Antonio Chella* e Riccardo Manzotti** Il jazz e la coscienza artificiale

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The arguments proposed by Hofstadter are discussed concerning whether the software system EMI by David Cope can be considered an effective example of imitation in the sense of the Turing Test. The main claim is that some form of consciousness are necessary for an effective creative process like the musical composition. Although this argument is typically adopted to conclude that computational systems cannot be creative as they cannot be conscious, a novel point of view is taken into account and based on the upsurge of studies in the field of machine consciousness. Machine consciousness is not simply a technological challenge, but a novel field posing theoretical and scientific issues related with consciousness, and also with mainstream AI, by means of the design and the implementation of «conscious robots». In particular, some basic challenges of machine consciousness, i.e., embodiment, situatedness, emotions, phenomenal experience, are discussed in the framework of a particular form of musical expression, namely jazz improvisation. A more interesting form of Turing test could then be proposed and based on the capability for an agent to produce jazz improvisations at the same level of an expert jazz musician.