

Comparing and Contrasting the views
of Booch with Gotterbarn/Miller

The term “Computer Science” can seem, to some, an oxymoron. After all, there are not lab coats, microscopes, beakers, or flasks; and yet it is a science as much as biology or chemistry. It is merely a new branch of science; so new, in fact, that we are still attempting to understand how it should be best approached and applied in the real world. A large part of this course deals with design, and building the framework for a project. The two papers, “Architecture as a Shared Hallucination”, and “Unmasking Your Software’s Ethical Risks” both deal with the general design process, albeit while approaching the issue from different angles.

Grady Booch is the author of “Architecture as a Shared Hallucination”, as well as being one of the original authors of the UML visual language. In the article, he refers to the design architecture as being a “shared hallucination” (Booch, 96). By which he means that it represents a vision shared and pursued by all of the stakeholders in that project. He also discusses how to best represent that shared vision/hallucination; mostly advocating a visual language or representation. Visual models are superior because “they allow us to present an abstraction with some degrees of freedom yet without ambiguity, and then let the brain do the reasoning.”(Booch, 96) The rest of the article is devoted to the qualities of a good architecture, and how they compromise the design. The first three of the five are simply logistical concerns: security, patterns, general design choice. The other two are less tangible. They cover personal, smaller design choices, and the reasons for why they were made. These choices are often lost in the final product, and may never be revealed. It is important to realize the impact that these choices have on the architecture, and how they might reflect the “shared hallucination”. Finally, he discusses a broad overview of architecture, mentioning it's

strength, flexibility, and ultimate reflection of that shared hallucination.

The second article was penned by two authors, Don Gotterbarn and Keith Miller, both of whom are professors of Computer Science. In their article, “Unmasking Your Software’s Ethical Risks” they also examine the design process of a project; however, their focus is more towards the ethical responsibility of programmers and designers. They first talk about taking into consideration who the stakeholders for this project are. This extends beyond people in the company, and applies to anyone who could be affected by this program or its functions. This also applies to the rights and obligations of those people, and how they might be affected by the program. Next they mention a code set down by IEEE/ACM regarding ethical choices in computer science; which lays down some general rules, and suggests a mindset of a reasonably informed non-technical person. They end this with an emphasis on the fact that “What we develop must be designed for the public good.”(Gotterbarn/Miller, 13) They stress that if there is suspicion of a problem, it usually means that investigation is required. The main point of this article is to be aware of, and be prepared to recognize any ethical problems a program may have or lead to.

While both of these articles focus on the initial phase of program design. They approach it from different angles. Gotterbarn and Miller focus on the moral obligations of programmers and engineers, while Booch focuses on the need for unity of purpose in architecture, and the need for everyone's shared vision to be expressed and communicated properly. Both of these points are valid, and can be taken together when beginning the design process. By using the recommended questions from the IEEE/ACM moral guidelines during the initial planning stages, everyone's “shared hallucination” can be brought within the same moral boundaries and checked against those boundaries. Even though these papers are discussing different aspects, they both lay out useful guidelines for a successful and effective architecture design.