Chapter 12, *When the Bazaar Sets Out to Build Cathedrals*, by Till Adam and Mirko Boehm, demonstrates how community processes such as sprints and peer-reviews can help software architectures evolve from rough sketches into beautiful systems.

Part V: Languages and Architecture

As many people have pointed out in their works, the programming language we use affects the way we solve a problem. But can a programming language also affect a system's architecture and, if so, how? In the architecture of buildings, new materials and the adoption of CAD systems allowed the expression of more sophisticated and sometimes strikingly beautiful designs; does the same also apply to computer programs? Part V, which contains the last two chapters, investigates the relationship between the tools we use and the designs we produce.

Chapter 13, *Software Architecture: Object-Oriented Versus Functional*, by Bertrand Meyer, compares the affordances of object-oriented and functional architectural styles.

Chapter 14, *Rereading the Classics*, by Panagiotis Louridas, surveys the architectural choices behind the building blocks of modern and classical object-oriented software languages.

Finally, in the thought-provoking Afterword, William J. Mitchell, an MIT Professor of Architecture and Media Arts and Sciences, ties the concept of beauty between the building architectures we encounter in the real world and the software architectures residing on silicon.

Principles, Properties, and Structures

Late in this book's review process, one of the reviewers asked us to provide our personal opinion, in the form of commentary, on what a reader could learn from each chapter. The idea was intriguing, but we did not like the fact that we would have to second-guess the chapter authors. Asking the authors themselves to provide a meta-analysis of their writings would lead to a Babel tower of definitions, terms, and architectural constructs guaranteed to confuse readers. What was needed was a common vocabulary of architectural terms; thankfully, we realized we already had that in our hands.

In the Foreword, Stephen Mellor discusses seven principles upon which all beautiful architectures are based. In Chapter 1, John Klein and David Weiss present four architecture building blocks and six properties that beautiful architectures exhibit. A careful reader will notice that Mellor's principles and Klein's and Weiss's properties are not independent of each other. In fact, they mostly coincide; this happens because great minds think alike. All three, being very experienced architects, have seen many times in action the importance of the concepts they describe.