Abstracts

International Conference of Students of Systematic Musicology 2017 (SysMus17)
13–15th September 2017

Contents

Wednesday September 13th

Music Of The Hemispheres

Lauren Stewart

Wednesday September 13th, 10:00

Keynote talk, Peston Lecture Theatre (GCG10)

The ability to make sense of musical sound has been observed in every culture since the beginning of recorded history. In early infancy, it allows us to respond to the sing-song interactions from a primary caregiver and to engage in musical play. In later life it shapes our social and cultural identities and modulates our affective and emotional states. In this talk I will discuss how the ability to perceive and make sense of musical sound is remarkably sophisticated, and can, for most people, be acquired simply by being exposed to the music of one's own culture. We'll also explore why some people really don't 'get' music (amusia), while others get too much of it (bothersome earworms), and discuss how some unique aspects of music make it such a powerful therapeutic tool in clinical contexts.

Neural Music Language Models: Investigating The Training Process

Adrien Ycart, Emmanouil Benetos

Wednesday September 13th, 11:50

Talk, Peston Lecture Theatre (GCG10)

Automatic music transcription (AMT) remains a challenging task, in particular with polyphonic music. In most AMT systems, an acoustic model estimates the pitches present in each time frame, and a language model links those estimations using high-level musical knowledge to build a binary piano-roll representation. While the former task has been widely discussed in the literature, the latter has received little attention until quite recently. We aim at investigating the use of recurrent neural networks (RNN) as language models for AMT. Most of the existing literature focuses on the architecture; here we investigate the training process, by using various types of training data and various data augmentation techniques. This will be a first step towards implementing a neural music language model (MLM), in order to investigate how MLMs can improve AMT performance.

Affective Priming Effects Between Music And Language In Bilinguals' First And Second Language

Miriam Tenderini, Tiina Eilola, Esther de Leeuw, Marcus Pearce

Wednesday September 13th, 12:10

Talk, Peston Lecture Theatre (GCG10)

Are emotions processed differently in bilinguals' first (L1) and second, later acquired (L2) language? This question was addressed by examining priming effects between music and emotion words in L1 and L2. The hypothesis was that the emotional force of L2 is weaker than L1 words as indicated by different

priming strength between affective linguistic and musical stimuli. Short musical excerpts and single written words (L1 & L2) with congruent or incongruent valence (positive, negative) were presented as pairs in a cross-modal affective priming paradigm to 50 German-English bilinguals. Reaction times and neurophysiological responses (N400) were analysed for effects of congruence (congruent/ incongruent stimulus pair) and language (L1, L2). Behavioural results indicate a clear priming effect between music and L1 words while this interaction is weaker in the L2 suggesting a decreased integration of emotional information communicated by L2 words. Full results including EEG data will be presented at the conference.

Modes Of Listening To Chinese Pentatonicism In Parisian Musical Modernity

John Lam Chun-fai

Wednesday September 13th, 13:50

Talk, Peston Lecture Theatre (GCG10)

How can we listen to modernist manipulations of the anhemitonic pentatonic scale, which was referred to as 'gamme chinoise' (Chinese scale) in early twentieth-century Paris? This study proposes multiple listening pathways by revealing innovative approaches to the scale at different levels of a musical structure. Drawing on music-theoretical underpinnings and cross-cultural capacities of the scale, this paper scrutinises three representative Parisian pieces bearing extra-musical associations with China and devises modes of listening based on analytical readings. It is found that innovative approaches range from alteration of dominant ninth chord as pentatonic harmony (Ravel) and exploitation of pentatonicised octatonic space (Schmitt) to formulation of pentatonic network (Stravinsky). Historically-informed analyses and listening pathways based on the two pentatonic scale-steps – minor third and whole tone – impact on our aural perception of culturally encoded techniques, shed light on cross-cultural dynamics between China and France, and contribute toward a theory of Chinese pentatonicism in Parisian musical modernity.

Chord Encoding And Root-Finding In Tonal And Non-Tonal Contexts: Theoretical, Computational And Cognitive Perspectives

Konstantinos Giannos, Emilios Cambouropoulos

Wednesday September 13th, 14:10

Talk, Peston Lecture Theatre (GCG10)

The concept of root is of great significance in chord encoding in tonal music. Is this notion useful in non-tonal idioms or should it be extended, changed or abandoned in different musical contexts? A series of harmonic excerpts from diverse idioms are examined through the application of different root-finding and chord encoding models, such as Parncutt's perceptual virtual pitch root-finding model, the harmonic system of Paul Hindemith, and the General Chord Type (GCT) representation. This way, the models are tested in various contexts, such as tonal, neo-tonal, whole-tone or atonal harmonies. In this process, the abstract encoding of chords in diverse tonal or non-tonal contexts is explored, employing a utilitarian notion of 'reference tone' in cases where root ambiguity is strong and cannot be resolved.

Spanish Version Of The Kenny-Music Performance Anxiety Inventory (K-MPAI): Factorial Structure And First Statistical Analyses Of A Peruvian Sample

Álvaro Chang-Arana

Wednesday September 13th, 14:30

Poster, Ground Floor Lobby (GC)

This study estimated validity evidence based on internal structure, and reliability evidence for scores derived from the intended uses of the Spanish Kenny-Music Performance Anxiety Inventory (K-MPAI). It also provided the first statistical analyses of a Peruvian sample of 455 music students (mean-age = 21.19, SD = 3.13). A high-order exploratory factor analysis with Schmid-Leiman solution was performed on the K-MPAI items. One high-order factor (ordinal alpha = .97) and two first order factors (ordinal alpha = .93; = .92) were obtained, explaining 58.65% of shared variance. A significant effect was found for gender differences, but not for musical institutions

or genre. A high-order factor called "negative affectivity in relation to music performance anxiety" and two first-order factors labelled "music performance anxiety" and "depressive components" were proposed. Gender-related score differences for MPA and the lack of significant differences in MPA scores between musical genre or musical institution were partially consistent with previous literature.

The Effect Of Socio-Cultural Identity On Musical Distaste

Elizabeth Kunde, Kate Leonard, Jim Borling

Wednesday September 13th, 14:30

Poster, Ground Floor Lobby (GC)

While the field of music therapy is beginning to develop a firmer grasp on how factors such as culture, age, personal identity, and physiology can sway musical preference, very little research has been done on what affects musical distaste. In response to this gap in the research, this study was conducted to better define musical and socio-cultural identities and how these identities can impact thoughts, feelings, and physical responses to music, particularly music that the individual dislikes. Seven surveys in tandem with musical excerpts of five different American genres were administered to participants from two universities in southwestern Virginia, USA, to gather information on the participants socio-cultural identity and background, his or her musical taste, and any thoughts, feelings, and/or physical responses that occurred in response to the music that was presented.

Cognition Of South Indian Percussion

Jay Appaji, Jay Dowling, Zachary Wallmark

Wednesday September 13th, 14:30

Poster, Ground Floor Lobby (GC)

Previous studies have explored humans' ability to memorize and recall rhythm within Western musical contexts; however, cross-cultural cognition of non-Western rhythm remains poorly understood. This study investigates the short-term memory of 20 rhythmic trials recorded on the mridangam, a double-headed pitched drum used in South Indian classical music. In experiment 1, we evaluated participants' (N = 36) memory for 27 natural and mechanical versions of mridangam rhythmic patterns, with a "target" rhythm memorized in contrast to "similar" and "different" lures separated by three delay times (2s, 6s, and 12s). Results suggested that there was not a significant difference in listeners' ability to distinguish between natural and mechanical versions. Difference between "similar" and "different" lures, however, was significant, as was delay time. In experiment 2 (in progress), we focus on the listener's ability to memorize and discriminate a specific "target" rhythmic sample from a pool of "similar" and "different" lures.

Reproduction Of Western Music Rhythms By Cameroonian School Children

Gesine Wermke, Bettina Lamm, Andreas Lehmann, Philipp Klinger

Wednesday September 13th, 14:30

Poster, Ground Floor Lobby (GC)

Rhythm is present in all musical cultures, though its distinctive characteristics might be culture-specific, and even tapping to a beat might reveal the participants culture-specific biases or perception. Yet the design of experiments regarding rhythm perception and production are generally Eurocentric. Hence, participants from non-Western music cultures might be at an advantage for some tasks and at disadvantage for others. Developing a culture-neutral analysis would be desirable. This study was designed to identify patterns of rhythmic reproduction based on sensori-motor synchronization (SMS); we investigated strategies of Cameroonian (Nso) children to synchronize a rhythmic motor pattern (finger tapping) with externally perceived typical Western music stimuli. Experiments were performed in Cameroon (Kumbo). Rhythm samples with different meter and different speeds were presented. The reproduction patterns were analysed by two musically trained judges according to meter, speed and rhythm patterns. The subjects showed different reproduction patterns and grouping.

Sounds Of Native Cultures In Electroacoustic Music: Latin American Study Cases

Pablo Cuevas

Wednesday September 13th, 14:30

Poster, Ground Floor Lobby (GC)

The electroacoustic music for tape of Latin American origin shows a rich history and a large, relative unexplored repertoire since its beginnings in the middle of the 20th century. In this paper, I study the inclusion of sounds of native cultures in a group of selected electroacoustic works between 1961-1989. A musical analytical inductive process divided in three stages was used to recognize and interpret this recurring topic. I formulate the notion of distance to embrace three types of references to the sounds of native cultures that can be found in this music. These references operate as indexes of a cultural identity that the composers were trying to portrait.

Study Of Emotion Perception For Indian Classical Raga Music

Makarand Velankar, Parag Kulkarni

Wednesday September 13th, 14:30

Poster, Ground Floor Lobby (GC)

Indian Classical Music (ICM) has a long tradition and people from various cultural backgrounds are fascinated by it. Each performance of a given raga in ICM is supposed to create a common mood among the listeners. We have selected all clips of instrument flute in order to eliminate the effect of timbre and lyrics on perceived emotions. For our initial experiments, we have selected 2 ragas. The 3 clips selected in each raga were one with fast rhythm, one with medium rhythm and one with alap which is arrhythmic. We have obtained total 240 responses with 40 responses per clip during 6 different sessions. Each session was planned with 2 clips per session with same tempo of different raga. The sessions were planned to eliminate the effect of possible ordering of music clips. Listeners provided rating for 13 different emotions on a numeric scale of 0 to 100 for musical clip. The results are presented using different statistical data charts along with the analysis of data. The critical findings about the expression creation are presented with support of data. These initial experiments revealed strong evidence of raga association with the specific emotion for novice listeners.

Performing Auspiciousness And Inauspiciousness In Parai Mēlam Music Culture In Jaffna, Sri Lanka

Pathmanesan Sanmugeswaran

Wednesday September 13th, 14:30

Poster, Ground Floor Lobby (GC)

Parai mēlam is one of the percussion instruments in Jaffna Tamil music culture in Sri Lanka. Although parai mēlam plays a significant role in providing music in the auspicious and inauspicious ritualistic contexts, the Jaffna Tamil Hindu community always identifies parai mēlam music as an inauspicious. Its musical rhythms vary depending on religious and funeral ritual contexts. This paper, hence, explores how the notions of purity and pollution practices of the Hindu caste system places the parai mēlam music as auspicious and inauspicious music in Tamil Hindu life in Jaffna, Sri Lanka.

Grammaticality Judgments In Linguistic And Musical Structures

Katerina Drakoulaki, Robin Lickley

Wednesday September 13th, 14:30

Poster, Ground Floor Lobby (GC)

A connection between language and music has been a matter of debate both in theory and empirical research. An online graded grammaticality judgment task with regular and irregular stimuli was administered to typical adults with and without music education. Linguistic (syntactic and semantic) stimuli were read and music stimuli were heard. Irregular linguistic syntactic stimuli contained a structural deviance (adjective-noun disagreement) and irregular music stimuli also contained a structural deviance (cadence violation). Irregular linguistic semantic stimuli contained reversed thematic roles of non-reversible verbs. It was hypothesised that stimuli with structural deviances would yield stricter judgments than stimuli with semantic deviances. However, linguistic deviances as a whole caused a binary judgment, whereas music deviances were evenly distributed. Music education had no effect on participant performance. The results were interpreted in an Optimality Theory framework, where linguistic constraints used were thought hard and the music constraint was thought soft.

Infectious Grooves: High-Groove Music Drives Auditory-Motor Interactions

Jan Stupacher, Guilherme Wood, Matthias Witte

Wednesday September 13th, 16:00

Talk, Peston Lecture Theatre (GCG10)

Numerous studies indicate that rhythm perception not only involves auditory, but also motor-related brain areas. Music with a strong groove (i.e., highly movement-inducing music) is thought to be especially powerful in engaging neural auditory-motor links. By using near-infrared spectroscopy (NIRS) – a method to measure hemodynamic changes in the brain – we examined whether listening to high-groove music activates the motor system more strongly than low-groove music and whether this activation is modulated by musical expertise. Twelve musicians and 14 non-musicians listened to high- and low-groove music clips without moving. The analysis of changes in oxygenated hemoglobin concentration revealed that in musicians, but not in non-musicians, listening to high-groove music compared to low-groove music increased brain activity in (pre)-motor and supplementary motor areas. The higher activation of musicians' motor-related brain areas with high-groove music might be a result of well-developed auditory-motor links strengthened by musical training.

Infant Spontaneous Motor Tempo

Sinead Rocha, Victoria Southgate, Denis Mareschal

Wednesday September 13th, 16:20

Talk, Peston Lecture Theatre (GCG10)

Being able to move rhythmically is an essential skill for producing music. The present study aimed to elucidate the early development of rhythmic movement, and explore how this relates to both our own biomechanics and our rich experience of rhythm during locomotion. We measured the Spontaneous Motor Tempo (SMT) of 170 infants using a spontaneous drumming task. 115 infants produced four or more sequential drum hits and were included in the following analyses. We found that infant drumming becomes faster (r(114) = -.279, p=.003) and more regular (r(114) = -.217, p=.021) with age. We did not find any relationship between infants' own body size and SMT. However, parental height was a significant predictor of infant tempo (=.413, p=.013). We suggest that infants' self-produced rhythm may be influenced by their parent's walking tempo, particularly by the vestibular information they receive when being carried on the caregiver's body.

Musical Intervals In Baby Sounds

Lotte Armbrüster, Werner Mende, Hanna Ehlert, Gesine Wermke, Kathleen Wermke

Wednesday September 13th, 16:40

Talk, Peston Lecture Theatre (GCG10)

Perception and memorizing of melody and rhythm start about the third trimester of gestation. In newborns, musical intervals in cry melodies were observed. Here, weekly recordings of 6,059 pre-speech vocalizations of 12 healthy babies over the first three months were analysed and interval-like substructures measured. Remarkable regular interval distributions were found with the minor second as the prevailing musical interval. Subsequent studies are warranted to investigate a potential influence of exposure to music or ambient language on the observed interval distribution in baby sounds.

Thursday September 14th

Investigating The Improvisers' Perspective Using Video-Stimulated Recall

Keith Phillips

Thursday September 14th, 10:00

Talk, Peston Lecture Theatre (GCG10)

Six participants (1 female), who self-identified as improvisers, were video recorded improvising to a backing track, and then asked to offer a commentary on their solo during an in depth semi-structured interview. The questions focused on strategy use, planning, the timing of decisions and the role of auditory imagery. Improvisers were also asked about why they improvised and what they valued about the process. The interviews were then subjected to thematic analysis, which is still ongoing. Preliminary findings reveal multiple strategy use and the important role of auditory imagery in the validation of improvisation as a creative process.

Visual Feedback In Higher Education Piano Learning And Teaching

Luciana Hamond

Thursday September 14th, 10:20

Talk, Peston Lecture Theatre (GCG10)

Feedback is crucial for learning; in piano learning, feedback is both intra- and inter-personal. Evidence indicates that the application of visual feedback can enhance instrumental and singing learning. However, what is not yet clear is exactly how visual feedback might be used in higher education piano studios. An exploratory study (Hamond, 2017) was conducted to investigate the pedagogical uses of additional visual feedback generated by technology in higher education piano studios. Three teacher-student pairs in higher education in Brazil and the researcher, as technology-mediator, participated in this study. Each pair chose a movement of a classical sonata of their current repertoire to work on in two piano lessons. The technology system involved a digital piano, connected with a laptop running Digital Audio Workstation (DAW) software (Cockos' Reaper) via MIDI interface, and an additional PC screen. Data collection encompassed the video observation of two lessons, interviews with participants, and MIDI data. A multi-methods Qualitative Data Analysis (QDA) was used: thematic analysis for videos and interviews, microstructure analysis of musical behavior in videoed lessons, and MIDI QDA. Real-time and post-hoc visual feedback was generated by the technology system, combined or not with auditory feedback. Results indicated that additional visual feedback can augment intrapersonal feedback, enhance conscious-awareness of students' performances and subsequently enhance learning and performance. Teacher-student pairs differed in preferences when using either auditory or visual feedback.

Musical Trajectories And Creative Music Teaching Interventions Affect The Development Of Interest In 'Music' Of German Secondary Schools' Students

Daniel Fiedler, Daniel Müllensiefen

Thursday September 14th, 10:40

Talk, Peston Lecture Theatre (GCG10)

Trajectories of musical development can be very different across adolescence and the causes and mechanisms leading to these differences are often subjects of music educational research. To measure the aspects of musical development of German students, the psychometric constructs 'musical self-concept' and 'musical sophistication' as well as 'interest in music as a school subject' can be used. The first aim of this repeated-measurement study was to identify different developmental trajectories within the sample of students. The second aim was to identify how 'musical self-concept' and 'musical sophistication' as well as creative music teaching interventions (e.g., composing, improvising, dancing, etc.) contribute to the development of the target variable 'interest in music as a school subject'. Data of 167 students from two Grammar Schools and two Middle Schools are presented. The data comprised the self-assessed psychometric constructs 'musical self-concept' and 'musical sophistication' as well as music-specific and demographic background variables and interest in 'music' at four time points across nearly two school years. The data were analysed using sequence pattern analysis and multilevel linear models. The sequence pattern analyses identified three developmental trajectories of 'musical self-concept' and 'musical sophistication'. From these, two typical trajectories of musical development were identified and associations with the variables sex (phi = .299), musical status (phi = .229), type of school (n.s.), and the overall self-assessed marks in 'music' (n.s.) as well as self-closeness to the school subject 'music' (r = .250), were found. Moreover, multilevel analyses show that the creative music teaching interventions (p .05) as well as the identified high developmental trajectory of students (p .001) affect the development of interest in 'music', while 'interest in music as a school subject' is generally decreasing over time (p .001).

A Theory Of The Musical Genre: The Three-Phase Cycle

Pablo Mendoza-Halliday

Thursday September 14th, 11:30

Talk, Peston Lecture Theatre (GCG10)

Musical genre is a form of categorization that groups musical entities, such as musical works, which share affinity criteria. However, the way we use the category and theorize about it depends on how we define the concept of musical genre. Current musicological theories propose genres to be sets, with properties defining their boundaries; or cognitive categories profiled through cognitive processes involving perception, memory, imagination and intuition; or cultural units that emerge through intersubjective negotiations among semiotic codes. The theory here explained claims that musical genre can simultaneously be a cognitive category, a cultural unit, and a taxonomical class; they work as phases of a cyclic dynamic that covers the entire concept of genre. Set theory can explain the properties of sets while cog-

nitive categories need to be explained with cognitive theories such as prototypes and family resemblances. This study aims for a broader definition of genre that solves some of the inconsistencies of current genre theories.

How The Rhythm Is Actually Performed In The First Movement Of Beethoven's Seventh Symphony

Dasaem Jeong, Juhan Nam

Thursday September 14th, 11:50

Talk, Peston Lecture Theatre (GCG10)

The first movement of Beethoven's Seventh Symphony uses a characteristic rhythm pattern throughout its main section. We analyzed 62 recordings of this movement by semi-manual method aided by audio signal processing to examine how accurately this rhythm pattern was performed in selected excerpts. The result showed that only few recordings performed this rhythm accurately as it is notated. In most of the cases, the rhythm was not accurate and its characteristic as a compound meter was diluted. We found that the rhythmic accuracy was mainly varied by musical texture of excerpts. Some conductors like Karajan, C. Kleiber, and Gardiner performed the rhythm more accurately than the others in most of the excerpts. The analysis result says that the recordings of American orchestras showed lower rhythmic accuracy than Austro-German orchestras or early music orchestras.

Musical Forces Can Save Analysts From Cumbersome Explanations

Jaco Meyer

Thursday September 14th, 12:10

Talk, Peston Lecture Theatre (GCG10)

Syrinx by Claude Debussy is regarded as one of the most important solo flute compositions of which comprehensive and contradictory literature on the analyses of the composition exist. Most authors provide cumbersome explanations of hierarchies and interactions of tones in their analyses. The aim of this paper will be to show how existing analyses of Syrinx can be reinterpreted in terms of Larson's theory of musical forces. I will present a comparative case study where instances from existing analyses are interpreted as a case and my analysis of Syrinx in terms of musical forces as another case. I found that the theory of musical forces is a useful music analytical tool that can be employed in order to avoid cumbersome explanations in written music analyses. This analytical tool can also be employed in many other compositions or employed to simplify existing written analyses.

Computational Approaches To Musicology

Elaine Chew, Daniel Müllensiefen, Marcus Pearce

Thursday September 14th, 13:30

Keynote panel session, Peston Lecture Theatre (GCG10)

Computational modelling is a crucial part of the systematic musicologist's toolkit. It allows researchers to analyse vast datasets that could never be processed by hand, to build complex simulations of human listeners and composers, and to unlock remarkable new avenues for musical appreciation, engagement, and interaction. In this session we hear from three distinguished researchers responsible for pioneering research in different aspects of computational musicology. In the first part of the session, the three researchers will introduce their own research areas, the motivation behind their approaches, and their research outcomes. The second part of the session will comprise a panel discussion with the audience, with topics including but not limited to different philosophies of computational modelling, ways for students to develop expertise in modelling, and the future of computational musicology.

An Experience-Sampling Study To Investigate The Role Of Familiarity In Involuntary Musical Imagery Induction

Rebecca Lancashire

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

Despite its prevalence in Western society, little is known about why certain songs get stuck in our heads or the intrinsic musical features which contribute to their potential as involuntary musical imagery (INMI). Experience-Sampling Methods were used to explore the role of familiarity in inducing INMI. Over the course of a fortnight, eighteen participants were

exposed to four previously unfamiliar musical stimuli, which were selected for their low INMI potential according to the melodic analysis software, FANTASTIC. Results indicate that musical training can increase susceptibility to INMI induction, even when the intrinsic features of the piece are not conducive to generating INMI. Besides contributing to existing research on the extra-musical factors which may lead to or trigger INMI episodes, a more detailed analysis of the intra-musical features which evoked INMI episodes may allow for the development of a more comprehensive method of assessing the INMI potential of a piece analytically.

Musicians' Timbral Adjustments In Response To Emotional Cues In Musical Accompaniments

Anna Czepiel, Emma Allingham, Kendra Oudyk, Adriana Zamudio, Pasi Saari

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

This study explored musicians' manipulation of timbre in response to musically emotional cues. Three melodies were composed, intended to be neither major nor minor. For each melody, major and minor accompaniments (and a bass line accompaniment intended as a neutral comparison) were also composed. There were two versions of each major and minor accompaniment: one performed by a pianist and one MIDI version. A cellist was asked to perform the melodies expressively along with each accompaniment. Acoustic features were analysed using the MIRtoolbox in MATLAB, and listeners were asked to rate the solo melodies on a scale of happy to sad. A two-way ANCOVA was used for the feature extraction data, and a factorial repeated measures ANOVA was used for the perceptual data. Results revealed that "mode" (major/minor) of accompaniment had a significant effect on mean "attack time" and mean "RMS", and had a significant effect on perceptual ratings.

Measuring Rhythmic Abilities: The Development Of A Computer-Based Test To Assess Individual Differences In Beat Keeping

Robyn Moran, Richard Race, Arielle Boneville-Roussy

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

This enquiry developed a prototypical computer-based instrument to assess individual differences in beat keeping. The test was based on the Beat Alignment Test (BAT) (Iversen and Patel, 2008), which was implemented in its original form, using the software authoring environment Max/MSP (Cycling74, 2016), and to which was added a novel offbeat-tapping task. It was administered to 70 college students. Results showed that, whilst the majority of people performed with similarly high degrees of accuracy when tapping to a metronome, the other tasks produced a wider range of individual differences, with tasks involving real music producing the greatest variety of performance. Significant differences were found between individuals with and without musical training, with musically trained participants tapping more accurately and less variably than untrained, and achieving significantly higher scores in the beat-perception test. The instrument proved effective at identifying individual differences in beat keeping and provides a good basis for further research.

Estimation Of Time In Music: Effects Of Tempo And Familiarity On The Subjective Duration Of Music

Theresa Schallmoser, Siavash Moazzami Vahid, Richard Parncutt

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

Time estimations while listening to music happen automatically in everyday life. Variations of those subjective durations depend on inner-musical parameters, environmental and personal influences. Our study investigates the role of musical parameters of tempo and familiarity on estimations of short musical excerpts. Subjects included musicians and not musically trained persons which rated the durations on rating scales. Results showed a significant effect of the differing tempo. Faster music was perceived as longer, probably due to the higher amount of information being processed in the same period of time. In addition, there is a tendency of underestimation in both groups regarding the original lengths. The level of familiarity of the musical pieces did not have a significant impact on the subjective durations. Our results correspond to previous theories and experiments on the relationship between tempo and time

duration, as well as time perception and information processing.

A Survey Of Musically-Induced Chills: Emotional Characteristics And 'Chills Moments' In Music

Scott Bannister

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

This study administered a survey to address issues in musical chills research, namely a poor understanding of the emotional qualities of the experience, and a narrow and small set of results linking chills with specific musical features. Open-ended responses were collected for chills experiences, describing subjective feelings, excerpts of music that elicited chills, and specific moments in the music that were linked to the response. Results show that whilst chills are generally pleasurable experiences, they are often characterised by mixed emotions such as happiness and sadness; additionally, sensations reported with gooseflesh and shivers included warmth in the chest and tears. Specific moments in music that elicited chills were broadly represented by five themes, referring to entrances of instruments, peaks and build up, transitions and change, social concepts, and finally, voices and words. Findings are discussed in terms of existing theories of aesthetic chills, and future directions for empirical research.

Experiences And Appraisals Of Musical Awe

Landon Peck

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

This paper presents an exploratory investigation into musical awe by way of a questionnaire detailing individuals' experiences. Previous research has speculated on the psychological basis for the appraisals of awe, and those claims are here empirically tested through participant recollection of musical events. In this study, 'awe' was presented as a 'combination of appreciation of beauty, surprise, and possibly fear'. Participants completed a questionnaire in which they freely wrote about an occurrence where they had experienced awe in response to music. Appraisal methods were tested through psychometric scales to determine the influence of multiple proposed factors (vastness, beauty, threat, etc.). Results show vivid recollection for the pleasantness of experiences as well as an increased engagement and enjoyment from being moved. Participants did not report musical awe as fearsome but did associate it with a sense of grandeur and power. Future studies building on the analysis of this questionnaire will continue to investigate the sources of awe-inducing music.

Factors Influencing Discrimination Of Emotional Expression Conveyed Through Music Performance

Chloe Stacey MacGregor, Daniel Müllensiefen

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

Previous research has shown that levels of musical training and emotional engagement with music are associated with an individual's ability to decode the intended emotional expression from a music performance (Akkermans & Schapiro, 2016). The present study aims to go further and investigate the contribution of auditory perceptual abilities to decoding performance as measured by a new effective emotion discrimination task (EDT). The first experiment investigated features that influenced the difficulty of the stimulus items (length, melody, instrument, target-/comparison emotion) in order to produce a short calibrated version of the EDT and ensure an optimal level of difficulty. The second experiment then assessed the contribution of individual differences measures of emotional intelligence as well as pitch and duration discrimination abilities. Findings displayed performance on the EDT was correlated with level of emotional intelligence. This research therefore contributes to the understanding of the origins of individual differences in musical emotional abilities.

Can Individuals Be Trained To Imagine Musical Imagery? A Preliminary Study

Michelle Ulor, Freya Bailes, Daryl O'Connor

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

Various imagery-based therapies have been used to reduce anxiety, such as visual imagery (Skodzik, Leopold & Ehring, 2017), yet auditory imagery for

music (imagining musical sounds) has not been studied. With negative thinking exacerbating anxiety (Rood, Roelofs, Bögels & Alloy, 2010), voluntary musical imagery may represent an alternative form of therapy to reduce negative thoughts. However before this can be tested, it is important to determine whether musical imagery can be trained and assessed, as well as consider which methods are suitable. One suggested training method is a volume fader task (Bailes & Bigand, 2004), used to track when participants imagine music, and a chronometric task such as tapping to the beat of imagined and heard music (e.g. Clark & Williamon, 2011) can measure musical imagery ability. These methods will be investigated and if proven successful in training musical imagery, a therapeutic intervention will be developed for individuals experiencing anxiety.

Neuroaesthetics And Music: Difficulties Of A Young Field Of Research

Stefanie Bräuml

Thursday September 14th, 15:30

Poster, Ground Floor Lobby (GC)

Neuroaesthetics is a young and controversially discussed field of research. In the beginnings of the 21st century, British neurobiologist Semir Zeki brought the term "neuroaesthetics" as a subdiscipline between humanities and natural science in the discourse. Neuroaesthetics tries to investigate aesthetic problems empirically. Depending on the self-conception of the discipline, the methodological spectrum moves in a wider or narrower framework and bases only on magnetic resonance imaging or includes additionally psychological as well as evolutionary biological research methods. In my poster presentation, I will focus on a series of difficulties that neuroaesthetics has to solve (especially in music research) in order to settle down as autonomous subdiscipline: Which obstacles can be identified – and how could we face them constructively?

Kinematics Feature Selection Of Expressive Intentions In Dyadic Violin Performance

Georgios Diapoulis, Marc Thompson

Thursday September 14th, 17:00

Talk, Peston Lecture Theatre (GCG10)

There is evidence that bodily movement plays a crucial role in regulating expressivity in music performance. Advances in technologies related to human movement research (e.g. motion capture using infrared cameras) give us the opportunity to study bodily motion with millimeter precision. Consequently, we can extract fine-grained kinematic characteristics and perform statistical learning techniques in order to identify similarities and differences in spatial accuracy of intended expressive movements. In this study, we applied feature extraction and feature generation algorithms to identify the kinematic characteristics that better predict expressive intentions. The results suggest that musical expressivity is not physically rendered in similar movement patterns during perception and during production of dyadic musical performance. We propose that future studies should focus on the interaction between motor experience and visual perception of expressivity.

Extrinsic Constraints On Violin Makers' Design Decisions

Jack Armitage, Andrew McPherson

Thursday September 14th, 17:20

Talk, Peston Lecture Theatre (GCG10)

Background. Musical instruments are shaped not just by the maker's will towards invention and curiosity, but also by the technology, economy and culture of music. All of these factors need to be considered to understand how instruments become established and survive. We present a thematic analysis of these extrinsic constraints based on interviews with violin makers. *Aims.* To inductively analyse extrinsic constraints on violin makers' design decisions during the making process, and understand how they respond to these constraints. *Method.* Six luthiers were interviewed over 1-2 hour periods, at their place of work if possible, and in person or by video chat if not. Three luthiers were either studying or recently graduated, and three were professionals with over 15 years of experience. Inductive thematic analysis was used to build a model of extrinsic constraints. *Results.* The income model of luthiers is weighted towards repair and restoration, meaning actual making is relatively niche and challenging to support. Obsolescence and material scarcity forces luthiers to constantly innovate and reinvent. Deviation from the accepted form of the violin in look, feel or sound significantly reduces the luthiers' potential market. However, luthiers can also exploit this by for exam-

ple artificially ageing violins and imitating other makers. *Conclusions.* Even in the case of an established instrument, becoming a full-time maker is risky technically, economically and culturally. Deviation from design expectations increases these risks, and thus innovation is tightly constrained.

Interoception In Musicians' Flow Experience

Jasmine W Tan, Joydeep Bhattacharya

Thursday September 14th, 17:40

Talk, Peston Lecture Theatre (GCG10)

People in flow often describe altered bodily sensations. However, interoception, i.e. how the brain perceives internal bodily signals, has not been studied in flow state. An index of interoception is the heartbeat-evoked potential (HEP), an event-related potential (ERP) linked to cortical processing of the heartbeat. This experiment used EEG to look at the HEP immediately after musicians self-induced flow by playing music. 40 musicians played a flow-inducing piece, a non-flow-inducing piece that was considered equally challenging and a non-flow-inducing piece that was equally liked. The HEP was significantly different in the three separate conditions. There was a lateralisation effect, with the HEP being more negative specifically in the left frontal electrodes after playing in flow state than playing in non-flow state. As more negative HEPs are associated with better interoception, results suggest that flow is linked to improved interoception.

Friday September 15th

Musical Impact: An Investigation Of Musicians' Health And Wellbeing

Aaron Williamon

Friday September 15th, 9:30

Keynote talk, Peston Lecture Theatre (GCG10)

Few pursuits are as dynamic and enjoyable as making music. Physical and mental wellbeing can shape how musicians pursue their art and the pleasure they take from it. The results of recent research, however, suggest that pain and ill health are widespread among musicians and that healthy approaches to training and working in music are far from uniform throughout the profession. Musical Impact, a Conservatoires UK project funded by the Arts and Humanities Research Council, set out to generate new knowledge of the physical and mental demands of music making, to gain insight into chronic and acute health problems and their impact over time, and to examine effective strategies for health promotion. The research was divided across three core strands: (1) Fit to Perform, a longitudinal study of physical and mental fitness for performance, led by Aaron Williamon (RCM), (2) Making Music, an investigation of the physical and mental demands of practising and performing, led by Emma Redding (Trinity Laban) and (3) Better Practice, a study of health promotion in music education and the profession, led by Jane Ginsborg (RNCM). This lecture focuses on Fit to Perform and, in particular, the results of a large-scale study (n=483) of musicians' perceptions and attitudes towards health, as well as indicators of their health-related fitness.

The results show that music students have higher levels of wellbeing and lower fatigue than comparable samples outside of music. However, they also reveal potentially harmful perceptions, attitudes and behaviours toward health. Specifically, engagement in health responsibility and stress management was low, which along with high perfectionistic strivings, limited use of coping skills, poor sleep quality, and low self-rated health, paints a troubling picture both for the music students and for those who support their training. The findings point to the need for more (and more effective) health education and promotion initiatives within music education; in particular, musicians should be better equipped with mental skills to cope with constant pressure to excel and high stress levels. In part, this calls for musicians themselves to engage in healthier lifestyles, take greater responsibility for their own health, and be aware of and act upon health information in order to achieve and sustain successful practice and performance. For that to happen, however, music educators, administrators and policy makers must play an active role in providing supportive environments where health and wellbeing is considered integral to expert music training.

The Effect Of Auditory Feedback On Motor Sequence Learning In Novices

Suzanne Ross, Elvira Brattico, Maria Herrojo-Ruiz, Lauren Stewart

Friday September 15th, 10:50

Talk, Peston Lecture Theatre (GCG10)

Is learning to play music on the piano a purely motoric process, or does the auditory feedback contribute to learning and memory of motor sequences? Auditory feedback is known to enhance learning in musicians (Finney & Palmer, 2003), yet less is known about how it affects learning in novices. We therefore aimed to investigate the effect of presence or absence of auditory feedback on motor sequence learning in musical novices. Participants learned to play a simple 4-bar melody on a MIDI piano, either with or without sound and were then tested on recall immediately and after 24 hours. Preliminary results showed that the group who learned with auditory feedback produced the sequence significantly less accurately in the final two bars of the melody as compared to the group who learned without sound. These preliminary results indicate that auditory feedback may interfere with motor sequence learning in novices, at least in the initial stages of learning.

Using Zygonic Theory To Model Expectations In Repeated Melodic Stimuli

Hayley Trower, Adam Ockelford, Arielle Boneville-Roussy

Friday September 15th, 11:10

Talk, Peston Lecture Theatre (GCG10)

Expectations are an essential ingredient in models of music cognition; yet most research focuses on the first hearing of a piece. The current paper concentrates on how the disruption of expectations can generate feelings of emotional pleasure even when the listener is familiar with a piece and knows what is coming next. The first aim was to conduct an experiment whereby adult listeners gave note-by-note expectancy ratings to a melodic stimulus, presented to participants four times in each of two sessions. The second aim is to apply the experimental data to the zygonic model of musical understanding so that, uniquely, listeners' expectations in response to rehearing music can be modelled. Initial findings show a systematic shift between different forms of expectation in response to stimulus repetition. A discussion will be couched in relation to the zygonic model, providing insight into the way that familiar music retains moments of expressivity.

Chance Music Is Best Not Left To Chance

Joshua Bamford

Friday September 15th, 11:30

Talk, Peston Lecture Theatre (GCG10)

Understanding random events is an ability which eludes humanity. People often assume that a random distribution should be more evenly distributed than it really is, while a highly complex pattern may be erroneously perceived as random. This has been demonstrated across many domains but never when perceiving stimuli through sound. The present study aimed to test perception of randomness in chance and serial works. A battery of 12-tone rows and sequences of 12 random notes were composed and presented to participants in a forced-choice paradigm – asking which of two given stimuli sounded the most "random". Testing is ongoing, but the initial sample (N=16) already suggests significant results, with most participants performing worse than chance (<50% correct). Participants may be misidentifying 12-tone serialism as being more random because no notes are repeated, thus achieving a perfectly even distribution, while chance music often results in repetitions or clusters of notes.

Using EEG And MIDI To Study The Neural Bases Of Musical Performance

Maria Herrojo Ruiz

Friday September 15th, 12:00

Workshop, Performance Space, Ground Floor Engineering Building

Understanding the neural bases of musical performance and motor skill learning is an increasingly growing area of research in the area of cognitive neuroscience and psychology. An excellent experimental setup in this context is the combination of piano performance and recordings of brain activity with high temporal resolution, such as electroencephalography (EEG) or magnetoencephalography. In this workshop we will cover how to simultaneously record electrical brain activity – using EEG – and musical performance – using a Musical Instrument Digital Interface (MIDI) and a digital piano. Specifically, we will cover different aspects of this methodology, such as how to: (1) synchronize EEG and MIDI information; (2) use MIDI information as trigger of events in the EEG recordings; and (3) adapt the feedback provided to

the participant by analysing in real-time the ongoing performance. We will also analyse in real-time the performance by some volunteers in the audience to illustrate what MIDI information can tell us about music performance.

Research In Music And Health: What Is It, Where Is It And Why Bother?

Neta Spiro, Katie Rose Sanfilippo

Friday September 15th, 12:00

Workshop, Peston Lecture Theatre (GCG10)

What questions do people ask in music and health research? Who is doing the asking and who cares about the answers? What topics can the music and health topics involve and how are they explored? In this session we will explore these questions through tasks that include mapping the field, proposing research questions and exploring alternative study designs.

Taking A Systematic Approach To Literature Reviews

Pedro Douglas-Kirk, Rebeka Bodak

Friday September 15th, 12:00

Workshop, GC604

Do you want to take a systematic, methodical and replicable approach to your literature reviews? The workshop will introduce you to some strategies and good practice when approaching the often daunting task of reviewing large numbers of papers. We will have a practical session where we can work on a key research question and build up a syntax for database searching using keywords and phrases. Then we will go over how to deal with removing duplicates before blinded screening using an online platform for systematic reviewing called Covidence.

'Feeling The Gap': Does Interoceptive Ability Mediate The Disparity Between Physiological And Subjective Emotional Response To Music Listening?

Sarah Campbell, Paul Sowden

Friday September 15th, 14:00

Talk, Peston Lecture Theatre (GCG10)

Emotion involves an interplay between physiological reactions and subjective perception. The circumplex model (Russell, 1980) of emotions characterizes emotions into four quadrants of a 2D emotion space, comprised of a valence dimension and an arousal dimension. In music-evoked emotion research, a disparity between physiological and subjective responses has been noted. In the present study we investigate the hypothesis that the size of this disparity is a function of an individual's ability to perceive internal bodily signals (interoceptive ability; Craig, 2006). In addition, we hypothesized that the disparity will vary as a function of emotion quadrant. Seventy-seven participants listened to four self-selected pieces of emotional music, one for each quadrant of the emotion space. They continuously reported their subjective emotional response, whilst facial EMG, EDA and ECG was measured. Results showed subjective musical emotion for each quadrant was characterized by a differentiated physiological profile, mediated by interoceptive ability.

Social Surrogacy: How Music Provides A Sense Of Belonging

Katharina Schäfer, Tuomas Eerola

Friday September 15th, 14:20

Talk, Peston Lecture Theatre (GCG10)

As we are social animals, interpersonal relationships are important for our well-being. If direct interaction is not possible, we revert to social surrogates which temporarily provide a sense of belonging. Those surrogates can have different forms like, for instance, a book, TV program, or movies that we immerse ourselves into. Previous research suggests that also music could act as social surrogate (e.g. Lee, Andrade, & Palmer, 2013). The aim of our study was a) exploring if listeners engage with music in order to gain company and b) if the ways of surrogacy found in research about TV and literature also play a role for music listening. In order to do so, 30 statements about possible ways of social surrogacy were compiled and assessed in an online survey. The results suggest that music serves as a temporary substitute for social interaction, but it operates differently from TV, films, or literary fiction.

Adaptation Of The Mindfulness-Acceptance-Commitment Approach For Groups Of Adolescent Musicians: An Assessment Of Music Performance Anxiety, Performance Boost, And Flow

Anthea Cottee, Sean O'Connor

Friday September 15th, 15:00

Poster, Ground Floor Lobby (GC)

Many musicians experience Music Performance Anxiety (MPA; Kenny, 2011), however adrenaline in performance may also have a positive effect, known as performance boost (Simoens, Puttonen, & Tervaniemi, 2015). Strategies to assist flow (Csikszentmihalyi, 2000) have been suggested for managing MPA (Lamont, 2012). The Mindfulness-Acceptance-Commitment (MAC) Approach (Gardner & Moore, 2007), shown to decrease anxiety, and increase flow in sport (Gardner & Moore, 2012), was adapted for young musicians. Significant relationships were found between MPA, boost and flow. Participants (N=18) showed a non-significant reduction compared to control (N = 18) in MPA (p = .097, 2p = .08), and a significant reduction in the performance context factor (p = .048, 2p = .11). Non-significant improvements were found in follow-up for both groups. While reduction in overall MPA is not significant, these results are notable for a small population, and worthy of further examination in development of early intervention strategies for MPA.

Analysing The Implications Of Music Videos On Youths' Listening Experience

Johanna Wilson

Friday September 15th, 15:00

Poster, Ground Floor Lobby (GC)

Previous research has analysed the importance of music during adolescence, particularly in respect to affect regulation, however there is little research to date that analyses the effect of music videos (MVs) from this perspective. The following study consists of open-ended questions and survey measures which analyse whether visual information from music videos (MVs) can affect how adolescent and young adult audiences engage with music. Participants are asked about their experiences watching MVs in respect to their interpretation and perception of their content, and how this affects their emotional engagement with the music. Whether this effect lasts in subsequent listens when no video is present is also of interest. Surveys concerning personality and music listening habits are also included in the study. The researchers expect that individuals' personality and listening habits may have an effect on how they engage with MVs, however the study is exploratory and has no set hypotheses.

Investigating The Development Of Joint Attentional Skills In Early Ontogeny Through Musical Joint Action

Marvin Heimerich, Kimberly Severijns, Sabrina Kierdorf, Kevin Kaiser, Philippe Janes, Rie Asano

Friday September 15th, 15:00

Poster, Ground Floor Lobby (GC)

Joint attention is an important basis for social interaction, which emerges in early ontogeny and scaffolds further social cognitive development. This paper investigates whether joint attentional skills show enhancement in the later developmental stage. To investigate this issue in a natural interactive situation independently of any language-related skills, we conducted a structural observation with children of different age-groups (1.5–2.5, 3–4, and 5–6 y) in a musical joint action setting. We present and discuss our coding scheme allowing for analyzing joint attentional skills and non-verbal interactive behavior of children across a broad age range by means of two categories: social gaze (gaze switching and gaze following) and musical gestures (rocking, clapping, and singing). By examining the relation between those categories, it is possible to investigate whether children's interactive behaviors are linked to an enhancement of joint attentional skills. Moreover, we report results from our first application of this coding scheme.

Stimulation Of The Primary Motor Cortex Enhances Creativity And Technical Fluency Of Piano Improvisations

Aydin Anic, William Thompson, Kirk Olsen

Friday September 15th, 15:00

Poster, Ground Floor Lobby (GC)

Aims. To determine if the M1 region contributes to creative cognition in musical improvisation. *Method.* Eight proficient pianists performed ten musical improvisations with their right hand. An independent expert musician adjudicator judged each performance on its level of creativity and technical fluency. The experimental paradigm involved two groups with four participants in each: (1) Excitatory tDCS (anodal - left M1; cathodal - right M1); (2) Inhibitory tDCS (cathodal - left M1; anodal - right M1). The experiment involved two blocks: Block one (no stimulation) and Block two (presentation of tDCS). It was hypothesised that relative to the stimulation control block, excitatory tDCS over the left M1 would enhance creativity and technical fluency, whereas inhibitory tDCS over the left M1 would decrease creativity and technical fluency. *Results.* The preliminary results support the hypothesis by demonstrating creativity ($p = .07$) and technical fluency ($p = .05$) improved for the excitatory tDCS group relative to baseline. Whereas, there was no apparent enhancement for the Inhibitory group. *Conclusions.* Technical fluency in the context of musical improvisations is mediated by the M1 region. The trend in creativity results show that the M1 region likely contributes to creativity in musical improvisations.

Towards A New Model For Effective Musical Teaching In Performance-Oriented Settings

Francisco Cardoso

Friday September 15th, 15:00

Poster, Ground Floor Lobby (GC)

There is a discernable growing concern about teaching effectiveness in music education. Current effective teaching models fail to fully describe the phenomenon of effective teaching, and fail to fully serve teacher education. The goal was to find a model that could: (1) help instrumental teachers to measure their own levels of teaching efficacy within a short period of time and in a specific setting, (2) respond to specific needs teachers have, helping them managing and improve their levels of teaching efficacy during their daily practice, and (3) allow teachers to improve themselves through time, even many years after finishing their degree. A model that had the potential to fulfill such goals consisted of a self-analysis tool with 19 effective teaching descriptors to be used along with video-recorded lessons. In this study 45 different instrumental teachers analyzed a total of 180 different instrumental lessons. Results suggest that 98% of teachers were to use this tool to measure their teaching effectiveness, being able to identify areas of their teaching that needed improvement. Results suggest that this model allows teachers to identify clearly what aspects of effective teaching are missing in their practice, and allows them to reinforce good teaching practices. These results indicate that it is possible to improve the quality of teaching in an educational setting where the main goal keeps being to raise the future generation of performers, and where the didactical options taken by teachers are still strongly influenced by tradition.

"Let The Music Flow In You": Music Listening, Health And Wellbeing In Everyday Life

Joy Vamvakari

Friday September 15th, 15:00

Poster, Ground Floor Lobby (GC)

This paper discusses music listening behaviours in relation to wellbeing, in the everyday life of the international general population. This study used an online survey, distributed to a highly diverse sample through the crowdsourcing platform CrowdFlower. The data, collected from 215 participants of 46 nationalities, highlights the emerging associations between music listening behaviours and wellbeing measures. The statistical analysis suggests that music listening is influenced by demographic factors, and associated with specific music listening behaviours when aiming towards increased wellbeing, such as frequency of music listening. Themes and individual experiences emerging from the qualitative data are also discussed, looking at when music listening is an effective form of self-care, and when and why it is ineffective. These findings present the association between music listening behaviours and wellbeing in everyday life, as an intricate, complex pattern within the context of individual wellbeing practices.

Urban Traffic Safety While Listening To Music – Views Of Listeners And Non-Listeners

Eva Schurig

Friday September 15th, 15:00

Poster, Ground Floor Lobby (GC)

The health and safety of the population is an important topic which requires adapting measures to the development of new technologies and their use. One aim of this doctoral research was to investigate mobile music listening in relation to safety in public environments. Using interviews and shadowing, the opinions and behaviours of mobile-music listeners have been studied, while a second study asked non-users of portable listening devices about their views. Results show that mobile music listeners are aware of the negative effects music listening over headphones in public could have on them, namely the danger of missing signals from their environment. All interviewees have strategies to deal with this issue in different ways. Non-listeners are conscious of risks, too, since one of their main concerns is the inability of listeners to notice and react quickly to auditory stimuli in traffic.

Investigating Beat Perception And Sensorimotor Synchronisation In People With And Without Parkinson's Disease

Dawn Rose, Lucy Annett, Peter Lovatt

Friday September 15th, 16:00

Talk, Peston Lecture Theatre (GCG10)

This study explores why some, but not all, people with Parkinson's disease (PD) benefit from music and dance-based therapeutic interventions. Certain types of external auditory cues may provide a compensatory mechanism for people with PD enabling entrainment, perhaps dependent on perceptual ability for rhythm. This study seeks to establish a) whether there is a link between perception and production abilities in people with PD, b) to explore how the modality of entrainment might affect measures of sensorimotor synchronisation, and c) how naturalistic instrumental music excerpts compare to basic auditory entrainment stimuli (metronome) at different tempi. Measures of sensorimotor synchronisation, spontaneous tempo and beat perception are compared across three modalities; finger tapping, toe tapping and marching up and down on the spot as a proxy for dancing. This is a three-way mixed design study: Group (PD/Controls), Stimuli (Music/Metronome) and Modality. Data collection is currently underway and preliminary results will be presented.

A Health Course For Music Students: Design, Implementation And Evaluation

Raluca Matei, Jane Ginsborg, Stephen Broad, Juliet Goldbart

Friday September 15th, 16:20

Talk, Peston Lecture Theatre (GCG10)

Background. The Health Promotion in Schools of Music (HPSM) project has recommended the implementation of undergraduate health courses for music majors. On this basis, a health promotion module was designed and implemented at the Royal Northern College of Music, in Manchester. *Aims.* To design, run and evaluate a health module for first-year students, as part of their core curriculum, lasting six months. *Method.* A health and wellbeing module was designed based on a critical appraisal of the literature, consideration of HPSM recommendations and the availability of staff members and preparation. Lectures and seminars covered a range of topics, including tools for better practice and time management, information on musicians' health and wellbeing, anatomy, hearing loss and music performance anxiety (MPA). Self-report data on a variety of health-related issues, behaviours and attitudes were gathered, both before (T1) and after the module was delivered (T2). Quantitative data were analysed using the Wilcoxon Signed-Rank Test. Semi-structured interviews were conducted at T2. *Results.* Although positive affect was lower at T2 than T1 ($Z = -3.434$, $p < 0.001$), causal inferences cannot be made. Improved scores were found for perceived knowledge of most covered topics, and awareness of risk factors for performance-related musculoskeletal disorders (PRMDs). Thematic analysis of interview data is underway. *Conclusions.* Increases in perceived knowledge and awareness of some relevant health-related topics were noted at T2. However, a control group or another comparable intervention is needed to infer causality.

Selling Madness: How Mental Illness Has Been Commercialised In The Music Business

Ekaterina Pavlova

Friday September 15th, 16:40

Talk, Peston Lecture Theatre (GCG10)

As history shows, madness has fascinated human

minds for centuries. I reveal how this fascination has led to the establishment and, at times, dangerous exploitation of the 'mad musician' gimmick - a profitable commonplace in the music industry. After a historical outline of social definitions of madness, I determine the trope's contemporary relevance and profitability through an analysis of contrasting 20-21st-century case studies. I build a multidimensional narrative addressing not only how these case studies were marketed, but also ethical and sociological issues arising from evocations of mental illness and suicide, gender and genre attributions, and the role of music journalism in systematic, occasionally post-mortem exploitation of mentally ill musicians. By undertaking this research, I intend to demonstrate that in music studies 'madness' should be placed alongside other more obvious tropes, such as sexuality, and studied in conjunction with its infinite commercial potential granted by its socially constructed, fluid definition.