

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK
DEPARTMENT OF COMPUTER SCIENCE

April 25, 2012

Professor Bjarne Stroustrup
Department of Computer Science
Texas A&M University
College Station, TX

Dear Bjarne,

I wish I could have come in person to your Festschrift but as admiring as I am of you and your work, the pull of my 128 students engaged in programming language and compiler projects this semester has been overwhelming. The straw that broke the camel's back was the fact that this is the last week of classes at Columbia and I am overwhelmed by students consulting me on how to get their compilers working before the class ends.

However, I did not want this occasion to pass without sharing with your distinguished guests some of your adventures that I am aware of from the past thirty years. In 1979, I remember you joining the Computing Science Research Center at Bell Labs, the center that I had joined a decade earlier. I believe your initial job charter was to "do something interesting" and your idea of something interesting was to add Simula-like features to C. In a few years, I noticed these ideas bore fruit in a new object-oriented language which got to be named C++. In a few more years, I noticed C++ had become the world's most popular object-oriented programming language used by millions of programmers. And today, many of the world's most significant software systems are implemented in C++. I think everyone would agree that you did something interesting!

As I am sure everyone in the audience knows, the path to commercialization of a new idea is never easy and the path by which C++ became the world's most widely used commercial programming language was no exception. I had become the director of the Computing Science Research Center and senior management at AT&T had requested that we commercialize C++. During this festive occasion, however, I don't want to get into the details of how this actually happened. Suffice it to say that if anyone in the audience is interested how this occurred, I know that Bjarne likes fine claret, and I am sure if you give enough of it to Bjarne he will regale you with some interesting stories.

Let me conclude by saying I always like learning new ideas from great people, and over the years I have learned a lot about programming and programming languages from Bjarne. These are the top ten things I remember learning from Bjarne:

1. C makes it easy to shoot yourself in the foot; C++ makes it harder, but when you do, it blows your whole leg off.

2. There are only two kinds of languages: the ones people complain about and the ones nobody uses.
3. C++ is my favorite garbage-collected language because it generates so little garbage.
4. C++ is designed to allow you to express ideas, but if you don't have ideas or don't have any clue about how to express them, C++ doesn't offer much help.
5. Within C++, there is a much smaller and cleaner language struggling to get out.
6. When (not if) automatic garbage collection becomes part of C++, it will be optional.
7. If you think it's simple, then you have misunderstood the problem.
8. Certainly not every good program is object-oriented, and not every object-oriented program is good.
9. An organization that treats its programmers as morons will soon have programmers that are willing and able to act like morons only.

And my favorite:

10. It's easy to win forgiveness for being wrong; being right is what gets you into real trouble.

Bjarne, I'd like to congratulate you on your hugely impactful contributions to programming languages, and I'd like to wish you the best of success in your continuing valiant efforts to improve the quality of the world's software.

Your friend,
al

Alfred V. Aho
Lawrence Gussman Professor