Digital Scores

Investigating the technological transformation of the music score

Online form contribution
Participant Information Sheet

Dear Participant

We are inviting you to participate in a research project. An important aspect of this project is the reflection on the nature of digital score musicianship. In order to reflect on this experience, we invite you to complete an online questionnaire. This is part of a series of such activities across the planet. We will be concentrating on 4 key areas:

1. The digital score of the piece – for example, your connections to the materials that form the parts of the digital score (sounds, images, game-worlds). Also, how you formed relationships with the active materials such as pre-recorded melodies, machine intelligence, creative media, evoked music-worlds, or the other musicians.

2. The flow in the moment of performing – for example, what journeys were you taken on, how involved in the music you became.

3. Your digital musicianship - what skills, knowledge, and approaches did you use to facilitate a creative engagement with the piece.

4. Transformative experiences and impact – for example, did the score communicate innovative music ideas, new music experiences, novel compositional approaches, new performance opportunities, music-making engagements, or broader accessibility/ inclusivity for musicians. Has this experience changed your outlook on music-making in general? Will the impact of this experience carry over to other future projects?

What is your role?
Complete an online questionnaire.

Project Outline
The “Digital Scores” project comprises an ambitious programme of practice-based research interwoven with an innovative theoretical investigation into the transformation of the music score being wrought by new computational technologies. A core objective is to investigate the shifts in creativity and musicianship that digital scores have on musicians: composers, performers, makers, designers and coders. A parallel objective is to innovate the music score as an inclusive creative space for musicians of traditional and non-traditional backgrounds. The benefits of the research extend beyond music studies into computer science, new media research and performance practice. It is real “frontier research”, which sits at the intersections of art, technology, cultural studies and creative practice. It investigates new phenomenologies of the experience of digital creativity, and new creative processes in a digital and post-digital world. The PI will lead a collaborative research network across four continents, which will create a series of case studies each addressing new computational technologies such as *artificial intelligence, machine learning, virtual reality, gaming, telematic networks* and *robotics*. These are interwoven with a transdisciplinary theoretical study that aims to situate digital scores within the wider fields of

digital humanities and media studies. It will engage professional and community musicians, music researchers and students in a longitudinal scientific study of digital musicianship. All aspects of the work will be created and stored in an interactive website which will be publicly accessible. The project will conclude with an academic conference and the publication of two books and numerous articles on digital scores.

What are the objectives of the Digital Scores project?
The objectives of the Digital Score project are to:

- determine how new computational technologies, integrated as innovative music score systems, can lead to the communication of innovative music ideas, new music experiences, novel compositional approaches, new performance opportunities and music-making engagements, and broader accessibility for musicians of traditional and non-traditional backgrounds.
- develop a transdisciplinary theoretical framework that situates digital scores within the wider field of digital humanities and media studies, in order to understand the deep creative experiences of musicking (the act of music-making (Small 1989)) with digital scores built around *artificial intelligence, machine learning, internet networking, robotics, virtual and augmented reality, gaming* and *physical computing*.
- discover how digital scores stimulate new relationships between musicians and how these profoundly influence the nature of the digital musician.

Who is organising this research?
The research for this study is being undertaken by Professor Craig Vear at University of Nottingham (UoN). This is part of a European Research Council funded research project in partnership with Professor Cat Hope at Monash University (AUS), Professor Sandeep Bhagwati at Concordia University (CAN), Professor Kenneth Fields at University of California Santa Barbara (US) and Professor Xiaobing at the Central Conservatory of Music, Beijing (China). University of Nottingham (UoN) Research Ethics Committee has reviewed and approved this research.

Who is funding the research?
European Research Council, grant number ERC-2020-COG – 101002086 – DigiScore

What is being recorded?
Your online responses

What is the lawful basis for using this data?
This event is a public task that is carrying out a specific research project in the public interest which is laid down by law. The data collection is designed in a targeted and proportionate way in order to achieve the specific purpose of this research project.

Where will the data be stored?
The audio recording and the full transcription, and the music performance (audio and video) will be stored in three places:

- in a secure section of the project website, which has password protection and is only accessible by the project team
- on an encrypted hard-drive, accessible by only the PI and UON team. This will not be connected to a network and will be stored in a locked office space.
- In UON cloud-based repository for open access data sharing

Who will it be shared with?
Only the project team will have access to secure section of the project website. Only the UON project team will have access to the secure HD. The cloud-based repository will be open-access and therefore openly available to other researchers and the general public. The recorded music performance will be made public through the project website.

How will it be shared securely?
University of Nottingham (UoN) is the central hub for this project. Data collection from a partner's territory will be encrypted and send securely using an online file transfer service such as ZendTo. The original data will then be securely stored according to the original country's legal protocols, or deleted.

Will/can it be anonymised or pseudonymised?
No – we need your contact details for the lucky dip competition. Following this, we will delete all your personal details.

How will the data be used?
Your responses will inform the development of the theoretical framework of this project. This framework will be used to build an understanding of digital musicianship. To this end, the project team will use these recordings as reference, and may include quotes in the academic output from the project.

You can withdraw at any point.
At any time you can choose to withdraw. You can also withdraw your data at any point after the collection, without giving any reason. If you withdraw, your data will be removed from the study and will be destroyed, or your participation from a recorded event will be edited out.

Who owns the IP of the Digital Score?
The musician will hold the Intellectual Property of the created work and all its materials, including the relevant mechanical, publishing and compositional rights. The performers will retain rights to the recording. However, as part of the commissioning contract the performers will grants the University the right to share these materials on the project website (in whole or in part, transcribed or otherwise) in perpetuity throughout the world for educational, research, commercial and promotional purposes at the University. The performer can request these materials to be anonymised or pseudonymised at any point in time.

PERSONAL DATA

Will any personal data be stored about me?
No, beyond the temporary storage of your contact details for the lucky dip.

What are the possible benefits of participating?
The study sets out a pioneering field of research, which combines interdisciplinary methodologies in an innovative trans-disciplinary approach. The research is fundamental in the new knowledge that it will bring to the field. It will enrich current music research, and the associated applications of digital scores, by providing a robust understanding of the musicianship and creativity when humans become embodied in these music systems.

What are the possible risks of taking part?
While we hope that your experience will be pleasant. We will take every precaution with the security of the stored data, including ensuring correct encryption and password protocols are maintained.

Transfer of data between EU, UK and rest of world
University of Nottingham (UoN) is the central hub for this project. Data collection from a partner's territory will be encrypted and send securely using an online file transfer service such as ZendTo. The original data will then be safely stored according to the original country's legal protocols, or deleted.

Material Transfer between EU and non-EU countries.
No material will be transferred between partners.

What happens at the end of the project?
If you agree to participate in this project, the research will be written up as a research report in the form of academic papers and scholarly books. These will be published internationally and distributed around the world. You have the right to have your information removed at later stages.
A digital online copy of the research will be deposited with UoN Open Research Archive and will be published with open access meaning that it will be available to all internet users. At the end of this project, the audio and digital data collected from interviews with participants will be deposited at the UK Data Service for use by future researchers.

What about use of the data in future research?
If you agree to participate in this project, the research may be used by other researchers and regulatory authorities for future research. You have the right to have your information removed at later stages.

What should I do if I have any concerns or complaints?
If you have any concerns about the project, please speak to the researcher, who should acknowledge your concerns within ten (10) working days and give you an indication of how your concern will be addressed. If you remain unhappy or wish to **make a formal complaint, please contact Dr. Elizabeth Kelly**, line manager for Professor Craig Vear (E-mail Elizabeth.Kelly@nottingham.ac.uk).

Fair Processing Statement
The information will be processed by use in accordance with the provisions of the GDPR and the UK Data Protection Act 2018. All personal data collected during this project will be held in password protected storage.

Yours sincerely

Professor Craig Vear

University of Nottingham - School of Humanities
Arts Centre
Department of Music
University Park,
Nottingham

By submitting this online form I give consent to the following:

Issue
I have read the information presented in the information letter about the study "Digital Scores - Investigating the technological transformation of the music score"
I have had the opportunity to ask any questions related to this study, and received satisfactory answers to my questions, and any additional details I wanted.
I am also aware that excerpts from the interview may be included in publications to come from this research.

I understand that my participation is voluntary and that at any time, I am free to withdraw without giving any reason. If I withdraw, my data will be removed from the study and will be destroyed
I give permission for the study to be recorded in the manner described by the information sheet.
I understand that relevant sections of the data collected during the study may be looked at by individuals from University of Nottingham or Monash University (Australia), Concordia University (Canada), University of California Santa Barbara (US) or the Central Conservatory of Music, Beijing (China), where it is relevant to my taking part in this research. I give permission for these individuals to have access to my responses.

With full knowledge of all foregoing, I agree to participate in this study.