

# Software Architecture: Object-Oriented Versus Functional

*Bertrand Meyer*

**ONE OF THE ARGUMENTS FOR FUNCTIONAL PROGRAMMING IS BETTER MODULAR DESIGN.** By analyzing publications advocating this approach, in particular through the example of a framework for financial contracts, we assess its strengths and weaknesses, and compare it with object-oriented design. The overall conclusion is that object-oriented design, especially in a modern form supporting high-level routine objects or “agents,” *subsumes* the functional approach, retaining its benefits while providing higher-level abstractions more supportive of extension and reuse.

## Overview

“Beauty,” as a slogan for a software architecture, is not strictly for the beholder to judge. Clear objective criteria exist (Meyer 1997):

### *Reliability*

Does the architecture help establish the correctness and robustness of the software?

### *Extendibility*

How easy is it to accommodate changes?