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Psychologist-Cellist Frances Rauscher

Music, Mindpower & "The Mozart Effect": Noted Researcher to Visit IWU, Jan. 25-26

BLOOMINGTON, Ill.--Does Mozart's music build mental muscle?

According to psychologist-cellist Frances H. Rauscher, music can play a key role in mental development and school performance.

Rauscher will discuss her research findings on the so-called "Mozart Effect" and participate in several programs, Jan. 25-26, at Illinois Wesleyan University.

Rauscher--a Juilliard-trained concert cellist with a doctorate in psychology from Columbia University--says her studies show that " . . . music plays a crucial role in early childhood development," adding that experiments she conducted with a team of researchers prove "unequivocally that music lessons improve a child's performance in school."

However, Rauscher cautioned in an April 8, 1998 Education Week article: "One of the things we have to be careful about is jumping to conclusions that we don't have data on at all. I find that [the] 'Mozart makes you smarter' thing is quite a bit of a leap."

IWU Itinerary

During Rauscher's two-day IWU visit, she will deliver a lecture, "The Musical Brain: Effects on Intelligence," on Monday, Jan. 25, at 4:30 p.m. in Westbrook Auditorium, Presser Hall (IWU's School of Music), 303 E. University Ave., Bloomington. Her presentation, which will be attended by IWU School of Music students and faculty, is open to the public, free-of-charge.

On Tuesday, Jan. 26, Rauscher will meet at 9:25 a.m. with 25 students enrolled in a Child Development class taught by Robin Leavitt, associate professor and chair of Educational Studies. Rauscher will discuss her research methods.

Other activities on Rauscher's Jan. 26 schedule are:

- A 10:40 a.m. meeting with IWU psychology students and Doran French, professor and chair of psychology, and Johnna Shapiro, assistant professor of psychology.
- A 2:30 p.m. meeting with IWU psychology students and French and Shapiro.
- A 4 p.m. meeting with education students and Shela Bondurant-Koehler, associate professor of music education. Music teachers in the Bloomington-Normal school districts have been invited to attend this informal discussion and question-and-answer session in Westbrook Auditorium, Presser Hall.

Rauscher's IWU visit is sponsored by the university's School of Music, Department of Psychology, Department of Educational Studies, and the President's Office.

Research Findings

The 102nd Annual Convention of the American Psychological Association in 1994 was the setting for Rauscher--then a member of a University of California, Irvine, research team--to unveil many of the group's findings, which documented a clear link between music and intelligence.

Rauscher, an assistant professor of childhood development at the University of Wisconsin, Oshkosh, wrote in the September/October 1996 edition of *Early Childhood News*: "In 1993, we completed a pilot study in which 10 three-year-old children were given music training--either singing or keyboard lessons. The scores of every child improved significantly (46 percent) on the Object Assembly Task, a section of the Wechsler Preschool and Primary Scale of Intelligence-Revised (WPPSI-R) that measures spatial reasoning.

"In a second experiment," she added, "we found that the spatial reasoning performance of preschool children who received eight months of music lessons far exceeded that of a demographically comparable group of preschool children who did not receive music lessons."

The link between music and spatial reasoning is important since spatial reasoning skills are part of the abstract reasoning skills the brain uses to perform both common, everyday activities--such as walking--and complex functions like solving problems in math and engineering.

In an Education Week interview last April, Rauscher explained the impact of music on the brain's wiring this way: "What we think music is doing is stabilizing the neural connections necessary for this kind of spatial-temporal ability."

The research conducted by Rauscher and her colleagues has gained widespread news media attention from the likes of the NBC News magazine, *Dateline*; USA Today; CBS News Correspondent Charles Osgood; broadcaster Paul Harvey; Associated Press; and countless radio and TV stations coast-to-coast.

Music Training Benefits

Rauscher explained: "Our research also indicates that music training may most benefit those children for whom maximizing academic and career potential is critically important: the disadvantaged. In our pilot study with preschool children, those from disadvantaged backgrounds displayed a particularly dramatic improvement in spatial reasoning ability after music training."

She credits these results to the fact that music is nonverbal and doesn't force youngsters to struggle with language or cultural differences.

"Music programs in schools can help disadvantaged children to learn on much more equal footing with children from more affluent backgrounds," Rauscher wrote in the *Early Childhood News* article.

Other Experiments

In another study that Rauscher and her colleagues have dubbed the "Mozart Effect," they concluded that compared to those who simply sat in silence or listened to instruction, 36 college students who listened to 10 minutes of Mozart's Piano Sonata K-448 subsequently experienced a significant increase in their spatial IQ scores.

Rauscher wrote: "This study reiterated our conclusion that the relationship between music and spatial reasoning is so strong that simply listening to music can make a difference.

"We have now confirmed," she added, "what teachers have long suspected: Music does more

than entertain our children, it also shapes their minds."

Politics of Research Results

Rauscher has taken this message to Capitol Hill, testifying before a U.S. House Appropriations subcommittee in April 1997 on the effects of music on early brain development. President Clinton and First Lady Hillary Rodham Clinton invited Rauscher to the April 1997 White House Conference on Early Childhood Development and Learning. In June 1997, she testified before a U.S. Senate subcommittee on music and neural development.

Rauscher's research also has political impact at the local level, where the budget ax frequently and heavily falls on music and arts programs.

"We believe," Rauscher told an American Music Conference interviewer, "that the research linking music to intelligence can serve as a potent argument before school boards and administrators to ensure that every child receives music as part the school curriculum."

Rauscher Background

Rauscher joined the psychology faculty at the University of Wisconsin, Oshkosh in 1995, where she specializes in early cognitive development. Previously, she was an assistant researcher at the Center for the Neurobiology of Learning and Memory at the University of California, Irvine, where she designed and conducted research on music and preschoolers' reasoning. As a postdoctoral research fellow to Gordon Shaw at the University of California, Irvine, she designed and conducted research on the effects of music on abstract reasoning skills.

She is the author or co-author of almost 30 publications and academic papers. Rauscher also has received almost 20 grants, awards, and honors, including a William T. Grant Foundation Faculty Scholars Award for 1997-2002 research on music training and Head Start preschoolers' abstract reasoning abilities.

As a musician, she performed in a televised master class with the legendary cellist Pablo Casals. She also performed as a cello soloist for several years at the Aspen, Tanglewood, Spoleto, and Siena music festivals, as well as in Canada and Europe. Rauscher also performed as a cello soloist with Mstislav Rostropovich, then-conductor of the National Symphony Orchestra.

Rauscher, who was born in New York City in 1957, received a bachelor of music degree (cello) from the Juilliard School in 1979. She earned a bachelor's degree (1984), two master's degrees (1986, 1988), and a doctorate (1992) in psychology from Columbia University.

About IWU

IWU, founded in 1850, enrolls about 2,000 students in a College of Liberal Arts, and individual schools of Music, Theatre Arts, Art, and Nursing. Since 1994, these facilities have been added to the IWU campus: a \$15 million athletics and recreation center, a \$25 million science center, a \$6.8 million residence hall, and a \$5.1 million Center for Liberal Arts.

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