'To be or, or ... um ... line!'

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How do you learn all those lines?" It is the question most asked of actors and their art.

The ability to remember and effortlessly deliver large quantities of dialogue verbatim amazes nonthespians. Most people imagine that learning a script involves hours, days, and even months of rote memorization. But actors seldom work that way; in fact, they often don't consciously try to memorize lines at all. And they seldom consider memorization as defining what they do.

What gives actors their seemingly effortless memory capabilities? Could acting teach us something about memory and cognition, and could acting principles help those with memory problems?

These are the questions that cognitive psychologist Helga Noice (Elmhurst College) and her husband, cognitive researcher, actor, and director Tony Noice (Indiana State University) have set out to answer in nearly two decades of psychological studies of actors. The Noices have not only described a learning principle that can be taught to non-actors but they have also tested acting-based interventions to counter cognitive decline in older people. They review their research in the February issue of *Current Directions in Psychological Science*.

According to the researchers, the secret of actors' memories is, well, *acting*. An actor acquires lines readily by focusing not on the words of the script, but on those words' meaning — the moment-to-moment motivations of the character saying them — as well as on the physical and emotional dimensions of their performance.

To get inside the character, an actor will break a script down into a series of logically connected "beats" or intentions. Good actors don't think about their lines, but feel their character's intention in reaction to what the other actors do, causing their lines to come spontaneously and naturally. The researchers quote the great British actor Michael Caine: "You must be able to stand there *not* thinking of that line. You take it off the other actor's face."

The key, the researchers have found, is a process called *active experiencing*, which they say uses "all physical, mental, and emotional channels to communicate the meaning of material to another person." It is a principle that can be applied off-stage as well as on. For example, students who studied material by imagining conveying its meaning to somebody else who needed the information showed higher retention than those who tried to memorize the material by rote.

The active-experiencing principle was also found to be effective against cognitive decline in old age. A group of older adults who received a four-week course in acting showed significantly improved word-recall and problem-solving abilities compared to both a group that received a visual-arts course and a control group. The gains persisted four months afterward, as did a significant improvement in the seniors' perceived quality of life.

Some of the Noices' findings confirm those of other researchers on memory. Memory is heavily reliant on emotion, action, and perception. In their work with actors, the Noices' have found, for example, that memory is aided by physical movement. In one study, lines learned while making an appropriate motion — e.g., walking across a stage — were more readily remembered by actors later than were lines unaccompanied by action. The physical motion didn't need to be repeated at the time of recall.

For more information about the Noices' research, read "What Studies of Actors and Acting Can Tell Us About Memory and Cognitive Functioning" in this month's issue of *Current Directions in Psychological Science*.