

«In homage from the multitude» – Positions of Non-Equidistant Microtonal Music



23–25 January 2023

Program

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Monday, 23 January 2023

HKB, Kammermusiksaal, Papiermühlestr. 13a, Bern

Panel 1: Opening and Walter Smetak

- 15:00 **Welcome/Introduction**
Peter Kraut, Martin Skamletz, Roman Brotbeck
- 15:10 **Roman Brotbeck (Bern)**
A Thorn in the Self-Conception of Modernity. On the Significance of Non-Equidistant Microtonal Music Using the Example of Mordecai Sandberg
- 15:50 **João Carlos Victor (Bern)**
IPAI – Walter Smetak's Egg
- 16:30 *Coffee break*
- 16:45 **Paulo Rios Filho (Santa Maria)**
Back to the Spirit. Re-Inventing Smetak Through *Volvere* (2017)
- 17:25 **Max Nyffeler (Zürich)**
Magical Objects, Fleeting Sounds. On the Re-Enactment of Walter Smetak's Musical Practice by the Ensemble Modern
- 18:15 *Apéro riche*

Tuesday, 24 January 2023

HKB, Kammermusiksaal, Papiermühlestr. 13a, Bern

Panel 2: Harry Partch

- 9:00 **Eleni Ralli (Bern)**
Harry Partch's Estate. An Overview of the Collection, Publication, and Maintaining Process
- 9:40 **Charles Corey (Seattle)**
Issues in Analysis and Realisation of the Music of Harry Partch
- 10:20 *Coffee break*
- 10:35 **Caspar Johannes Walter (Basel)**
The Different Step-Sizes in Harry Partch's Tonality Flux as Building Blocks for an Enharmonic and a Floating Diatonic Intervallic Relationship
- 11:15 **Chris Rainier (London)**
God, She. The Significance of Female Performers in the Work of Harry Partch
- 12:00 *Lunch*

Panel 3: Ben Johnston

- 14:00 **Marc Kilchenmann (Bern)**
Brief Summary of the Dissertation and Outlook on Remaining Research Questions
- 14:40 **Manfred Stahnke (Hamburg)**
Ben Johnston and his Notation of “Just Intonation” at its Extreme, Using Examples from his String Quartet No. 7, 3rd Movement (1984)
- 15:20 *Pause*
- 15:35 **Kyle Gann (New York, via ZOOM)**
The Influence of Ben Johnston on my Microtonal Composing
- 16:15 **Eyewitness Talk**
Mike Svoboda and Ellen Fallowfield
- 17:00 *Dinner*

HKB, Grosser Konzertsaal, Papiermühlestr. 13d, Bern

- 19:00 **Konzert**
Charles Corey und Chris Rainier/Scordatura Ensemble

Wednesday, 25 January 2023

HKB, Kammermusiksaal, Papiermühlestr. 13a, Bern

Panel 4: Jean-Claude Risset and Closing

- 9:00 **Vincent Tiffon (Marseille)**
Jean-Claude Risset’s Composition Workshop. Analysis of the Archives and Close Family Interviews
- 9:40 **Nemanja Radivojevic (Bern)**
Little Boy in Fonds Risset. From the Sources to Resynthesis
- 10:20 *Coffee break*
- 10:35 **Victor Lazzarini (Dublin, via ZOOM)**
Spectral Music at the Threshold of the Age of Computer Music
- 11:15 Discussion and closing remarks
- 12:15 *End of the Symposium*

Abstracts and Biographies

Roman Brotbeck (Bern)

A Thorn in the Self-Conception of Modernity. On the Significance of Non-Equidistant Microtonal Music Using the Example of Mordecai Sandberg

Der Aufbruch zu fernen Planeten, den die Moderne anstrebte, war immer auch begleitet von der Suche nach Standards für die Musikindustrie. Der Viertelton-Pionier Ivan Wyschnegradsky zum Beispiel verprasste sein halbes Vermögen für die gescheiterte industrielle Entwicklung eines Vierteltonflügels. Die nicht-äquidistanten Mikroton-Komponisten hingegen verweigerten sich diesem ‹industriellen› System und entwickelten eigenständige Kompositionssysteme und Instrumentarien. Gerade bei den Instrumentarien lassen sich die Unterschiede im Vorgehen gut demonstrieren: Walter Smetak baute Instrumente, die als Klangskulpturen auch Bildkunstwerke sind, Harry Partch schuf Instrumente, die sein 43-Ton-System repräsentieren, Ben Johnston wählte die europäischen Streichinstrumente und entwickelte eine neue Hörschule, Jean-Claude Risset griff bei den ersten mikrotonalen Computerwerken auf altgriechische Vorbilder zurück und der rumänisch-palästinisch-amerikanische Komponist Mordecai Sandberg ignorierte angesichts seines monumentalen Vorhabens, die jüdische Bibel zu vertonen, die Instrumentenfrage und schrieb eine mikrointervallische Musik für Instrumente der Zukunft. Diese prekäre Position von Sandberg wird im Referat thematisiert.

The departure to distant planets that modernism aspired to was always accompanied by the search for standards for the music industry. The quarter-tone pioneer Ivan Wyschnegradsky, for example, squandered half his fortune on the (failed) industrial development of a quarter-tone grand piano. The non-equidistant microtone composers, on the other hand, refused this 'industrial' system and developed their own compositional systems and instruments. The differences in approach can be demonstrated particularly well in the case of the instruments: Walter Smetak built instruments that are also works of visual art as sound sculptures, Harry Partch created such that represent his 43-tone system, Ben Johnston chose European string instruments and developed a new school of listening, Jean-Claude Risset drew on ancient Greek models for the first microtonal computer works, and Mordecai Sandberg ignored the instrumental question and wrote microintervallic music for instruments of the future. This precarious position of Sandberg will be addressed in the lecture.

Roman Brotbeck, Musikwissenschaftler. Promotion an der Universität Zürich, 1982–88 Musikredaktor und -produzent bei Radio SRF2; 1988–94 Forschungsprojekt des Schweizerischen Nationalfonds zur frühen Mikrotonalität in der Musik des 20. Jahrhunderts. Forschungsaufenthalte in Mexiko, Kanada, Frankreich, den USA und der UdSSR. 1996–2002 Präsident des Schweizerischen Tonkünstlervereins; 1997–2009 unterschiedliche Leitungsaufgaben im Management der Hochschule der Künste als Leiter des Fachbereichs Musik, Vizedirektor und Direktor. 2010–2014 Konzeption, Entwicklung und erster Leiter der Graduate School of the Arts, des ersten schweizerischen Promotionsprogramms für die Künste (heute SINTA). Zahlreiche

Publikationen, Vorträge, Rundfunksendungen, vor allem zur Musik des 19. und 20. Jahrhunderts. Brotbeck betreute an der HKB diverse Forschungsprojekte, zuletzt das vom Schweizerischen Nationalfonds unterstützte Forschungsprojekt «In homage from the multitude». Positionen nicht-äquidistanter Mikrotonmusik des 20. und 21. Jahrhunderts.»

Roman Brotbeck received his doctorate in Musicology from the University of Zurich. 1982–88 he worked as music editor and producer at Radio SRF2; led 1988–94 a Swiss National Science Foundation research project on early microtonality in twentieth century music, with research stays in Mexico, Canada, France, the USA and the USSR. 1996–2002 he acted as president of the Swiss Association of Musicians, and took from 1997 to 2009 various leadership roles in the management of the Hochschule der Künste Bern as Head of the music department, Vice-Director and Director. 2010–2014 he conceived, developed and acted as first director of the Graduate School of the Arts, the first Swiss doctoral programme for the arts (now SINTA). Besides, numerous publications, lectures, radio broadcasts, especially on nineteenth and twentieth century music, Brotbeck supervised various research projects at the HKB, most recently the research project “‘In homage from the multitude’. Positions of non-equidistant microtonal music of the 20th and 21st centuries.”

João Carlos Victor (Bern)

IPAI – Walter Smetak’s Egg

Anton Walter Smetak (1913–1984) liked to call himself a sound researcher, which for him was an umbrella term for a broad and interdisciplinary work, running through instrument making, pedagogical activities, theatre plays, poems and books, visual arts, and also research in the domain of natural science. In all his projects these different fields are always strongly interconnected. It is also important to say that he himself had a high position within a theosophical movement, whose world of thought is very strongly represented in everything he did. Smetak’s belief that art and especially music can change people in the sense of a higher consciousness also grew out of his involvement with theosophy. This belief and desire are central in his project plan for a ‘future’ university, which is a utopian university with a humanistic-esoteric direction. One of several institutes of this utopic university is a building in the form of an egg, which Smetak calls IPAI (Portuguese abbreviation for International Acoustic Research Institute). This building and its purpose are extremely important for Smetak’s sound research and therefore to his whole artistic production, because in this project many of Smetak’s interests are united, such as the overtones and undertones, sound development in closed resonance bodies and in different mediums (air and water), recording and analyses as important components in the composition process and experiments with microintervals. That’s why the ‘egg’ will be in the centre of this paper. The ‘egg’ project was never realised, despite Smetak’s applications for financial support in every level, including trying to ‘sell’ the building as touristic attraction. But its idealisation stimulated Smetak to keep his sound research, and parallel elements can be found in his other projects.

João Carlos Victor is a Brazilian classical guitarist and researcher with a wide musical education that includes academic research and music performance training. He holds Master Diplomas in Musicology, Musical Performance and Soloist at world-renowned Universities like: Universität Bern (Switzerland), Musikhochschule Basel (Switzerland), Musikhochschule Luzern (Switzerland) and Musikhochschule Nürnberg (Germany).

In 2016 his debut CD *Guitar Recital* was released by the label Naxos and since João has been highlighted in the international music scene being invited to play at renowned festivals, concert series, radio and television in Switzerland, Norway, Austria, Spain, Brazil, Liechtenstein and Germany. He is currently writing his doctoral thesis on Anton Walter Smetak's sound research at the University of Bern, under the supervision of Prof. Dr. Cristina Urchueguía and Dr. Roman Brotbeck. Since 2022, João is guitar professor at the LUCA School of Arts in Leuven (Belgium).

Paulo Rios Filho (Santa Maria)

Back to the Spirit: Re-Inventing Smetak Through *volvere* (2017)

In 2016, I was invited by the Ensemble Modern to participate in the project “Re-inventing Smetak”, an initiative of DAAD Artists-in-Berlin, that involved an intensive research about the Swiss musician Walter Smetak (1913–1984), building replicas of some of his ‘sound sculptures’, the premier of four new works including that replicas in the ensemble’s formation, in addition to holding talks on his life and work. Within this context, I wrote my piece *volvere*, for ensemble, video, electronics and some of Smetak’s sound sculptures, namely, “Três Sóis”, “Ronda” and “Boré”. *volvere* relies on some particular vectors to approach the Smetakian universe. The first is the idea that advancing towards should perhaps involve comebacks. Smetak’s futurism is a return to the egg, to the stem cell, to the gourd – and this is something present in several ways in his sound sculptures, which embody both primitive elements and visions of the future; which combine precarious materials – often lacking with sonic ideals of acoustic projection – and random microtonal harmonic universes. The second, closely linked to the first, has to do with the idea that music progresses from consonance, then dissonance, finally reaching chaos-sonance, the latter being the primary purpose of his instruments. An advance that goes through the dissolution of music systems, arriving at the Smetakian axiom that touch, and not hearing, is the primary sense of music making. Finally, the unusual perspective of sharing ancestral forces linked to the ‘baiana’ culture, reflecting on my personal artistic path within the context of the composition movement in the province of Bahia, and how much this framework also influenced (and was influenced) by Smetak’s later work. The present work introduces the compositional process of *volvere* in the light of these vectors, intending to demonstrate how a primal movement of return (to the uterus? to chaos? to the spirit?) can generate (un)imagined sonic-futures.

Paulo Rios Filho is a musicologist and composer from Brazil, with a PhD in music composition from Federal University of Bahia. His works have been performed in most Brazilian states and abroad, in countries such as the Netherlands, Germany, USA, Portugal, Venezuela, Argentina, Spain, Russia, Norway and Switzerland. As a

composer, he has been collaborating with relevant musicians and ensembles such as Camerata Aberta, GNU, ABSTRAI and Camará Ensemble (Brazil); Nieuw Ensemble (Holland), ICE-Ensemble, Orpheus Chamber Ensemble (USA) and Ensemble Modern (Germany). He is a founding member of the group of composers OCA and Camará Ensemble, Delta Camerata and MATE Ensemble. Nowadays, he is a full time professor of music composition at Federal University of Santa Maria (Rio Grande do Sul), where he is the leader of the research group “Music composition, experimentalism and Artistic Research” (CM.ÉPA! – UFSM/CNPq) and the community program “Gestações Musicais: musical gestures and actions” (UFSM).

Max Nyffeler (Zürich)

Magical Objects, Fleeting Sounds. On the Re-Enactment of Walter Smetak’s Musical Practice by the Ensemble Modern

Walter Smetak (1913–1984), der mit 24 Jahren aus der Schweiz nach Salvador da Bahia (Brasilien) emigrierte, ist ein Sonderfall unter den mikrotonalen Komponisten. Seine Musik basiert nicht auf einem rationalen Tonsystem, sondern auf der spezifischen Konstruktion selbstgebaute Instrumente, die er zugleich als visuelle Kunstobjekte, oft mit magischer Aura, konzipierte. In ihnen spiegelt sich ein spekulatives, für den kulturellen *melting pot* Bahia charakteristisches Kunst- und Weltverständnis. Smetak nutzte die Instrumente zur Improvisation. Musik existierte für ihn im momenthaften Vollzug, ein objekthafter Werkbegriff im europäischen Sinn interessierte ihn kaum. 2016 reisten Musiker des Frankfurter Ensemble Modern nach Salvador, um die Klangplastiken zu studieren und die Möglichkeit ihrer konzertanten Verwendung zu prüfen. Das Referat skizziert die Grundzüge der synkretistischen Musikauffassung Smetaks, zeichnet den Rekonstruktionsprozess von 2016 nach und fragt nach den Resultaten dieses einzigartigen Reenactments.

Walter Smetak (1913–1984), who emigrated from Switzerland to Salvador da Bahia (Brazil) at the age of 24, is a special case among microtonal composers. His music is not based on a rational tonal system, but on the specific construction of self-made instruments, which he simultaneously conceived as visual art objects, often with a magical aura. They reflect a speculative understanding of art and the world that is characteristic of the cultural melting pot Bahia. Smetak used the instruments for improvisation. For him, music existed in momentary execution; an objective concept of work in the European sense hardly interested him. In 2016, musicians from the Frankfurt Ensemble Modern travelled to Salvador to study the sound sculptures and to examine the possibility of using them in concert. The paper outlines the main features of Smetak’s syncretic conception of music, traces the reconstruction process of 2016 and asks about the results of this unique re-enactment.

Der Musikwissenschaftler, Publizist und Filmemacher **Max Nyffeler** studierte Musikwissenschaft und Musik in Zürich, Basel und Köln und machte 1969 das Konzertexamen für Klavier. 1970 übersiedelte er nach Köln, wo er den Weg als freiberuflicher Kritiker mit Schwerpunkt Neue Musik einschlug. Er arbeitete als Musikredakteur beim Bayerischen Rundfunk und beim Schweizer Radio DRS, war

Leiter der Informationsabteilung der Schweizer Kulturstiftung Pro Helvetia und Künstlerischer Leiter des Musikverlags Ricordi in München. Seit 1998 arbeitet er als freier Publizist für Rundfunk und Presse und publiziert im Internet unter www.beckmesser.info. Nyffeler ist Herausgeber der Schriften von Klaus Huber (Köln 1999). Er begleitete 2016/17 das Projekt «Re-Inventing Smetak» des Ensemble Modern.

The musicologist, publicist and filmmaker **Max Nyffeler** studied musicology and music in Zurich, Basel and Cologne and passed his concert exam for piano in 1969. In 1970, he moved to Cologne, where he set out as a freelance critic specialising in New Music. He worked as a music editor at Bayerischer Rundfunk and Swiss Radio DRS, was head of the information department of the Swiss cultural foundation Pro Helvetia and artistic director of the music publisher Ricordi in Munich. Since 1998 he has worked as a freelance publicist for radio and press and publishes on the internet at www.beckmesser.info. Nyffeler is the editor of the writings of Klaus Huber (Cologne 1999). He accompanied the Ensemble Modern's project "Re-Inventing Smetak" in 2016/17.

Eleni Ralli (Bern)

Harry Partch's Estate. An Overview of the Collection, Publication, and Maintaining Process

The discussion of Harry Partch's Estate became an issue even before his death in the late 1960s. Betty Freeman, his patron since the early 1960s, played an essential role in his later life, especially in the first phase of the continuation of his work after his death in 1974. Composer Ben Johnston, Partch's assistant in the 1950s, also undertook a daunting task; almost directly after Partch's death at the end of the 1970s, he and Thomas McGeary initiated a project of gathering all the existing materials in order to bring them together in one collection. Their materials, in addition to other private donations (1975–2015), ended up being archived in the "Music and Performing Arts Library Harry Partch Collection, 1914–2007" in Sousa Archives and Center for American Music at the University of Illinois in Urbana/Champaign. There, the collection "Harry Partch Estate Archive 1918–1991" was and still remains catalogued, together with material donated by Partch's heir, student, and assistant Danlee Mitchell in 1992 and 2008.

The two collections include Partch's writings, sketches, scores, correspondences, lectures, receipts, other administrative documents, oral history tapes, audio and video tapes, and reels of his recordings. Additionally, his original instruments are now in storage in Seattle, Washington (until the COVID pandemic at the University of Washington) and have an uncertain future.

How was the process of collecting Partch's documents and memories of his musical and professional life while maintaining his instruments?

I chose to concentrate on the practical and other challenges the second generation phased concerning Partch's Estate, based on written sources, interviews, and other material studied and gathered during my residency in the US in the spring-summer 2021.

Eleni Ralli is a Greek composer and researcher. She received Bachelor and Master degrees in Composition, Music Theory and Musicology from the Aristotle University of Thessaloniki (2013), Basel Music Academy (2016, 2021) and Bern University (2018). Currently, she is proceeding with her PhD at Bern University, researching the American composer, Harry Partch (1901–1974). She has presented her ongoing research in festivals such as Fermentationstage Basel (January 2015), International Society for Ekmelic Music “Small is Beautiful” (Salzburg, 2017, 2019, 2021), IGNM Basel (May 2018) and GMTH (Basel, 2021). As a composer, she has won many prizes, attended many workshops, seminars, and master classes for contemporary music and in addition, professional ensembles and festivals regularly commission pieces from her. Her works have been performed in Germany, the US, Ukraine, Switzerland, Greece, Poland, Holland, Israel, Austria, Iran, Argentina, Russia, England, Estonia, Thailand and Italy. Her work *GO WITHIN* for Tenor Saxophone is released in Don Paul Kahl’s homonymous solo album in 2021. She is a founding member of the Ensemble False Relationships and the Extended Endings, founded in 2019, concentrating on performing contemporary music and located in Germany, Switzerland and France.

Charles Corey (Seattle)

Issues in Analysis and Realisation of the Music of Harry Partch

Study of the music of American composer Harry Partch (1901–1974) comes with a set of unusual challenges. Some of these issues are obvious: Partch invented and built his own instruments designed specifically to perform his music in just intonation and each one uses a unique tablature system of notation; his shorthand comments can be difficult to decipher and occasionally reference other scores, which may be difficult to access; his stylistic tendencies shifted wildly over the course of his career. Other issues, however, are more obscure: the notation for some instruments varied from one work to the next; many of his scores suffer from omissions and contradictions; some of his scores are difficult to read either as a result of poor copying or because third parties have added their own markings. Further complicating the situation, Partch neglected to consistently identify definitive versions of his work. In some instances his preferred version of a particular composition was never written in score format, and must be put together by transcribing his recordings into his tablature-based just intonation system.

To provide an overview of these issues, I will examine some particularly problematic instruments, draw attention to some specific moments in his music where the score does not adequately represent Partch’s intentions, and provide several examples of revisions that must be made to his extant (and published) scores in order to accurately realise or analyse his work.

Charles Corey is an American musicologist and composer holding a PhD in Music Composition and Theory from the University of Pittsburgh. His approach to composition exploits and subverts the relationships that exist between different tuning systems. Corey’s scores, known for their unexpected, evocative harmonies and their

strong dramatic arcs, have been recognised by the Young Virtuosos Foundation, the Foundation for Modern Music, and the Sociedade Pró-Sinfônica de Limeira. Corey is Director and Curator of the Harry Partch Instrumentarium, and Director of the Harry Partch Ensemble. In this role, he presented the world premieres of Partch's 1955 works *The Potion Scene* and *The Bewitched – A Ballet Satire*, gave the first performance of the original 1943 *U.S. Highball* for one performer, premiered more than one dozen works by contemporary composers, and resumed international touring with Partch's instruments.

Caspar Johannes Walter (Basel)

The Different Step-Sizes in Harry Partch's Tonality Flux as Building Blocks for an Enharmonic and a Floating Diatonic Intervallic Relationship

Harry Partch beschreibt in seinem Buch *Genesis of A Music* zwei Arten des Tonality Flux. Die erste (O 8/7 zu U 7/4) stellt den obertönigen Dur-Dreiklang auf der Unterseptime (Teilton 7) dem untertönigen Moll-Dreiklang unter der Oberseptime gegenüber; die zweite (O 16/11 zu U 11/8) wiederholt die gleiche strukturelle Prozedur mit dem Teilton 11, es wird also der obertönigen Dur-Dreiklang auf der Unterundezime (Teilton 11) dem untertönigen Moll-Dreiklang unter der Oberundezime gegenübergestellt.

In beiden Fällen sind alle Akkorde Dur- oder Mollakkorde (also, was die Teiltöne betrifft, limit-5) aber die Definition der Akkordverbindung überschreitet den Raum der Primzahlen 3 und 5 und benötigt eine 7 bzw. eine 11, also eine der nächstfolgenden Primzahlen, für die Herleitung.

Einfache Klänge werden durch besondere, aber in seinem System naheliegende Schritte miteinander in Beziehung gebracht. Im Buch zeigt uns Partch die Diagramme der Schrittgrößen. Im ersten Flux liegt bei zwei einfachen Dreiklängen die Mollterz fast genau in der Mitte der Durterz, im zweiten Flux wird eine kleine Terz (erst als Mollterz, dann als Terz zwischen Durterz und Quinte) ein klein wenig parallel verschoben. In beiden Fällen gibt es zwischen einzelnen Stimmen der Akkordprogression signifikante Gegenbewegungen.

Wenn wir die Größen der Schritte betrachten, können wir für den ersten Flux analoge Akkordverbindungen aus der enharmonischen Musik von Nicola Vicentino finden. Das kleinste Intervall hier, die Diesis, ist dem Schritt bei Partch erstaunlich ähnlich. Für den noch kleineren kleinsten Schritt im zweiten Flux gäbe es eine weitere erstaunliche Analogie: Würde das für Vicentino grundlegende Konzept der drei Genera (Diatonik, Chromatik, Enharmonik) strukturell weitergeführt, würde bei einem hypothetischen vierten Genus mit einer weiteren Teilung der Diesis ungefähr dieser Schritt entstehen. Diese erweiterte Enharmonik nähert sich klanglich dann wieder einer Diatonik an. Der Text entwickelt Strategien für eine Musiktheorie dieser zwei kleinsten Schritte und zeigt Beispiele von Kompositionen von Harry Partch, Nicola Vicentino und Caspar Johannes Walter.

Harry Partch describes two types of tonality flux in his book *Genesis of A Music*. The first (O 8/7 to U 7/4) juxtaposes the overtone major triad on the lower seventh (partial 7) with the undertone minor triad on the upper seventh; the second (O 16/11 to U 11/8)

repeats the same structural procedure with the partial 11, thus juxtaposing the overtone major triad on the lower eleventh (partial 11) with the undertone minor triad on the upper eleventh.

In both cases, all chords are major or minor chords (i.e., as far as partials are concerned, limit-5) but the definition of the chord connection exceeds the space of the prime numbers 3 and 5 and requires a 7 or an 11, respectively, i.e., one of the next prime numbers, for the derivation.

Simple sounds are related to each other by special but obvious steps in his system. In his book, Partch shows us the diagrams of the step sizes. In the first flux, in two simple triads, the minor third is almost exactly in the middle of the major third; in the second flux, a minor third (first as a minor third, then as a third between major third and fifth) is shifted a tiny bit in parallel. In both cases, there are significant counter-movements between individual voices of the chord progression.

If we look at the sizes of the steps, we can find analogous chord connections from the enharmonic music of Nicola Vicentino for the first flux. The smallest interval here, the diesis, is amazingly similar to the step in Partch. For the even smaller smallest step in the second flux, there would be another astonishing analogy: if the concept of the three genera (diatonic, chromatic, enharmonic), which is fundamental for Vicentino, were to be continued structurally, a hypothetical fourth genus with a further division of the diesis would produce approximately this step. This extended enharmonic then sonically approaches a diatonic again.

The text develops strategies for a music theory of these two smallest steps and shows examples of compositions by Harry Partch, Nicola Vicentino and Caspar Johannes Walter.

Caspar Johannes Walter, geb. 1964 in Frankfurt/Main, hatte Kompositionsunterricht bei V. D. Kirchner (Wiesbaden), J. Fritsch und C. Barlow (Musikhochschule Köln, 1985-90). 1985 war er Mitbegründer des Kölner Thürmchen Verlages. Er erhielt eine Reihe bedeutender Kompositionspreise und Stipendien; die vom Deutschen Musikrat bei Wergo herausgegebene Portrait-CD mit Kammermusik von Caspar Johannes Walter erhielt 1998 den Preis der deutschen Schallplattenkritik. Sein Interesse als Interpret – er ist Cellist im 1991 von ihm mitbegründeten Thürmchen Ensemble – gilt vor allem jüngeren Komponistinnen und Komponisten aus den Bereichen der experimentellen Musik und des Musiktheaters. 2002/2003 war Caspar Johannes Walter composer in residence und Kompositionslehrer an der University of Birmingham, von 2006 bis 2013 war er Professor für Komposition an der Musikhochschule Stuttgart und seit 2013 ist er in gleicher Funktion an der Musikakademie Basel tätig. Seit 2014 ist er Mitglied der Akademie der Künste Berlin, wo er das Labor Beethoven 2020 initiierte und betreute.

Caspar Johannes Walter studied composition with V. D. Kirchner (Wiesbaden) as well as with J. Fritsch and C. Barlow (Cologne Conservatory of Music, 1985-90). In 1985 he was cofounder of the Cologne-based Thürmchen Verlag (Publishing House). He has received several major composition awards and various scholarships. His interests as an interpreter – he is cellist in the Thürmchen Ensemble, which he also co-founded in 1991 – are focused primarily on young composers from the areas of

experimental music and musical theatre. Caspar Johannes Walter's works are performed regularly, not only in Europe but also very successfully in the USA and Japan, for example 1993 World Premieres in Atlanta and Tokyo. In 2002/2003 Caspar Johannes Walter was teacher of composition and composer in Residence at the University of Birmingham/UK, since 2006 he has been professor for composition and director of the studio contemporary music in Stuttgart/Germany and since since 2013 he has been professor for composition at the Musikakademie Basel/Switzerland. In 2014 he was elected into the Akademie der Künste, Berlin, where he initiated the Labor Beethoven 2020.

Chris Rainier (London)

God, She. The Significance of Female Performers in the Work of Harry Partch

In a 1942 letter to his friend the composer Otto Leuning, the American composer Harry Partch (1901–1974) listed a proposed but still unrealised composition as part of his “Plans for Work”, for his soon-to-be-submitted (then) second Guggenheim application. The title of the piece was *God, She*, with Partch describing it in the correspondence as a “musical satirization of women as the arbiters of the nature and color of American expression”. Intended for inclusion within a collection of works known as his Monophonic Cycle, *God, She* was first mentioned in the tiny notebook that accompanied Partch on his crosscountry trip from San Francisco to Chicago between September and October 1941 – a journey later immortalised in the text of his musical travelogue *U.S. Highball* (1943/1955). Given its somewhat latent misogyny, *God, She* fortuitously never progressed beyond its script stage. By 1943 its title would be omitted from the Monophonic Cycle, and Partch would never mention the piece again. I have chosen to repurpose the sentiment of *God, She* – a piece that would ultimately remain only a fleeting creative entity – as a means of framing a long-neglected investigation into the significant role of female performers in Partch's practice. Present as indispensable collaborators and realisers of the composer's creative vision from the very first private and public hearings of his works, numerous women would fulfil critical artistic roles in virtually every definable phase in the chronology of Partch's creative work. These women include the almost entirely female ensemble responsible for the production of the speech-drama *King Oedipus* at Mills College (1951/1952), as well as numerous individuals who fulfilled critical roles as part of the majority of the composer's performances and recordings between 1931 and 1969. My lecture will consciously shift the nature of its public delivery away from the utilisation of an expectedly individual, male persona, instead incorporating the voices of two female performers in order to present its content.

Assisting me in the methodology of this presentation will be Elisabeth Smalt and Alfrun Schmid, both members of the Amsterdam-based ensemble Scordatura, who have presented Partch's early chamber music on replica instruments since 2002.

Chris Rainier received his Master of Music degree (Composition) from the Sydney Conservatorium of Music in 2002, with his research focusing on tuning systems, new percussion instrument designs, and the music of Harry Partch and Lou Harrison. He received his PhD in Music (by Research) from the University of Huddersfield in 2022,

investigating the intersection of biographical context and creative process in the work of Harry Partch. In addition to a thesis, his doctoral research included outcomes pertaining to performance, recording, transcription and instrument-building. Rainier has presented performances and workshops relating to Partch's life, music and instruments at various universities and institutions around the world and is a long-standing member of the Dutch ensemble Scordatura, led by violist Elisabeth Smalt, with whom he has performed not only Partch's early chamber music, but also the work of other composers whose music explores tuning systems outside of equal temperament. He has collaborated with various craftspeople in the UK, Europe and Australia, creating replicas of some of Partch's unique musical instruments, including Harmonic Canon 1 (w/David Lavis, 2017/2018), the first Adapted Guitar 1, Adapted Guitars 2 and 3 (w/James Mumford and Tess E. McKenzie, 2013/2017/2018), Chromelodeon 1 (w/Louis Huivenaar, 2019) and the Bass Marimba (w/Aart Strootman, 2020). In terms of recordings, Rainier's most recent release is the EP *Yuma* (2020). 2022 will see the release of his interpretations of Partch's early compositions for voice and microtonal acoustic guitars as well as a new album of original compositions for voice and Adapted Guitar 1. www.chrisrainier.net

Marc Kilchenmann (Bern)

Brief Summary of the Dissertation and Outlook on Remaining Research Questions

Während 40 Jahren hat Ben Johnston in Theorie und Praxis systematisch Schwingungsverhältnisse untersucht. In den 1960er-Jahren arbeitete er ausschliesslich mit reinen Terzen, Quarten und Quinten. Anschliessend erweiterte Johnston diesen Intervallvorrat sukzessive und etablierte Ende der 1970er-Jahre ein modulationsfähiges 13-Limit als neuen Standard. Anders als Harry Partch entwarf Johnston nicht ein neues mikrotonales Tonsystem, sondern seine Just Intonation stellt einen systematischen Komplex mikrotonaler Tonräume dar. Johnston arbeitet jeweils mit einer kleinen Anzahl konstitutiver Intervalle, die sich nach dem Gehör genau intonieren lassen. Die verschiedenen Intervallkombinationen bildete er in Netzdiagrammen ab und entwickelte so eine Vielzahl unterschiedlicher harmonischer Strukturen.

Kontrastiert werden diese analytischen Betrachtungen mit einer Einordnung der sich wandelnden ästhetischen Ausrichtung Johnstons. Als Gegenbewegung zu einer immer komplexer werdenden Harmonik ist die Tendenz zu einer wachsenden Verständlichkeit auszumachen. Ausgehend von den seriellen Ansätzen im Frühwerk schlägt Johnston einen grossen Bogen hin zu postmodernen musikgeschichtlichen Rätselspielen.

For 40 years, Ben Johnston has systematically studied harmonic relationships in theory and practice. In the 1960s, he worked exclusively with pure thirds, fourths and fifths. Subsequently, Johnston expanded this interval stock and established at the end of the 1970s a modulable 13-limit as a new standard. Unlike Harry Partch, Johnston did not design a new microtonal system. His Just Intonation represents a systematic

complex of microtonal spaces. Johnston works in each case with a small number of constitutive intervals that can be intoned precisely by ear. He depicted the various combinations of intervals in network diagrams and thus developed a large number of different harmonic structures.

These analytical considerations are contrasted with a classification of Johnston's changing aesthetic orientation. In contrast to an increasingly complex harmony, the tendency towards a growing comprehensibility can be discerned. Starting from serial approaches in his early work, Johnston draws a wide arc to postmodern music-historical puzzles.

Marc Kilchenmann studied bassoon with Ingo Becker and Eckart Hübner and finished with a soloist's diploma in 1998. He also studied composition with Urs Peter Schneider and studied Elementary Music Pedagogy and Research in the Arts. In 2022 he completed his dissertation on Just Intonation, using the example of the composer Ben Johnston. In the age of specialisation, Marc Kilchenmann has kept his claim to want to practise the musical profession as a generalist. After intensive activity as a soloist, chamber and orchestral musician, he is now active as a researcher, improviser, composer and publisher. He is co-founder of aart verlag and is in charge of the complete editions of the composers Hermann Meier, Urs Peter Schneider and Peter Streiff. Marc Kilchenmann is a lecturer at the Hochschule der Künste Bern and father of two children.

Manfred Stahnke (Hamburg)

Ben Johnston and his Notation of "Just Intonation" at its Extreme, Using Examples from his String Quartet No. 7, 3rd Movement (1984)

Ben Johnston (1926–2019) is at the centre of a microtonal school in the U.S. that seeks to link Just Intonation, or 'natural tuning' in whole-number interval ratios, with Western compositional thought. Johnston had played in Harry Partch's ensemble in his early years and had become acquainted with his Just Intonation philosophy. He then soon adapted it as the starting point for his own thinking, which was initially Western in many ways, mediated by his teacher at Mills College, Darius Milhaud. Ben Johnston's third movement, "Variations, With Solemnity", from the String Quartet No. 7 (1984) will be the focus of this paper. This third movement demonstrates Johnston's "Just Intonation" way of thinking as a comprehensive proportional principle that also involves the entire time structure of the work. Here, one cent (1/100th of a semitone) corresponds to one metric eighth of the time scale. This is demonstrated by the central viola line.

Using integer interval bridges in the natural tone 'dimensions' of 3, 5, 7, 11, and 13 (dimension is a term from the just-intonation school in the U.S.), Johnston quickly moves away from his initial reference tone of C. He builds a web of complex integer ratios that finds its way back to C only at the end of the movement. Ultimately, Johnston describes an immense modulatory arc into territories that far exceed European modulation and into the previously unheard. This is demonstrated by the analysis of the starting point and the final development. Strangeness is twofold: On the one hand, Johnston uses whole-number interval ratios including the naturals 11 and

13, which are per se unfamiliar to the listener. On the other hand, he piles untempered fourths and fifths on top of and into each other to achieve the smallest cent deviations of new fundamental tones, resulting in extreme harmonic tensions.

Manfred Stahnke, 1970–74 Freiburg studies with Wolfgang Fortner, Klaus Huber, Brian Ferneyhough, Hans-Heinrich Eggebrecht. 1974 Hamburg with György Ligeti and Constantin Floros. Dr. phil. Hamburg University on the Aesthetics of Pierre Boulez. 1979/80 Urbana/Champaign with Ben Johnston, Stanford with John Chowning. From 1988 on professor for composition at Hochschule für Musik und Theater Hamburg, now prof. emeritus since 2017. Stahnke's works: Operas: *The Fall of the House of Usher*, *Henry the Fourth*, *Orpheus Kristall*. Orchestra pieces and concertos: *Der Mandelbrotbaum*, *Trace des sorcières*, *Violin Symphony*, *Scales of Ages* (Saxophone concerto). Chamber music, several times for the Ensemble Modern Frankfurt. Lecturer in Chicago, Johannesburg, Glasgow, Boston, Wellington (New Zealand), Buenos Aires, Cluj (Romania), Oslo etc. Violist of the semi-improvising Ensemble TonArt Hamburg.

Kyle Gann (New York)

The Influence of Ben Johnston on my Microtonal Composing

I studied privately with Ben Johnston from 1983 to 1986. He never encouraged students toward microtonality, but early on he mentioned that a chord I'd written would sound beautiful if tuned correctly, and he reeled off the fractions. With a shock I realised that I understood just what he was saying, and from that point on I became passionate about working in microtonality. The just-intonation notation Ben developed seemed natural and intuitive for me, and I habitually think in it.

The key to my microtonal music is the exploitation of commas – the tiny intervals resulting from the collision of intervals based on different prime numbers – and I make their differences audible by supporting them harmonically. For instance, I will follow a minor triad on the 15th harmonic, whose minor third is 9/8, with a major triad on the 7th harmonic, whose major third is 35/32. The first pitch is 204 cents above the tonic, the second 155 cents above; in the key of E-flat they are two different F's, and when one chord changes to the other the F seems to bend a little, which I like. I find, and believe, that music sounds livelier and more natural when the pitches are allowed to shift slightly according to their harmonic context,

Relatedly, I believe that alternate pitch systems will never find widespread acceptance unless they preserve harmonic relationships people are already used to, such as triads and seventh chords in recognisable tunings. I sometimes write music without such common harmonies, but I have to have them available to help usher the listener's ear into a strange soundworld. My largest microtonal piece is *Hyperchromatica*, a cycle of 21 pieces for three retuned, computer-driven pianos, lasting three hours and 23 minutes. It employs 33 pitches to the octave, each one a harmonic of a very low E-flat.

Kyle Gann is a composer and the author of seven books on American music, including books on microtonality, Charles Ives's *Concord Sonata*, John Cage's *4'33"*, Conlon Nanarrow, and Robert Ashley. He studied composition with Ben Johnston,

Morton Feldman, and Peter Gena, and about a fourth of his music is microtonal. His major works include the piano concerto *Sunken City*, *Transcendental Sonnets* for chorus and orchestra, the microtonal music theatre piece *Custer and Sitting Bull*, *The Planets* for mixed octet, and *Hyperchromatica* for three retuned, computer-driven pianos. His music is available on the New Albion, New World, Cold Blue, Lovely Music, Mode, Other Minds, Meyer Media, Innova, New Tone, Microfest, Vous Ne Revez Pas Encore, Brilliant Classics, and Monroe Street labels.

Eyewitness talk

Der US-amerikanische Komponist und Posaunist Mike Svoboda (*1960) zählt zu den international führenden Musikern unserer Zeit. Er wirkt seit vielen Jahren an der Hochschule für Musik Basel. Zu Beginn der 1980er Jahre war er Student von Ben Johnston an der University of Illinois in Urbana-Champaign. Die Cellistin und Musikforscherin Ellen Harriet Fallowfield, heute Leiterin des Studiengangs Special Music Performance an der HKB, befragt Mike Svoboda zum Unterricht bei Ben Johnston, zur Bedeutung von dessen Musik und ihrem Einfluss auf das eigene Schaffen.

US composer and trombonist Mike Svoboda (*1960) is one of the leading international musicians of our time. He has worked at Hochschule für Musik Basel for many years. In the early 1980s he was a student of Ben Johnston at the University of Illinois Urbana-Champaign. The cellist and music researcher Ellen Harriet Fallowfield, today head of the Master Specialised Music Performance programme at HKB, speaks with Mike Svoboda about his lessons with Ben Johnston, the significance of Johnston's music and its influence on his own work.

The trombonist and composer **Mike Svoboda** came to Germany with the help of a BMI Award to Young Composers in 1982. His eleven years as trombonist and assistant with Karlheinz Stockhausen during the 80s and 90s proved to be of eminent importance for Svoboda's musical development. Including the collaboration with Stockhausen and other composers such as Peter Eötvös, Helmut Lachenmann, Wolfgang Rihm, Martin Smolka, David Lang, and Frank Zappa, Svoboda has premiered over 400 works for trombone at major festivals throughout the world. Mike Svoboda composes across the borders between popular and classical music, high culture and entertainment, combining – through the use of text and various musical styles – both traditional and avant-garde. Numerous CDs, mainly for the WERGO label, document Svoboda's art both as an interpreter and composer. In 2008 he was awarded the Praetorius-Prize for Innovation in Music from the German government, because of, according to the jury, the "influence and recognition his concepts and ideas have had on the development of music and its performance". Since 2007 he is professor for contemporary chamber music and trombone at the Academy of Music in Basel, Switzerland.

Ellen Fallowfield studied cello with Andreas Lindenbaum at the KUG Graz and Martina Schucan at the ZHdK Zurich. She undertook specialised studies in the performance of contemporary music at the Musikhochschule Basel and with

Klangforum Wien at the KUG Graz. A grant from the Leverhulme Trust enabled her PhD studies at the University of Birmingham UK/Musikhochschule Basel in the performance practice of contemporary music for cello. Regular performances as a guest in various ensembles have taken her to international festivals, including Musik Triennale Köln, Acht Brücken neue Musik für Köln, Musikfest, Berlin, Huddersfield Contemporary Music Festival and the Lucerne Festival. Ellen Fallowfield is the creator of the online resource www.cellomap.com.

Vincent Tiffon (Marseille)

Jean-Claude Risset's Composition Workshop. Analysis of the Archives and Close Family Interviews

The statements made by Jean-Claude Risset himself and the study of his archive show us that Jean-Claude Risset's scientific and artistic activities are inseparable, indivisible (and mutually reinforcing), although those two fields are clearly distinct. This false paradox is the centre of intense and very precise thought, a way of thinking interdisciplinarity put forward and defended by Jean-Claude Risset throughout his life. A detailed analysis of the archive shows that one of the main threads of his daily activity was his own principle, established by himself to define his aesthetics and his sound synthesis music: "Composing the sound itself", allowing to drastically free from music with twelve notes. The scientific answer has been Jean-Claude Risset's participation in the creation of a new discipline: computer music.

This presentation aims to propose a draft reconstruction of several typical days, in order to better understand Jean-Claude Risset's "compositional workshop" (location, technical environment, and so on...). We are going to present core characteristics of this exceptional archive through its interdisciplinarity and therefore its diversity of entries (notebooks, work and research notebooks, diaries or schedules, correspondences, drafts of articles, sketches of musical works, research archives, drafts of conferences, etc.). In addition to these primary sources, secondary sources (testimonies of Jean-Claude Risset's two children) will be included, in order to reconstitute a missing (or almost absent) part of the archive: his activity of composition at home or on holiday, data not really provided by the archives.

Finally, this contribution is part of a larger project of documenting processes of composition, in an interdisciplinary situation.

Vincent Tiffon is a professor of musicology at Aix-Marseille University (France), researcher in the Prism Lab (CNRS – France), an interdisciplinary laboratory. He is also an associated researcher at IRCAM in Paris (France). Tiffon's research addresses history, analysis, and aesthetics of electroacoustic and mixed musics with an interest in analysing the creative process in music and musical mediology (study of the interactions between technological advancements and musical innovations). His work has been published in journals including *Acoustic Arts & Artifacts/Technology*, *Aesthetics*, *Communication*, *Analyse musicale*, *Les Cahiers du Cirem*, *Les Cahiers de Médiologie*, *Contemporary Music Review*, *DEMéter*, *Filigrane*, *LIEN*, *Medium*, *Médiation et communication*, *Musurgia*, *NUNC*, *Revue de musicologie*, *SMC* (*Sound*

and Music Computing), and *Circuit*. He also published in Hermann, Libreria Musicale Italiana, Roudledge, Symétrie, PUR, PUP editors.

Nemanja Radivojevic (Bern)

Little Boy in Fonds Risset. From the Sources to Resynthesis

Computer suite for Little Boy is a seminal piece of computer music. It was derived from the music for a theatre play by Pierre Halet. Although well documented in first and secondary sources, the piece's genesis remains unclear. In this presentation, I hope to shed some light on a new perspective offered by the undocumented recent discovery of a manuscript of the orchestra version, as well as by the full re-synthesis of the MUSIC V code for *Little Boy* found in Fonds Risset, undertaken together with my colleagues Victor Lazzarini and Damián Keller. I suggest that an approach that combines the critical reading of available textual sources with code resynthesis may prove a novel and methodologically applicable method for a better understanding of computer music.

Nemanja Radivojevic, Komponist und Forscher, ist als Assistent des Studiengangs Master Composition / Creative Practice sowie als Doktorand an der Hochschule der Künste Bern tätig. Er erhielt einen Master of Arts in Musiktheorie an der Haute École de Musique de Genève und einen Master of Arts in Komposition unter der Leitung von Xavier Dayer an der Hochschule der Künste Bern, und seit August 2018 macht er ein Doktorat in Musikwissenschaft an der Universität Bern (Betreuung Prof. Dr. Anselm Gerhard und Dr. Roman Brotbeck).

In seiner aktuellen Forschung konzentriert er sich auf die Fragen von nicht-äquidistanten mikrotonalen Elementen in der Computermusik von Jean-Claude Risset, sowie auch auf die Fragen von Computermusik Archäologie.

Nemanja Radivojevic, composer and researcher, works as an assistant for the Master Composition/Creative Practice programme and as a doctoral student at the Hochschule der Künste Bern. He received a Master of Arts in Music Theory at the Haute École de Musique de Genève and a Master of Arts in Composition under the supervision of Xavier Dayer at the Hochschule der Künste Bern. Since August 2018, he is doing a PhD in Musicology at the University of Bern (supervised by Prof. Dr. Anselm Gerhard and Dr. Roman Brotbeck). His current research focuses on the issues of non-equidistant microtonal elements in the computer music of Jean-Claude Risset as well as on the issues of computer music archaeology.

Victor Lazzarini (Dublin)

Spectral Music at the Threshold of the Age of Computer Music

Early computer as practised by composers such as Risset and Chowning was particularly focused on the spectral qualities of musical sounds. This practice was of course influenced by the early electronic music studio practices (from Cologne and Paris, for example), but it was well supported by the synthesis environment provided by computer music languages. The possibilities presented by techniques such as

feedback amplitude modulation, additive synthesis, and frequency modulation could be more consistently explored within programs such as MUSIC IV and MUSIC V. The early experiments and their applications in some of the early computer music compositions set a seminal influence on what was to come in the following decades. If we accept that spectral thought became one of the central propositions in the electronic music that came out of the computer music studios as the technology became more widespread, then we should suspect that the work of 1960s composers was responsible for setting a trend in this regard. In this presentation, we will examine the details of this interest in the spectrum in the early days of computer music, and how the technology of computer music languages supported it.

Victor Lazzarini is a graduate of the Universidade Estadual de Campinas (UNICAMP) in Brazil, where he was awarded a Bachelor of Music in Composition. He completed his doctorate at the University of Nottingham, UK, where he received the Heyman scholarship for research progress and the Hallward composition prize for a large-scale work, *Magnificat*. His interests include musical signal processing and sound synthesis; computer music languages; electroacoustic and instrumental composition. Dr Lazzarini received the NUI New Researcher Award in 2002 and the Ireland Canada University Foundation scholarship in 2006. He has authored over one hundred articles in peer-reviewed publications in his various specialist research areas. He has also completed the volume *Ubiquitous Music Ecologies* (with D. Keller, N. Otero, and L. Turchet, Routledge 2020), as well as a research monograph for Oxford University Press: *Spectral Music Design: A Computational Approach* (2021). He is the author of Aulib, an object-oriented library for audio signal processing, and is one of the project leaders for the Csound sound and music programming system. His music is regularly performed in Ireland and abroad, and has been released on CD by FarPoint Recordings.

