

# Some Recent History: Weapons of Math Destruction

DEp00W

17 March 2022



*WIE DIE  
WELT IN  
DEN  
Zur  
Entstehung  
digitaler  
Wirklichkeit*  
*COMPUTER  
KAM*



# How the World Came into Computer (David Gugerli, 2018)

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## Contents:

- Settings
- Computing, Programming, Formatting
- Dividing and taking care of
- Synchronising
- Producing und directing
- Connecting, borders, saving
- Switching off

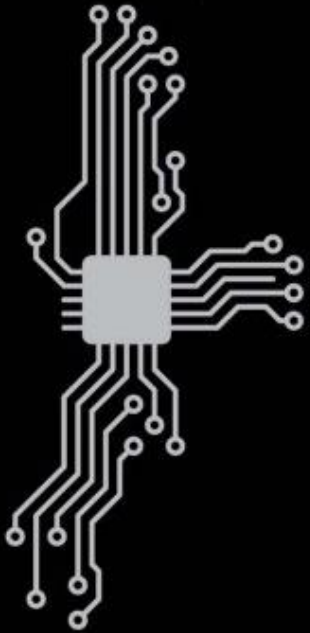
# Early Modern computers

- Wilhelm Schickard (1592-1635)
- Blaise Pascal (1623-1662)
- Gottfried Wilhelm Leibniz (1646-1716)
- Joseph-Marie Jacquard (1752-1834)
- Charles Babbage (1791-1871)
- Ada Lovelace (1815-1852)
- Herman Hollerith (1860-1929)
- Alan Turing (1912-1954)

# COMPUTING

A CONCISE HISTORY

PAUL E. CERUZZI



## Computing. A Concise History (Paul Ceruzzi, 2003, rev. 2012)

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### Table of Contents:

The digital age

The first computers, 1935-1945

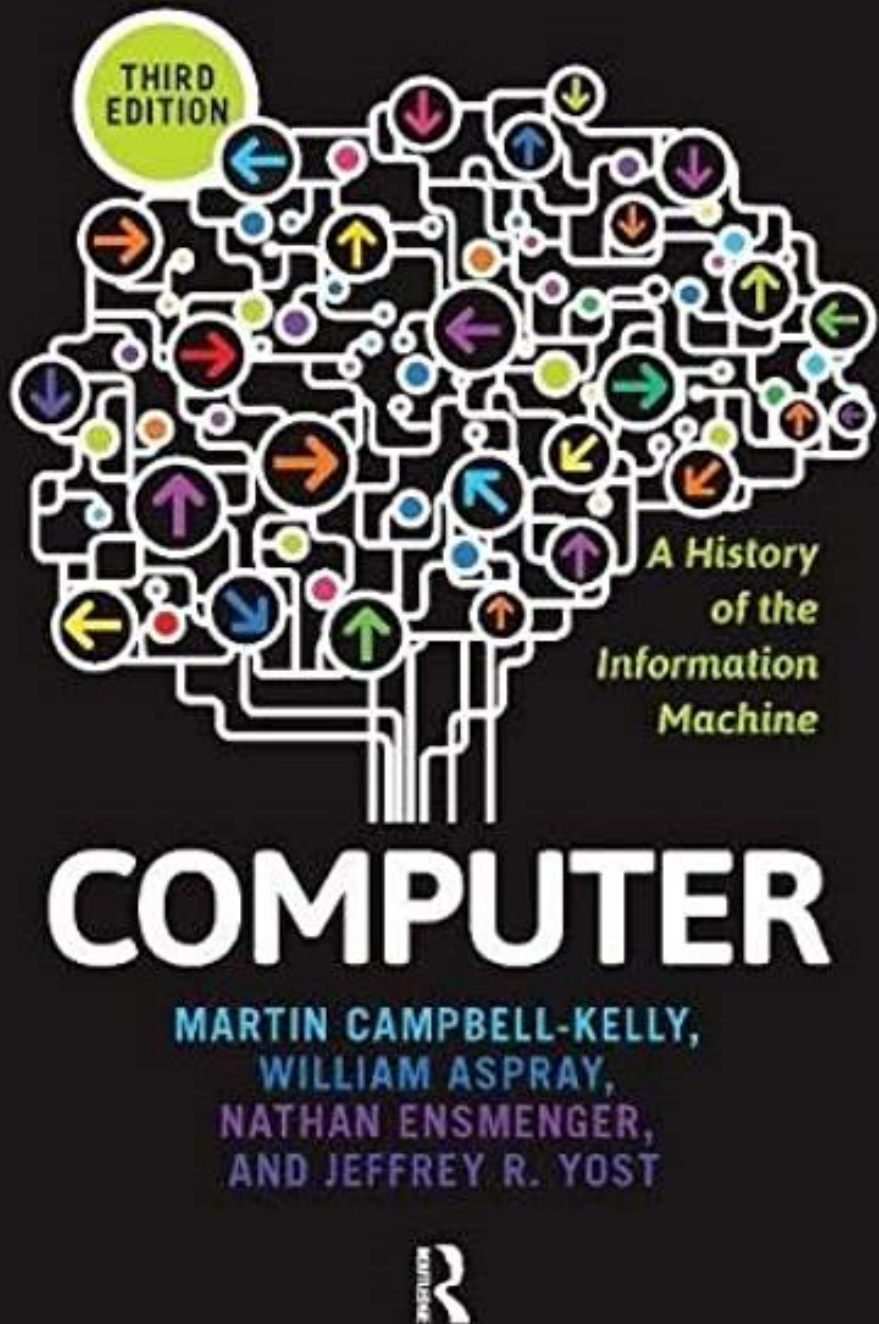
The stored program principle

The chip and Silicon Valley

The microprocessor

The Internet and the World Wide Web

Conclusion.



# Computer: A History of the Information Machine

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- Written originally by William Aspray and Martin Campbell-Kelly
- Re-written together with Jeffrey R. Yost and Nathan Ensmenger
- Overview --- from the point of view of information transfer
- Library science / information studies / informatics
- Digitisation
- Mathematisation

# From Counterculture to Cyberculture (Fred Turner, 2006)

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## Contents:

1. The Shifting Politics of the Computational Metaphor
2. Stewart Brand Meets the Cybernetic Counterculture
3. The *Whole Earth Catalog* as Information Technology
4. Taking the Whole Earth Digital
5. Virtuality and Community on the WELL
6. Networking the New Economy
7. Wired
8. The Triumph of the Network Mode



from  
**Counterculture  
to  
Cyberculture**

Stewart Brand, the Whole Earth Network,  
and the Rise of Digital Utopianism

Fred Turner

**NATHAN L. ENSMENGER**

**COMPUTERS, PROGRAMMERS,  
AND THE POLITICS  
OF TECHNICAL EXPERTISE**

# **THE COMPUTER BOYS TAKE OVER**

## Computer Boys Take Over (Nathan Ensmenger, 2010)

1. Introducing the Computer Revolutionaries
2. The Black Art of Programming
3. Chess Player, Music Lovers, and Mathematicians
4. Tower of Babel
5. The Rise of Computer Science
6. The Cosa Nostra of the Data Processing Industry
7. The Professionalisation of Programming
8. Engineering Solution
9. Conclusion: Visible Technicians







# A NEW HISTORY OF Modern Computing

Thomas Haigh and Paul E. Ceruzzi

## A New History of Modern Computing (Paul Ceruzzi, Thomas Haigh, 2021)

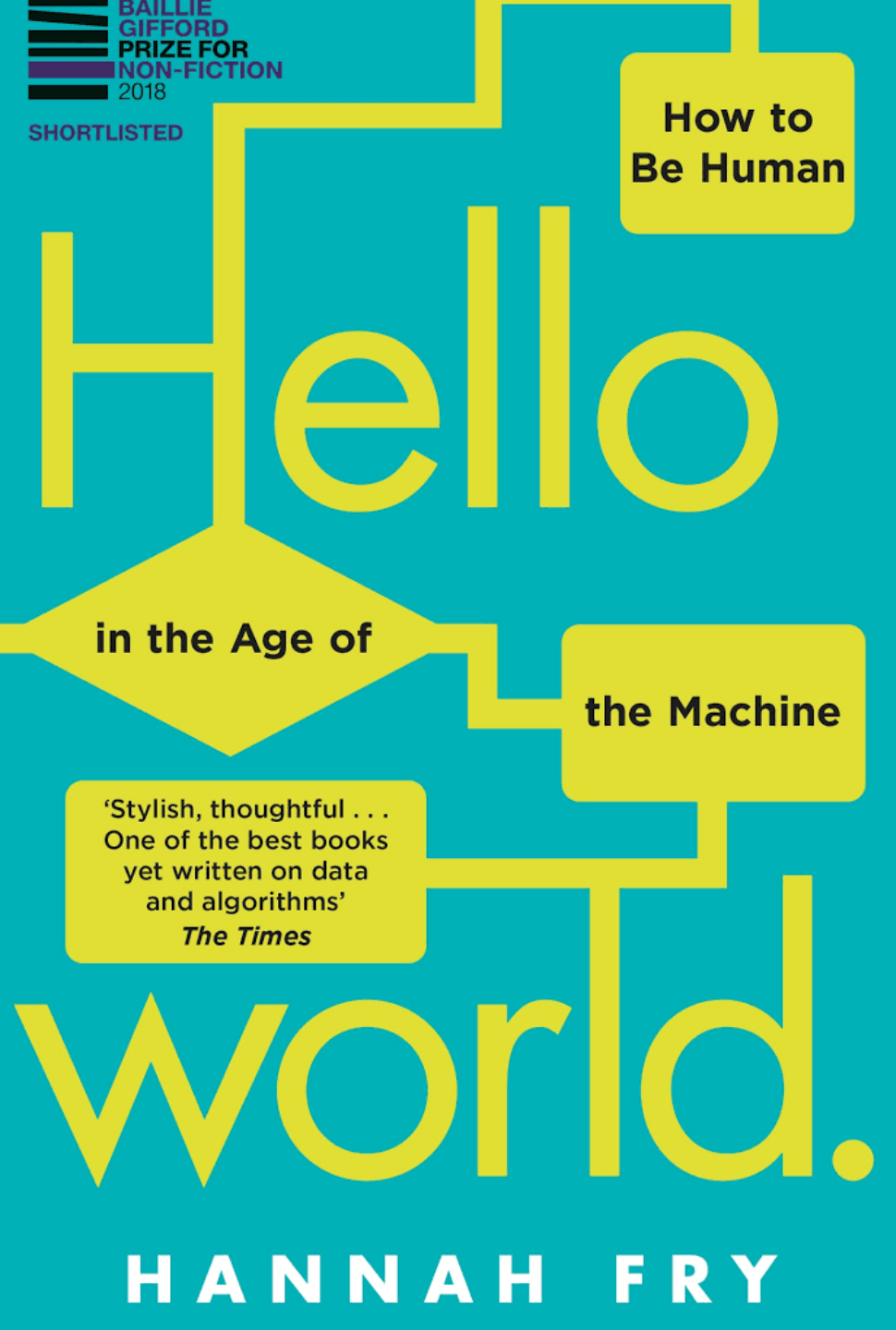
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Becoming Universal:

Introducing A New History of Computing

1. Inventing the Computer
2. The Computer Becomes a Scientific Supertool
3. The Computer Becomes a Data Processing Device
4. The Computer Becomes a Real-Time Control System
5. The Computer Becomes an Interactive Tool
6. The Computer Becomes a Communications Platform
7. The Computer Becomes a Personal Plaything





# Hello World (Hannah Fry, 2018)

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You are accused of a crime. Who would you rather determined your fate - a human or an algorithm?

An algorithm is more consistent and less prone to error of judgement. Yet a human can look you in the eye before passing sentence.

Welcome to the age of the algorithm, the story of a not-too-distant future where machines rule supreme, making important decisions - in healthcare, transport, finance, security, what we watch, where we go even who we send to prison. So how much should we rely on them? What kind of future do we want?



# Where can mathematical models go wrong

1. Teacher evaluation
2. Job application
3. Crime monitoring

What is the problem 1 to 3?

- Relying on previous human experience (e.g. Based on discrimination)
- Little possibility of human intervention / appeal

4. Facebook newsfeed

- Many of us are unaware it happens; and even if we are aware, ...

Facebook:  
art versus  
algorithms

**“TAKE CARE OF  
MUSLIM  
BLACK  
WOMEN + FEMMES  
QUEER LATNX  
NATIVE  
IMMIGRANT  
P.O.C.  
TRANS  
DISABLED  
INCARCERATED  
L.G.B.T.Q. +  
FRIENDS  
FAMILY & COMMUNITY.”**