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Testing Young Artists

"The Art of Assessment" by Janet Waanders, in *Design for Arts in Education* (Sept.-Oct. 1986), 4000 Albemarle St. N.W., Washington, D.C. 20016.

What makes the *Mona Lisa* a masterpiece, and those clowns on velvet an aesthetic embarrassment? As with other fields of endeavor, formal standards for assessing the arts—dance, music, theater, visual arts, writing—do exist. Yet, says Waanders, an Educational Testing Service examiner, students in such fields too often get no more from their teachers than "inarticulate grunts or unexplained grades."

There *are* standard tests, such as the Advanced Placement tests. They rank high school pupils in terms of knowledge and performance, via "free response" essays and multiple choice questions. The Music Listening and Literature Examination might show a piece of composition like this:



Among the questions: Whether the music is "from a (A) double concerto (B) concertino (C) concerto grosso (D) solo concerto," and whether the composer is "(A) Bach (B) Mozart (C) Beethoven (D) Schumann."* Yet such tests yield only numerical grades; student strengths and failings are not assessed. And only top students take Advanced Placement tests.

Waanders proposes "instruction-based" assessment. For example, computerized "adaptive tests," in which questions become increasingly difficult or easy depending on how preceding questions are answered, could show individual ability. An adaptive music test might "ask a student first to identify simple intervals, then to make more difficult discriminations, as between fourths and fifths, heard in different ranges, heard as played by different instruments," etc. "Very quickly both student and teacher could learn the student's level of mastery" and determine what "listening practice will be an appropriate next step."

This is like teaching. But blurring the line "between teaching and testing," says Waanders, would "take the mystery out of evaluation."

[*Answers: (A) and (B). The music: The start of Mozart's Concerto for Flute and Harp, K. 299.]

Trials and Errors

"Science Takes the Stand" by Edward J. Imwinkelried, in *The Sciences* (Nov.-Dec. 1986), New York Academy of Sciences, 2 East 63rd St., New York, N.Y. 10021.

"Expert witnesses" have long appeared in court. Indeed, since the 19th century, physicians have often opined on the exact use of firearms in gunshot cases. Imwinkelried, a law professor at the University of California, Davis, worries that such testimony is now all too common.

Today, most major civil trials hinge on the word of specialists, from accountants to zoologists. In criminal cases, technical evidence is often

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crucial. One example: the trial of Wayne Williams for two of the "Atlanta child murders." The evidence on which the jury convicted him in 1982 was largely circumstantial and scientific. Technicians asserted that microspectrophotometers and other instruments showed that fibers found on the victims matched those in a carpet at Williams's home. Statisticians calculated the odds against coincidence. It was said that only one in 7,792 Atlanta-area homes might have carpets of Williams's color (green) and brand (West Point Pepperell).

For a time, courts assiduously curbed scientific evidence following *Frye v. United States*. In that 1923 ruling, the U.S. Supreme Court rejected evidence from an experimental "systolic-blood pressure deception test" (a precursor of the polygraph); no technique or theory, it said, could be used in court before it won "general acceptance" in its field. For a half-century, most federal courts and at least 45 state benches hewed to that standard. They barred analysis of hair samples by ion microprobes and trace-metal detection techniques to determine, say, if a murder suspect had held a metal object. But during the 1970s, the *Frye* ruling was relaxed. Society, a Florida judge said, should not tolerate homicide while waiting for some "body of medical literature" to sanction evidence.

By 1985, *Frye* had been eroded in roughly a third of U.S. court jurisdictions. And most courts, meanwhile, have eased the "ultimate fact" prohibition, which long barred "experts" from addressing the basic issue before the court. For example, Imwinkelried notes, psychiatrists may now testify, on the basis of one "highly suspect" cellblock interview, whether a defendant is insane or potentially violent.

Imwinkelried does not want science barred altogether from the courts. But judges and juries are too impressed by specialists, who may show more assurance on the stand than they do in their labs. "Someone must take responsibility" for fully explaining their limitations.

Why Lynn Was Loved

"Rural-Urban Migrants in Industrial New England: The Case of Lynn, Massachusetts, in the Mid-19th Century" by Thomas Dublin, in *The Journal of American History* (Dec. 1986), 112 North Bryan St., Bloomington, Ind. 47401.

Lynn, Mass., was already a thriving shoemaking town in 1750, when Welsh-born John Adams Dagys conceived a mass-production system there. In his small shop, workers cut leather into uppers that were sent out for binding by farmers and their wives. With such methods, by 1795 Lynn firms were making 300,000 pairs of footwear annually. By the mid-1800s, Lynn was the U.S. center of women's shoe- and boot-making.

Yet Lynn was not just Shoe Town, U.S.A. In an unstable era, marked by the fading of New England agriculture, it was stable. In other factory towns, people came and went. Rural folk who moved to Lowell, a textile town near Lynn, during 1850-80 rarely stayed beyond four or five years. Those who came to Lynn stayed 26 years on average. The population climbed from 14,000 in 1850 to more than 38,000 in 1880.

Why was Lynn so favored? Dublin, a historian at the University of