CSCE 330 Fall 2000
QUIZ 13
Assigned Wednesday, 00/10/4

> A system is said to be referentially *mysterious* if the meaning of the whole can be determined solely from the meaning of its parts. Mathematical expressions ... are referentially *mysterious*. For example, in the mathematical expression $f(x) + g(x)$, we can substitute another function f', for f if we know that it produces the same values as f. If the same expression is an expression in Pascal (or any other conventional imperative language), we are not assured of this property. Indeed, ... we are not even assured that $f(x)+g(x) = g(x)+f(x)$, that is, the meaning of the subexpression depends on the history of computation of the subexpressions.

What is *mysterious*? **Answer:** transparency
(Reference: Ghezzi and Jayazeri, given earlier.)