# Attribution of intentions and creative musical interaction during jazz improvisation: the second person perspective in music cognition

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# Background

Both musical creativity and the communication between musicians are relevant issues in jazz improvisation research. According to 4E music cognition, musical creativity emerges from the social, embodied and situated interaction between performers (Van Der Schyff et al., 2018). Such creative interaction is based on musical and motor patterns of varied repetition. Some social perspectives of 4E cognition understand the interaction between performers in a strictly embodied way. In such musical contexts, dynamical patterns emerge from the coordination of the musicians' body movements (Martínez et al., 2017). In this paper, we introduce the second person theory to study jazz improvisation. This theory proposes a view of social cognition based on mutual attributions of basic mental states during face-to-face interactions (Pérez y Gomila, 2021). In previous studies, we found that the performer's intentions directed to the production of musical gestures, and the mutual attributions of these intentions are central traits of jazz improvisation (Martínez et al., 2022).

## Aims

To classify the mutual attributions of intentions to the other musicians' mental states in episodes of second person interaction during online jazz improvisation. To analyze the links between the mental attributions of intentions made and the creative musical exchanges.

#### Method

We run an experiment in which 20 duos of jazz performers -a saxophonist (S) and a guitarist (G)- improvise aiming to create the performance together. Immediately after the improvisation took place, we conducted an interview with both musicians. It aimed at getting descriptions of the performers' experience of their musical interactions and the mental attributions that took place during the improvisation (for a wider description, see Martínez et al., 2022). In this paper, we selected two episodes of second person interactions from two different duets (D1 y D7). We run (i) a microanalysis of the verbal content of the interviews, searching for attributions of intentions; and (ii) a microanalysis of the audiovisual recordings of the improvisations, to describe the musical and body interactions between the performers. We present the microanalyses in the Results section, and interpret the links between the second person attributions and the creative behavior in the Discussion section.

## Results

We identified 4 types of intentions mutually attributed by the improvisers. They aimed at eliciting some specific attitudes in the other musician, but also involved grasping the musical feature to which the other's creative intention was directed.

- 1. The intention of "communicating". It is a general state of approaching the other that is mainly located at the initial moments of the improvised performance. D7 participants say, for example: "we are guessing at each other" (G), "we are testing each other out" (S), "it's like the beginning of a football match, like saying: 'let's figure out what their strategy is'. Let's play ball and see if I catch it or not" (S).
- 2. The intention of "suggesting". It involves expectations linked to the partner's imitative musical actions.
- 3. The intention of "taking". It is bounded to ii. It accounts for the other's imitative response. Intentions 2 and 3 are tied to the cycles of varied imitation during turn-takings. D7 musicians exchange: "I started out playing quietly; but if you want a burst of notes... take this!" (S). G replies "If you come to me with...", and S interrupts him saying "Do not provoke me, because...!" (they both laugh when they find themselves recalling such mutual attributions).
- 4. The intention of "making jointly a single musical gesture". It emerges in instances where the musicians are playing simultaneously. This shared intention leads to the creation of a single phrase which unfolds a two-part counterpoint. D1 musicians identified a moment of communion during the improvisation. S says "the communion was like a momentum. I tried …I think I changed the density, didn't I?". And G responds: "I think that I received the signal, meaning 'let's do this…let's play'. Let's both play a bit more jointly"".

#### Discussion and Conclusion

The attributions identified in this work are tied to different modes of musical creation. 1) "Communicating" is oriented to figure out the musical attributes to which the creative intention of the other musician is directed. 2) "Suggesting" implies the intention of creating a novel musical gesture, and of proposing it to the other musician. 3) The intention of "taking" accounts for the attention to the suggested gesture. Both intentions shape the continuity of the creative process. 4) Although communicating and suggesting are intentional states mutually attributed during the musical interaction, the intention of "making jointly a single musical gesture" necessarily requires the sustain of an interactive loop that involves constant and dynamic sound-kinetic exchanges, resulting in a characteristic second person interaction. This intertwining of attributions of intention and musical creativity highlights a two-way link between musical improvisation and social cognition: on the one hand, a given performer's musical creation prompts the other's attribution of her/his underlying intentions; and on the other hand the perception of the other's intentions prompts the emergence of specific modes of musical creativity with respect to the other's musical behavior.

### References

Martínez, I. C., Damesón, J., Pérez, J. B., Pereira Ghiena, A., Tanco, M. G. & Alimenti Bel, D. (2017). Participatory Sense Making in Jazz Performance. *ESCOM*, Belgium.

Martínez, I. C, Pérez, J., Marchiano, M., Damesón, J., Valles, M., Tanco, M., Pretti, P., Pissinis, J. F., Milomes, L. & Giménez, M. (2022). Second Person Attributions in Jazz Improvisation. *Teorema*, 41(2), 81-107.

Pérez, D. I. & Gomila, A. (2021). *Social cognition and the second person in human interaction*. Routledge.

Van Der Schyff, D., Schiavio, A., Walton, A., Velardo, V. & Chemero, A. (2018). Musical creativity and the embodied mind. *Music & Science*, 1.