807-Dec-84 1231 MMM To: DAJ, PAT Ballet Proposal Draft

A unique performance of music and dance is planned for a September concert of the Center for Computer Research in Music and Acoustics (CCRMA) at Stanford. A musical composition by Michael McNabb conceived in the ballet form will be performed by live musicians with computer synthesis. Dance will be performed by the Oberlin Dance Collective, with choreography by their director, Brenda Way. The ballet will include a truly novel element, the performance of integral dance movement by sophisticated robotic devices.

The music will be performed by three musicians, accompanied by both digitally-recorded computer synthesis, and live synthesis controlled by electronic interfaces to the acoustic instruments. The work will consist of 5 contrasting movements, with a total length of approximately 40 minutes. Each movement will consist of a different combination of the musical, dance, and robotic elements.

The robots, an arm and a mobile base, are part of a collaborative project underway between Stanford and the Veterans Administration Rehabilitation Research and Development Center in Palo Alto. This project aims at the development of an intelligent manipulation aid for severely disabled people. Programming the robots to dance is seen as a natural extension of a concern for the quality of their movement. The dance choreographer is challenged to explore the potential of these machines for artistic expression.

As we see it now, an articulate machine intelligence is neither threat nor saviour, but rather a current medium with great potential for expressing the most humane values and concerns. The role of the artist is prucial in shaping not only works of value but also the tools needed to direct this intelligence toward humanistic ends.