

## Brain Theatre

A psychologist and an actor examine the impact of acting classes on aging.

**BY MEGAN FELLMAN**

Sir Ralph Richardson, the British stage actor, called his profession “the art of keeping a large group of people from coughing.” Helga and Tony Noice have their own take on the actor’s craft, one that is less jaded and altogether original.

The couple, both Elmhurst College faculty members, believe that the specialized techniques that actors use to bring their characters to life may also be employed to delay or even reverse cognitive decline among the aging. They are engaged in a collaborative research project that draws creatively on their respective expertise in psychology and the theatre.

The Noices are investigating whether training in various acting techniques—from role-playing skills to interpretive methods—might have a positive effect on cognitive functioning in older people. Over the last seven years, they have completed a series of three related studies, one in Switzerland and two in the Chicago area. They discovered that after their elderly research subjects received instruction in acting—a new experience for them—the subjects experienced significant improvement in memory and other cognitive functions. Their general sense of psychological well-being also improved.

“The more stimulation you offer the brain, the more you increase the chances that the brain will remain healthy throughout your life,” says Helga Noice, a professor of psychology. “The acting process produces a particularly high degree of stimulation.” An actor, she notes, needs to be engaged on many levels: emotional, physical, and intellectual. All of this complex activity appears to alter neural connections in the brain.

Their innovative, interdisciplinary research project is a perfect fit for Helga Noice, a cognitive psychologist with expertise in human memory, and Tony Noice, a professional actor who teaches theatre and speech as an adjunct professor at Elmhurst. The couple spent many years studying acting from a theoretical point of view, looking at how the expertise of actors differs from that of scientists, musicians, and visual artists. In 1996, the government of Switzerland invited them to conduct a pilot study in which they taught the techniques of stage acting to older adults. The subjects’ verbal recall and recognition improved, even though they were not taught any memory techniques. “New research indicates that the brain is much more plastic than we thought,” says Tony Noice. “The brain can literally be modified through activity. This is what we are trying to do with acting. In the training we emphasize that the participants must actively put themselves in the place of the character—to intimidate, placate, or plead with someone for real.”

In 2001, Helga Noice received a three-year grant from the National Institute of Aging (NIA) to conduct further research, this time including the visual arts. The 124 participants in the NIA study were predominantly college-educated older adults who lived independently in the western suburbs of Chicago, drove themselves to the training site, and were an average of 73 years old.

One group acted as a control and received no training. A second group received visual arts training twice a week for four weeks. Lynn Hill, an associate professor of art at Elmhurst, led the visual arts component; she had the participants view and evaluate paintings. The third group were trained in the theatre, also for four weeks. Tony Noice encouraged each of his subjects to go well beyond the scripts, to interpret each character's personality and motivations.

When the subjects were tested at the end of the study, the visual arts group showed measurable improvement in cognitive skills. The theatre group showed, as it were, dramatic improvement. Their word recall improved by 18 percent; their problem-solving ability by 55 percent. In addition, the theatre students showed a substantial improvement in their perceived quality of life. All of these benefits continued to be observed four months after the sessions ended.

Recently, supported by a grant from the Elizabeth Morse Charitable Trust, the couple went to work with residents of Plymouth Place, a continuing-care community in LaGrange Park. The study group included 18 people—average age, 82. They came from both the independent living and the assisted living sections of Plymouth Place. This time, the participants studied acting only.

As in the earlier study, the cognitive skills of the participants improved in several areas, including word recall, working memory, and problem solving. Their self-esteem also improved. What's more, a little theatre group has sprouted at Plymouth Place, with Tony Noice providing direction. In December the group staged the short melodrama *The Widow's Plight*.

In future research, the couple would like to study less educated populations, to see if they can obtain the same improvement in mental and emotional well-being. They also hope to compare the impact of acting with that of other creative activities, such as painting, music, and creative writing.

The impact of their findings may someday have a substantial impact on an aging population. "If we can keep our cognitive powers as long as possible," says Helga Noice, "we can avoid premature loss of independence and lead more fulfilling lives."