

Research Presentations

Ivar Roban Križić, Thomas Grill and Adrian Kempf:
ESP Duos – Remote Collective Improvisation
and the Embedding of Internal Counterparts

This presentation introduces the ESP Duos project, a collaborative artistic research inquiry into resonance, imagination, and long-term improvisatory experience. The research question asks: To what extent can long-term collaborators in free improvisation maintain a sense of collective interaction and musical coherence when performing simultaneously in different locations, without hearing each other?

Inspired by studies of extrasensory perception (ESP) and remote viewing—understood metaphorically rather than empirically—the project explores whether long-term musical collaboration produces internalized models of others that persist beyond physical co-presence. These internal counterparts may allow improvisers to enact forms of imagined co-presence, activating embodied traces of shared experience that shape real-time decision-making even in isolation.

The project takes the form of a series of ESP Duos, in which two performers begin five-minute improvisations at the same time in different locations, guided only by a synchronized timer. Each performer imagines the other's presence—recalling their sound, phrasing, and responsiveness—while recording independently. After each session, the participant listens only to their own recording, and an individual interview is conducted to probe specific moments of imagined interaction—what was internally heard, which cues were anticipated, and how these shaped decisions.

This methodological framework combines performative experimentation with autoethnographic and analytical reflection, forming a hybrid between artistic research and phenomenological inquiry. The examination of verbal accounts will be further enriched by a computational analysis of the audio recordings conducted by Adrian Kempf, who also carries out the interviews. Such a mixed-method approach may uncover evolving traces of internalized representation in the audio recordings and connect them to performers' descriptions of their lived experience.

By situating improvisation within the context of resonance (Rosa 2016) and shared mental models (Canonne & Aucouturier 2015), ESP Duos critically examines the relational, cognitive, and affective dimensions of collective music-making. The project proposes that through long-term collaboration, improvisers develop embodied representations of one another that enable interaction across absence—an expanded form of resonance in which musical response becomes a mode of remembering, imagining, and re-enacting connection.

This research is embedded in the Spirits in Complexity artistic research project [Grant DOI 10.55776/AR821]. It serves as a prototypical inquiry into opaque interactions with humans or non-humans, where a musical partnership is necessarily assumed but not certain.

Canonne, Clément, and Jean-Julien Aucouturier. 2015. "Play Together, Think Alike: Shared Mental Models in Improvised Music Interaction." *Psychology of Music* 44 (3): 544–58. <https://doi.org/10.1177/0305735615577406>

Rosa, Hartmut. 2019. *Resonance: A Sociology of Our Relationship to the World*. Translated by James C. Wagner. Cambridge: Polity.

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Ivar Roban Križić is a musician, composer, researcher, and curator based in Vienna. His artistic practice moves across contemporary jazz, experimental music, free improvisation, and artistic research. He studied Philosophy and German Studies at the University of Zagreb, earned a Master's degree in Jazz from the University of Music and Performing Arts Graz, and completed

a Doctorate in Artistic Research at the University of Music and Performing Arts Vienna (mdw). His work combines improvisation, performance, and sound-based experimentation with a critical approach to music-making. Central to his research is the epistemology of improvisation, the dynamics of musical cognition, and the role of self-sabotage and technological extensions in shaping artistic practice. Križić curates *Perspectives on Improvisation*, a Vienna-based transdisciplinary festival, and teaches artistic research and critical improvisation studies at the mdw and MUK Vienna.



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Thomas Grill works as a composer and performer of electroacoustic music, as a media artist, technologist and researcher of sound. His artistic work encompasses most varied fields of audible and trans-media art, focusing on loudspeaker-based music, electroacoustic improvisation, as well as installations and interventions.

His education includes studies of technical physics, of computer music and electronic media and of interactive electronic instruments. He earned a doctorate in composition and music theory at the University for Music and Performing Arts, Graz. Post-Doc research followed at the Austrian Research Institute for Artificial Intelligence (OFAI) in the domain of machine listening and learning. He currently heads the Certificate Program in Electroacoustic and Experimental Music (ELAK) and co-heads the Artistic Research Center (ARC) at the University for Music and Performing Arts Vienna.

Grill has been awarded with an Honorary Mention of the Prix Ars Electronica, with the Theodor-Körner prize, the Award of Excellence of the Austrian Federal Ministry of Education, Science and Research, with two PEEK grants by the Austrian Science Fund and various work stipends.

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Adrian Kempf is a music cognition researcher, focusing on musical creativity with particular emphasis on the creative process in musical improvisation and the role of social interaction. He earned his Ph.D. from the University of Graz with a thesis on the role of rhythm production in musical creativity and has an academic background in computer engineering, philosophy, and cognitive science.