

1993



The Bulgarian artist, Christo (Javatcheff), presented his new project to wrap the Berlin Reichstag building which was put into effect in 1995.

1996



The Scottish embryologist, Ian Wilmut, created Dolly, the first time that DNA had been used successfully to clone a mammal.

1997



The Massachusetts Institute of Technology, MIT, worked out the first prototypes of intelligent clothes.

2001



Two aircraft hijacked by suicide terrorists smashed into the twin towers of the World Trade Center in New York.

2003



Quo vadis?

_legacy

Dahl, Dijkstra and Nygaard all died in 2002, each man leaving behind a tremendous intellectual legacy.

One appreciation of their work can be found in the ACM Turing Award Citations:

About Dijkstra: "He is one of the principal exponents of the science and art of programming languages in general, and has greatly contributed to our understanding of their structure, representation, and implementation."

(ACM Turing Award 1972)

About Dahl and Nygaard: "For ideas fundamental to the emergence of object-oriented programming, through their design of the programming languages Simula I and Simula 67."

(ACM Turing Award 2001)

There are two main areas of influence on computing science:

- Algorithmic work that introduced new solutions of known problems or even established new fields of research. A large part of Dijkstra's work falls especially into this area.
- New ways of thinking (programming paradigms, architectures etc.) that changed the way of thinking about computing systems. Part of Dijkstra's work and most of the work about Simula fall in this area.

Most of the algorithmic work is easier to recognize in everyday life (e.g. routing planners). The more important impact of the work of Dahl, Dijkstra and Nygaard is their paradigmatic work influencing software engineering and all subsequent programming language design. Their breakthroughs on modularization, object-orientation, layering, and many more are today accustomed ways of thinking – the true sign of greatness.

"A characteristic of Ole-Johan Dahl as a researcher is his seeking for simplicity, elegance, purity and orthogonality rather than ad-hoc solutions, exceptions and compromises," wrote Olaf Owe.

Dahl's deep love for music and his capability to work in an unusually concentrated manner on scientific problems seemed to complement and strengthen each other. He was probably the personal manifestation of Dijkstra's "separation of concerns", he lived this in his practical work.

Kristen Nygaard was a strongly communicative and political man. The fear that his country might abandon its high regard for social values made him an opponent of Norwegian membership in the EU. Shortly before his death he started a major project about didactic aspects of object-orientation.

He understood his metier in a very broad context.

The friendship between Dahl and Nygaard over decades is one of the most beautiful chapters in the – admittedly short – history of computing. They had a deep respect for each other, and a friendship based on hard discussions, honest confrontations, and soaring visions.

Dijkstra was the one always able to find a question where no one could see it, because it was hidden behind the façade of routine and everyday practice. He could also find simple solutions for problems that were considered complex by others – because he was able to find the essential and forget the rest. He was "not the man for working in a team!" – as Niklaus Wirth wrote us – "In fact, he realized this after the 'THE' operating system project and vowed to work alone henceforth." Similarly to Dahl he played piano even in his late years.

All three men had a strong inner motivation for doing research in a methodically perfect, simple and elegant way. They were aware of their responsibility as representatives of a new science. As Dijkstra put it:

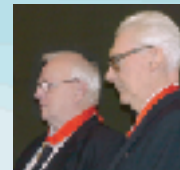
"As the years went by, I became convinced that the influence of automatic computers, in their capacity as tools, would only be a ripple on the surface of our society, compared with the deep influence they were bound to have on our culture in terms of their unprecedented capacity to intellectually challenge mankind."

Each was a researcher, but also an inveterate teacher, fully aware that teaching is a sensitive kind of human communication. As Dijkstra wrote:

"We have not the faintest idea how knowledge, insights and habits are transferred."



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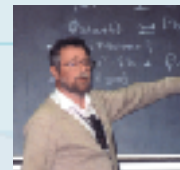
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