



/ Simula 50 OOP talk / Outline / Prologue — Where are the objects?

Image: Guernica?

<https://fineartamerica.com/featured/the-battle-nicolas-poussin.html>

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arms / Simula 1962/1967

<http://www.npr.org/sections/health-shots/2016/02/02/465188104/phosphorus-starts-with-pee-in-this-tale-of-scientific-serendipity>

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arms / Simula 1962/1967 / Origins of Simula — queues vs stacks

<http://campus.hesge.ch/daehne/2004-2005/langages/simula.htm>

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arm... / Simula 1962/1967 / Origins of Simula — ... / Started as simulatio...

Dahl and I started out to make a simulation language, but of course we have spent so much time with all these people working on general purpose languages, that I must admit we have to some extent fallen in love with the concept of general purpose languages.[\[60\]](#)

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arms / Simula 1962/1967 / Origins of Simula — queues vs stacks / Inheritance 1967

<https://fineartamerica.com/featured/the-prodigal-son-receiving-his-portion-of-the-inheritance-bartolome-esteban-murillo.html>

/ Simula 50 OOP tal... / Outline / Part 1 — Call to ... / Simula 1962/1967 / Origins of Simula... / Inheritance 1967 / "Prefixing" — add...

Class and Subclass Declarations Paper

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arm... / Simula 1962/1967 / Origins of Simula — ... / discovery that OO is...

"In spite of the success of Simula I as a practical tool it became increasingly clear that the activity/process concepts, if stripped from all references to simulated time, would be useful for programming and system design in general." (Dahl 2001)

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arm... / Simula 1962/1967 / Origins of Simula — ... / Dahl early history p...

<http://www.olejohandahl.info/old/birth-of-oo.pdf>

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arm... / Smalltalk 1971/1980 / Smalltalk -- new gen... / Tower of turtles

<http://kk.org/thetechnium/recursive-gener/>

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arm... / Smalltalk 1971/1980 / Smalltalk -- new gen... / Escher lizards

<https://www.pinterest.com/pin/8310555593898884/>

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arms / Smalltalk 1971/1980 / Alan Kay demoing ST to KN

He not only understood everything I said, but often told me what I was going to show him next.

[http://heim.ifi.uio.no/~gisle/in\\_memoriam\\_kristen/](http://heim.ifi.uio.no/~gisle/in_memoriam_kristen/)

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arms / Smalltalk 1971/1980 / Mystical view / Ingalls — objects talking to objects

“Instead of a bit-grinding processor ... plundering data structures, we have a universe of well-behaved objects that courteously ask each other to carry out their various desires.”

— Ingalls 1981

Design Principles Behind Smalltalk, Byte Magazine, August 1981.

/ Simula 50 OOP tal... / Outline / Part 1 — Call to ... / Smalltalk 1971/19... / Mystical view / Programming is ob... / Computation is si...

Ingalls quote P2 lecture 2

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arms / Data abstraction / Liskov 1974

[https://en.m.wikipedia.org/wiki/Abstract\\_data\\_type](https://en.m.wikipedia.org/wiki/Abstract_data_type)

/ Simula 50 OOP talk / Outline / Part 1 — Call to Arms / Data abstraction / "A stack is not an object"

James Noble paraphrasing Alan Kay.

/ Simula 50 OOP talk / Outline / Part 2 — The Golden ... / Proliferation of OO ... / C++ 1979/1983 / OOP Is data abstract...

Decide which classes you want; provide a full set of operations for each class; make commonality explicit by using inheritance.

What is “Object-Oriented Programming”? (1991 revised version)

/ Simula 50 OOP talk / Outline / Part 2 — The Golden Age / Proliferation of OO languages (1980s) / Objective C 1981/1982

1986 - Brad Cox and Tom Love create Objective-C, announcing "this language has all the memory safety of C combined with all the blazing speed of Smalltalk." Modern historians suspect the two were dyslexic.

[james-iry.blogspot.it/2009/05/brief-incomplete-and-mostly-wrong.html](http://james-iry.blogspot.it/2009/05/brief-incomplete-and-mostly-wrong.html)

<http://james-iry.blogspot.it/2009/05/brief-incomplete-and-mostly-wrong.html>

/ Simula 50 OOP talk / Outline / Part 2 — The Golden ... / Proliferation of OO ... / Eiffel 1985 / OOSC is based on the...

OOSC 2nd edition, ch 5.4

See also defn 2 ch 6.5

/ Simula 50 OOP talk / Outline / Part 2 — The Golden Age / Ralph Johnson — Three views of OOP

"I explain three views of OO programming. The Scandinavian view is that an OO system is one whose creators realise that programming is modelling. The mystical view is that an OO system is one that is built out of objects that communicate by sending messages to each other, and computation is the messages flying from object to object. The software engineering view is that an OO system is one that supports data abstraction, polymorphism by late-binding of function calls, and inheritance."

/ Simula 50 OOP talk / Outline / Part 2 — The Golden ... / Ralph Johnson — Thre... / Software Engineering... / Wegner and Zdonik 19...

<http://scg.unibe.ch/scgbib?query=Wegn88a&display=abstract>

/ Simula 50 OOP tal... / Outline / Part 2 — The Gold... / Ralph Johnson — T... / Software Engineer... / Wegner and Zdonik... / Wegner 1987: OOP ...

## **Dimensions of object-based language design**

/ Simula 50 OOP tal... / Outline / Part 2 — The Gold... / Ralph Johnson — T... / Software Engineer... / Wegner and Zdonik... / Wegner and Cardel...

<http://scg.unibe.ch/scgbib?query=Card85c&display=abstract>

/ Simula 50 OOP talk / Outline / Part 2 — The Golden Age / Early OO hype / OO methods / Ed Berard

<http://www.ipipan.gda.pl/~marek/objects/TOA/OOMethod/mcr.html>