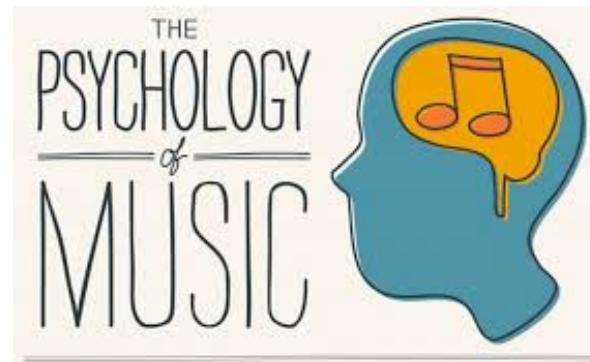
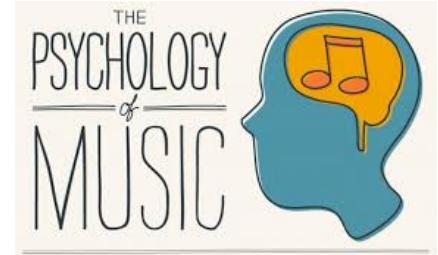


What is Music Psychology?

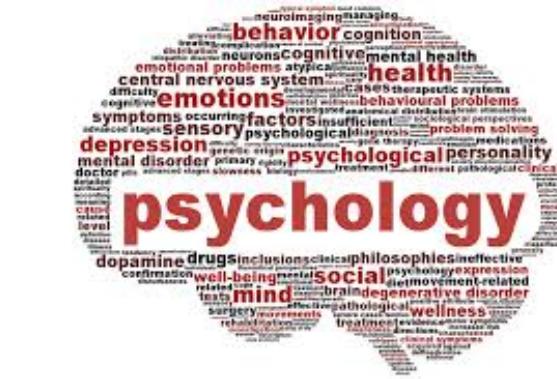




What is Music Psychology?

MUSICOLOGY

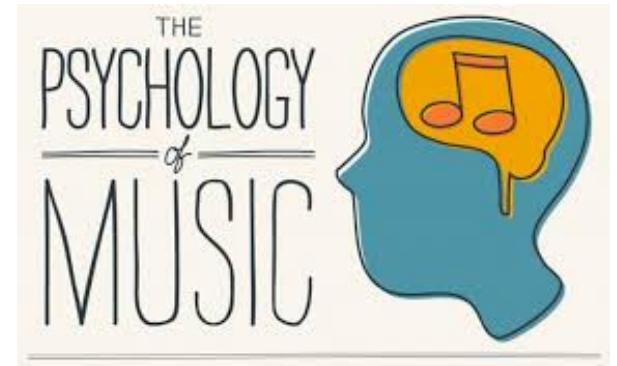
scholarly
analysis and
research-based
study of music



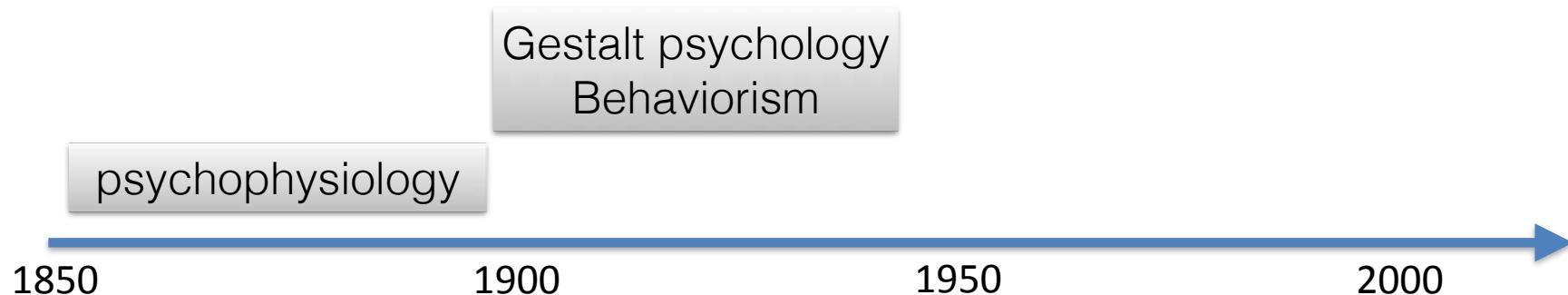
the science of
behavior and mind

aims to study musical behaviour and experience,
including the processes through which music is
perceived, created, responded to, and incorporated into
everyday life

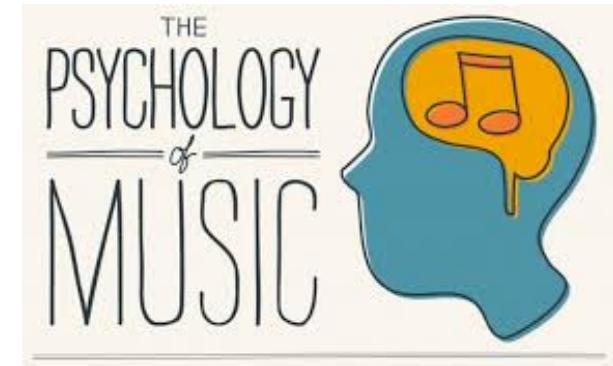
Music Psychology as a scientific field



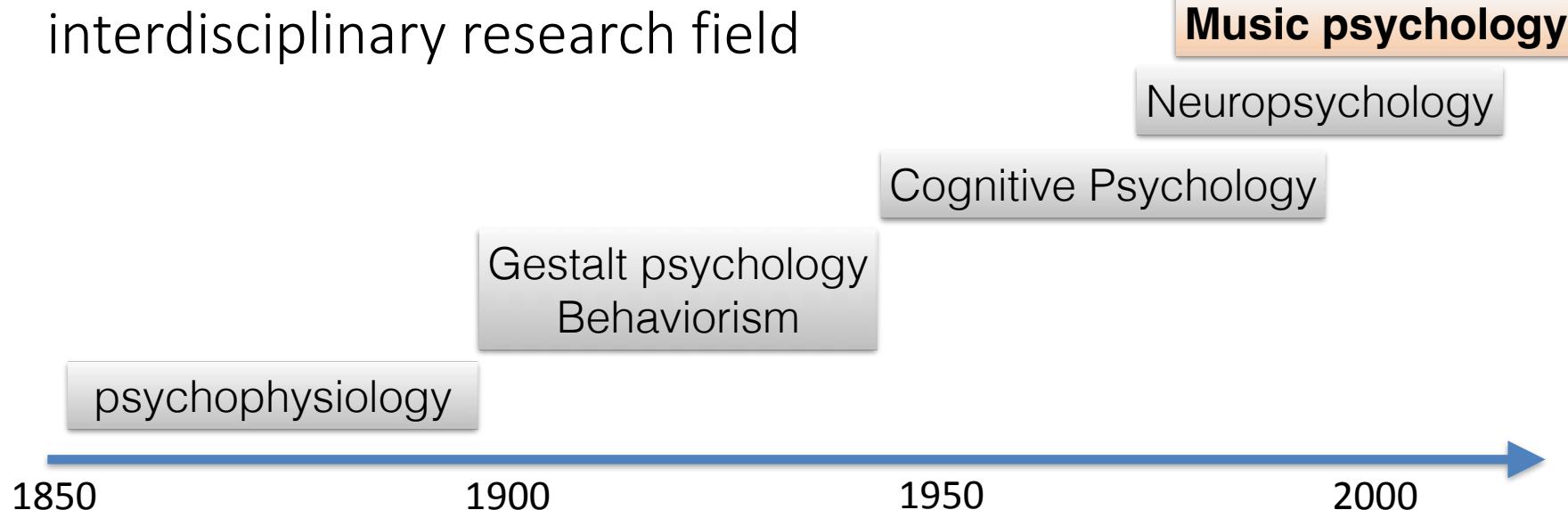
- **19th Century:** the era of natural sciences and technology
 - concerned with the physiological bases of psychological processes
- **20th Century: first half**
 - Influences from the current scientific approaches including Gestalt psychology and Behaviorism



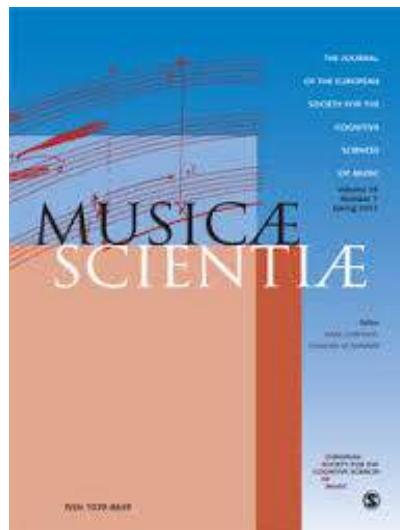
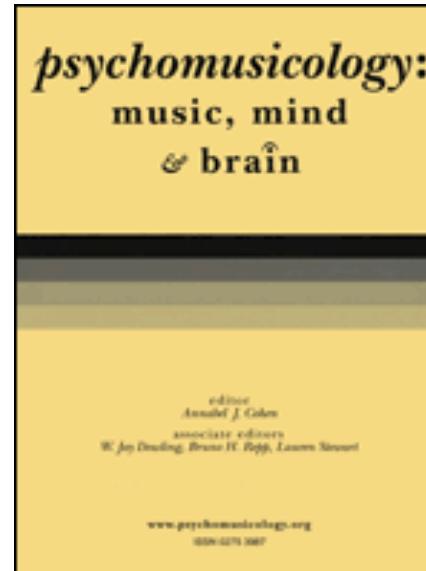
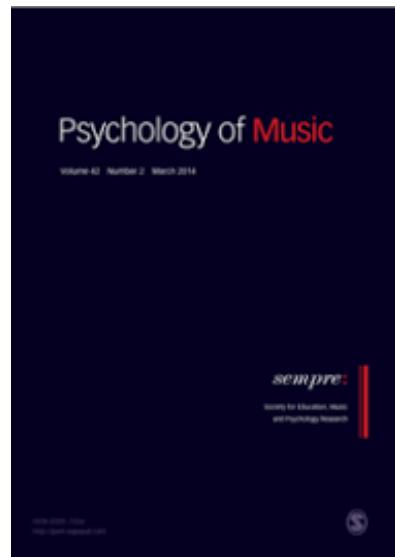
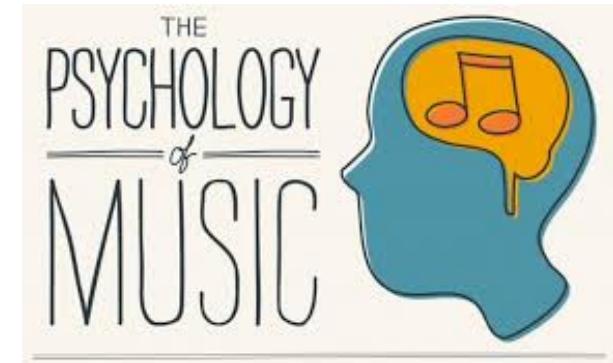
Music Psychology as a scientific field



- **current state**
 - **1980**: the field of music psychology confirmed its position as independent scientific field
 - several international journals and books, technological development, emergence of various new approaches
- Currently, music psychology is a very diverse and interdisciplinary research field



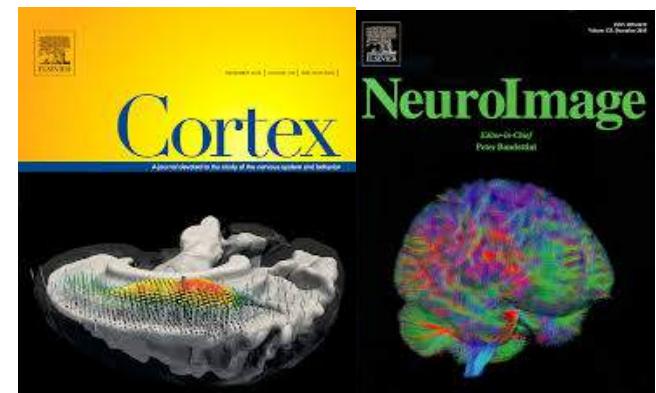
Scientific Journals on Music Psychology



Examples of Other Scientific Journals



nature



International Conferences on Music Psychology

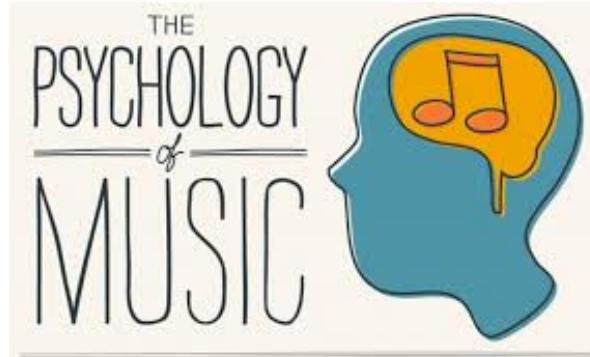


International Conference on
Music Perception and Cognition



**European
Society for the
Cognitive Sciences
Of
Music**

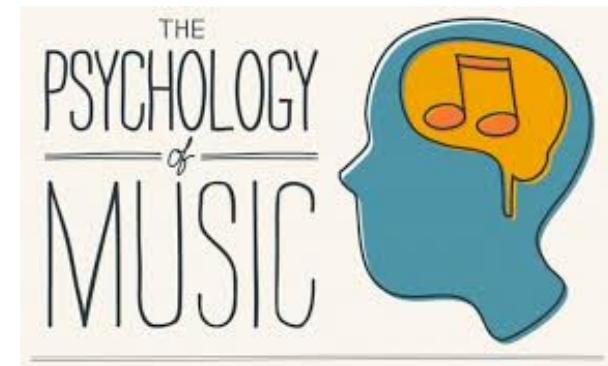




Social psychology of music

- ▶ Musical preferences, attitudes
- ▶ Personality
- ▶ Everyday music listening behaviour
- ▶ Social cognition of music

Examples of Questions that music psychology asks

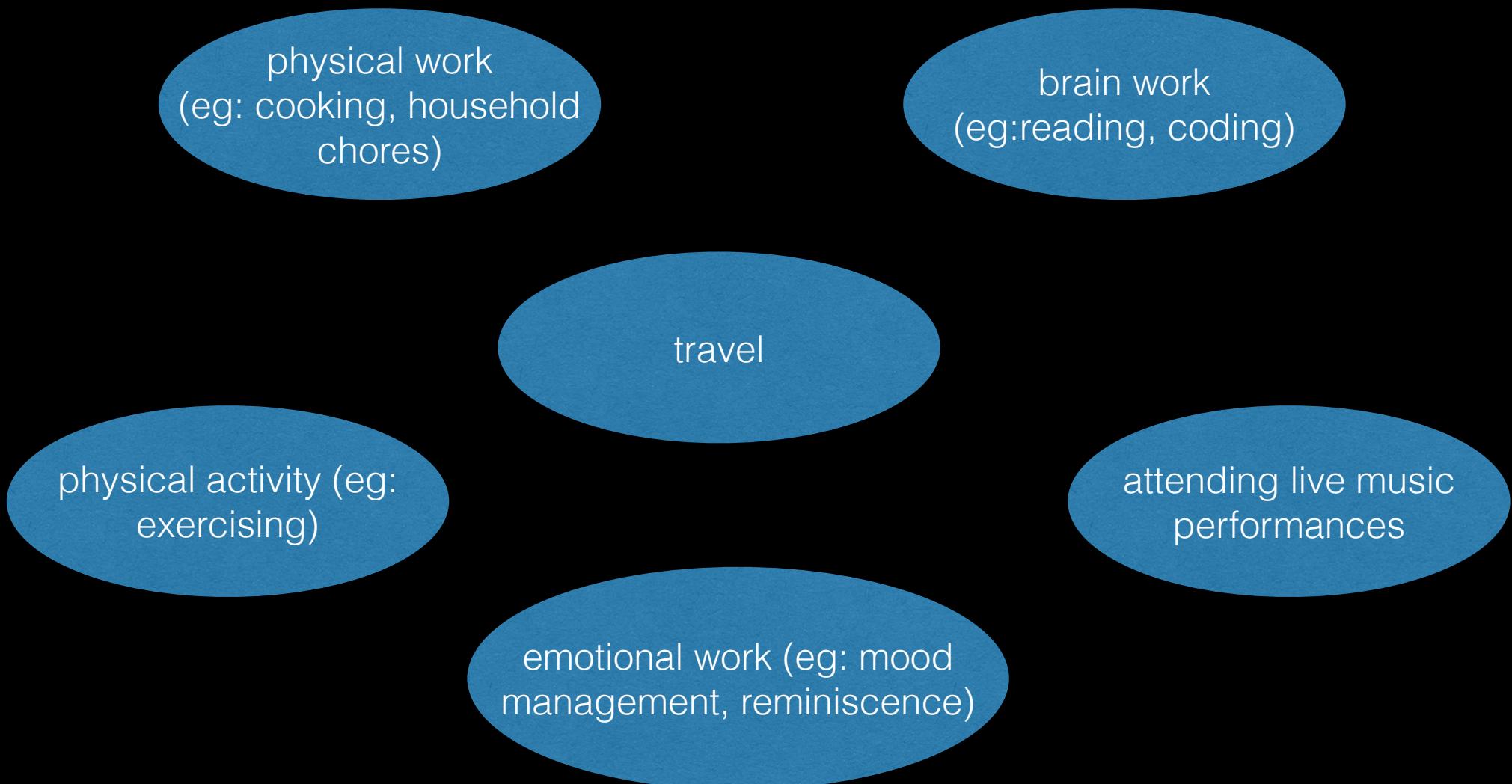


- What does musical taste tell us about ourselves?
- If happy music makes us happy, why do we like sad music so much?
- How does music affect us?
- Why do people play music in stores and elevators?
- Why do we start to tap our leg when we hear music?
- Is musicality something all humans possess?
- How is it possible that an entire orchestra plays together with the precision of just one millisecond or hertz?

Music in everyday life

behaviour accompanying music
listening ?

behaviour accompanying of music?



functions of music?

function of music?

enhance other art forms

cross-cultural awareness

(Self)Mood Regulation

social bonding/group cohesion

motivation

concentration/work

escapism

background

memory prompt

Music in everyday life

Behaviors music accompanies:

- Travel (e.g. driving, walking, public transport)
- Physical work (e.g. cleaning, cooking)
- Brain work (e.g. study, reading, writing)
- Body work (e.g. exercise, yoga, relaxation, pain management)
- Emotional work (mood management, reminiscence, presentation of identity)
- Attendance at music performance as an audience member

Functions music serves:

- Distraction
- Energizing
- Entrainment
- Meaning enhancement



International Journal of Psychology

Publication details, including instructions for authors and subscription information:
<http://www.tandfonline.com/loi/pjip20>

The functions of music and their relationship to music preference in India and Germany

Thomas Schäfer ^a, Arun Tipandjan ^b & Peter Sedlmeier ^a

^a Department of Psychology, Chemnitz University of Technology, Chemnitz, Germany

^b International Centre for Psychological Counseling and Social Research, Pondicherry, India

Available online: 21 Jun 2012

Main function

Allocated items

Music listening

Background

My favorite music . . .

Memory prompt

Is what I like to listen to as background music

Diversion

Enables me to reminisce

Emotion regulation

Is what I like to listen to when I'm dancing

Self-regulation

Is music I can appreciate as art

Self-reflection

Is able to put me in a good mood

Social bonding

Can make me feel ecstatic

Can help me chill and tune out

Helps me forget my problems and worries

Supplies me with important or interesting information

Enables me to experiment with different sides of my personality

Enables me to better understand my thoughts and feelings

Expresses my values

Helps me express my identity

Helps me feel close to others

Can help me meet people

Enables me to identify with the artists



International Journal of Psychology

Publication details, including instructions for authors and subscription information:
<http://www.tandfonline.com/loi/pijp20>

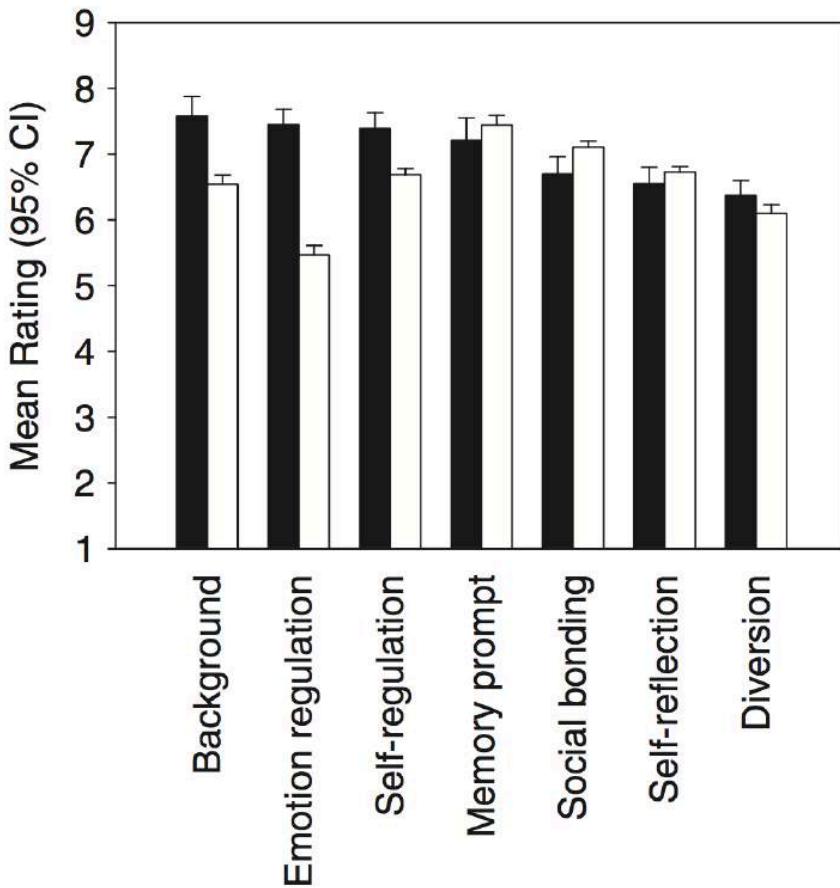
The functions of music and their relationship to music preference in India and Germany

Thomas Schäfer ^a, Arun Tipandjan ^b & Peter Sedlmeier ^a

^a Department of Psychology, Chemnitz University of Technology, Chemnitz, Germany

^b International Centre for Psychological Counseling and Social Research,
Pondicherry, India

Available online: 21 Jun 2012



Slides from Amanda Krause©

How do we experience music in daily life?

- How the music was heard and the consequences of listening
- 3 types of consequences as a result of the music experienced
 - Purposive listening (helping concentration, motivation)
 - Actively engaged listening (bringing back memories, enjoying the music)
 - Validation seeking (aiding worship and appearance)

Krause, A. E., North, A. C., & Hewitt, L. Y. (2015). Music-listening in everyday life: Devices and choice. *Psychology of Music*, 43, 2, 155-170.

Krause, A. E., North, A. C., & Hewitt, L. Y. (2014). Music selection behaviors in everyday listening. *Journal of Broadcasting and Electronic Media*, 58, 2, 306-323.

How do we experience music in daily life?

Krause, et al.'s (2015) Experience Sampling Method Study

- 7 days x 2 texts each day = 14 responses
- Texts randomly sent between 8:00 and 23:00
- 177 individuals completed 12+ responses

	Yes	No
Did you hear music within the two hours prior to receiving the text?	46.3 %	53.7 %



Krause, A. E., North, A. C., & Hewitt, L. Y. (2015). Music-listening in everyday life: Devices and choice. *Psychology of Music*, 43, 2, 155-170.
<http://images.wisegeek.com/cell-phone-message.jpg>

How do we experience music in daily life?

- How the music was heard and people's mood



lethargy

content

project idea???

How do we experience music in daily life?

■ How the music was heard and people's mood

Shift in feeling more lethargic	Shift in feeling more content
Recorded music in public; Radio, TV	Mobile phone, personal computer collection
Not having control	Personal playlist
Shift in feeling less lethargic	Shift in feeling less content
Cloud source	Recorded music in public; TV
Live performance; Random/Shuffle	Not having control; someone else chose

project idea???

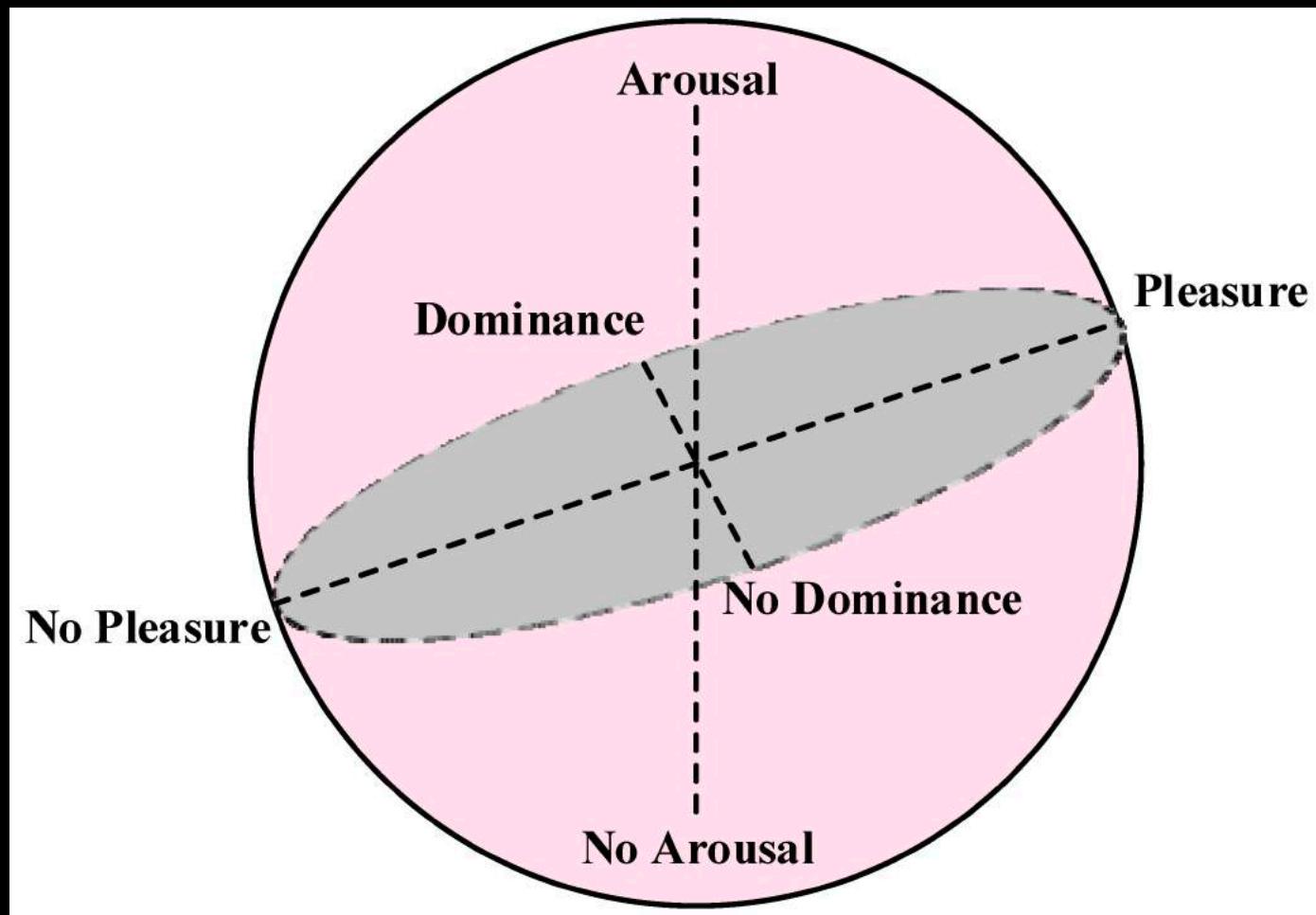
How do we experience music in daily life?

- Where the music was heard
 - Also asked participants about their engagement with the music
 - Four questions - rated their music episode (1-7 rating):

Choice	Liking	Attention	Arousal
At home, driving a car, public transportation ↑ ↓	At home, public transportation ↑ ↓	At home, public transportation, walking ↑ ↓	At the gym ↑ ↓
At a restaurant, pub/club	At a restaurant	At work, at a restaurant	At work, at a restaurant

Krause, A. E., North, A. C., & Hewitt, L. Y. (2016). The role of location in everyday experiences of music. *Psychology of Popular Media Culture*, 5, 3, 232-257.

most liked in public transportation



PAD model & the role of control

Krause and North (2017) → An explicit consideration of location and control over the music

An in-situ, ecologically valid 'experiment'

- Background questionnaire
- A 15-minute listening task (playlist)
- Questionnaire response
 - >response to the music
 - >response to the overall experience ("episode")

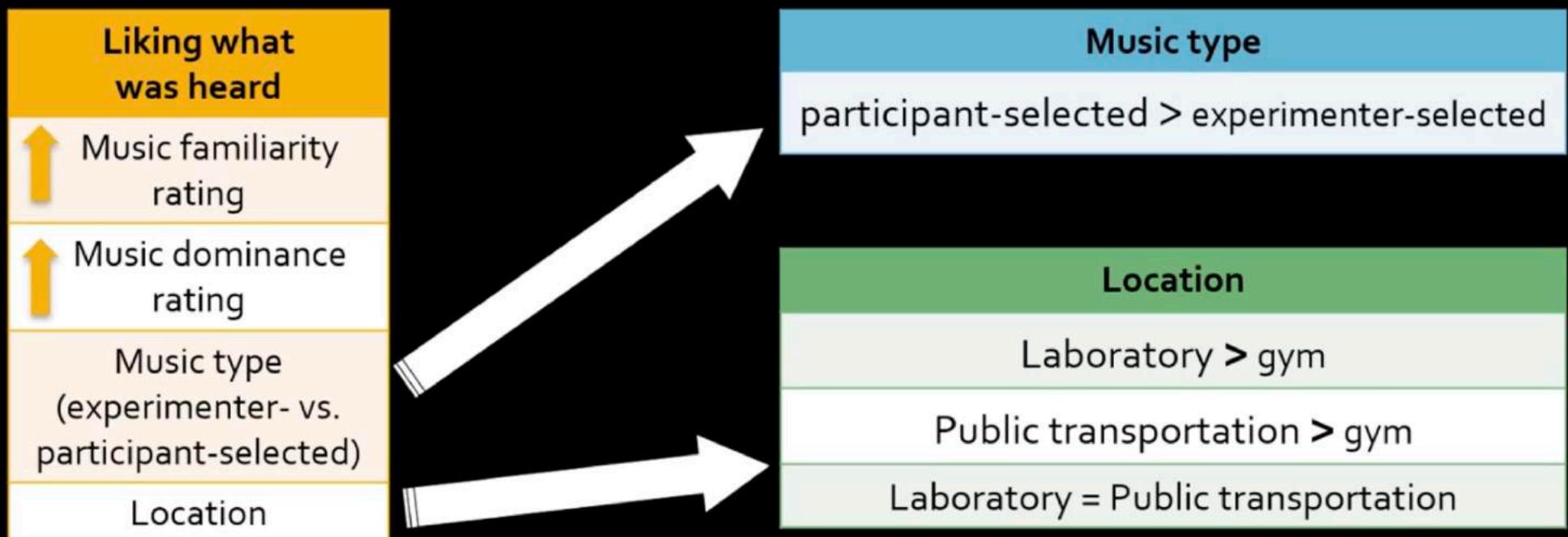
Experiment design 3 (Location) x 2 (Music)	
At the gym	Experimenter-provided
On public transport	Participant-selected
In the laboratory	--

216 participants (17-51 years old, $M_{age} = 21.50$, $Mdn_{age} = 19$; 78.70% female)

Krause, A. E., & North, A. C. (2017). How do location and control over the music influence listeners' responses? *Scandinavian Journal of Psychology*, 58, 2, 114-122.

PAD model & the role of control

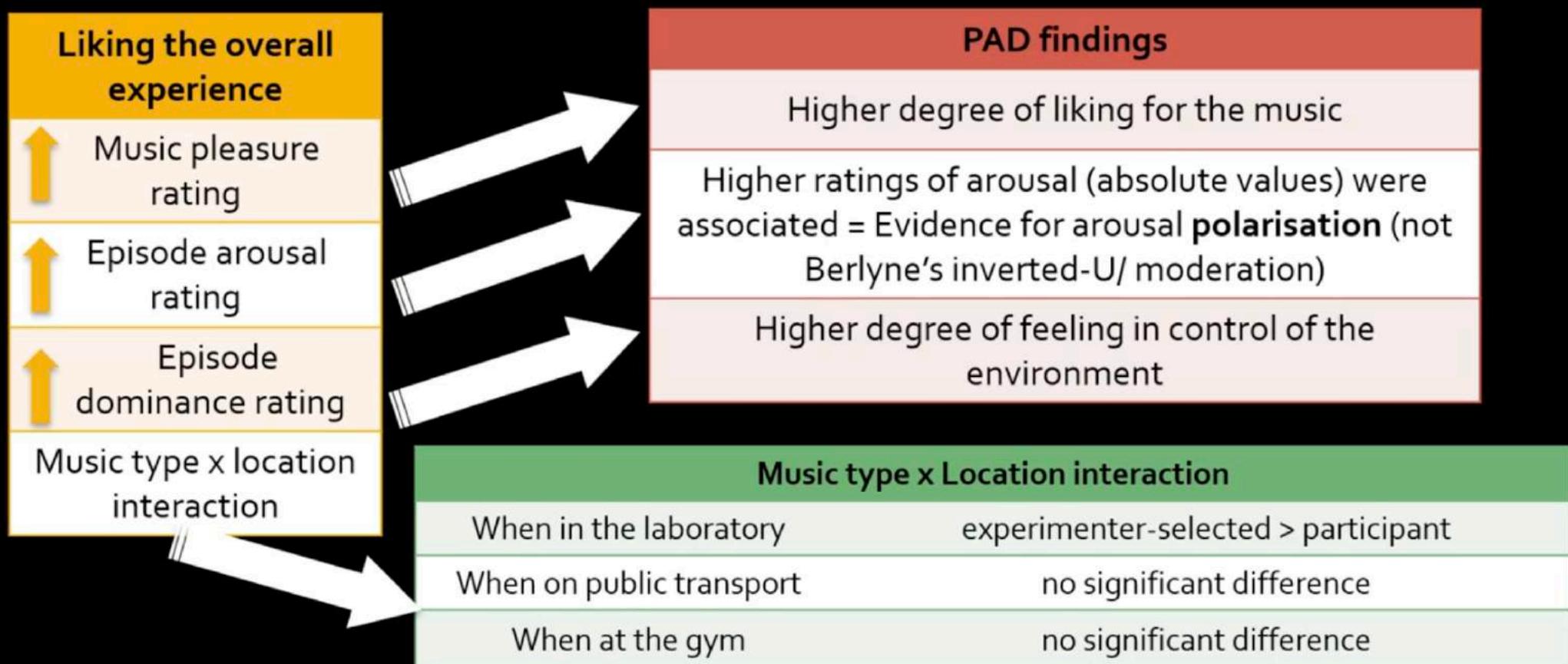
- Response rating regarding the music



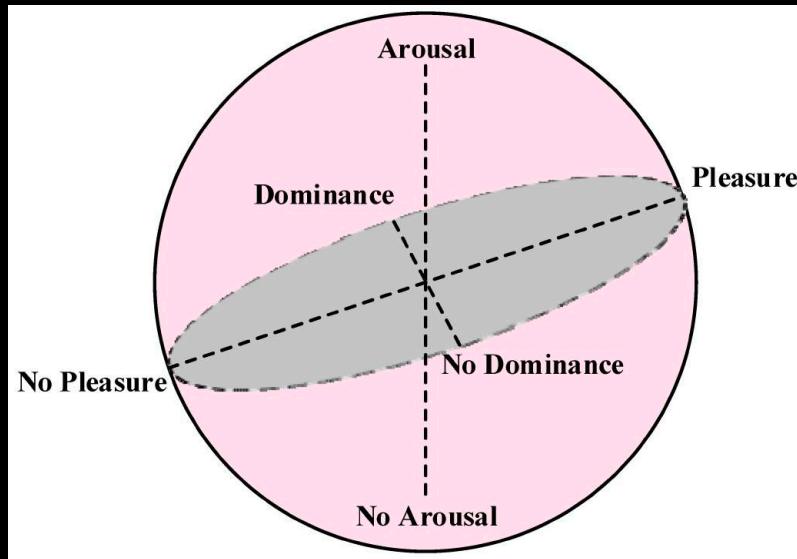
Krause, A. E., & North, A. C. (2017). How do location and control over the music influence listeners' responses? *Scandinavian Journal of Psychology*, 58, 2, 114-122.

PAD model & the role of control

- Response rating regarding the *whole experience*



Krause, A. E., & North, A. C. (2017). How do location and control over the music influence listeners' responses? *Scandinavian Journal of Psychology*, 58, 2, 114-122.



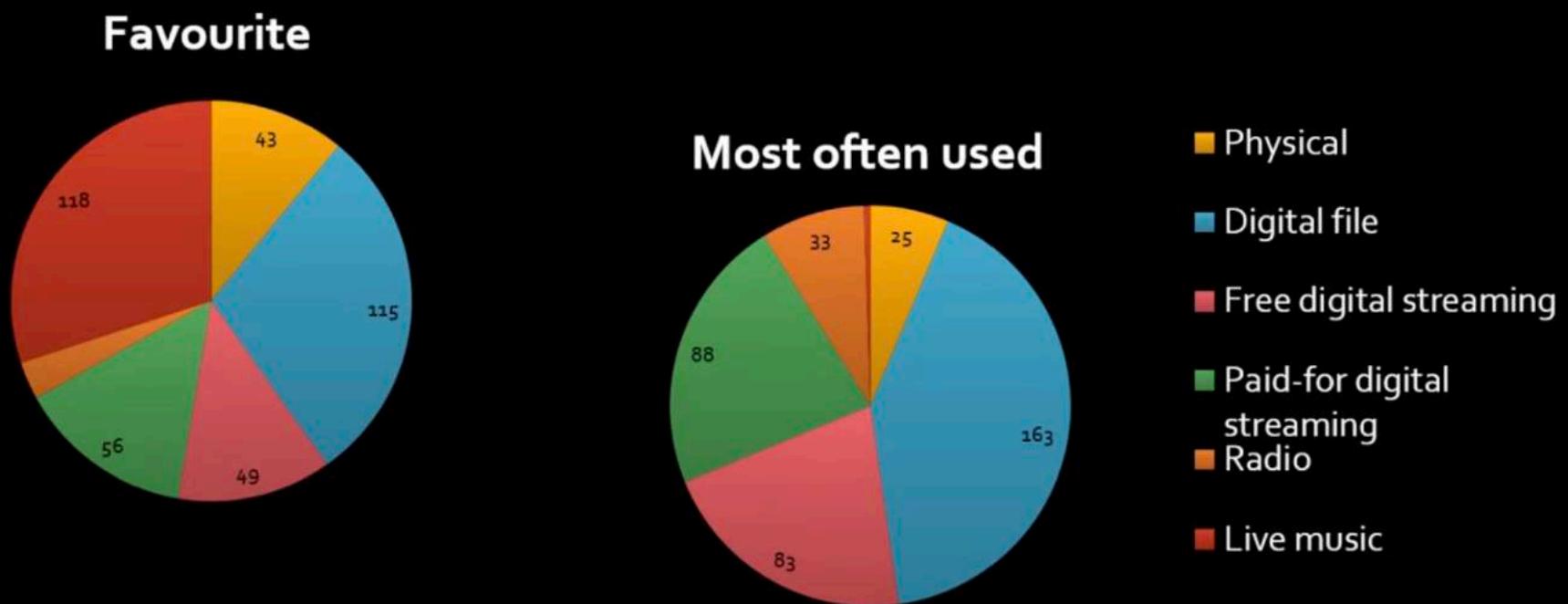
more control - more positive experience

when we like music more - we enjoy what we are doing more

dominance in India??? listening to music itself appears to make you feel a sense of control

Preferred Devices

Brown and Krause (2016): Newer device use data ($N = 396$)

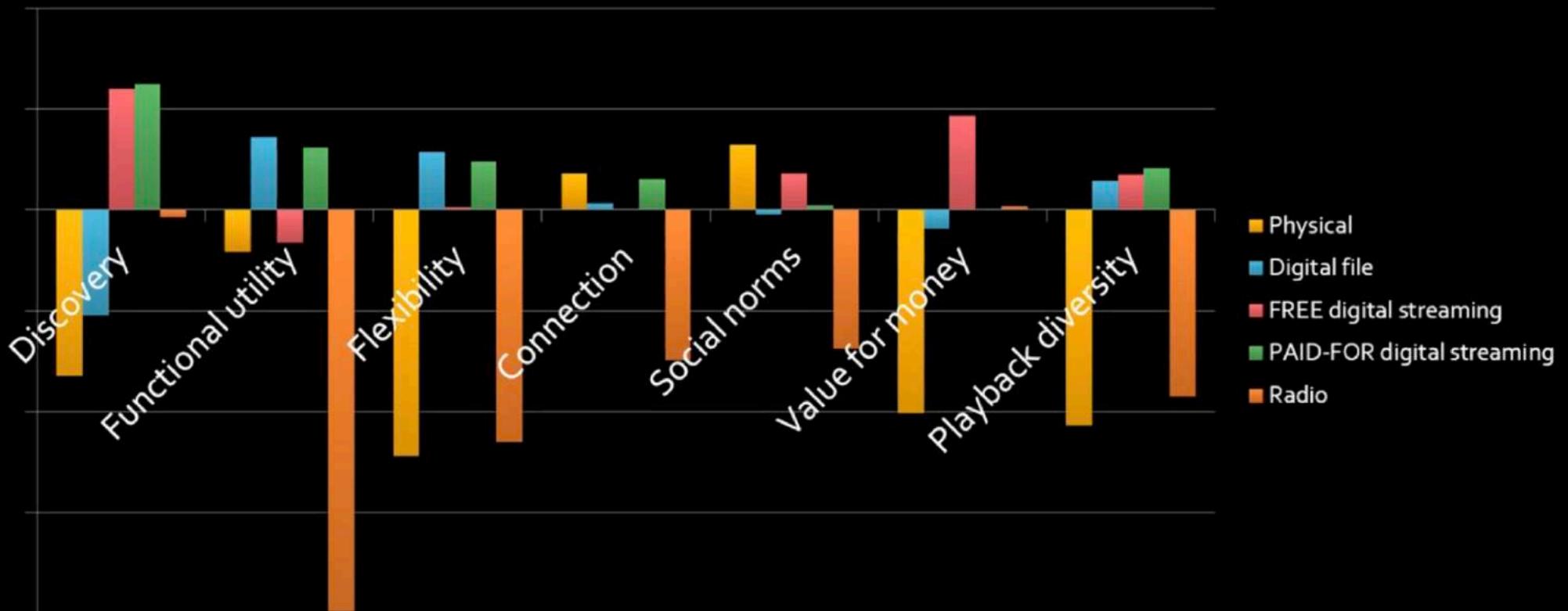


Brown, S. C., & Krause, A. E. (2016, July). *A psychological approach to understanding the varied functions that different music formats serve*. In the Proceedings of the 14th International Conference on Music Perception and Cognition, San Francisco, CA, USA.

what differences would we observe if this was done in India?

Preferred Devices

Brown and Krause (2016): Uses and Gratifications of device use
Estimated Marginal Means



Brown, S. C., & Krause, A. E. (2016, July). *A psychological approach to understanding the varied functions that different music formats serve*. In the Proceedings of the 14th International Conference on Music Perception and Cognition, San Francisco, CA, USA.

Spotlight on portable mp3 players

- Stores many, many digital song files
- Act as “digital sherpas” (Bull, 2007)
 - Providing companionship as individuals go about their daily routines and traverse different settings
- Listening to personal music on MP3 players
 - Auditory bubbles (Bull, 2007) = Private listening EVEN in public places
 - E.g., while traveling / commuting (Heye & Lamont, 2010)
 - Can make situations more tolerable:
 - E.g., music acts as a diversion from a stressful commute, blocks out the surrounding sounds, can create psychological distance from others on crowded public transport (Skånland, 2011)

Bull, M. (2007). *Sound moves: iPod culture and urban experience*. Abingdon, Oxon: Routledge.

Heye, A., & Lamont, A. (2010). Mobile listening situations in everyday life: The use of MP3 players while travelling. *Musicae Scientiae*, 14, 1, 95-120.

Skånland, M. S. (2011). Use of mp3 players as a coping resource. *Music and Arts in Action*, 3, 2, 15-33.

Spotlight on streaming

YouTube as a music source?

- Website devoted to videos – but a primary site of music engagement
 - Especially for youth (Avdeeff, 2012)
- 38.4% of all of the YouTube views are of music, and 19.1% of all YouTube videos uploaded are music-related (Houghton, 2014)
- 2017 data: YouTube has a higher weekly reach than Spotify (Music Week, 2017)
- Allows for individuals to access any song on demand with a simple search without it needing be purchased or stored
 - The same/different from other streaming platforms?
 - Music industry concern about copyright, piracy (“stream ripping”)

Avdeeff, M. (2012). Technological engagement and musical eclecticism: An examination of contemporary listening practices. *Participations: Journal of Audience & Reception Studies*, 9, 2, 265-285.

Houghton, B. (2014). How big is music on YouTube? Hint really big [INFOGRAPHIC]. Retrieved from <http://www.hypebot.com/hypebot/2014/01/how-big-is-music-on-you-tube-hint-really-big-infographic.html>

Music Week: <http://www.musicweek.com/digital/read/spotify-and-youtube-listening-habits-revealed-in-survey/069690>

Spotlight on playlists

How are playlists made?

- Are there different types of playlists?
- Krause (2010)
 - Categorized 5 main types of playlists

Playlist types
Artist/ Group
Genre
Specific situation/Activity
Feeling/ Emotion/ Mood
Time (Holiday, Occasion, Season, etc.)

Krause, A. E. (2010). *myTunes: Digital music library users and their self images*. Masters Thesis, Roehampton University.

Spotlight on playlists

Contextualized Listening

- A lot of playlists are made to accompany an activity/situation
- Krause and North's (2014) study
 - [Discussed in the lecture on taste]
 - Asked to create a playlist of 10-12 songs for a situation

Playlist situations:
House party with friends
Commuting on public transportation
To use while doing the washing up/ironing
To listen to before going to sleep
For a posh cocktail reception
To listen to after a long day of work
For a wedding
To use while jogging with an mp3 player

Krause, A. E., & North, A. C. (2014). Contextualized music listening: Playlists and the Mehrabian and Russell model. *Psychology of Well-Being: Theory Research and Practice*, 4: 22.

what would you expect to find?

Spotlight on playlists

Krause and North's (2014) study

- Analyses demonstrated that preferred playlist music varied by situation

Arousing = loud, invigorating, attention-grabbing
↑ Jogging with an mp3 player At a house party
Overall mean
↓ Before going to sleep At a cocktail party

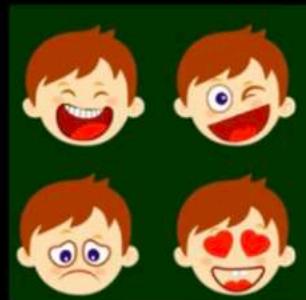
Sophisticated = sophisticated/classy, sensual, beautiful
↑ At a wedding At a cocktail party
Overall mean
↓ After a long day At a house party Jogging with an mp3 player While commuting on public transportation

Krause, A. E., & North, A. C. (2014). Contextualized music listening: Playlists and the Mehrabian and Russell model. *Psychology of Well-Being: Theory Research and Practice*, 4: 22.

Everyday listening and well-being

Music engagement and well-being

- More than 500 benefits reported in published work
(Krause, et al. 2018)



- Social, emotional, cognitive, spiritual, physical, quality of life

Krause, A. E., Davidson, J. W., & North, A. C. (2018). Musical activity and well-being: A new quantitative measurement instrument. *Music Perception*, 35, 4, 454-474.
<https://doi.org/10.1525/MP/2018.35.4.454>

Everyday listening and well-being

Social

- Gives you opportunities to make and keep friends
(e.g., Jutras, 2011)
- Helps you feel connected + involved in a community
(e.g., Creech, et al., 2013)

Emotional

- A big **reason** for listening is to **manage mood** (Lonsdale & North, 2011)
- Positive emotions (Bungay & Skingley, 2008)
- Stress release, relaxation (Jutras, 2011) & catharsis (Garrido, 2017)
- Processing & expressing emotions
(e.g., Bailey & Davidson, 2005)

Jutras, P. J. (2011). The benefits of new horizons band participation as self-reported by selected New Horizons band members. *Bulletin of the Council for Research in Music Education*, 187, 65-84.

Creech, A., Hallam, S., Gaunt, H., McQueen, H., Pincas, A., & Varvarigou, M. (2013). The power of music in the lives of older adults. *Research Studies in Music Education*, 35, 1, 87-102.

Lonsdale, A.J., & North, A.C. (2011). Why do we listen to music? A uses and gratifications analysis. *British Journal of Psychology*, 102, 1, 108-134.

Bungay, H., & Skingley, A. (2008). The silver song club project: Summary of a formative evaluation. Canterbury: Canterbury Christ Church University.

Jutras, P. J. (2011). The benefits of new horizons band participation as self-reported by selected New Horizons band members. *Bulletin of the Council for Research in Music Education*, 187, 65-84.

Bailey, B. A., & Davidson, J. W. (2005). Effects of group singing and performance for marginalized and middle-class singers. *Psychology of Music*, 33(3), 269-303.

Garrido, S. (2017). *Why Are We Attracted to Sad Music?* Palgrave MacMillan.

Everyday listening and well-being

Cognitive (Music & Memory)

- Supports QoL in PWD (Särkämö, et al., 2016)
- Alzheimer's and autobiographical recall (El Haj, et al., 2015)
- Benefits for 'healthy' folks, too (e.g., Thompson, et al., 2005)
 - e.g., higher intelligence (Schellenberg, 2005) and supporting creativity/ imagination (Kokotsaki & Hallam, 2011)

Physical (Cue to move)

- Improvements after stroke (van Wijck, et al., 2011)
- Improves walking with Parkinson's disease (Hove & Keller, 2015)
- Children walk farther when listening (Reychler, et al., 2017)
- Improves sports performance (Karageorghis, et al., 2013)

Särkämö, T., Laitinen, S., Numminen, A., Kurki, M., Johnson, J. K., & Rantanen, P. (2016). Clinical and demographic factors associated with the cognitive and emotional efficacy of regular musical activities in dementia. *Journal of Alzheimers Disease*, 49, 3, 767-781.

El Haj, M., Antoine, P., Nandrino, J. L., Gély-Nargeot, M.-C., & Raffard, S. (2015). Self-defining memories during exposure to music in Alzheimer's disease. *International Psychogeriatrics*, 27, 10, 1719-1730.

Thompson, R.G., Moulin, C.J.A., Hayre, S., & Jones, R.W. (2005). Music enhances category fluency in older adults and Alzheimer's disease patients. *Experimental Aging Research*, 31, 91-99.

Schellenberg, G. (2005). Music and cognitive abilities. *Current Directions in Psychological Science*, 14, 6, 317-320.

Kokotsaki, D., & Hallam, S. (2011). The perceived benefits of participative music making for non-music university students: a comparison with music students. *Music Education Research*, 13(2), 149-172.

van Wijck, F., Knox, D., Dodds, C., Cassidy, G., Alexander, G., & MacDonald, R. A. R. (2011). Making music after stroke: Using musical activities to enhance arm function. *Annals of The New York Academy of Sciences*, 305-311.

Hove, M. J., & Keller, P. E. (2015). Impaired movement timing in neurological disorders: Rehabilitation and treatment strategies. *Annals Of The New York Academy Of Sciences*, 1337, 111-117.

Reychler, G., Fabre, J., Lux, A., Caty, G., Pieters, T., & Liistro, G. (2017). Influence of different kinds of music on walking in children. *Rehabilitation Nursing*, 42, 1, 33-38.

Karageorghis, C. I., Hutchinson, J. C., Jones, L., Farmer, H. L., Ayhan, M. S., Wilson, R. C., . . . Bailey, S. G. (2013). Psychological, psychophysical, and ergogenic effects of music in swimming. *Psychology of Sport and Exercise*, 14, 560-568.



Final Thoughts

- Consuming music is not “simply about listening but involves the ways it becomes integrated into our personal and social lives. This is very much determined by the technologies through which we experience it: how music is distributed, rendered, purchased, organized, shared, chosen, listened to, interacted with and repurposed”
(O’Hara & Brown, 2006, p. 3)
- Technologies still evolving – future music technologies are yet to come
 - But vital for research on music behaviors “to keep in touch with these technological developments in order to maintain its ecological validity”
(Krause & Hargreaves, 2013)

O’Hara, K., & Brown, B. (2006). Consuming music together: Introduction and overview. In K. O’Hara & B. Brown (Eds.), *Consuming music together: Social and collaborative aspects of music consumption technologies* (pp. 3-18). Dordrecht, The Netherlands: Springer.

Krause, A. E., & Hargreaves, D. J. (2013). myTunes: Digital music library users and their self images. *Psychology of Music*, 41, 5, 531-544.

social bonding/group cohesion



Is music still fundamentally social when we are listening to or making it alone (e.g., listening through headphones, etc.)?

music as a utility?

omnipresence: music or noise?



Music as a mirror of
the self

Musical Preferences & Individual Differences



measure preferences?

measure individual differences?

what do we know so far?

Music Preferences ?

Emotion
(Felt vs Perceived)

Musical Genre

Dance form
(eg: salsa)
Movement Genre

Mood

Artist

Perceptual attributes
(eg: loud, soft, intense)

Lyrical Aspects
(Topics, emotion)

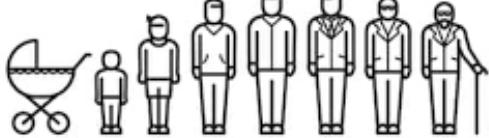
Psychological attributes
(eg: complex, inspiring,
sophisticated)

Social Aspects
(Popularity, Identity,
Bonding)

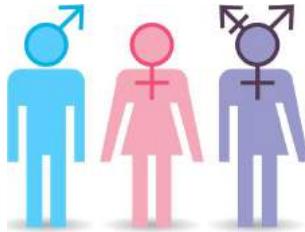
Your musical preference: responses

- Lyrical content (way of using language as part of music, way of verbal expression)
- Changes & dynamics (genre change in middle of song)
- Playing myself, reminds of specific time, memory of listening to the composer
- Beauty, balance, music encompassing life from beginning to end
- Jealousy for the wonderful experience music is describing, composer envy/admiration
- The way of reproducing a cover song from original
- Visual connotation music evokes, the atmosphere music creates
- Timbre & instrumentation of the music
- Developing melody or theme in the song – music grows / goes forward
- Personal connection, feeling something for the performer
- Images that lyrics evoke (even though meaning is not completely clear)

Individual Differences



age



gender



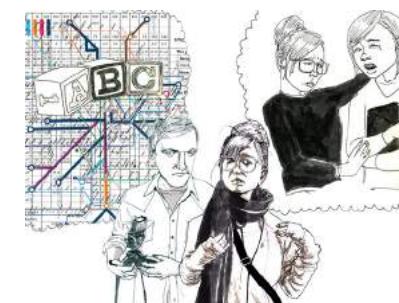
traits



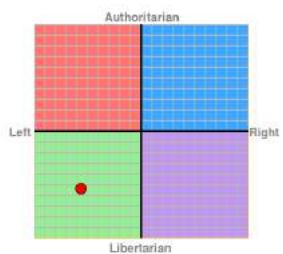
skills



states/arousal level



cognitive styles

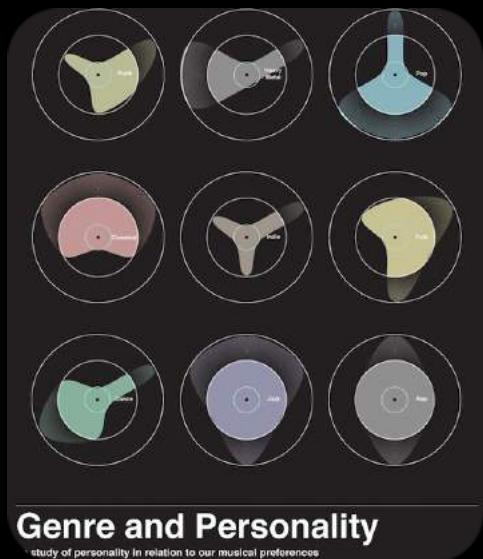


political leanings



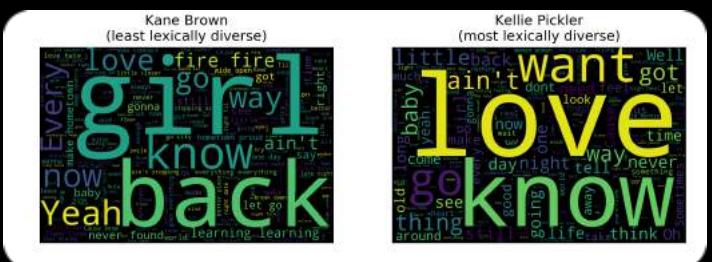
disease/brain disorders

Musical Preferences & Individual Differences



“individuals are drawn to the social and cultural meanings in music that match their personal characteristics and concerns”

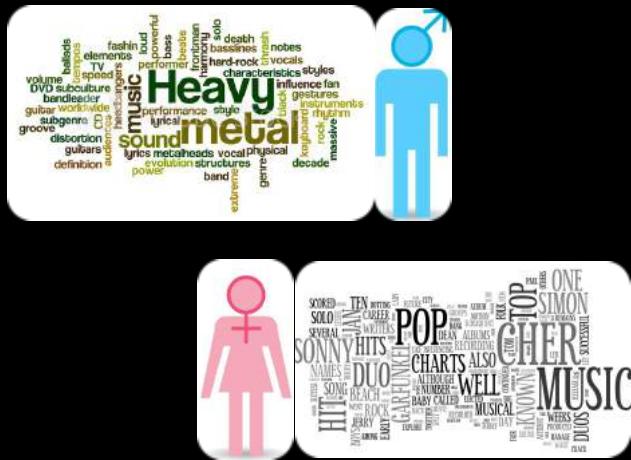
Rentfrow, P. J., & Gosling, S. D. (2003). **The do re mi's of everyday life: The structure and personality correlates of music preferences.** Journal of Personality and Social Psychology, 84(6), 1236-1256.
<http://dx.doi.org/10.1037/0022-3514.84.6.1236>



“people use linguistic cues in lyrics as stimuli to fulfill their individual needs”

Qiu, L., Chen, J., Ramsay, J., & Lu, J. (2019). **Personality predicts words in favorite songs**
Journal of Research in Personality 78 (2019) 25–35

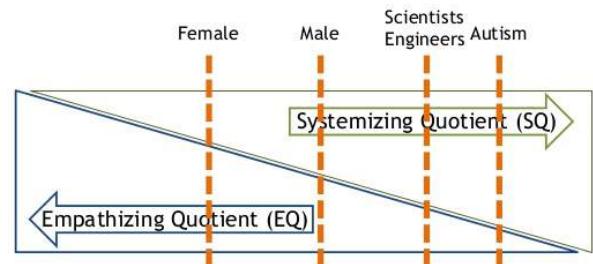
Musical Preferences & Individual Differences



"greater preference for heavier contemporary music among men and of chart pop music among women"

Colley (2008), *J. Appl. Social Psychol.*, vol. 38, no. 8, pp. 2039–2055; Hargreaves et al. (1995) *J. Res. Music Educ.*, vol. 43, no. 3, pp. 242–250

Empathizing-systemizing theory



empathisers - mellow
systemizers - intense

Musical Preferences & Individual Differences



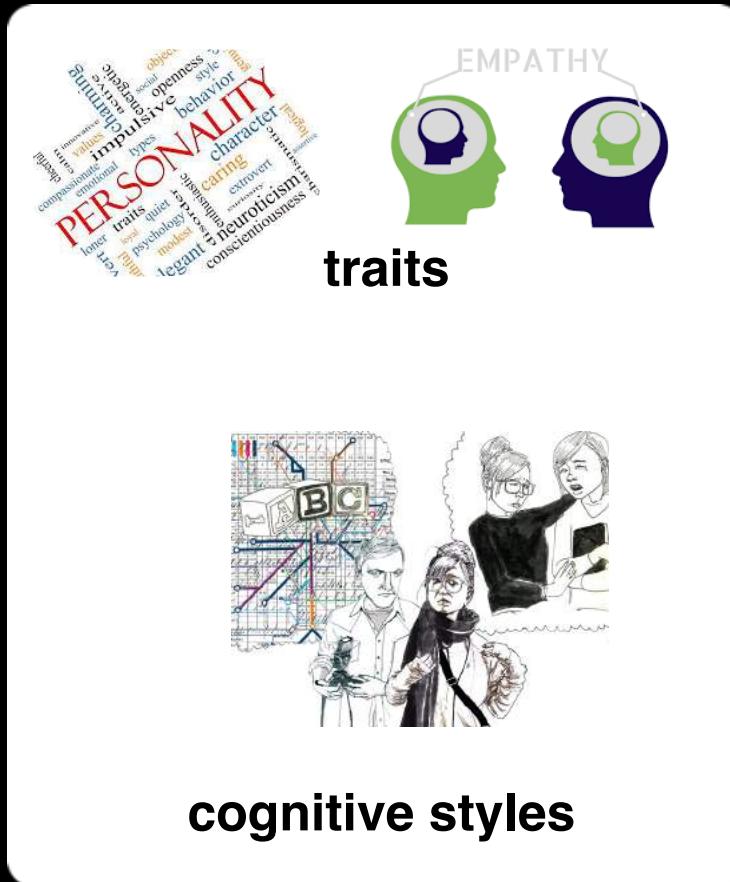
"people who feel the pain of sad songs may be better at feeling the pain of other human beings"

Vuoskoski, J. K., Thompson, B., McIlwain, D., and Eerola, T. (2012). **Who enjoys listening to sad music and why?** Music Percept. 29, 311–317

"musical preferences are an expression of who we are **emotionally, socially, and cognitively**"



Individual Differences



Trait Theory

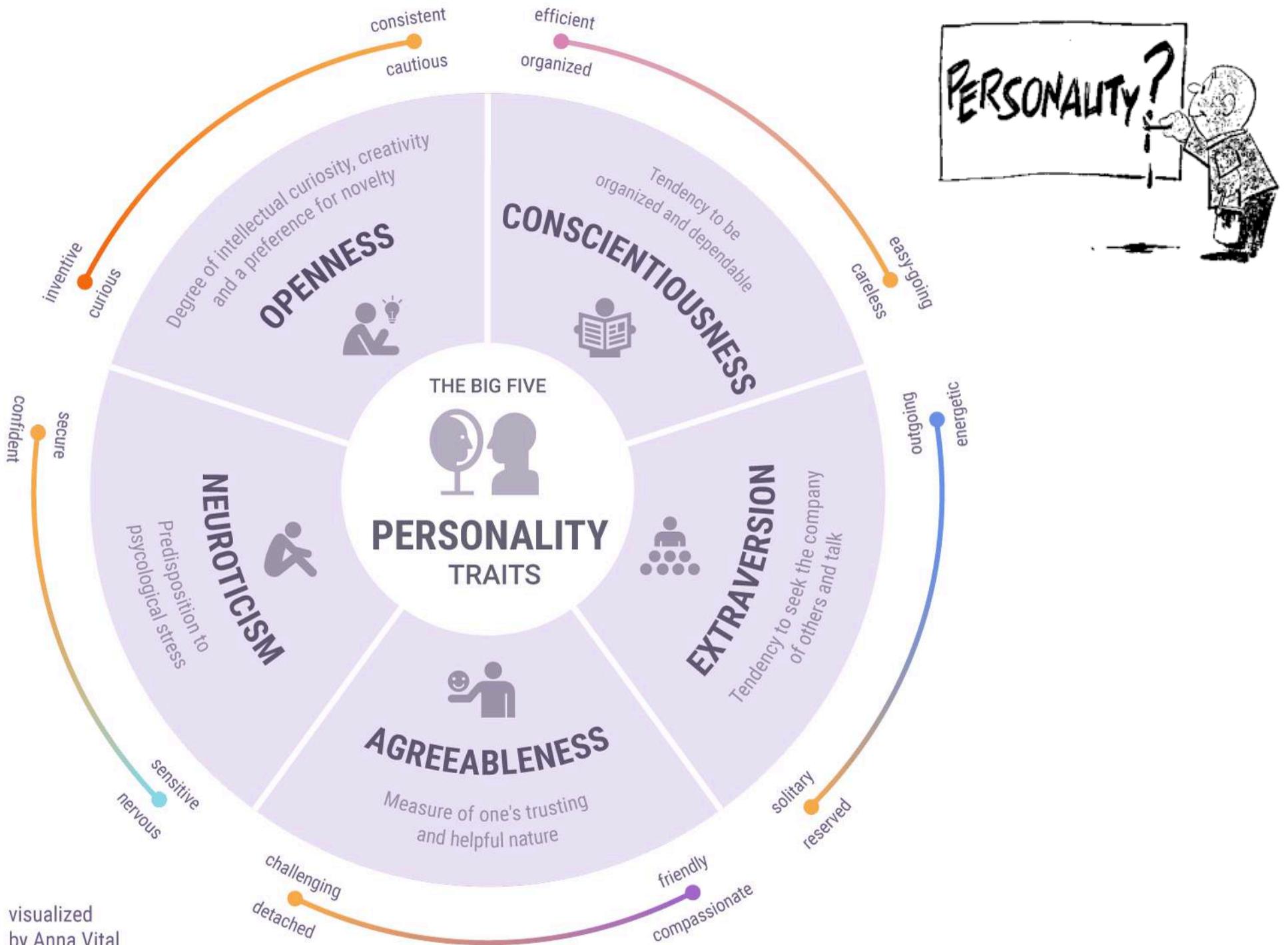


- **Personality** = a set of traits that remain fairly stable throughout an individual's life
- Are present in each individual to a greater or lesser degree
- Eysenck's model of personality (1947, 1976):
 - Extraversion, Neuroticism, and Psychoticism
- The “**Big Five**” personality model (Goldberg 1992, Costa & McCrae 1992)
 - Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience

The “Big Five” Personality Traits



- **Extraversion** = a tendency to experience positive emotions, to be energetic, and to seek stimulation in the company of others
- **Agreeableness** = a tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others
- **Conscientiousness** = a tendency to show self- discipline, act dutifully, and aim for achievement
- **Neuroticism** = a tendency to experience unpleasant emotions such as anger, anxiety; sometimes called emotional instability linked to depression susceptibility
- **Openness to Experience** = appreciation for art, emotion, adventure, unusual ideas, and curiosity



Source: J. M. Digman
Personality Structure: Emergence of the Five-Factor Model

Does your Music Taste Reveal Your Personality?

Based on Research by:

Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A Very Brief Measure of the Big Five Personality Domains. *Journal of Research in Personality*, 37, 504-528.

Rentfrow, P. J., & Gosling, S. D. (2003). The do re mi's of everyday life: The structure and personality correlates of music preferences. *Journal of Personality and Social Psychology*, 84, 1236-1256.



APPENDIX 4.1. BIG FIVE INVENTORY RESPONSE FORM AND INSTRUCTIONS TO PARTICIPANTS

Instructions: Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

1 Disagree strongly	2 Disagree a little	3 Neither agree nor disagree	4 Agree a little	5 Agree strongly
------------------------	------------------------	------------------------------------	---------------------	---------------------

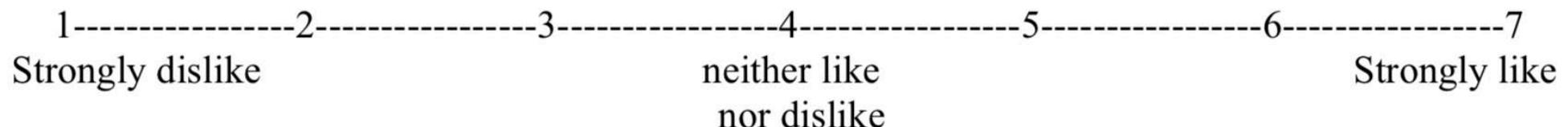
I see myself as someone who ..

- | | |
|---|--|
| 1. <input type="text"/> Is talkative | 24. <input type="text"/> Is emotionally stable, not easily upset |
| 2. <input type="text"/> Tends to find fault with others | 25. <input type="text"/> Is inventive |
| 3. <input type="text"/> Does a thorough job | 26. <input type="text"/> Has an assertive personality |
| 4. <input type="text"/> Is depressed, blue | 27. <input type="text"/> Can be cold and aloof |
| 5. <input type="text"/> Is original, comes up with new ideas | 28. <input type="text"/> Perseveres until the task is finished |
| 6. <input type="text"/> Is reserved | 29. <input type="text"/> Can be moody |
| 7. <input type="text"/> Is helpful and unselfish with others | 30. <input type="text"/> Values artistic, aesthetic experiences |
| 8. <input type="text"/> Can be somewhat careless | 31. <input type="text"/> Is sometimes shy, inhibited |
| 9. <input type="text"/> Is relaxed, handles stress well | 32. <input type="text"/> Is considerate and kind to almost everyone |
| 10. <input type="text"/> Is curious about many different things | 33. <input type="text"/> Does things efficiently |
| 11. <input type="text"/> Is full of energy | 34. <input type="text"/> Remains calm in tense situations |
| 12. <input type="text"/> Starts quarrels with others | 35. <input type="text"/> Prefers work that is routine |
| 13. <input type="text"/> Is a reliable worker | 36. <input type="text"/> Is outgoing, sociable |
| 14. <input type="text"/> Can be tense | 37. <input type="text"/> Is sometimes rude to others |
| 15. <input type="text"/> Is ingenious, a deep thinker | 38. <input type="text"/> Makes plans and follows through with them |
| 16. <input type="text"/> Generates a lot of enthusiasm | 39. <input type="text"/> Gets nervous easily |
| 17. <input type="text"/> Has a forgiving nature | 40. <input type="text"/> Likes to reflect, play with ideas |
| 18. <input type="text"/> Tends to be disorganized | 41. <input type="text"/> Has few artistic interests |
| 19. <input type="text"/> Worries a lot | 42. <input type="text"/> Likes to cooperate with others |
| 20. <input type="text"/> Has an active imagination | 43. <input type="text"/> Is easily distracted |
| 21. <input type="text"/> Tends to be quiet | 44. <input type="text"/> Is sophisticated in art, music, or literature |
| 22. <input type="text"/> Is generally trusting | |
| 23. <input type="text"/> Tends to be lazy | |

Please check: Did you write a number in front of each statement?

STOMP

For the following items, please indicate your basic preference level for the genres listed using the scale provided.



- | | |
|----------------------------|--------------------------------------|
| 1. _____ Classical | 9. _____ Alternative |
| 2. _____ Blues | 10. _____ Jazz |
| 3. _____ Country | 11. _____ Rock |
| 4. _____ Dance/Electronica | 12. _____ Pop |
| 5. _____ Folk | 13. _____ Heavy Metal |
| 6. _____ Rap/hip-hop | 14. _____ Soundtracks/theme
songs |
| 7. _____ Soul/funk | |
| 8. _____ Religious | Scoring for the four m |

Scoring for the four music preference dimensions:

Reflective & Complex: 1, 2, 5, 10

Intense & Rebellious: 9, 11, 13

Upbeat & Conventional: 3, 8, 12, 14

Energetic & Rhythmic: 4, 6, 7

STOMP

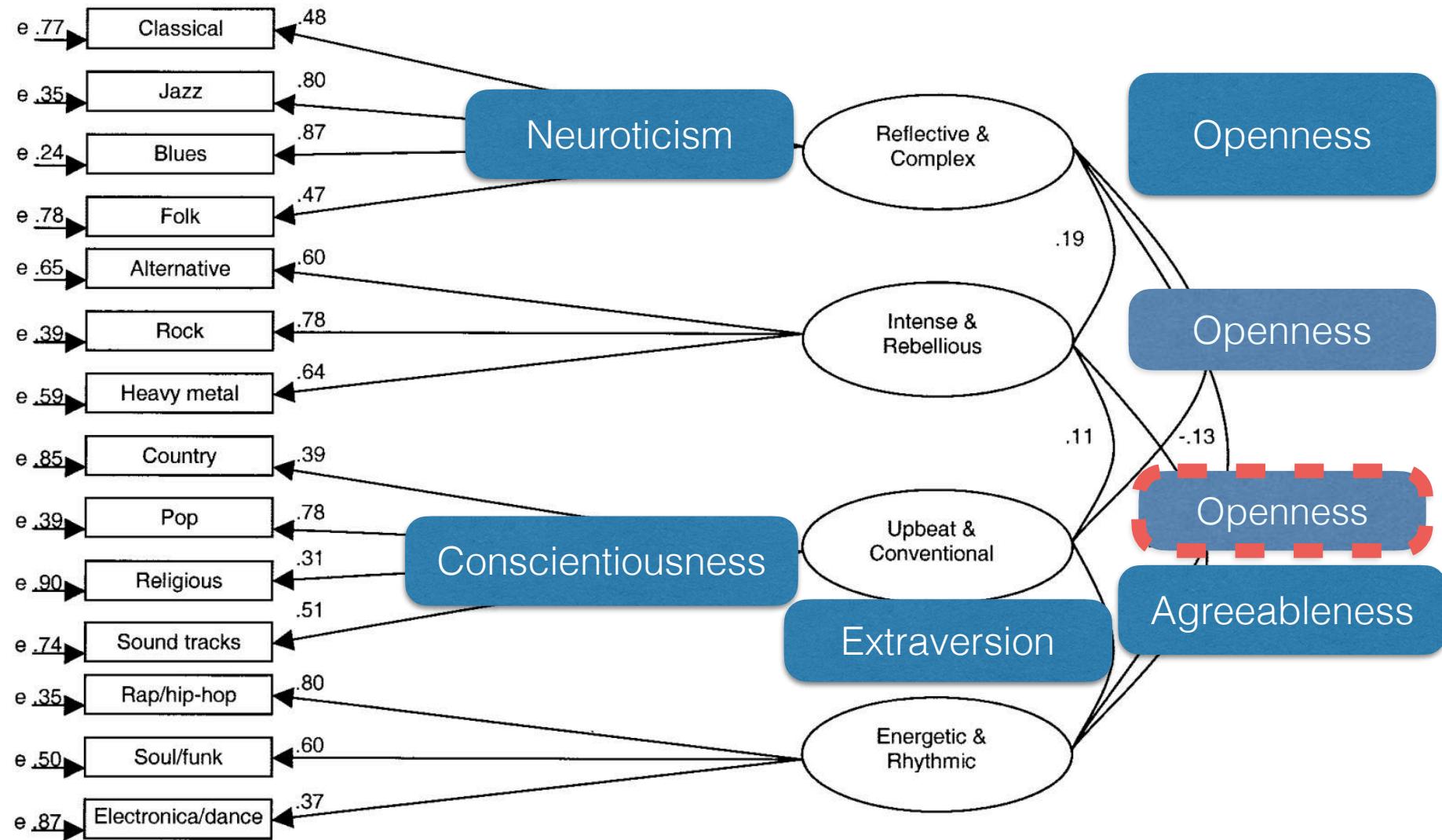
For the following items, please indicate your basic preference level for the genres listed using the scale provided.

Table 1

Factor Loadings of the 14 Music Genres on Four Varimax-Rotated Principal Components in Study 2

Genre	Music-preference dimension			
	Reflective and Complex	Intense and Rebellious	Upbeat and Conventional	Energetic and Rhythmic
Blues	.85	.01	−.09	.12
Jazz	.83	.04	.07	.15
Classical	.66	.14	.02	−.13
Folk	.64	.09	.15	−.16
Rock	.17	.85	−.04	−.07
Alternative	.02	.80	.13	.04
Heavy metal	.07	.75	−.11	.04
Country	−.06	.05	.72	−.03
Sound tracks	.01	.04	.70	.17
Religious	.23	−.21	.64	−.01
Pop	−.20	.06	.59	.45
Rap/hip-hop	−.19	−.12	.17	.79
Soul/funk	.39	−.11	.11	.69
Electronica/dance	−.02	.15	−.01	.60

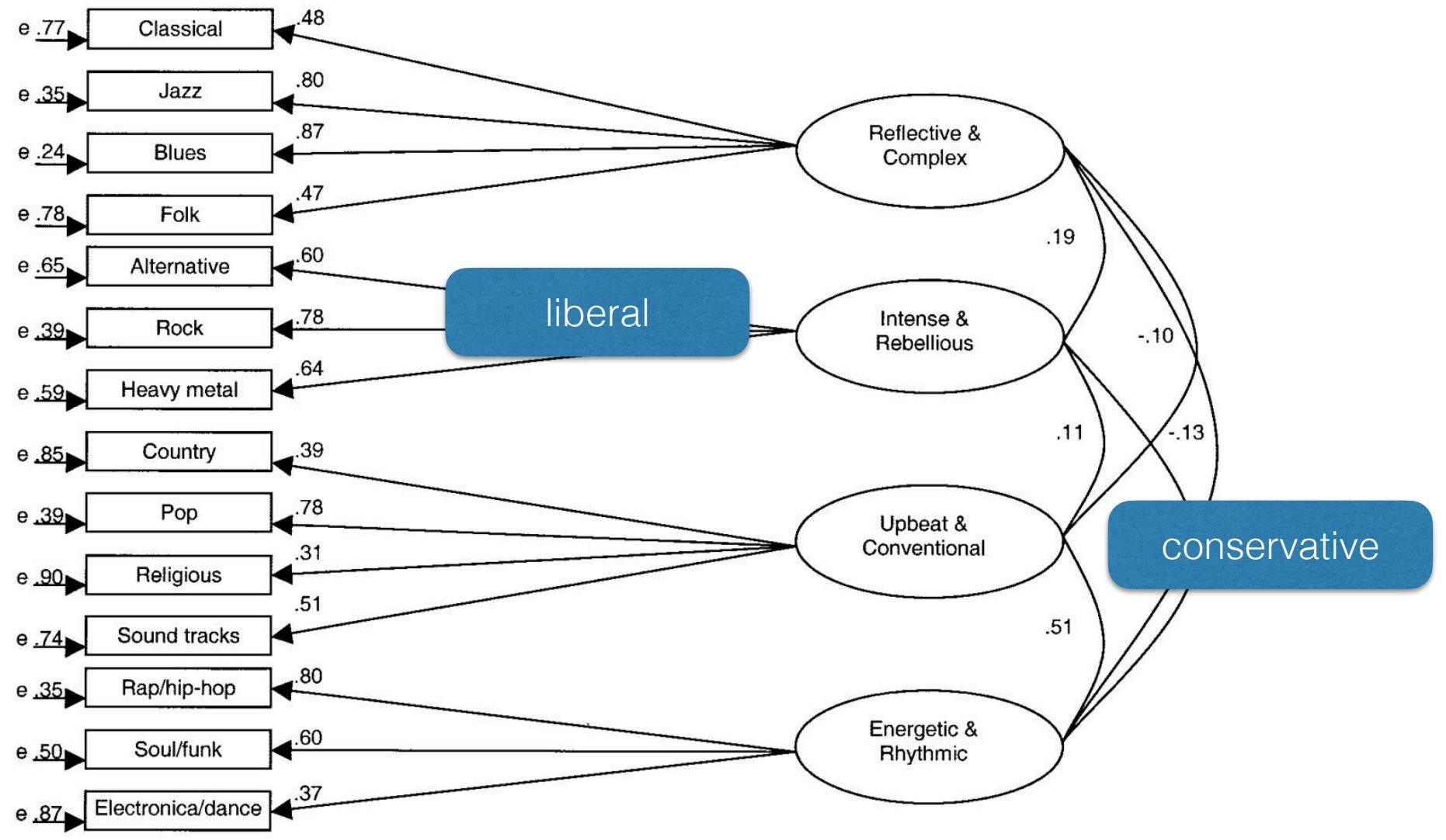
Note. N = 1,704. All factor loadings |.40| or larger are in italics; the highest factor loadings for each dimension are listed in boldface type.



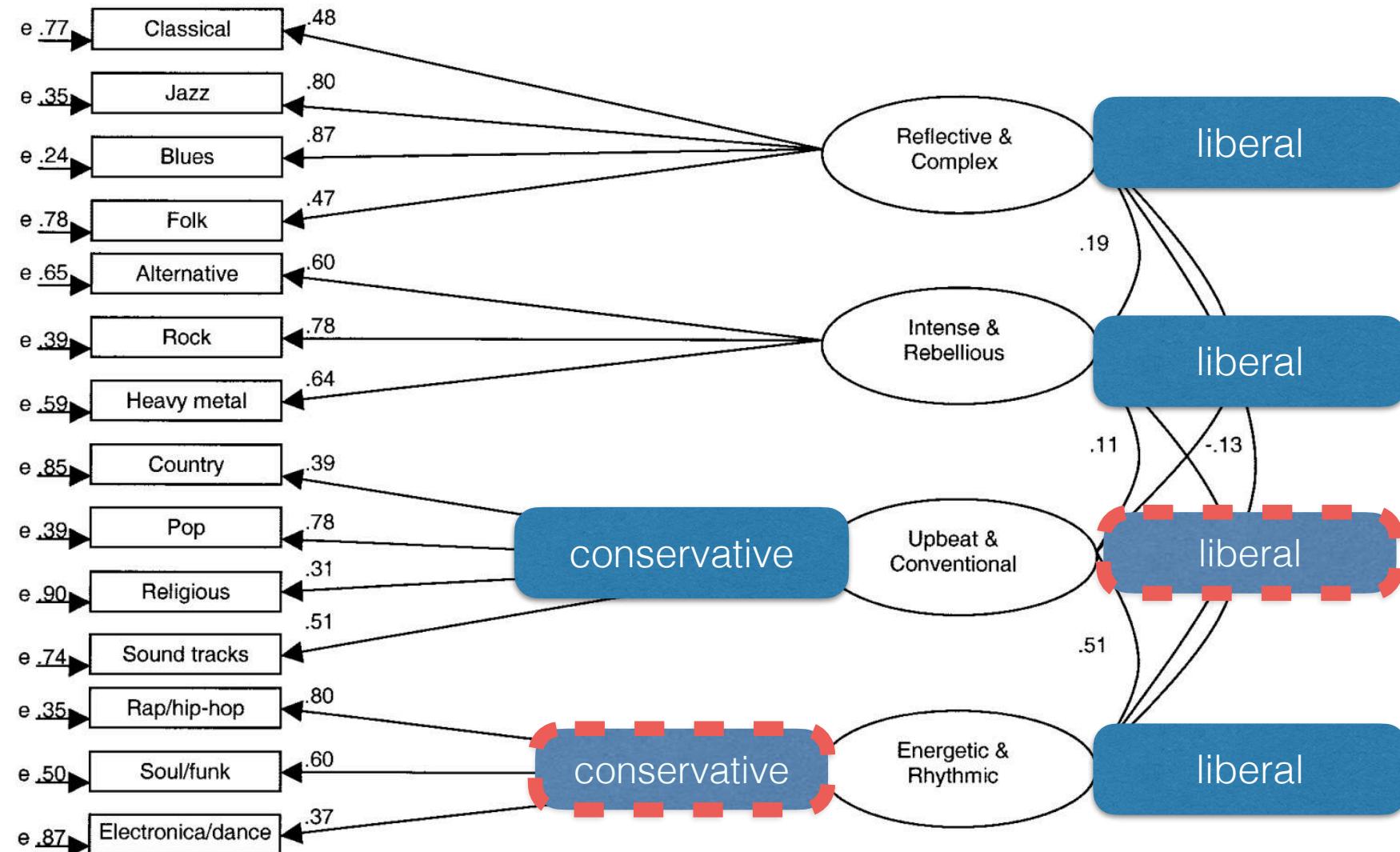
Can you match this with personality?

External Correlates of the Music-Preference Dimensions

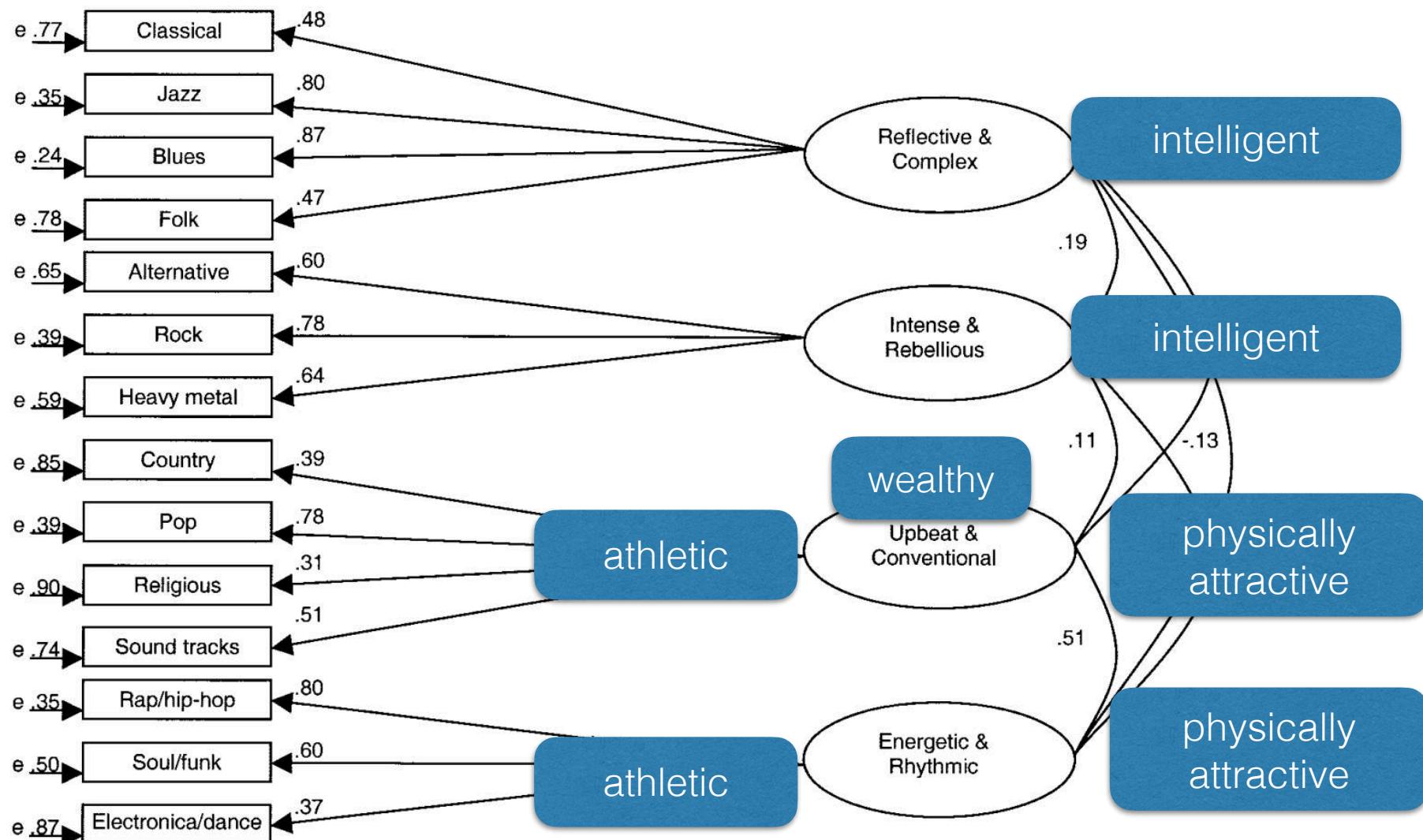
Criterion measure	<i>M</i> (<i>SD</i>)	Reflective and Complex		Intense and Rebellious		Upbeat and Conventional		Energetic and Rhythmic		
		S2	S3	S2	S3	S2	S3	S2	S3	
Personality										
Big Five										
Extraversion	3.42 (0.85)	.01	−.02	.00	.08*	.24*	.15*	.22*	.19*	
Agreeableness	3.80 (0.62)	.01	.03	−.04	.01	.23*	.24*	.08*	.09*	
Conscientiousness	3.57 (0.64)	−.02	−.06	−.04	−.03	.15*	.18*	.00	−.03	
Emotional Stability	3.11 (0.81)	.08*	.04	−.01	−.01	−.07	−.04	.01	−.01	
Openness	3.75 (0.61)	.44*	.41*	.18*	.15*	−.14*	−.08*	.03	.04	
Interpersonal dominance	1.52 (0.25)	.07*	.06*	.04	.06*	.05	.08*	.04	.05	
Social dominance	2.70 (1.00)	−.16*	−.12*	.06*	.04	−.06*	−.14*	−.09*	−.10*	
Blirtatiousness ^a	2.95 (0.70)	.00	.00	.01	.07*	−.04	.01	.08*	.11*	
Self-esteem	3.05 (0.69)	.02	.00	−.02	−.01	.07*	−.05	.06*	−.04	
Depression	0.87 (0.34)	.01	−.03	.03	.03	−.08*	−.07*	−.02	.04	



political self-views?



political self-views?



self-views?

“In sum, **three separate studies** of over **3,500** participants converged on the finding that music preferences can be organized into four independent dimensions: **Reflective and Complex, Intense and Rebellious, Upbeat and Conventional, and Energetic and Rhythmic.** Although the age range of the audiogalaxy.com sample was probably not as broad as we had hoped, the convergent findings provided strong evidence for the generalizability of the music-preference dimensions. These dimensions generalized across time, populations, method, and geographic region”

Music Preferences

STOMP

For the following items, please indicate your basic preference level for the genres listed using the scale provided.

- | | |
|---|--|
| 1. <input type="checkbox"/> Classical | 9. <input type="checkbox"/> Alternative |
| 2. <input type="checkbox"/> Blues | 10. <input type="checkbox"/> Jazz |
| 3. <input type="checkbox"/> Country | 11. <input type="checkbox"/> Rock |
| 4. <input type="checkbox"/> Dance/Electronica | 12. <input type="checkbox"/> Pop |
| 5. <input type="checkbox"/> Folk | 13. <input type="checkbox"/> Heavy Metal |
| 6. <input type="checkbox"/> Rap/hip-hop | 14. <input type="checkbox"/> Soundtracks/theme |
| 7. <input type="checkbox"/> Soul/funk | songs |
| 8. <input type="checkbox"/> Religious | |



Music Preferences

Table 1. Significant correlations found between the Big Five dimensions and music preferences in research studies since 2003

Music Dimension	Genre	Correlated Traits			
		R & G	D et al.	G et al.	Z
Reflective & complex	Blues	O	—	O	O
	Classical	O	O, <u>N</u>	O	-
	Folk	O	—	E, C	O
	Jazz	O	O, <u>N</u>	O	O
Intense & rebellious	Alternative	O	—	O, <u>A</u> , <u>C</u>	-
	Heavy metal	O	O	O, <u>A</u> , <u>C</u>	-
	Rock	O	O	O, <u>A</u> , <u>C</u>	-
Upbeat & conventional	Country	E, A, C, <u>O</u>	—	E, C	-
	Pop	E, A, C, <u>O</u>	E, A	O, <u>A</u> , <u>C</u>	<u>O</u>
	Religious	E, A, C, <u>O</u>	—	-	<u>O</u>
	Soundtracks	E, A, C, <u>O</u>	—	—	A, <u>O</u>
Energetic & rhythmic	Dance/ Electronica	E, A	E, A	O, <u>C</u>	-
	Rap/hip-hop	E, A	E, A	O, <u>A</u> , <u>C</u>	E, O
	Soul/funk	E, A	E, A	—	O

Notes: Referenced material: R & G = Rentfrow & Gosling, 2003; D et al. = Delsing et al., 2008; G et al. = George et al., 2007; Z = Zweigenhaft, 2008. Trait abbreviations: N = Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness. Abbreviations denote significant correlations ($p < .05$) between trait and genre. Correlation is positive unless an underlined abbreviation is shown, indicating a negative correlation. Single dashes (-) indicate no significant correlations found in that particular study. Double dashes (—) indicate that the genre was not considered in that particular study.

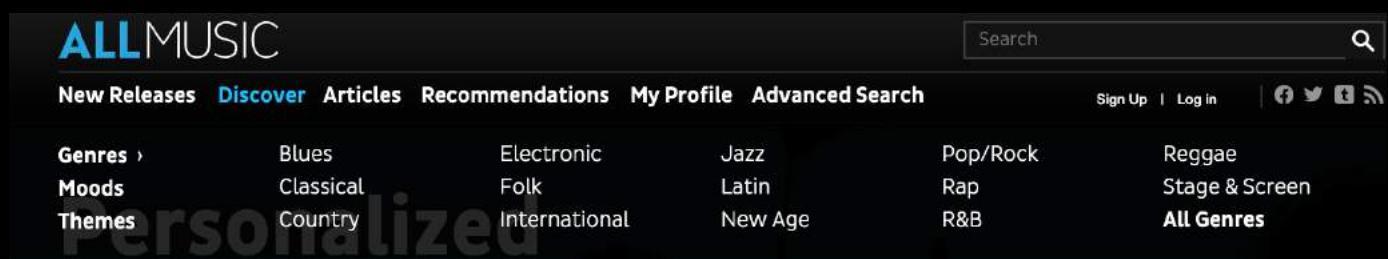
Music Preferences

STOMP

For the following items, please indicate your basic preference level for the genres listed using the scale provided.

- | | |
|----------------------------|-----------------------------|
| 1. _____ Classical | 9. _____ Alternative |
| 2. _____ Blues | 10. _____ Jazz |
| 3. _____ Country | 11. _____ Rock |
| 4. _____ Dance/Electronica | 12. _____ Pop |
| 5. _____ Folk | 13. _____ Heavy Metal |
| 6. _____ Rap/hip-hop | 14. _____ Soundtracks/theme |
| 7. _____ Soul/funk | songs |
| 8. _____ Religious | |

395 participants

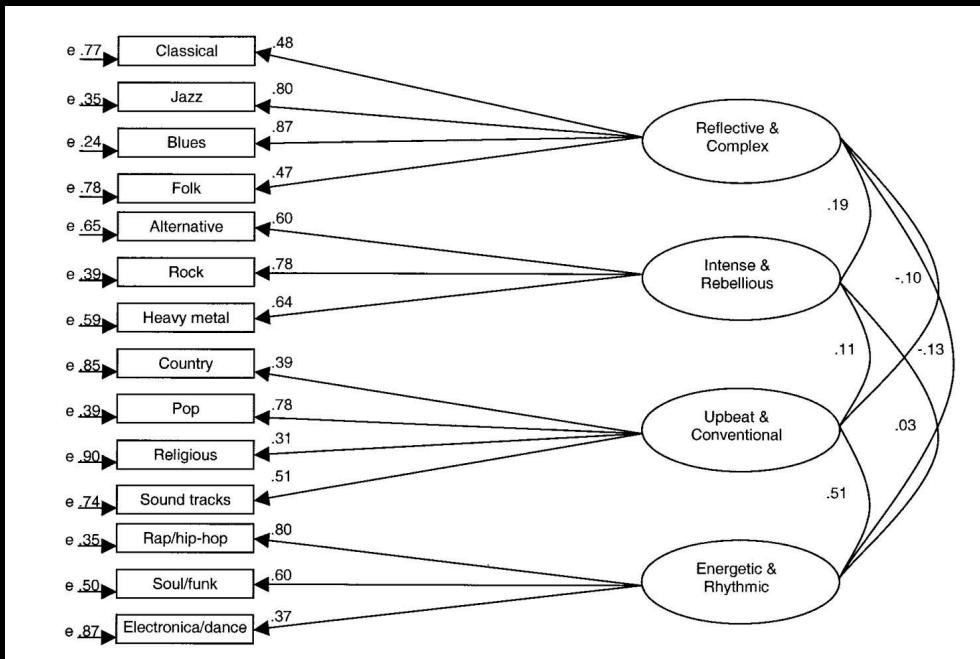


70,000 tracks

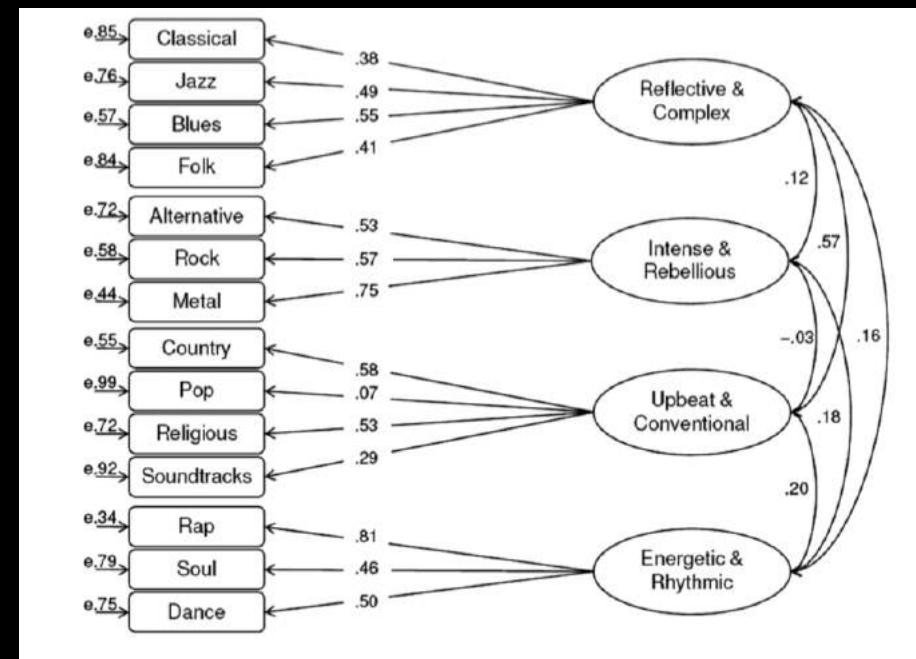
min. 3 months

min. 100 songs

16 genres



2003



2016

- unlike Rentfrow and Gosling's (2003) results, the obtained data did not fit the existing model well
- removing **pop** would provide a much better fit for the CFA model given the obtained data
- further removal of soundtracks and jazz was necessary before the model showed minimally acceptable fit criteria statistics

Music Preferences

Table 2. PCA factor loadings from the 14 genres using a six-factor, varimax-rotated solution

Genre	Music preference dimension					
	Rhythm 'n' blues	Hard rock	Bass heavy	Country	Soft rock	Classical
Jazz	.774	.069	.097	-.154	-.017	.278
Blues	.754	-.006	-.182	.311	.001	.061
Soul	.703	.063	.383	.113	.072	-.143
Heavy Metal	-.061	.812	.083	.134	.024	-.141
Alternative	.134	.763	.161	-.077	-.143	.222
Rock	.106	.655	-.176	-.057	.548	-.110
Rap	.113	.017	.842	.119	.056	-.089
Dance	.010	.111	.763	-.109	.056	.098
Country	.020	-.112	.007	.834	.145	.069
Folk	.146	.164	-.016	.731	-.079	.118
Pop	.077	-.002	.097	.015	.869	-.155
Soundtracks	-.157	-.061	.149	.079	.613	.507
Classical	.222	.013	-.132	.043	-.020	.762
Religious	-.024	-.016	.163	.429	-.140	.603

Notes: N = 395. All factor loadings .300 or larger are provided in *italics*; factor loadings in **bold** represent highest factor loadings for each genre given each dimension.

70% variance explained

With exception to the Bass-Heavy label, these factors were labeled based on genre categorization by AMG (2008).

Bass-Heavy label was used to express an audio characteristic generally perceived to be exhibited in that music.

Music Preferences

Table 3. PCA factor loadings from the 14 genres using a four-factor, varimax-rotated solution

Genre	Music preference dimension			
		Acoustic foundation	Hard rock	Bass foundation
Folk	.639		.108	-.023
Country	.624		-.116	-.051
Religious	.606		-.176	.082
Blues	.600		.187	.146
Classical	.568		-.006	-.030
Rock	-.060		.814	-.077
Heavy metal	-.038		.723	.027
Alternative	.096		.643	.190
Rap	-.036		-.057	.792
Dance	-.127		.005	.693
Soul	.245		.211	.649
Jazz	.367		.220	.441
Pop	-.083		.261	.174
Soundtracks	.232		-.007	.089

Notes: N = 395. All factor loadings .300 or larger are provided in *italics*; factor loadings in **bold** represent highest factor loadings for each genre given each dimension.

52% variance explained

while rap and dance genres grouped together in the present research, these genres are grouped separately in other research

blues and jazz were grouped separately from classical in the six-factor PCA, but grouped together in other research

Music Preferences

Table 4. Correlation coefficients between participants' STOMP scores and their Listening Duration scores per genre

Music Listening duration genre	STOMP Genre													
	Classical	Blues	Jazz	Folk	Alternative	Rock	Heavy Metal	Country	Pop	Religious	Soundtracks	Rap	Soul	Dance
Classical	.33***	-.10*	.02**	.00**	-.11*	-.11*	-.21*	-.02**	-.04*	.06**	.03**	-.08*	-.10*	-.10*
Blues	.00***	.22**	-.05*	.08**	.00**	-.02*	.03**	-.04**	-.06*	-.05*	-.14**	.01**	.16**	-.12*
Jazz	.09***	.06**	.37**	.00**	.06**	.00**	-.04*	-.15**	-.05*	-.05*	-.25**	-.02*	.14*	.05**
Folk	.08***	-.01*	-.05*	.16**	.03**	-.06*	.01**	.11***	-.03*	.04**	-.03**	-.05*	-.02**	-.01*
Alternative	-.11***	-.13*	-.04*	-.06*	.11**	.13**	.16**	-.03**	.05**	-.06*	-.01**	.06**	-.05**	.13**
Rock	-.21***	.00**	-.01*	-.05*	.38**	.33**	.44**	-.13**	.00**	-.12*	-.09**	.00**	.04**	-.07*
Heavy metal	-.17***	-.15*	-.11*	-.10*	.11**	.11**	.28**	-.11**	-.06*	-.10*	-.09**	.00**	-.04**	-.05*
Country	.01***	.04**	-.05*	.18**	.10**	-.09*	-.04*	.27***	.04**	.07**	.03**	-.01*	.06**	-.03*
Pop	-.10***	.10**	-.12*	.00**	-.33*	-.04*	-.13*	.22***	.20**	.03**	.07**	-.14*	-.08**	-.24*
Religious	.06***	.00**	-.02*	-.06*	-.08*	-.29*	-.12*	.05***	-.18*	.26**	.02**	-.07*	-.08**	-.10*
Soundtracks	-.05***	-.03*	-.09*	.05**	-.06*	-.03*	-.13*	.12***	.06**	-.04*	.14**	.00**	-.12**	.00**
Rap/hip-hop	-.10***	.04**	.01**	.11**	-.04*	.03**	.02**	.01***	.08	.08**	.07**	.42**	.17**	.15**
Soul /funk	-.14***	.23**	.02**	.12**	-.10*	-.05*	.01**	.07***	-.05*	.10**	-.15**	.04	.24**	-.07*
Dance/ Electronica	-.03***	-.08**	.04**	-.12**	.02**	-.17**	-.07**	-.16***	-.09**	.01**	-.04**	.13**	.05**	.43**
R&B	-.02***	.07**	.14**	-.13*	-.16*	-.13*	-.13*	-.03**	.05**	-.08*	.06**	.12**	.16**	.07**
Other	.18***	-.01*	.00**	.10**	-.16*	-.14**	-.29*	.13**	-.05*	.08**	.21**	-.07**	-.13*	-.03*

Note: N = 267. Correlation values in **bold** indicate expected significant positive correlations between participants' reported music preferences and their listening behavior for the same genre.

* p < .05; ** p < .01.