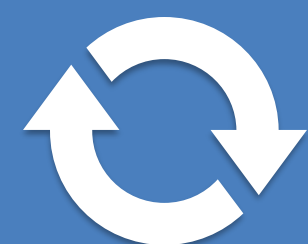


# Transparency in Music Psychology – From Humble Beginnings to a Respected Future?

Tuomas Eerola  
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Replication



Open Data



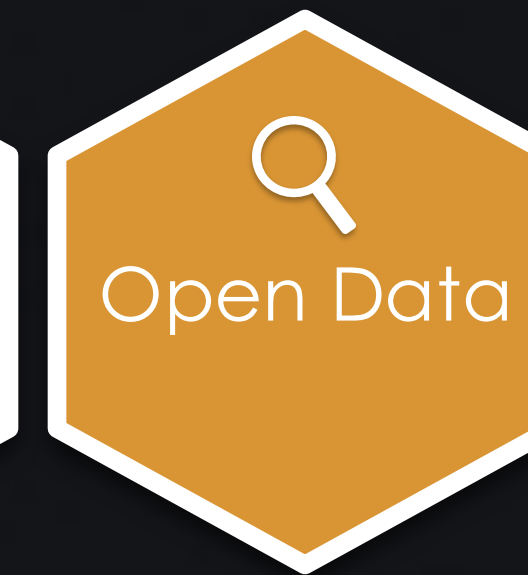
Preregister



Open Access

# Transparency – Why Should We Care?

- Crisis and policy reforms on transparency (Ionnidis, 2012)
- Failure to replicate key studies (OSC, 2015; "Many Labs 2", Klein et al., 2018)
- Healthy ecosystem
- Transparent practices widely neglected in psychology (Hardwicke et al., 2024)



16% Sharing Materials

14% Sharing data

7% Pre-registration

74% Open Access

# Transparency – Music Psychology?

- A random sample (N=239) of articles in our field (2017-2022)
- Manual annotation of



 Article availability

 Materials availability

 Protocol availability

 Data availability

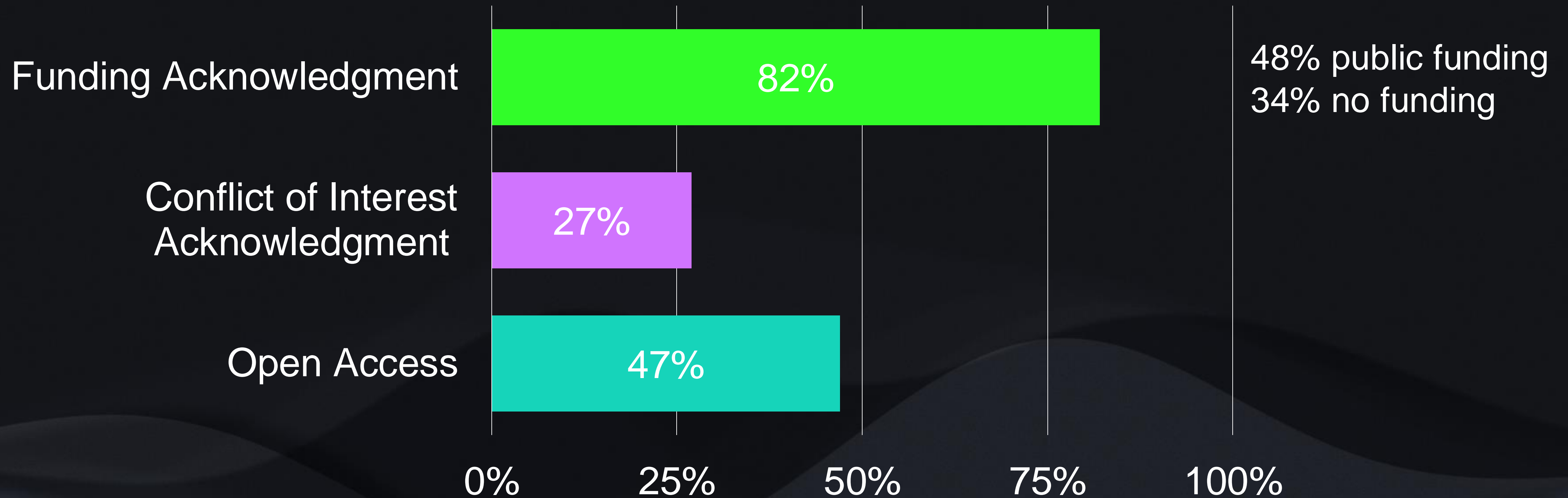
 Analysis script availability

 Pre-registration

 Funding

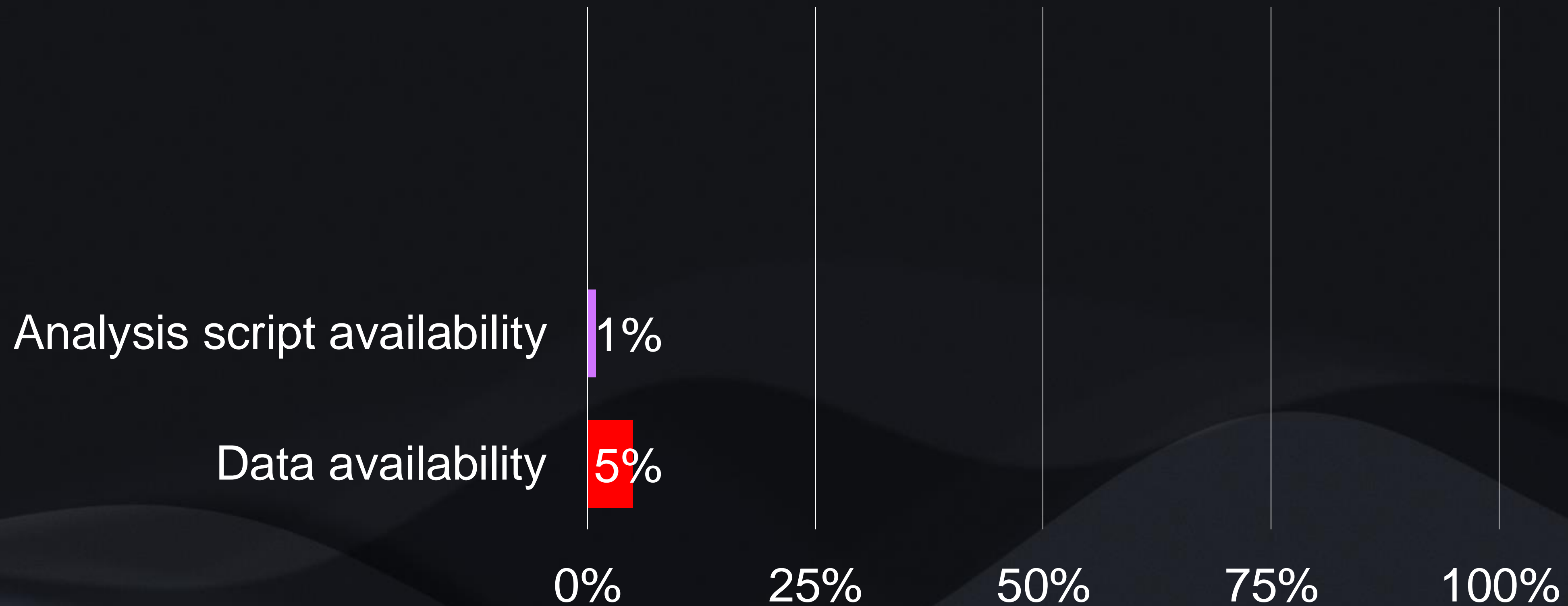
 Conflict of interest

# Transparency – Results

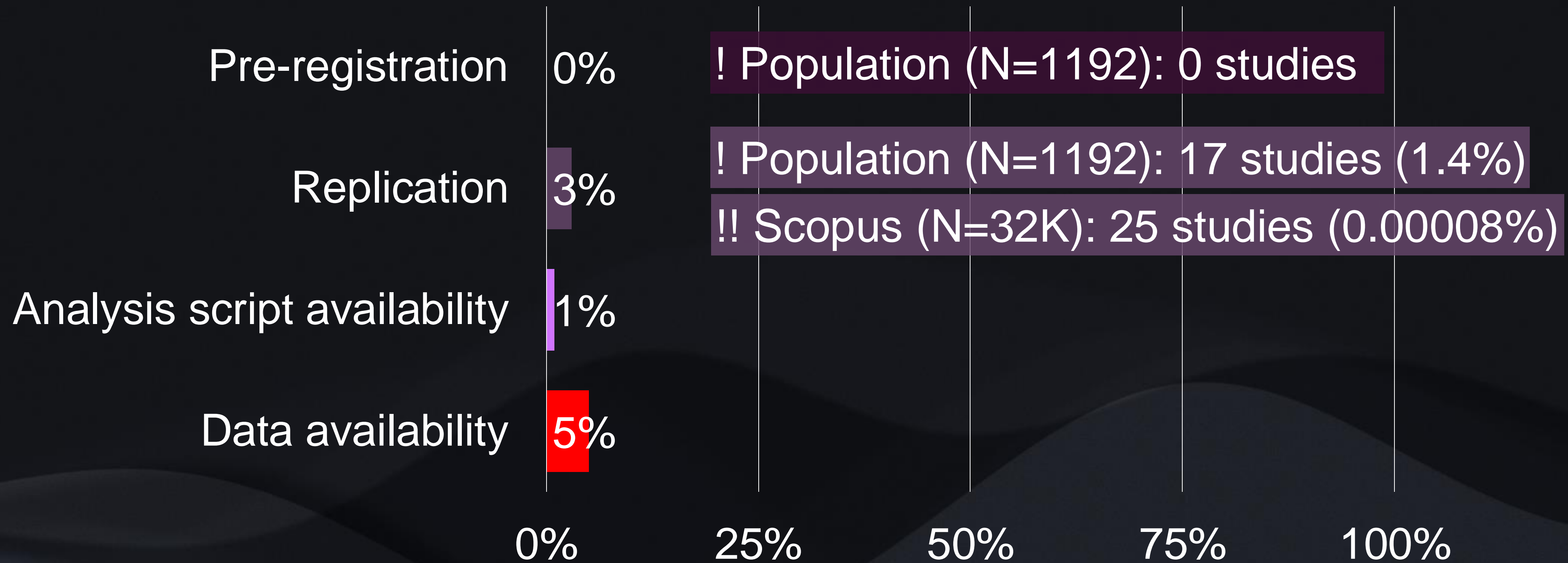




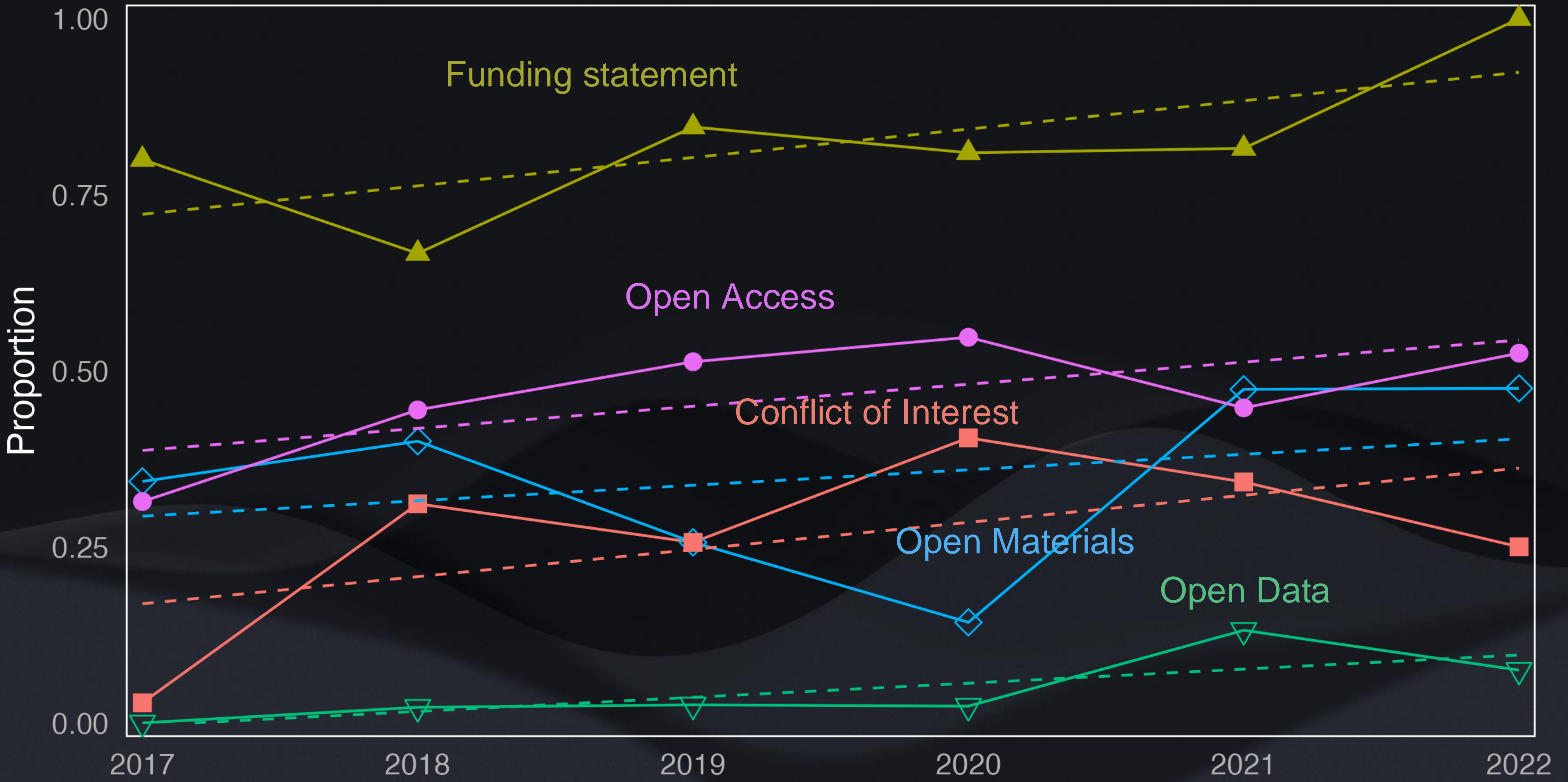
# Transparency – Results



# Transparency – Results



# Transparency – Results



# Transparency – Conclusions

- **Satisfactory adoption** of Open Access and Funding acknowledgement
  - due to journal and university policies
- **Poor adoption** of making research data available
  - behind psychology (Hardwicke et al., 2024)
  - despite multiple calls for action (Frieler et al., 2013; Jensenius, 2021)



# Transparency – Read More

Eerola, T. (in press). Prevalence of transparency and reproducibility-related research practices in music psychology (2017-2022). *Musicae Scientiae*

Preprint, materials, data, and analysis scripts are available at



Replication

3%

Open Data

5%

Preregister

0%

Open Access

47%

A Humble Situation –  
What Can We Do About It?

# Why the Lack of Transparency?

- We don't know better
- We have pressure to publish
  - selective reporting (cherry picking, p-hacking, HARKing, positive results)
- We have no incentive to be transparent
- We face no real requirements to be transparent
- We are not against it, but ... {extra effort, doubts, worry, legal/clinical}

# Transparency – Collective Actions



- Training and raising awareness
  - sign-up to *ReproducibiliTea* network, promote best practice, transparency champs
- Stronger funder and journal policies (e.g., *Psychological Science*)
- Aligning incentives (promotion, funding, tenure)
- Adopt transparency to the core agenda (groups, labs, societies and networks)



# Transparency – Individual Actions

- Require reproducibility from PhD students
- Run replication studies in teaching
- Contribute to the theme in lab meetings
- Steer collaborations into reproducible workflows
- Release data and analysis scripts
- When meaningful, preregister studies
- Publicly commit and promote transparency in your field

“Reproducibility is like brushing your teeth. It is good for you, but it takes time and effort. Once you learn it, it becomes a habit.” (Irakli Loladze in [Baker, 2016](#))

# Benefits of Transparency (1)

- **1. To increase trust**

- Better collective scholarship
- Field is able to discard ideas that do not work

- **2. To comply with the transparency demands**

- Open Access Data is required by all UKRI funding
- More and more journals require transparency

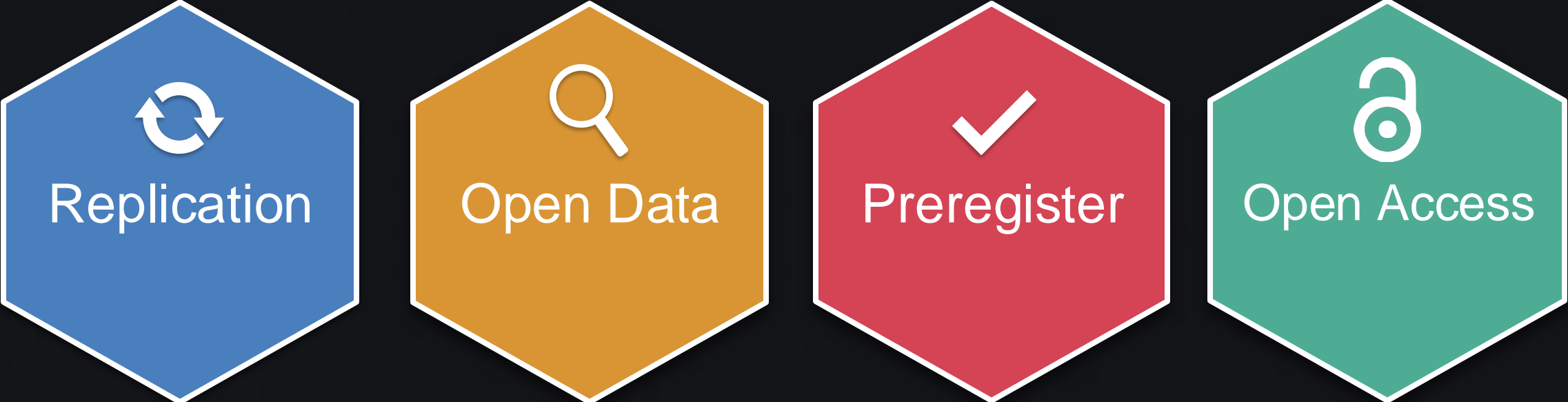


# Benefits of Transparency (2)

- **3. To collaborate more easily and effectively**
  - Spot mistakes, encourage learning & exploration
- **4. To enhance communication and inclusion**
  - Gain visibility (Wang et al., 2015) & citations (Langham-Putrow et al., 2021)
  - Facilitates wider access to the research (regardless of ability to pay for access)
- **5. To raise awareness of quality concerns**
  - Transparency is mentioned but *optional* in music psychology journals



# Example for our lab: Consonance/Dissonance

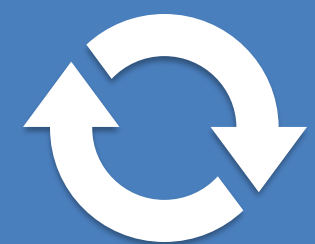


Question	Answer				
What is it?	Preference/Pleasantness ≠ CD, expertise mediates				<i>Scientific Reports, 2020</i>
How can it be modelled?	Roughness, <u>Culture</u> , & <u>Sharpness</u>				<i>Music &amp; Science, 2021</i>
What predicts it?	Roughness & Sharpness				<i>Psychonomic Bulletin, 2022</i>
Is it malleable?	No, if driven by roughness				<i>Annals of NYAS, 2022</i>
Is it automatic?	Yes, if driven by roughness				<i>JASA, 2021</i>
Is automatic malleable?	No, if driven by roughness				<i>Plos ONE, 2023</i>
Can cultural be automatic?	Yes, even if NOT driven by roughness				<i>Music Perception, 2024</i>



# Conclusions – Building Better Research

- Music psychology is not yet a particularly transparent discipline
  - But we want better quality, rigour, inclusion and wider reach
- We can impact the rate of change by adopting transparency principles
- Open Science is an opportunity and an asset



Replication



Open Data



Preregister



Open Access

# Helpful Links

- [Definition of open science concepts](#)
- [Crowdsourced Replication database](#) (3000+ studies and growing)
- <https://reproducibilitea.org> (localized journal clubs to discuss Open Science)
- [How to start FAIR discussions in your lab](#) (Data sharing)
- [10 simple rules for writing Registered Reports](#)
- [Repository of Reproducible Research](#)
- [Answers to 18 Questions About Open Science Practices](#)
- [Preregistration resources](#)

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# Thank

# You