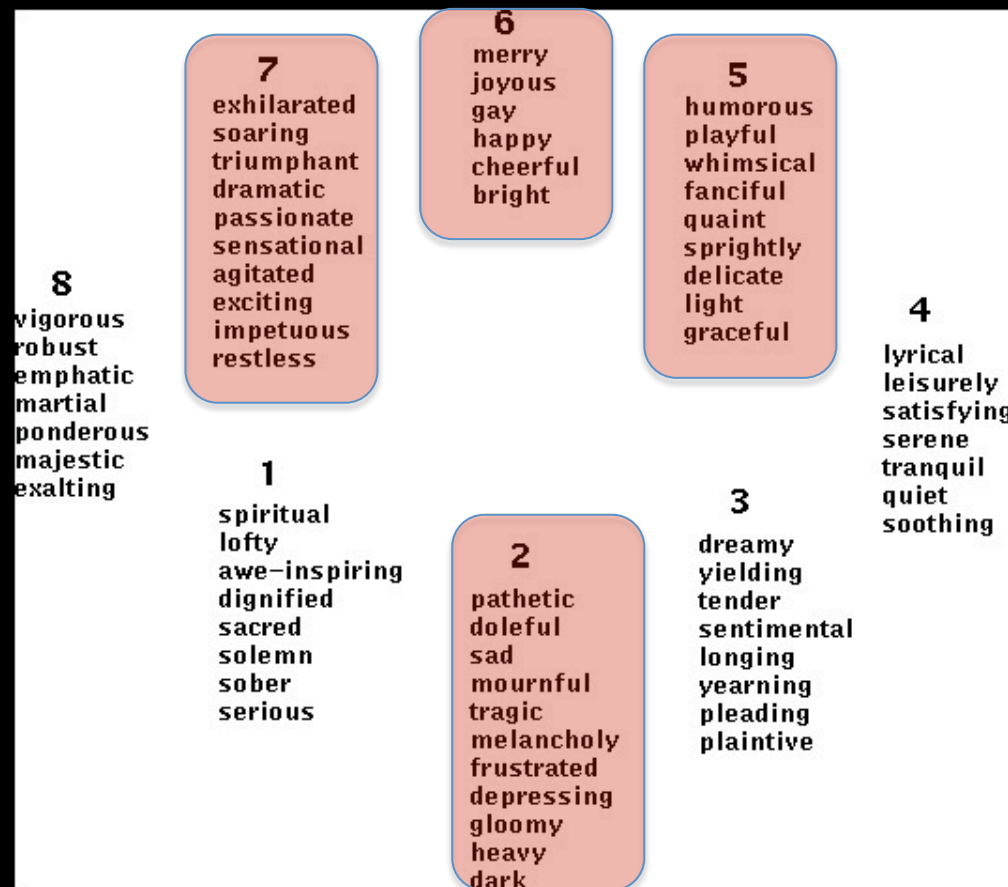
**Results:** 8 pieces from the classical piano repertoire



# Background

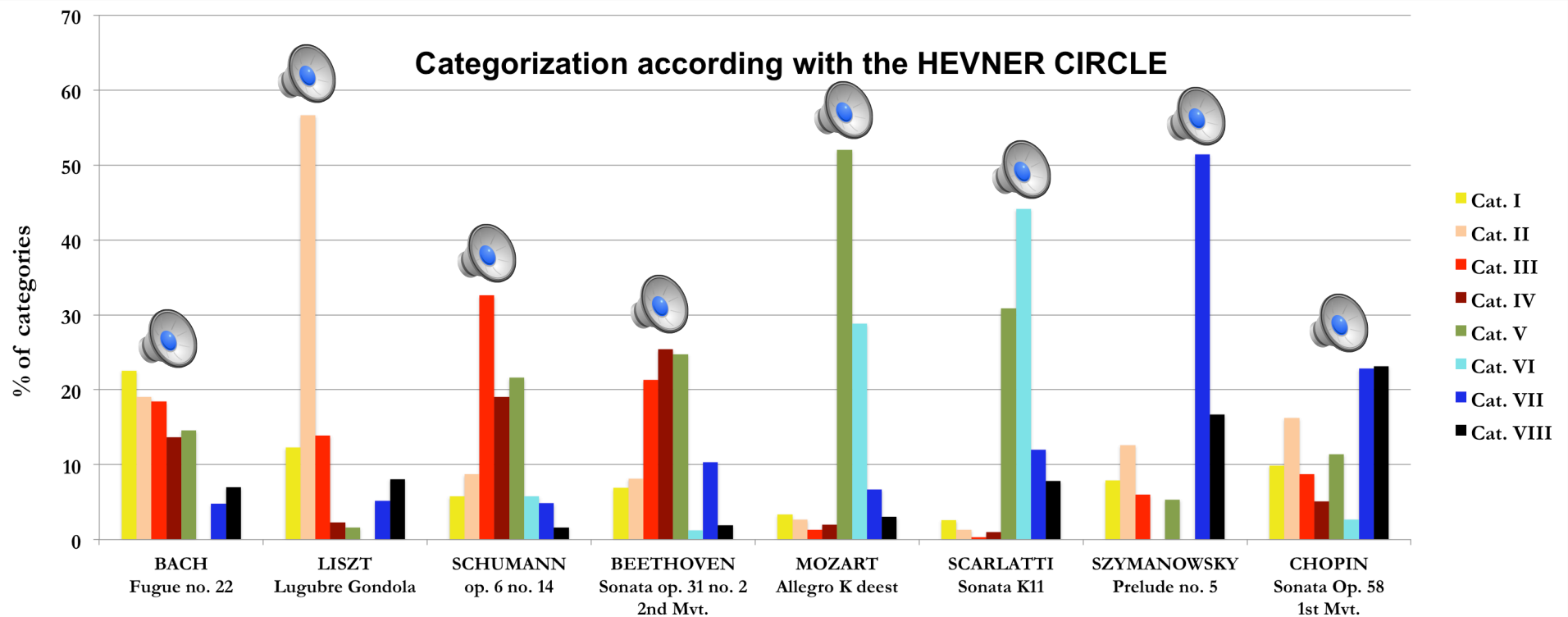
## Emotions:

- ◆ classical approach: the **Hevner Circle** (*Hevner, 1935; 1936; 1937*)



# *Stimuli selection*

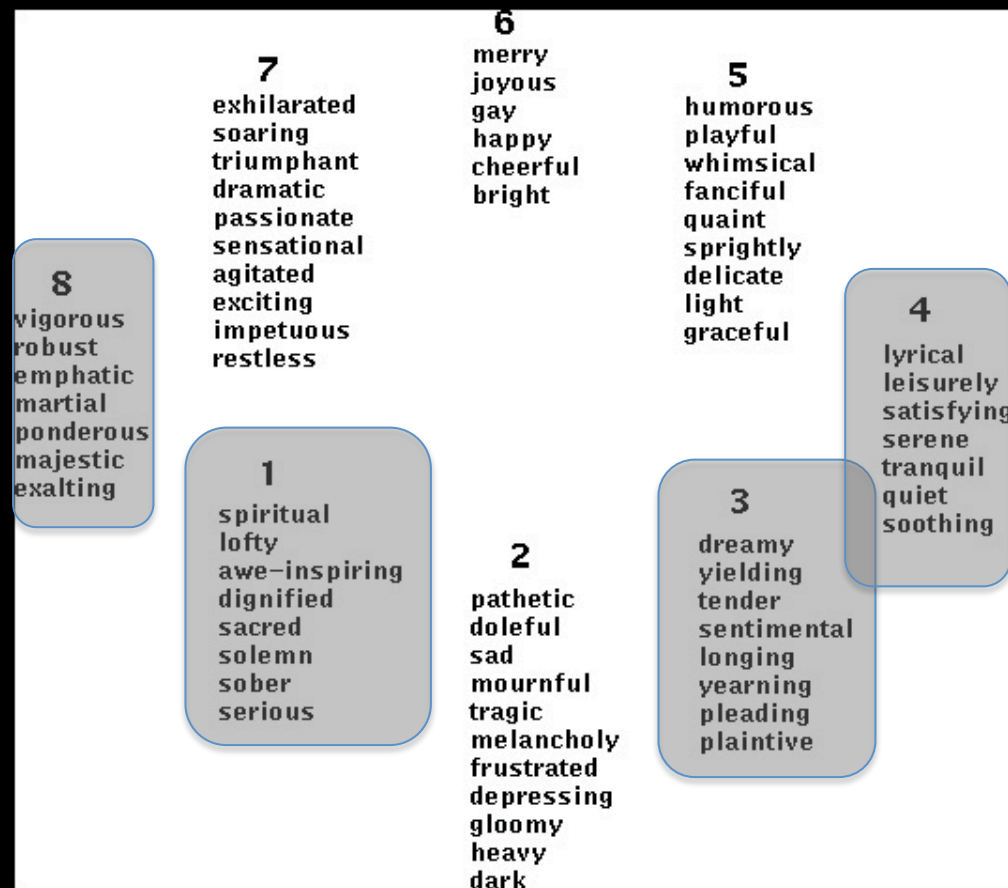
**Results:** 8 pieces from the classical piano repertoire



# Background

## Emotions:

- ◆ classical approach: the **Hevner Circle** (*Hevner, 1935; 1936; 1937*)



# Participants

- ✧ Groups (preliminary):
  - ✓ **Experts:** musicians, with high music knowledge
  - ✓ **Amateurs:** listeners to the classical music, with no or low music knowledge
  - ✓ **Non-experts:** non-listeners to the classical music

# Methodology

## ✧ Qualitative

- ✓ Guideline-based interviews
- ✓ Grounded theory approach (*Strauss, 1987*)

## ✧ Mixed (qualitative & quantitative)

- ✓ Descriptive relationships between qualitative data (MAXQDA)

## ✧ Quantitative

- ✓ Correspondence analysis (XLSTAT)

# Methodology

- ✧ Music aims
  - ✓ Which contexts?
  - ✓ Which motivations and goals to listen to the music?
- ✧ Description of structure
- ✧ Description of emotions
- ✧ What does the music evoke?
  - ✓ Free associations (feelings, memories, images)
  - ✓ Music-person-situation interplay



*CATEGORIZATION*

# *Methodology*

## ✧ Grounded Theory:

- ✓ Data collection and analysis is made simultaneously
- ✓ Adaption to the guidelines and number of participants



# Guideline-based interviews (in German)

In which situation do you listen to the music?	<ul style="list-style-type: none"> <li>• motivations, aims of hearing (relaxation, learning, getting into a feeling state, etc.)</li> <li>• feelings</li> <li>• musical context</li> <li>• active/passive listening</li> <li>• radio, MP3 player, concerts</li> </ul>
Musical context	<ul style="list-style-type: none"> <li>• instrumental or songs</li> </ul>
Which emotions? (produced vs. perceived)	<ul style="list-style-type: none"> <li>• melody, text, structure, memories/situations retrieved</li> </ul>
Do/did you play an instrument?	<ul style="list-style-type: none"> <li>• which, how long</li> </ul>
<p style="text-align: center;"><b>MUSIC LISTENING</b> Close your eyes and listen</p>	
What was the first thing you 1. felt? 2. saw/thought? Hearing	<ul style="list-style-type: none"> <li>• <b>Description of structure</b> <ul style="list-style-type: none"> <li>○ structure of the pieces</li> <li>○ body experience</li> <li>○ personal touching</li> <li>○ positive/negative feelings</li> <li>○ intensity</li> </ul> </li> <li>• <b>Free associations</b> – do you see something with your mind's eyes? (living/non-living things, colours, situations, people, memories/images)</li> <li>• <b>Emotions</b> (among all, also physical sensations?)</li> <li>• <b>Structure</b> (role of musicians, melody, harmony, rhythm, dynamics, tempo, phrasing, accents, timbre, technical questions...)</li> </ul>
Knowledge of the pieces	<ul style="list-style-type: none"> <li>• where, how long, how often?</li> <li>• are you a performer?</li> </ul>
Would you also listen to this piece privately?	<ul style="list-style-type: none"> <li>• which situations?</li> <li>• did you like the piece?</li> </ul>

# *Data analysis*

## ➤ **stage A:**

- ✓ top-down categorization:
  - ✓ analytic (musical structure, technical)
  - ✓ emotions (feelings, mood)
  - ✓ free associations (images, situations)

## ➤ **stage B:**

- ✓ bottom-up categorization:
  - ✓ subcategories derived by data

# Data analysis

## ◆ Grounded theory:

LEVEL 0			
converse term (not properly defined)			
LEVEL 1			
analytic - structure	emotions and feelings	free associations	
LEVEL 2			
positive	negative	neutral (not p, not n)	undecided (p and n)
LEVEL 3			
3a - intensity	3a1 - intensity strong	3a2 - intensiy normal	3a3 - intensity a bit
LEVEL 4			
4a - subcategories of structure	4b - subcategories of emotions	4c - subcategories of free associations	

# Data analysis

## ◆ Bisesi & Parncutt (2010):

ANALYTIC - STRUCTURE				21	EMOTIONS	5	FREE ASSOCIATIONS		15
IMMANENT	time	tempo		A111	basic (anger, disgust, fear, joy, sadness, surprise)	E1	colours		F1
	loudness			A12	relationships, love and hate	E2	life	human	F21
	structure	time	rhythm	A131	cognitive (complex)	E3		not human	F22
		pitch	melody	A1321	movement, activity	E4	inanimate world		F3
			harmony	A1322	generally emotional	E5	abstract		F4
			tonality	A1323					
	form			A14			static		S
	relationships			A15			dynamic		D
	character and	meaning		A16			not specified		/
	time	tempo		A211					
PERFORMANCE		rhythm		A212			living things		L
		phrasing		A213			not living things		NL
		synchrony		A214			not specified		/
	dynamics			A22					
	pitch	melody		A231					
		harmony		A232					
	accentuation			A24					
	timbre			A25					
	technical questions			A26					
	relationships			A27					
	character and meaning			A28					

# *Data analysis*

CATEGORIES	%
ANALYTIC	25.65
EMOTIONS	36.96
FREE ASSOCIATIONS	36.52

# Subcategories examples

## FREE ASSOCIATIONS

German, English

COLOURS			
		LIVING THINGS	
STATIC	HUMAN	eine neugierige Person	a curious person
	NOT HUMAN	die Sonne scheint	sun is shining
DYNAMIC	HUMAN	Horrorfilm (Krimi)	a horror movie (crime)
	NOT HUMAN	Regen	rain
		NOT LIVING THINGS	
STATIC		Landschaft	landscape
DYNAMIC		Wellen am Meer	sea waves

# *Subcategories examples*

## **EMOTIONS**

**German, English**

<b>BASIC</b> (anger, disgust, fear, joy, sadness, surprise) (Ekman, Friesen, & Ellsworth)	traurig	sad
<b>HUMAN RELATIONSHIPS, LOVE and HATE</b>	Leidenschaft	passion
<b>COGNITIVE, COMPLEX</b>	langweilig	boring
<b>ACTION, MOVEMENT</b>	aktivierend	activating
<b>EMOTION IN GENERAL</b>	schönes Gefühl	good feeling

# *Subcategories examples*

## **ANALYSIS (MUSICAL STRUCTURE)**

**German, English**

<b>ELEMENTS</b>	die Melodie ist wie ein Dialog	<b>the melody dialogues</b>
<b>RELATIONSHIPS</b>	Noten haben nicht zusammengepasst	<b>notes don't fit together</b>
<b>GENERAL EVALUATION OF THE MUSIC</b>	Charakter des Stücks	<b>character of the piece</b>



# *Going further...*

- ✧ Results from this study will be used as an input for a quantitative study aimed at determining correlations between categories
- ✧ We plan to map different structural aspects in a multidimensional space of emotions (Bisesi, Eckl & Parncutt, 2013)

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*What emotions and free associations  
characterize different musical styles?*

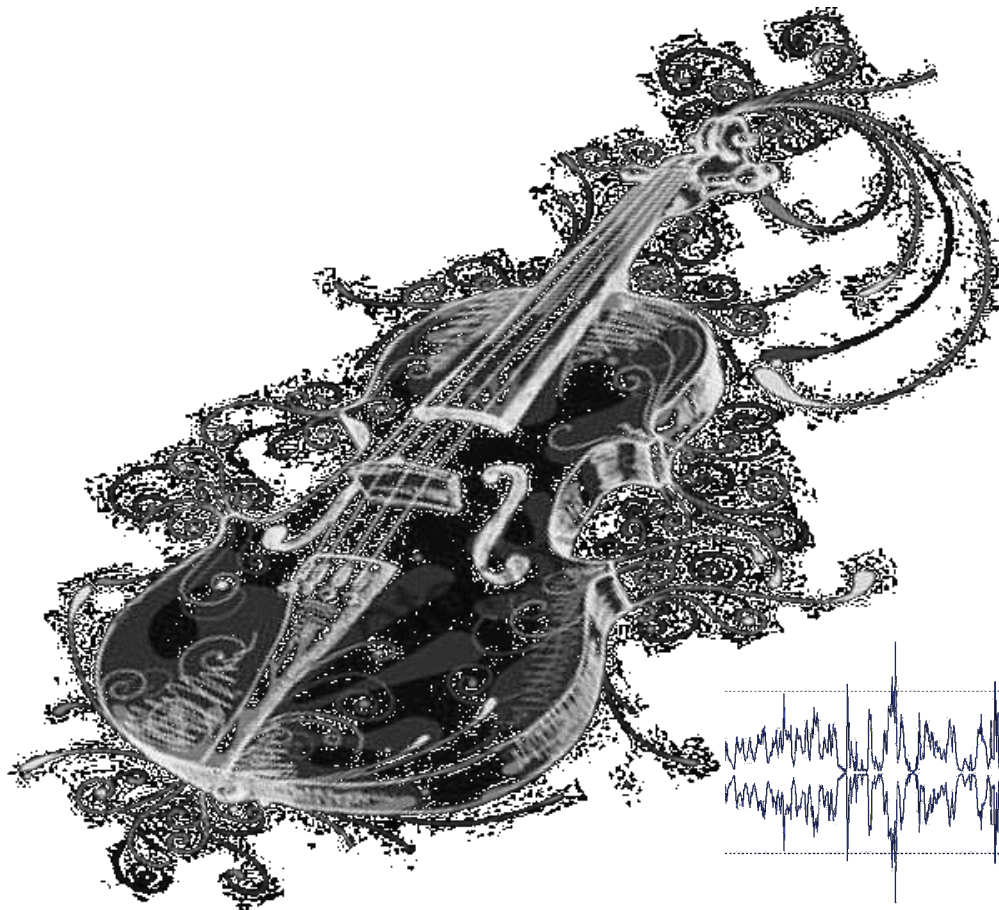
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*“Quelli che s'innamoran di pratica senza scienza  
son come 'l nocchier ch'entra in navilio senza timone o bussola,  
che mai ha certezza dove si vada”*

*Leonardo da Vinci*



*“Wir können überhaupt nicht denken,  
ohne unsere fünf Sinne zu gebrauchen”*

*Albert Einstein*

