

Music-induced visual imagery and its correlates with musical skills: Findings from an online survey

Mats B. Küssner¹ & Tuomas Eerola²

¹Institut für Musikwissenschaft und Medienwissenschaft, Humboldt-Universität zu Berlin

²Department of Music, Durham University

Introduction

Visual imagery—the experience of seeing images before one’s mind’s eye—is often associated with music listening and has been proposed as one important mechanism of how music induces emotions in the listener (Juslin & Västfjäll, 2008). Although evidence suggests that people identify visual imagery as an emotion-eliciting factor when listening to music (Juslin, Liljeström, Västfjäll, Barradas, & Silva, 2008), the literature on this topic is scant.

Aims:

- Investigate the prevalence and nature of visual imagery (VI) during music listening
- Explore how VI in response to music is different from VI in general
- Investigate how VI correlates with domain-specific skills

Methods

- N = 146 (82 females, M = 36.62 years, SD = 15.13, range 18–79 years)
- Top 5 nationalities: German (48), British (23), American (18), Greek (6), Italian (6)
- Education
 - Postgraduate degree (81)
 - Undergraduate degree (25)
 - Second qualification, e.g. A-levels (29)
 - Still in education (10)
- Music preferences
 - Classical music (61)
 - Rock/pop (42)
 - Other (41)
 - Jazz (2)

Structure of questionnaire

- Open-ended questions
- Vividness of Visual Imagery Questionnaire (VVIQ)
- Self-report inventory of GOLD-MSI
- 24 items of new Music-related Visual Imagery (MVI)

Prevalence

- **66.44 %** reported having visual imagery during music listening
- **6.16%** reported never experiencing visual imagery during music listening
- **27.40%** did not respond

Types of visual imagery

Concrete images	Abstract images
- Nature/landscapes (33)	- Colours / shades (20)
- Past events (28)	- (animated) shapes (20)
- People (28)	- Geometric objects/ patterns (10)
- Performance/performer/ venues (21)	- Sense/image of movement (3)
- Seeing oneself (17)	- Multimodal associations (e.g. scent imagery) (2)
- Movies/games/music video (15)	- Images related to musical structure
- Related to lyrics/title/ album cover (12)	- melodic/instrument lines (5)
- Imaginary (e.g. flying, different world) (9)	- music score (4)
- Narratives (9)	- harmony (2)
- Scenes from daily life (6)	- tempo (1)
- Musical instruments (5)	
- Future events (4)	
- Historical settings (3)	

Results: Generic Visual Imagery vs. Musical Visual Imagery

	VVIQ	MVI 1	MVI 2	MVI 3
Realistic Imag.	MVI 1 0.28	1	0.61	0.5
Abstract Imag.	MVI 2 0.14	0.61	1	0.44
Absorbing Imag.	MVI 3 0.22	0.5	0.44	1
Active	MSI 1 0.03	-0.06	0.11	-0.07
Perceptual	MSI 2 0.12	-0.14	0.06	-0.09
Training	MSI 3 0.02	-0.14	-0.01	-0.13
Singing	MSI 4 0.14	-0.13	-0.05	-0.08
Emotions	MSI 5 0.28	0.30	0.23	0.33

Music-related Visual Imagery and individual differences

- MVI factors not influenced
 - by active participation in the arts (music, visual art, fiction)
 - gender (exception: absorbing imagery)
- Minor negative correlations between MVI factors and
 - age (the older the less Realistic Imagery)
 - education (the more educated the less Abstract Imagery)

Discussion

Our findings provide evidence that visual imagery in response to music correlates with one’s vividness of visual imagery in general, and is mediated by several inter-individual differences.

Questions to be addressed in future studies:

- What is the causal link between music-related visual imagery and emotion?
- What are the functional uses of visual imagery in music?
- How does musical structure influence visual imagery?

References

- Juslin, P.N., Liljeström, S., Västfjäll, D., Barradas, G., & Silva, A. (2008). An experience sampling study of emotional reactions to music: Listener, music, and situation. *Emotion*, 8(5), 668-683.
- Juslin, P.N., & Västfjäll, D. (2008). Emotional responses to music: The need to consider underlying mechanisms. *Behavioral and Brain Sciences*, 31(5), 559-575.

Website

<https://sites.google.com/view/emuvis/>

Results: 3 Factors accounted for 62% of the variance in Music-related Visual Imagery

