Mr. Sherrill Milnes c/o Metropolitan Opera Guild 1865 Broadway New York, N.Y. 10023 February 4,1985

Dear Mr. Milnes,

I am writing to you on the recommendation of Marilyn Curtis, a common friend, who told me that your interests extend far beyond music. I am hoping that they might eventually include a long term research project, having to do with the singing voice, which I am initiating at Stanford University's Center for Computer Research in Music and Acoustics (CCRMA). First a bit of background.

For the past twenty years I have been involved with music and computers. As a composer, I was first interested in the extraordinary control allowed over sound when generated by means of computers. It became apparent rather early in my work, however, that in order to make effective use of these machines far more knowledge was required than that normally provided in a composer's education. It is rather common therefore to find one's interests extending to acoustics, especially psychoacoustics (perception), and computers, of course.

While there were very few of us initially, the field has grown rapidly and now includes a number of centers world-wide of which Stanford's CCRMA and IRCAM in Paris, directed by Pierre Boulez, are perhaps the best known. The nature of the work is so engaging and demanding of resources that there has developed a rather extraordinary degree of cooperation and interaction between the various facilities. It is rather common for us to spend time at one another's facilities, as I am now, sharing experiences and ideas.

One area in which I became interested while working at IRCAM in 1979 is the singing voice. It is interesting for a number of reasons from the point of view of acoustics and psychoacoustics (perception). For example, there is no better musical sound than the voice for the study of the perceptual importance of very small inadvertant fluctuations in the pitch of a tone. In addition, the voice presents special problems when attempting to model it with machines: within any given voice type (e.g. soprano)

there is probably a wider range of voice qualities judged to be excellent than in most other musical sources (e.g. violin). In order to gain some understanding of, and to be able to begin to assign acoustic and psychoacoustic dimensions to voice quality, we need as large a number as possible of recordings of excellent voices. We want to make these recordings with digital equipment in a known and controlled environment at CCRMA. There is much for us to learn about the singing voice and the current technology offers us an unprecedented means.

The enclosed page notes CCRMA's move to a new location on the Stanford campus and the long term study of the singing voice which the new facility will allow. I am asking you if such a project would be of interest and if you would be able to give a small amount of time (an hour or so of recording your voice in the CCRMA digital recording studio) when you are in the San Francisco area? The examples would be used only for purposes (research) to which you agreed. Should you be interested in a more substantive involvement with the project, I would be delighted to talk to you about that. While you are at CCRMA, I with my staff would of course show you the facility and explain some of the research and composition which is being pursued.

As the facility will not be completed until the September of this year (and I will not return until that time, as well), sometime during the 85/86 season would be an appropriate time for you to visit Stanford (the earlier the better). In the meantime, should you be in Paris over the next months, I would be happy to give you a tour of IRCAM and play some examples with further explanation of the vocal research which we are proposing. I look forward to meeting you.

Sincerely,

John M. Chowning, Professor of Music and Director CCRMA Department of Music Stanford University Stanford, California 94305

until 8/31/85: c/o IRCAM 31 rue St. Merri 75004 Paris, France

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