**EXPLANATORY UNIT = SYSTEM OF MULTI-AGENT AND MULTI-SCALE SUB-PERSONAL MECHANISMS**

**Context:**
Musical expressive actions and interaction are embedded in social situations, especially but not exclusively, in group performance and improvisation.

**The problem:**
Yet mainstream methodological (and ontological) individualism restricts the unit of explanation to mechanisms of sub-personal (single) individual neural and bodily activity.

**Keywords:**

**Experimental paradigm:**
Perceptual crossing (see Auvray & Rohde, 2012).

**Agent-based modelling**
(see Froese et al., 2014)

**Multi-scale approaches using dynamical systems theory:**
Coordination dynamics (see Walton et al., 2015)

**Anthropology of music:**
Multi-scale entrainment (see Clayton & Leante, 2013)

**Technology:**
Hyperscanning fMRI, EEG, MEG, (see Hirata et al., 2014)

**Neuro-phenomenology:**
Perceptual awareness scale (see Sandberg et al., 2010)

**Towards a common explanatory framework:**
Co-operating areas of research

**Experimental paradigm:**
Perceptual crossing (see Auvray & Rohde, 2012)

**Agent-based modelling**
(see Froese et al., 2014)

**Enactive theory:**
- Participatory Sense-making
- Interactive brain hypothesis (see De Jaeger & Di Paolo, 2007)