

GENETIC CRITICISM AND MUSICAL IMPROVISATION: COMPARED PERSPECTIVES

SYMPOSIUM

IRCAM

FRIDAY OCTOBER 3RD, 2025

The aim of this study day is to test and develop the conclusions of two programmatic articles by Clément Canonne and Martin Guerpin. These articles proposed an application/adaptation (and the necessary adjustments) of genetic criticism (also known as textual genetics) to musical improvisation. The approach is based on a hypothesis that challenges the idea that improvisation is a spontaneous, purely singular creation, without past or future: some improvisers, when improvising several times on the same piece, or in the same improvisational situation, reject or reuse ideas from previous performances. Performance after performance, an “improvisational project” develops, which can itself evolve according to new ideas that arise during the process.

The presentations at this study day will be based on these programmatic articles and will allow them to be compared and discussed on the basis of new case studies or questions. Four domains will be considered: (1) the study of the evolution of an improvisational project over a medium-term period (e.g., a concert tour) or a long-term period (e.g., a creative period in a musician's career); (2) a genetic approach to the collective dimension of improvised creation; (3) the “positional” nature of studying the process (how can consciously studying this process based on one's own practice yield different results from external observation based on historical sources or an ethnographic approach?); (4) the development of a comparative perspective, through the application of this approach to improvisational practices derived from classical or traditional music.

Organising committee

Musical Practices Analysis research team, IRCAM–STMS laboratory.

In partnership with the RASM–CHCSC (Research in Performing Arts and Music, Center for Cultural History of Contemporary Societies)



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¹ Clément Canonne and Martin Guerpin, « Pour une génétique de l'improvisation musicale (première partie : éléments théoriques) », *Genesis* 47, 2018 ; and Clément Canonne and Martin Guerpin, « Pour une génétique de l'improvisation musicale (seconde partie : cas d'études) », *Genesis* 48, 2019.

Program

9:00	<i>Arrival of the participants</i>
9:30-9:45	Introduction Martin Guerpin , Sorbonne Université, IReMus Clément Canonne , CNRS, IRCAM, STMS/APM
9:45-11:15	Determination/Indetermination "The genetics of jazz performance under the mike: from interpretive choices to improvisational logics" Martin Guerpin , Sorbonne Université, IReMus Clément Canonne , CNRS, IRCAM, STMS/APM "How to figure it out : harpsichord accompaniment in George Frideric Handel's continuo cantatas" Christian Kjos , Norwegian Academy of Music
11:15-11:30	<i>Break</i>
11:30-13:00	Genetic approaches of creative processes in the long-term: stylistic and intertextual issues "Sonny Rollins's early recordings" Ben Givan , Skidmore College, USA "At the edge of improvisation. Mikhaïl Pletnev and Chopin's <i>Nocturne</i> op. 9 n° 2: a genesis featuring creation and memory" Inès Taillandier , CNSMdP
13:00-14:30	<i>Lunch break</i>
14:30-16:00	Taking interaction into account in genetic approaches of improvisation "Exploring the relationship between improvisation, memorisation, rememoration, and repetition: the case of the El Memorioso band" Nicolas Souchal , IRCAM, STMS/APM "The role of improvisation in the collective elaboration of the performance of a theme: a study of the "Freedom Jazz Dance" session reels (Miles Davis second quintet, 1967)" Martin Guerpin , Sorbonne Université, IReMus

16:00-16:15	<i>Break</i>
16:15-17:45	The role of material environment and softwares in the creative process of improvisation "Voyager: writing the virtual improvisation between the piano and the orchestra. Genesis of a chiasma" Pierre Saint-Germier , CNRS, IRCAM, STMS/APM "Beginning's one solo: an interactive performance" Emilie Škrijelj , turntables, Baptiste Bacot , discussant, Centre for Interdisciplinary Studies in Rhythm, Time and Motion, University of Oslo

Summary of the presentations

“The genetics of jazz performance under the mike: from interpretive choices to improvisational logics”, Martin Guerpin, Sorbonne Université, IReMus, and **Clément Canonne**, CNRS, IRCAM, STMS/APM

In a previous article (Canonne & Guerpin, 2019) reviewing the recording session of John Coltrane's *Giant Steps*, we highlighted the crystallization and optimization processes that may have underpinned the construction of his improvised solo. However, our study had two important limitations that limited the possibility of generalizing its results: on the one hand, it focused on a piece with a very high degree of harmonic constraint, which may have led to an artificial overestimation of the role of these crystallization and/or optimization logics; on the other hand, it began the genetic analysis process with the first attempts at recording the piece, thus overlooking everything that may be at play before the recording. In order to test the of our initial results, we asked two jazz pianists recognized by their peers to come to the studio in turn to record a composition (Herbie Nichols' *She Insists*) which had the dual advantage of mobilizing the harmonic language of “common practice” – and therefore not unduly constraining the musicians' improvisation – and of being unknown – and therefore not being associated with the memory of pre-existing performances as is generally the case with jazz standards (Kane, 2024). Both sessions were recorded in their entirety in audio and video, allowing us to exhaustively document the creative process, from the first reading of the score to the recording of a series of complete takes, including moments of re-listening in the control room. Two re-enactment interviews conducted the day after the recording session completed the protocol.

Our presentation will focus more specifically on three aspects: firstly, the matrix role played by sight-reading time in the development of the interpretation (Donin, 2005) proposed by the musicians; secondly, the way in which arrangement logics and improvisation logics interact in the construction of the solo; and thirdly, the place to be put into perspective of optimization – the takes being considered more as a diversity of more or less valid possibilities than as the links in a chain linearly oriented towards the realization of a definitive version.

“How to figure it out: harpsichord accompaniment in George Frideric Handel's continuo cantatas”, Christian Kjos, Norwegian Academy of Music

I invite you to have a look inside the creative laboratory of my artistic research project “Releasing the Loudie – harpsichord accompaniment in G. F. Handel's continuo cantatas” (Norwegian Academy of Music, 2015-2019), where I investigated the role of the harpsichord player and the interpretation of basso continuo in Handel's cantatas for one voice with continuo accompaniment. How the harpsichord player shapes the improvised part above Handel's written and more or rather less figured bass line plays a vital part in how the composition eventually will sound to the listener. I will present some of my methods that unfolded a wide range of possible solutions in the intersection between improvisation, composition, imagination, and speculation within a source-oriented approach, and how I decided to use this material in performance and recording situations. To give these cantatas a musical guise that is rarely heard among performer's today, I focused on an advanced and soloistic harpsichord continuo that includes different use of imitation, counterpoint, harmonic additions, ‘duet-making’ with the vocal part and other rarely heard features; inspired by 18th-century continuo treatises that describes this practice, as well as idioms from Handel's own keyboard music.

“Sonny Rollins's early recordings”, Ben Givan, Skidmore College, USA

In 1949, jazz saxophonist Sonny Rollins (b. 1930), at the age of eighteen, began recording professionally as a sideman under the leadership of Babs Gonzales, J. J. Johnson, and Bud Powell. This article examines transcriptions of twenty-three improvised solos that Rollins played at four different studio sessions between January and August of that year. Thirty-eight melodic formulas (“licks”) are identified and categorized. Comparisons are drawn between (a) Rollins's melodic language and that of his known influences Charlie Parker, Louis Jordan, Coleman Hawkins, and Lester Young; (b) different choruses within single solos; (c) separate solos on distinct themes; and (d) multiple “takes” of particular themes. The advantages and limitations of adopting the interpretative perspective of “genetic criticism”—as deployed by Canonne and Guerpin (2018/19) for the study of improvised music—are considered. A genetic-critical orientation offers the benefit of clearly defining and demarcating the analyst's purview, focusing on how one or more performers' creative process unfolds through multiple takes of a given theme. At the same time, sets of multiple takes may also be further illuminated by situating them intertextually within the context of a given improviser's individual “idiom,” as well as a broader stylistic “dialect” (Meyer 1989).

“At the edge of improvisation. Mikhail Pletnev and Chopin’s *Nocturne* op. 9 n° 2: a genesis featuring creation and memory”, Inès Taillandier, CNSMdP

Combining genetics, improvisation, and interpretation is no easy task. To achieve this, I will first try to understand what meaning we can give today to the notion of improvisation in the context of a practice—the interpretation of a musical text—that is, a priori, its antithesis. The aim will therefore be to reveal the aporias posed by this quest. Not only are spontaneity, audacity, creativity, the highlighting of a singular personality, and authenticity, which are its supposed corollaries, are difficult to identify and theorize, but we can also question their relevance insofar as the genetic paradigm, which presupposes work and gradual edification, inevitably brings us back to a traditional conception of interpretation as the execution of a score. I will therefore propose to test these epistemological pitfalls by studying a corpus of twelve live recordings of pianist Mikhail Pletnev playing Chopin’s *Nocturne* Op. 9 No. 2. A chronological examination of these recordings—which now form our genesis file—will reveal the mechanisms behind what could be called an improvisational breakthrough and uncover a genealogy of its sound components. This will also involve considering a much broader temporal scale, as certain textual distortions made by Pletnev seem to be rooted in much older models of interpretation, such as those of Koczalski or Paderewski

“Exploring the relationship between improvisation, memorisation, remembrance, and repetition: the case of the El Memorioso band”, Nicolas Souchal, IRCAM, STMS/APM

Among practitioners of free collective improvisation who aspire to spontaneously create music that is as original as possible (Wilson & MacDonald, 2012) by deliberately avoiding reliance on explicit references (Pressing, 1984), long-term phenomena such as routine, the weight of habit, and aesthetic sedimentation often take on a pejorative character. Rather than suffering or attempting to circumvent these phenomena, the group El Memorioso has appropriated them, turning them into modes of action by adopting the following principle: improvise freely for a certain amount of time, then attempt to replay the same piece several times, relying solely on memory and the improvisation that has just been performed. Each performance generated by this principle is therefore a series of pieces, the first of which is an improvisation, followed by attempts at replication, which are versions whose comparative analysis will aim to better understand the extent to which the processes of memorization, recollection, and repetition induced by the protocol modify the playing styles of this improvising group, whether in terms of interactions between improvisers, musical material, or form.

“The role of improvisation in the collective elaboration of the performance of a theme: a study of the “Freedom Jazz Dance” session reels (Miles Davis second quintet, 1967)”, Martin Guerpin, Sorbonne Université, IReMus

Genetic analyses of the creative processes specific to improvisation have so far focused on the evolution of an “improvisational project” (Guerpin and Canonne 2019), i.e., on passages of a given piece identified as “improvisations.” Focusing on these passages would be to overlook the fact that, in a musical tradition such as jazz, improvisation also plays a role in the thematic parts, and that “improvisation” is far from being limited to passages exclusively devoted to it and which, for this reason, bear this name (as in the “theme-improvisation-theme” form).

This presentation aims to test the genetic approach in the context of a jazz group developing the thematic part of a piece intended for inclusion on an album. The study of the genetic process will therefore focus on examining the role of improvisation in the emergence of ideas proposed by a musician on their own initiative, or suggested to a musician by another. These ideas may be retained (with or without modifications) or rejected (by the leader or following a collective decision) from one rehearsal to the next, until the version released on the album. Addressing this process raises obvious problems of sources: how can such a process be documented unless it is elicited through an experimental protocol? This paper will draw on a relatively rare source in the field of jazz: the recording of the discovery and working phase of “Freedom Jazz Dance” by Miles Davis’ second quintet.

“Voyager: writing the virtual improvisation between the piano and the orchestra. Genesis of a chiasma”, Pierre Saint-Germier, CNRS, IRCAM, STMS/APM

In 2004, for the purposes of the piece *Virtual Concerto*, commissioned by the American Composers Orchestra, the virtual improviser Voyager designed by George Lewis in the mid-1980s, went from being a virtual orchestra, intended to improvise a concerto with a human improviser, to being an improvising pianist, performing a concerto for Disklavier and orchestra. This change in status coincided with the porting of Voyager’s code from the FORTH language to Max/Msp. Based on the archives of the FORTH code and the current version for Max, this paper uses the resources of genetic criticism to examine how the writing of piano improvisation in Voyager owes to the initial design of the orchestra and the forgotten programming languages of the 1980s.

"Beginning's one solo: an interactive performance", Emilie Škrijelj, turntables, **Baptiste Bacot**, discussant, Centre for Interdisciplinary Studies in Rhythm, Time and Motion, University of Oslo

What does it mean to prepare an improvisation, and even more so an improvised solo? What cognitive processes and instrumental parameters come into play in this preparation, and how do they interact with each other? How can we recognize a good start to an improvisation? The possibilities offered by instrumental interfaces (or affordances) are particularly ambivalent in this context: they are both obvious starting points for a solo, but can also be barriers to the freedom and spontaneity that are supposed to characterize improvised musical discourse. In this dialogued performance, Emilie Škrijelj (turntables) and Baptiste Bacot (discussant) explore the instrumental affordances of the turntable and mixing desk and question the genesis and form of the improvised solo in a technological context. The choice of microgroove records placed on felt pads, volume levels, equalization, crossfading, and rotation speeds are all parameters that can be used to construct and deconstruct music.

Presentations of the participants

Baptiste Bacot conducts research on electronic music practices, which he studies mainly from three aspects: means (instruments, interfaces, music and sound technologies), performance (audiovisual scenography, body, musical gesture) and the creative process (genetics of digital audio files, ethnography of musical production). Baptiste is a Doctor in Music, History, Society (EHESS/IRCAM). He carried out postdoctoral research in the STMS laboratories (IRCAM, Analysis of Musical Practices team) and CRISAL (Algomus team, University of Lille). He is currently postdoctoral researcher at RITMO, Centre for Interdisciplinary Studies in Rhythm, Time and Motion (University of Oslo, Norway).

Clément Canonne is a CNRS senior researcher and Head of the Analysis of Musical Practices team at IRCAM. He conducts scientific and artistic research on collective improvisation, aesthetic appreciation, auditory attention, sound games and musical humor, and is the author of many articles that were published in international journals. As a pianist, he has recorded two CDs with Urborigène Records (*Improvisation in the Lab*, 2021 ; *Florent Schmitt : Scènes de la Vie Moyenne*, 2025).

Benjamin Givan teaches music history and theory in the United States. He has published a variety of articles about jazz, including studies of the French musicians Mimi Perrin and Michel Petrucciani, as well as four previous essays on the music of Sonny Rollins. His book *The Music of Django Reinhardt* was published in 2010.

Christian Kjos studied at the Norwegian Academy of Music in Oslo, Norway and Schola Cantorum Basiliensis in Basel, Switzerland. He has been working as a harpsichordist and continuo player in the leading orchestras and ensembles in Norway, such as Barokkanerne, and Concerto Copenhagen in Denmark. He is a founding member of the Swiss-based Ensemble Meridiana. In 2019 he earned his PHD in artistic research at the Norwegian Academy of Music. Christian received a three-year work grant from the Norwegian state for the period 2022-2024. From August 2025 he will be associate professor in harpsichord at the Norwegian Academy of Music in his native city of Oslo.

Martin Guerpin is Professor of Musicology at Sorbonne University. He is the author of several books, including *Faites vos jeux ! La vie musicale dans les casinos français* (Actes Sud, 2024), and *Music and Postwar Transitions in the 19th and 20th Centuries* (New York, Berghahn Books, 2023), as well as a critical edition of French-language texts on jazz published in the 1920s. He coordinates the international research project "Music and Nation" (Princeton University, Université Paris-Saclay, Leeds University, Université de Montréal). Martin is also a musician. He performs regularly with Laurent Cugny's Tentet, Azawan (jazz and Algerian chaâbi) and the saxophone duet +2Sop. Among his recorded albums are Spoonful (2017, « Choc » Jazz Magazine/Jazzman), Zeitgeist (2023, Prix de l'Académie du Jazz) and Azawan (2022).

Inès Taillandier-Guittard teaches musicology at the Conservatoire National Supérieur de Musique et de Danse de Paris. A former student of the École Normale Supérieure de Lyon and assistant professor since 2019, she is the author of a doctoral thesis entitled *Alfred Cortot, interprète de Frédéric Chopin* (2013) and has since published numerous articles, mostly in the field of performance studies. Her publications focus more specifically on the piano repertoire of the 19th century and the first half of the 20th century. She is particularly interested in the analysis of recordings, the link between hermeneutics and instrumental performance, interpretation conceived as a spectacular phenomenon, and finally the body and gestures of the musician.

Pierre Saint-Germier is a research officer in philosophy at the CNRS, where he conducts research at the intersection of logic, the philosophy of science, and the philosophy of music. As part of his project "Inside Artificial Improvisation", he is interested in the interpretation strategies of artificial musical improvisation systems.

Emilie Škrjelj plays and explores the accordion in its smallest folds. She uses it both as a percussion instrument and a generator of electroacoustic materials. Inspired by her research around the turntable, modular synths and field recording, she brings the accordion into the abstract territory of electronics by manipulating the bellows, rubbing its contours and exploring its extremities. She has performed in many European and international festivals.

Nicolas Souchal is a contract doctoral student at the University of Paris 8 | Vincennes – Saint-Denis, Musidanse laboratory, and at IRCAM, Analysis of Musical Practices team. He is a Master's graduate, with a first year's degree on George Lewis, Evan Parker, and Jean-Luc Cappozzo, followed by a second year's degree on the History of Jazz and Improvised Music in France. As part of his research-creation thesis project entitled *Loss of Control in Improvised Processes: Experiencing, Analyzing, Provoking, and Exploiting Them*, he is developing an augmented trumpet with Diemo Schwarz and is working on the development and participant observation of the group El Memorioso.

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Founded by Pierre Boulez, IRCAM is one of the world's largest public research centers dedicated to both musical expression and scientific research. It is associated with the Centre Pompidou, under the tutelage of the French Ministry of Culture. The mixed STMS research lab (Sciences and Technologies for Music and Sound), housed by IRCAM, also benefits from the support of the CNRS and Sorbonne University.