Manuel Anglada-Tort

Goldsmiths, University of London

Lecturer in Psychology

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Research, teaching, and education

2023 - **Lecturer in Psychology**
Department of Psychology, Goldsmiths, University of London
- Researching psychological and cultural foundations of complex human behaviours, such as language and music.
- Developing new, open-access methods to increase the efficiency and scalability of psychological research.
- Teaching and developing courses both at undergraduate and postgraduate levels on psychology, perception, statistics, and data science.

2023 - 2024 Departmental Lecturer
Faculty of Music, University of Oxford
- Leading the Music, Culture, and Cognition Group, conducting research in the intersection between human cognition, music, and culture.
- Teaching and developing new content for courses on psychology, music cognition, and empirical aesthetics.

2020 - 2022 Postdoctoral researcher
Computational Auditory Perception Group, Max Planck Institute (Germany), supervised by Dr Nori Jacoby.
- Researching fundamental components of auditory perception combining cross-cultural research and massive online experiments.
- Developing new psychological methods and testing software for large-scale online behavioural experiments (*REPP*, *sing4me*, *PsyNet*).

2019 **Departmental Lecturer**
Humboldt University of Berlin (Germany)
- Teaching research methods and statistics using R, both at undergraduate and postgraduate levels.

2017-20 **PhD in Psychology, *Summa Cum Laude***
Technical University of Berlin (Germany), supervised by Prof Dr Stefan Weinzierl and Prof Dr Daniel Müllensiefen.
- Studying perception and decision making in complex subjective human behaviour, such as music and aesthetics.

2014-15   **MSc in Music, Mind & Brain,** *Distinction*
Psychology Department, Goldsmiths, University of London, (UK), supervised by Prof Dr Daniel Müllensiefen.
- Studying biological and cultural foundations of music behaviour, combining methods from computer science, psychology, and neuroscience.

2009-13   **BA in Psychology**
Universtiat Rovira i Virgili (Spain)
- Studying cognitive science, research methods, and psycholinguistics.

Supervising

2024 -   **Supervisor of MSc students**
Goldsmiths, University of London
- Caroline Duffy (2023-2024).
- Mencía Pintado Tan (2023-2024).
- Wanyu Cheng (2023-2024).

2023 -   **PhD Viva Assessor**
University of Oxford
- Nilo Merino Recalde (PhD in Biology, 03/2023).
- Peter Varga (PhD in Psychology, 01/2023).

2023 -   **Supervisor of MSt and Mphil students**
University of Oxford
- Chloe Green (MSt and Mphil, 2023).
- Ryszard Tan (MSt, 2023).
- Violetta Utiuzhnikova (MSt, 2023).

2023 -   **Research Tutor**
Stanford University
- Julia Zielke (BA in Psychology, 2023).
- Research project published in *Frontiers in Psychology*

2015 -   **Co-supervisor of MSc students**
MSc in Audio Communication and Technology, Technical University of Berlin
- Melanie Schulz (2020-2021)
- Miguel Reyes (2020-2021)
- Till Noé (2019-2020)

MSc in, Mind & Brain, Goldsmiths, University of London
- Austin Coates (2020-2021)
- Pattera Sutanthavibul (2018-2019)
- Kerry Schofield (2017-2018)
- Heather Thueringer (2017-2018)
- Thomas Baker (2016-2017)
- Björn Thorleifsson (2015-2016)

Other professional experience

2024 -   **Member of the Coding and AI Provision**
Goldsmiths, University of London
- Departmental group to discuss, design, and implement issues related to statistics, coding, and AI.
- Develop new strategies to engage with AI in education and assessment.

2024 -   **Member of the Research Ethics Committee**
Goldsmiths, University of London
- Responsible for reviewing and approving research proposals of academic staff and students.
- Provide guidance on ethical issues to researchers and develop new workflows and strategies to improve ethics.

2023 -   **Co-director of the Oxford Seminar in the Psychology of Music**
University of Oxford
- Co-leading the Oxford Seminar Series in the Psychology of Music.
- The seminar features leading international researchers presenting a wide variety of topics in the intersection between music and cognitive science.

2018 -   **Research consultant**
SoundOUT – Sonic Testing (UK); DLMDD – Sonic Branding Agency (UK)
- Amazon (2020-2021): testing the effectiveness of sonic logos for Amazon using massive online experiments.
- Aldi (2019): performing large-scale behavioural experiments to identify a new audio logo identity for Aldi UK (link to media piece).

SoundOUT – Sonic Testing (UK)
- SONOS - Home Sound Systems (2019): Assessing the impact of audio systems on music listening experiences (link to media piece).

iV Audio branding (US)
- Cadbury Chocolate (2018-2019): Examined crossmodally congruent relationships between sound, flavour, and mood (link to media piece).

2015-17   **Special Needs Teacher**
The Garden School (UK)
- Teaching autistic students with complex learning disabilities.
- Working collaboratively with parents and professionals.
- Designing and performing music and drama interventions.

Invited speaker

2024 **Whitehead Lecture at Goldsmiths, University of London (UK)**
'Bridging between micro and macro-level cultural dynamics of music: Advanced online experiments and big data' (link)

2024 **Centre for Language Evolution, University of Edinburg (Scotland)**
'Bridging between micro and macro-level cultural dynamics through human singing experiments' (link)

2023 **Networks and Cognition Workshop at Princeton University (US)**
'Studying cultural dynamics at scale through human singing experiments: Variation, fitness, and inheritance' (link)

2023 **University of Oxford (UK)**
'Studying the effect of oral transmission on music evolution using online singing experiments' (link)

2023 **University of Cambridge (UK)**
'Studying the effect of oral transmission on music evolution using large-scale online singing experiments' (link)

Funding

2023-24 **John Fell Fund Grant (9,700 €)**
Funded by Oxford University Press
- Research fund intended to foster creativity and a proactive approach to research: https://researchsupport.admin.ox.ac.uk/funding/internal/jff

2022-23 **Oxford-Berlin Research Partnership Grant (10,000 €)**
Funded by the Oxford-Berlin Research Partnership
- Strategic research partnership granted to high-quality joint research initiatives: https://www.ox.ac.uk/about/international-oxford/oxford-berlin-research-partnership
- Awarded in collaboration with Dr Mats Küssner at Humboldt University of Berlin (Germany).

2017-20 **PhD Scholarship (52,200 €)**
Funded by the Studienstiftung des Deutschen Volkes (Germany)
- 3-year doctoral scholarship granted to highly qualified and socially committed researchers.
- The *Studienstiftung* (German National Academic Foundation) is one of the largest and most prestigious organizations for the promotion of gifted students in Germany: https://www.studienstiftung.de/

Software development

I am a co-developer of the following software packages:

PsyNet   Open-source platform to build, run, and automate online psychological experiments (Python, JS, HTML): https://psynetdev.gitlab.io/PsyNet/

REPP   Open-source package for measuring sensorimotor synchronisation in online experiments (Python): https://gitlab.com/computational-audition/repp

Sing4me   Open-source package for conducting speech and singing experiments online, including fundamental frequencies extraction and manipulation from (Python): https://gitlab.com/computational-audition/sing4me

Selected Publications

Studying cultural evolution through large-scale online experiments

In this 2023 article published in *Current Biology*, we developed an automatic online pipeline that streamlines large-scale cultural transmission experiments in vocal production modalities (e.g., singing, speech). This approach allowed us to study oral transmission mechanisms in an unprecedented detail, quantifying the evolution of ~ 30,000 human from ~2,000 participants in the US and India. The results produced a high-resolution characterisation of how oral transmission shapes human communication systems, revealing the emergence of diverse musical structures that are consistent with widespread features observed in many musical traditions, such as the use of small melodic ranges and pitch intervals. In a series of control experiments, we established causal links between individual participant biases – vocal, cognitive, and cultural – and population-level emergence structures, such as music complexity and diversity. Overall, these results provide a new understanding into how cross-cultural similarities and differences in human song structures emerge via cultural transmission.

Anglada-Tort, M., Harrison, P. M., Lee, H., & Jacoby, N. (2023). Large-scale singing experiments reveal oral transmission mechanism underlying music evolution. *Current Biology, 33*, 1-15. https://doi.org/10.1016/j.cub.2023.02.070

Understanding the genetics of musical ability in the first large-scale Genome-wide association study (GWAS) on beat synchronization

In this 2022 article published in *Nature Human Behaviour*, we developed a method to measure high-precision beat synchronization (e.g., taping to the beat in a piece of music) over the internet. This method was crucial to validate the phenotype of the first large-scale GWAS on beat synchronization, where 606,825 participants answered the question "Can you clap in time with a musical beat?". The GWAS revealed that the genetic architecture of beat synchronization is highly polygenetic, with an estimated heritability of 13-16%. These results are significant in pinpointing genetic alleles that cumulatively form a robust association with inter-individual variability in the beat synchronization trait.

Niarchou, M., Gustavson, D. J., Sathirapongsasuti, F., **Anglada-Tort**, M., …, Jacoby, N., & Gordon R. L. (2022). Genome-wide association study of musical beat synchronization demonstrates high polygenicity. *Nature Human Behaviour 6*, 1292–1309. https://doi.org/10.1038/s41562-022-01359-x

Running massive online experiments in complex production modalities

In this 2022 article published in *Behavioural Research Methods*, we introduced a new technology to run high-precision sensorimotor synchronization (SMS) studies through the web browser (e.g., tapping to the beat along an external audio stimulus). We then ran several behavioural experiments to validate this technology empirically. The results show that this technology achieves high temporal accuracy (latency within 2 msec on average), high test-retest reliability both in the laboratory (r = .87) and online (r = .80), and high concurrent validity (r = .94). By making such experiments viable online, this technology (available as a free Python package) has enabled the study of individual differences in SMS in the general population, influencing important follow-up work (e.g., Vishne et al., 2021 in *Nature Communications*; Jacoby et al., 2021 in *Nature Human Behaviour*).

Anglada-Tort, M., Harrison, P. M. C., & Jacoby, N. (2022). REPP: A robust cross-platform solution for online sensorimotor synchronization experiments. *Behavioral Research Methods 4*, 2271–2285. https://doi.org/10.3758/s13428-021-01722-2

Primary Publications

2024 Jacoby, N., Polak, R., Grahn, J. A., …, **Anglada-Tort, M**., Harrison, P. M., McPherson, M. J., Dolan, S., Durango, A., McDermott, J. H. (2024). Commonality and variation in mental representations of music revealed by a cross-cultural comparison of rhythm priors in 15 countries. *Nature Human Behavior* (2024). https://doi.org/10.1038/s41562-023-01800-9

2023 **Anglada-Tort, M.**, Harrison, P. M., Lee, H., & Jacoby, N. (2023). Large-scale singing experiments reveal oral transmission mechanism underlying music evolution. *Current Biology, 33*, 1-15. https://doi.org/10.1016/j.cub.2023.02.070

Anglada-Tort, M., Lee, H., Krause, A. E., & North, A. C. (2023). Here comes the sun: music features of popular songs reflect prevailing weather conditions. *Royal Society Open Science, 10*, 221443. https://doi.org/10.1098/rsos.221443

Steffens, J., & **Anglada-Tort, M.** (2023). The effect of visual recognition on listener choices when searching for music in playlists. *Psychology of Aesthetics, Creativity, and the Arts*. Advance online publication. https://doi.org/10.1037/aca0000562

2022 **Anglada-Tort, M.**, Harrison, P. M. C., & Jacoby, N. (2022): REPP: A robust cross-platform solution for online sensorimotor synchronization experiments. *Behavioral Research Methods 4*, 2271–2285. https://doi.org/10.3758/s13428-021-01722-2

Niarchou, M., Gustavson, D. J., Sathirapongsasuti, F., **Anglada-Tort**, M., …, Jacoby, N., & Gordon R. L. (2022. Genome-wide association study of musical beat synchronization demonstrates high polygenicity. *Nature Human Behaviour 6*, 1292–1309. https://doi.org/10.1038/s41562-022-01359-x

Anglada-Tort, M., Harrison, P. M. C., & Jacoby, N. (2022). Studying the effect of oral transmission on melodic structure using online singing experiments. *Proceedings of the Annual Meeting of the Cognitive Science Society, 44*(44). https://escholarship.org/uc/item/3567q2vf

Anglada-Tort, M., Masters, N., Steffens, J., North, A., & Müllensiefen, D. (2022). The Behavioural Economics of Music: Systematic review and future directions. *Quarterly Journal of Experimental Psychology*, *76*(5), 1177-1194. https://doi.org/10.1177/17470218221113761

Anglada-Tort, M., Schofield, K., Trahan, T., & Müllensiefen, D. (2022). I've heard that brand before: The role of music recognition on consumer choice. *International Journal of Advertising*, 1-20. https://doi.org/10.1080/02650487.2022.2060568

2021   Jacoby, N., Polak, R., Grahn, J., Cameron, D. J., Lee, K. M., Godoy, R., **… Anglada-Tort, M.,** Harrison, P. M. C., McPherson, M. J., Dolan, S., Durange, A., & Mcdermott, J. (2021). Universality and cross-cultural variation in mental representations of music revealed by global comparison of rhythm priors. Manuscript accepted in *Nature Human Behavior.* Preprint doi: https://doi.org/10.31234/osf.io/b879v

Savage, P. E., Jacoby, N., Margulis, E. H., Daikoku, H., **Anglada- Tort, M.,** Castelo-Branco, S. E.-S., …, Patel, A., & Schippers, H. (2021). Building sustainable global collaborative networks: Recommendations from music studies and the social sciences. In E. H. Margulis, D. Loughridge, & P. Loui (Eds.), *The science-music borderlands: Reckoning with the past, imagining the future*. MIT Press. Preprint doi: http://doi.org/10.31234/osf.io/cb4ys

Anglada-Tort, M., Krause, A. E., & North, A. C. (2021). Popular music lyrics and musicians' gender over time: A computational approach. *Psychology of Music*, *49*(3), 426-444. https://doi.org/10.1177/0305735619871602

Anglada-Tort, M., Keller, S., Steffens, J., & Müllensiefen, D. (2021): The impact of source effects on the evaluation of music for advertising: Are there differences in how advertising professionals and consumers judge music? *Journal of Advertising Research.* https://doi.org/10.2501/JAR-2020-016

2020   **Anglada-Tort, M.,** & Skov, M. (2020): What counts as Aesthetics in Science? A bibliometric Analysis and Visualization of the Scientific Literature from 1970 to 2018. *Psychology of Aesthetics, Creativity, and the Arts, 16* (3), 553-568. https://doi.org/10.1037/aca0000350

Harrison, P. M. C., Marjieh, R., Adolfi, F., van Rijn, P., **Anglada-Tort, M.**, Tchernichovski, O., Larrouy-Maestri, P., & Jacoby, N. (2020). Gibbs Sampling with People. 34th Conference on Neural Information Processing Systems (NeurIPS 2020). https://arxiv.org/abs/2008.02595

2019 **Anglada-Tort, M.,** Steffens, J., & Müllensiefen, D. (2019): Names and titles matter: The impact of linguistic fluency and the affect heuristic on aesthetics and value judgements of music. *Psychology of Aesthetics, Creativity, and the Arts, 13* (3), 277-292. https://dx.doi.org/10.1037/aca0000172

Anglada-Tort, M. (2019): Measuring stereotypes in music: A commentary on Susino and Schubert (2019). *Empirical Musicology Review, 14*(1-2), 16-21. http://dx.doi.org/10.18061/emr.v13i1-2.6387

Anglada-Tort, M., Thueringer, H., & Omigie, D. (2019): The busking experiment: A field study measuring behavioural responses to street music performances. *Psychomusicology: Music, Mind, and Brain, 29*(1), 46-55. http://dx.doi.org/10.1037/pmu0000236

Anglada-Tort, M., & Sanfilippo, K.R.M. (2019): Visualizing music psychology: A bibliometric analysis of Psychology of Music, Music Perception, and Musicae Scientiae from 1973 to 2017", *Music & Science, 2*, 2059204318811786. https://doi.org/10.1177/2059204318811786

2018 **Anglada-Tort, M.,** Baker, T., & Müllensiefen, D. (2018): False memories in music listening: Exploring the misinformation effect and individual difference factors in auditory memory. *Memory,* 1-16. https://doi.org/10.1080/09658211.2018.1545858

2017 **Anglada-Tort, M.,** & Müllensiefen, D. (2017): The repeated recording illusion: The effects of extrinsic and individual difference factors on musical judgments. *Music Perception, 35*(1), 94-117. https://doi.org/10.1525/mp.2017.35.1.94

Ferré., P., **Anglada-Tort, M.,** Guasch, M. (2017): Processing of emotional words in bilinguals: Testing the effects of Word concreteness, task type and language status. *Second Language Research, 34*(3), 371-394. https://doi.org/10.1177/0267658317744008

Peer review

I am an editorial board reviewer for the journal of *Psychology of Aesthetics, Creativity, and the Arts.* I have reviewed articles for the *Journal of Experimental Psychology: General, Scientific Reports, Royal Society Open Access*, *Psychology & Marketing*, *Music Perception, Brain Sciences*, *Psychology of Music*, *Music & Science*, *POETICS,* and *Journal of Media Business Studies*. I have also reviewed paper submissions for the Cognitive Science Society Conferences (CogSci) and the International Society for Music Information Retrieval (ISMIR) Conference.