BETWEEN AUTONOMY AND AGENCY: ART AND ARTIFICIAL INTELLIGENCE

Gunalan Nadarajan
University of Michigan

Abstract: Beginning with a historical and cultural contextualization of artificial intelligence, this talk will show that the creative capacities of AI are inextricably connected to the ways in which these technologies often disable and complicate effective human agency. The growing anxiety and fears about autonomous technologies and artificial intelligence not surprisingly centre on how 'humans are not in control anymore'. The consequent emergence of regulatory regimes and legal safeguards that seek to contain and control the workings and effects of AI have ironically sought to reverse the historical trajectory of such technologies; namely, to return the human into the 'automation loop'. Drawing on a range of artworks it will be shown that such artistic explorations of AI show us the limits of AI and ways of reimagining and acting to ethically restitute agency back to humans.

Bio: Gunalan Nadarajan, an art theorist and curator working at the intersections of art, science and technology, is Dean Emeritus and Professor at the Penny W. Stamps School of Art and Design at the University of Michigan. His publications include multiple books and over 100 book chapters, catalogue essays, academic articles and reviews; many translated into 16 languages. He has curated many international exhibitions including in Mexico, Indonesia, US, Korea, Germany, Japan, Taiwan and China. He was Artistic Co-Director of the Ogaki Biennale 2006, Japan and Artistic Director of ISEA2008 (International Symposium on Electronic Art) in Singapore.

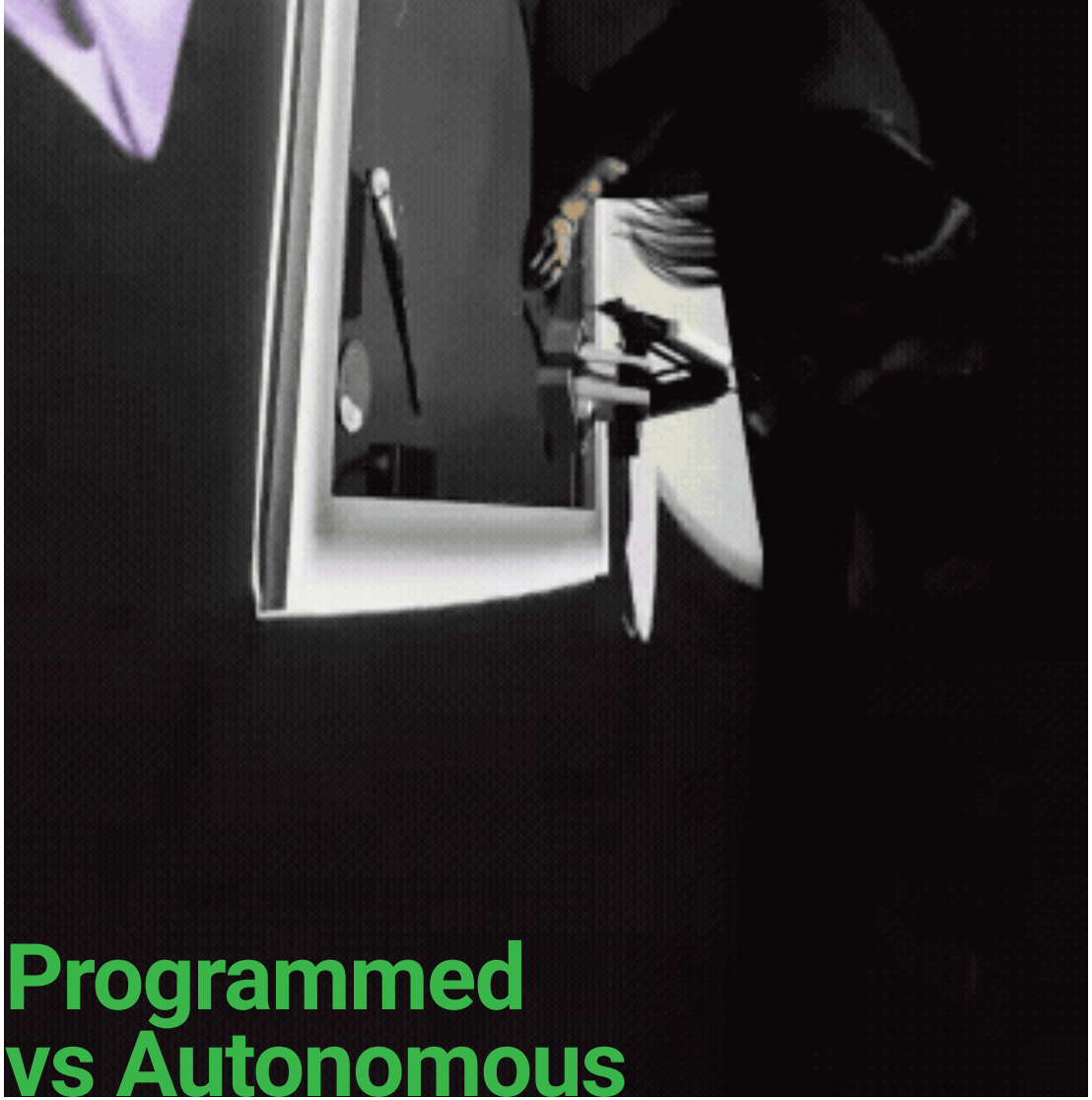
Automation and Artificial Intelligence are fundamentally about human agency

how these shift responsibility for actions and decisions from humans to machines and systems

Tangled Histories of Artificial Intelligence

Automated Devices and Combinatorial Art

Control vs Submission



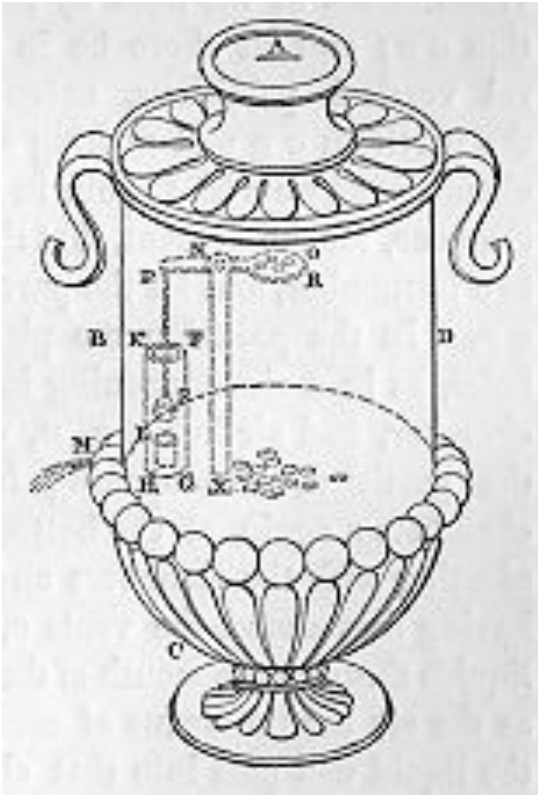
Programmed vs Autonomous

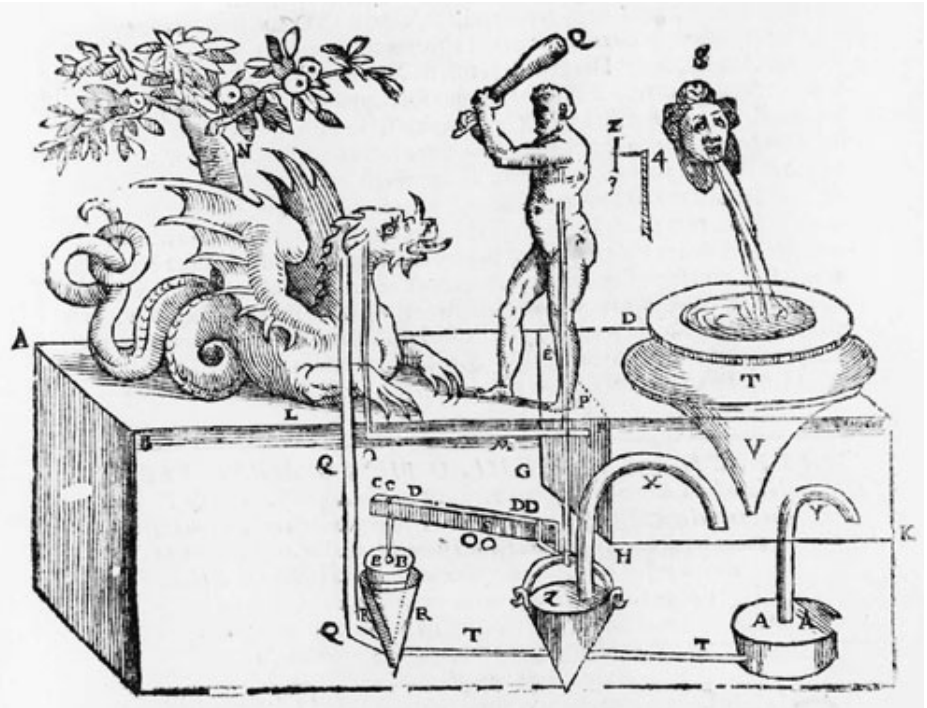
Gunalan Nadarajan, University of Michigan

Automated Devices

Hero

100 CE



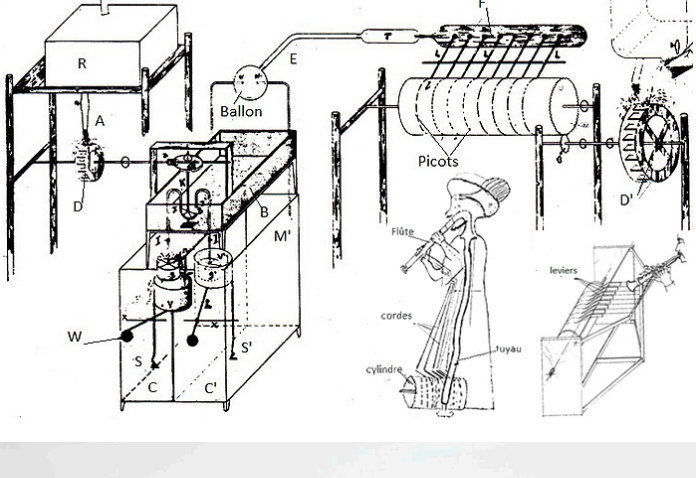


Hydraulic Musical Instrument

Banu Musa

850 CE

Automated Devices



Gunalan Nadarajan, University of Michigan

Automated Devices

Elephant Clock and wine serving automata

al-Jazari

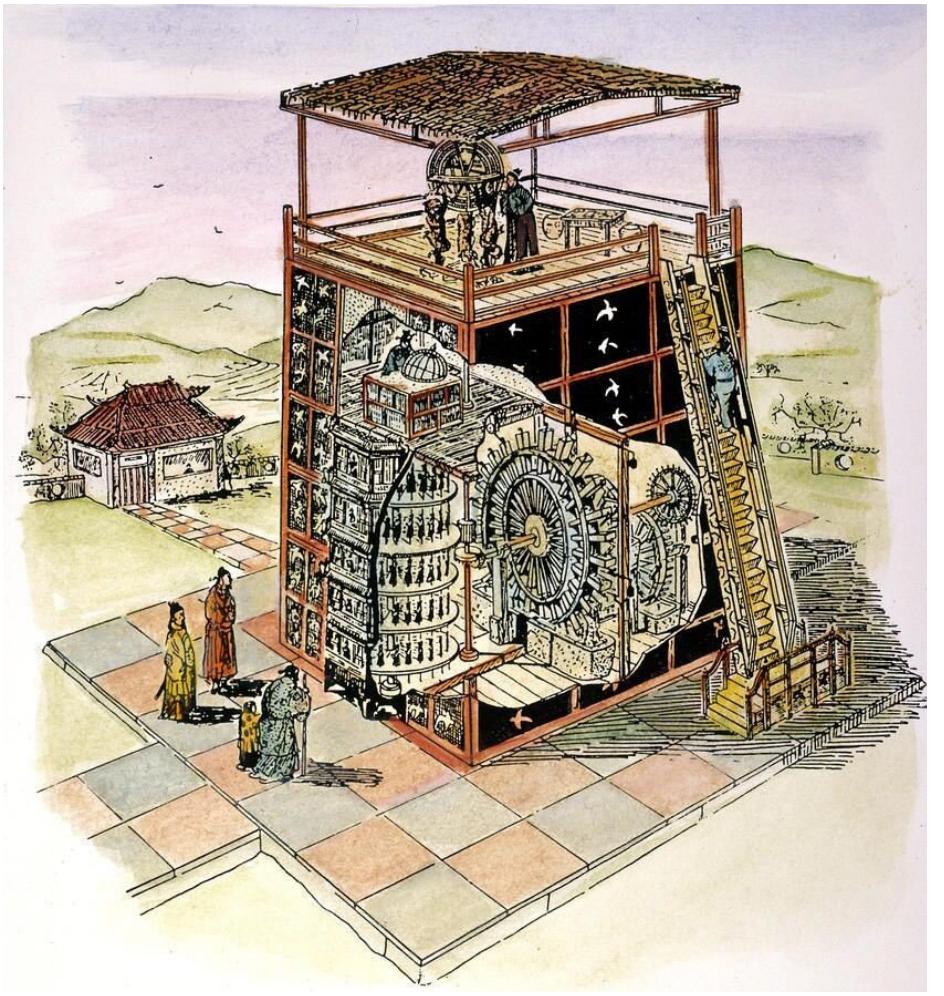
1206 CE

Automated Devices

Astronomical Clock

Su Song

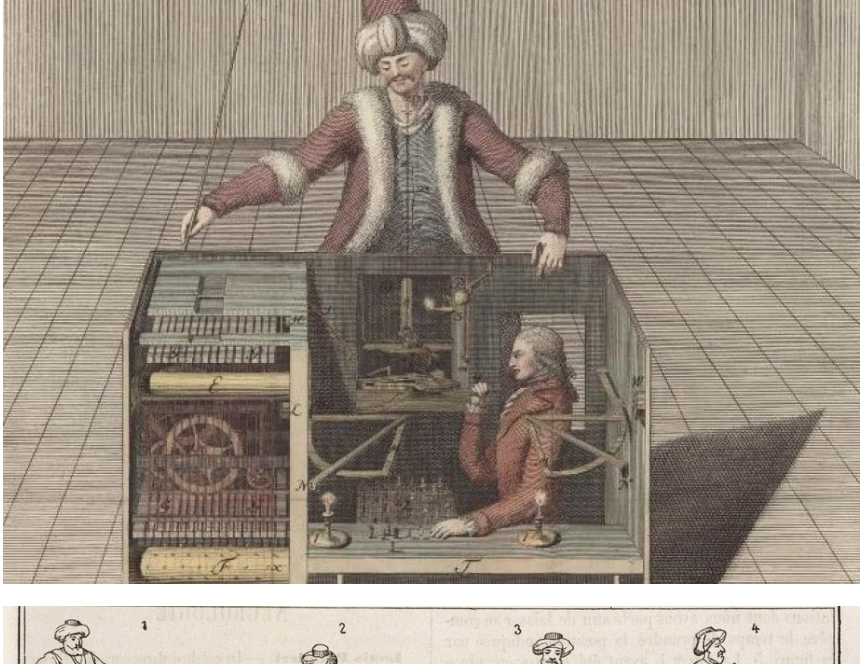
1092 CE

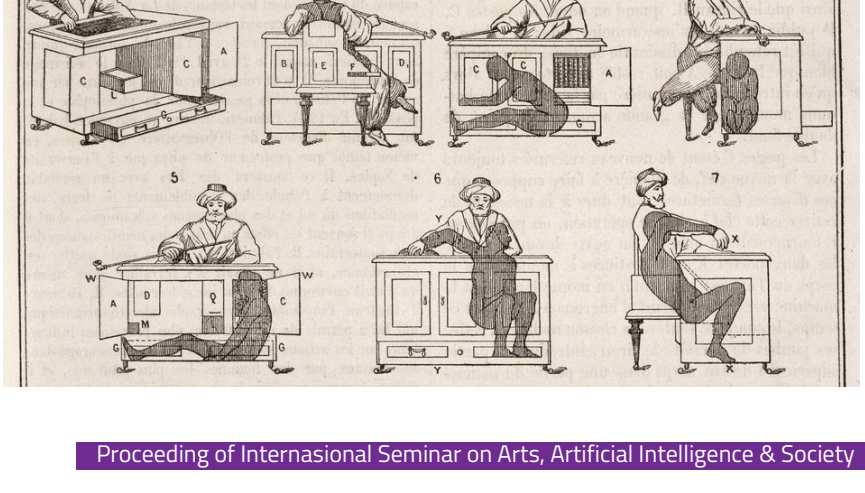


The Magic of the Mechanical Turk

Automated Devices

Gunalan Nadarajan, University of Michigan



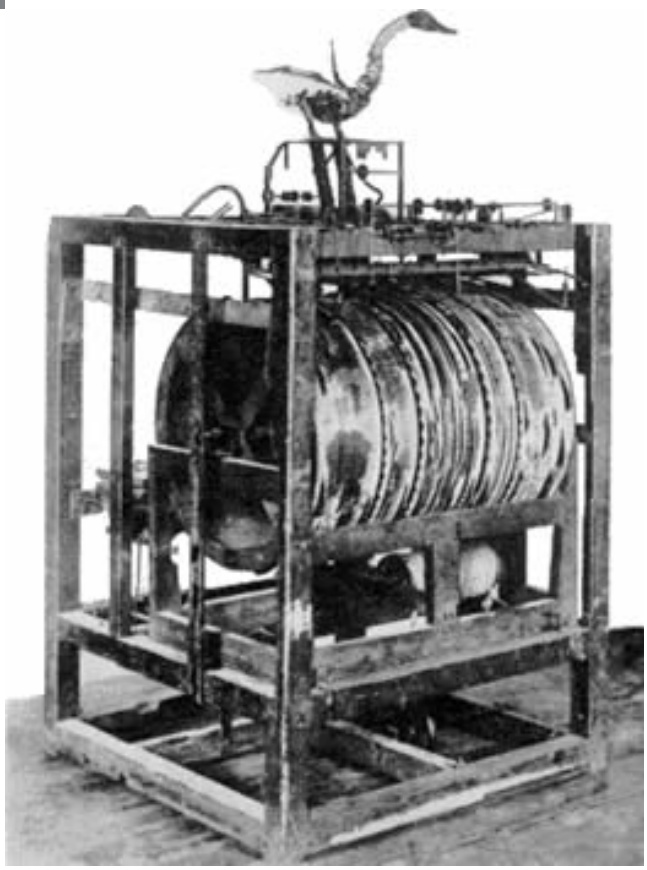


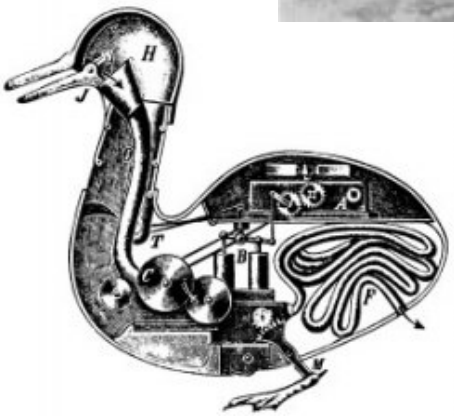
Automated Devices

Defecating Duck

Jacques de Vaucanson

1739 CE





Automated Devices

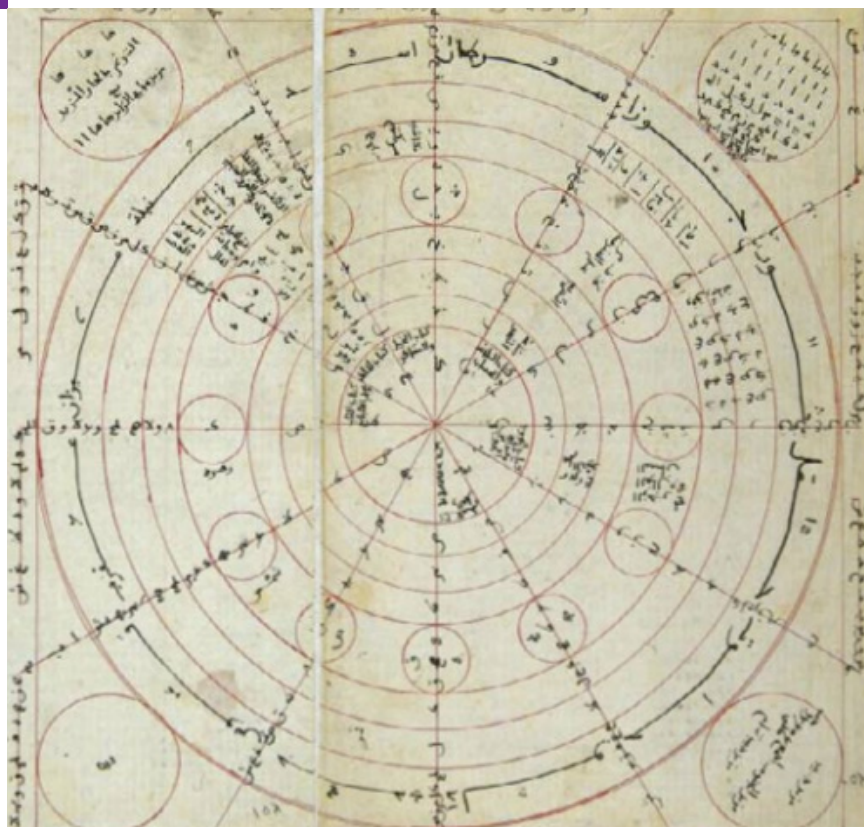
Chahakobi Ningyo

Gunalan Nadarajan, University of Michigan

Combinatorial Art

Zairja

circa 1260



"A branch of the science of letter magic, practiced among the authorities on letter magic, is the technique of finding out answers from questions by means of connections existing between the letters of the expressions used in the question. They imagine that these connections can form the basis for knowing the future happenings they want to know."

Ibn Khaldun, 1377

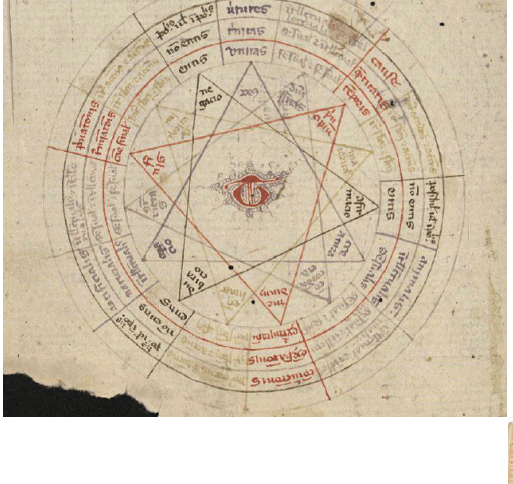
Volvelle, Ars Magna

Ramon Llull

1305

Combinatorial Art

Gunalan Nadarajan, University of Michigan



“Not just logically proving truths by combinatorics of elements and axioms but generating new and unanticipated truths.”

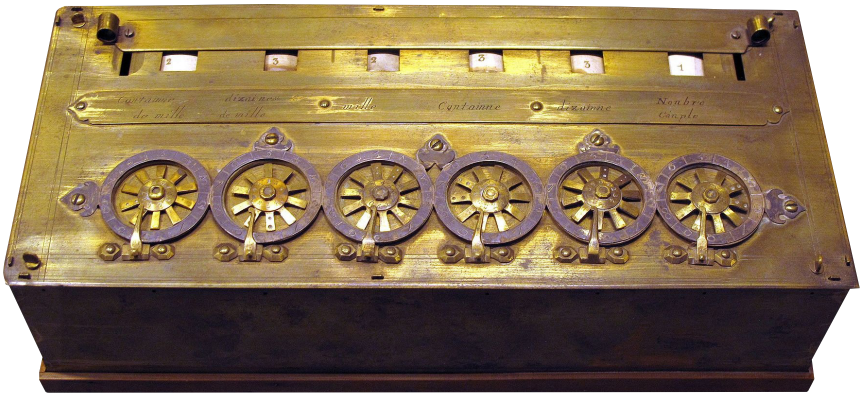
Combinatorial Art

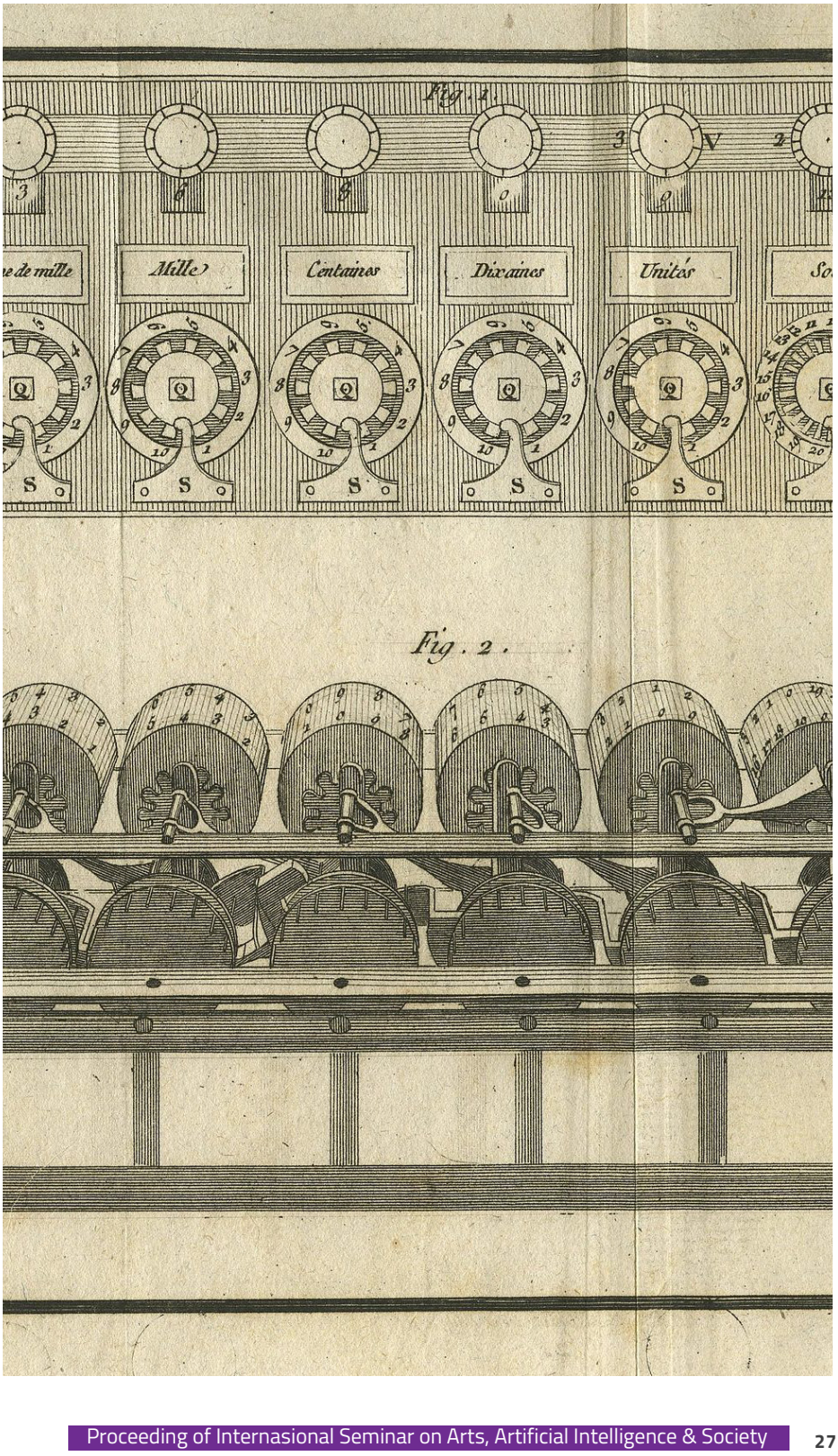
Pascaline

Blaise Pascal

1642

An “arithmetical machine” that “produces effects which approach nearer to thought than all the actions of animals… but it does nothing that would allow us to say it has will.”



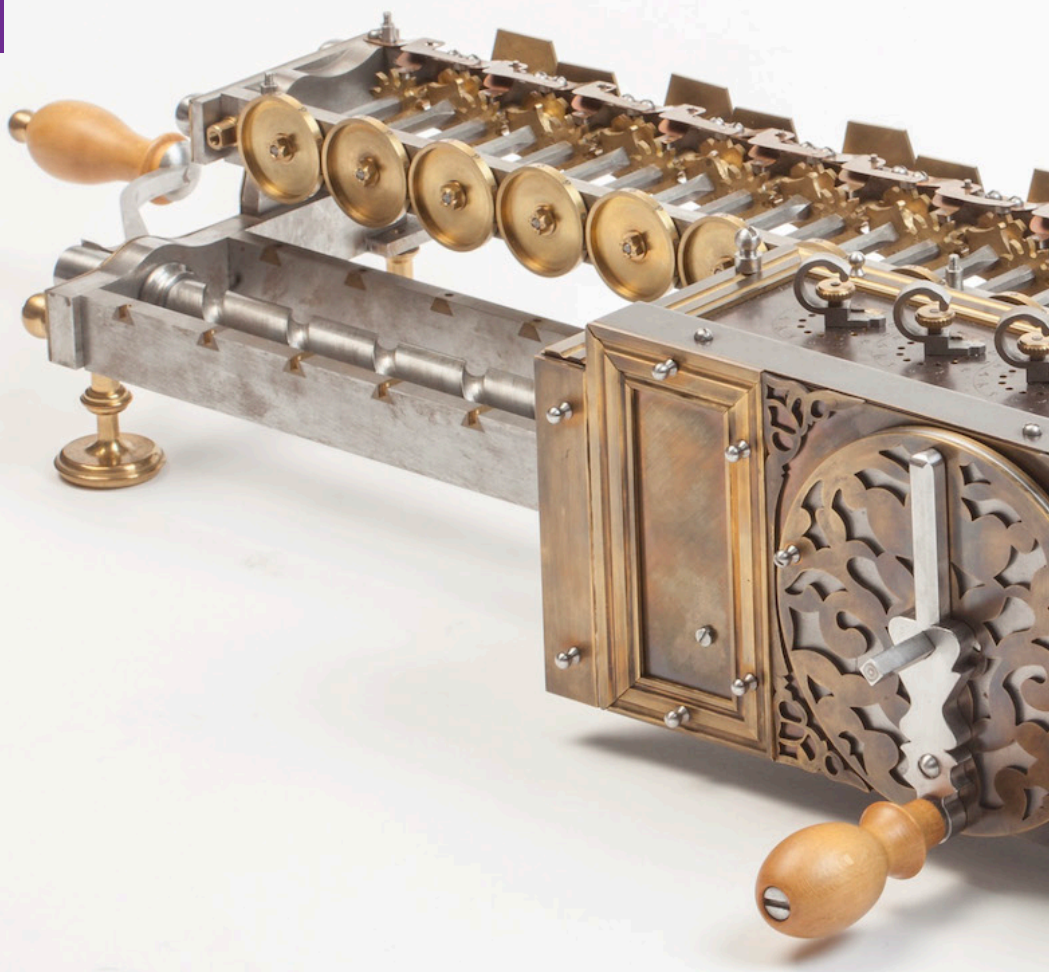


Gunalan Nadarajan, University of Michigan

Combinatorial Art

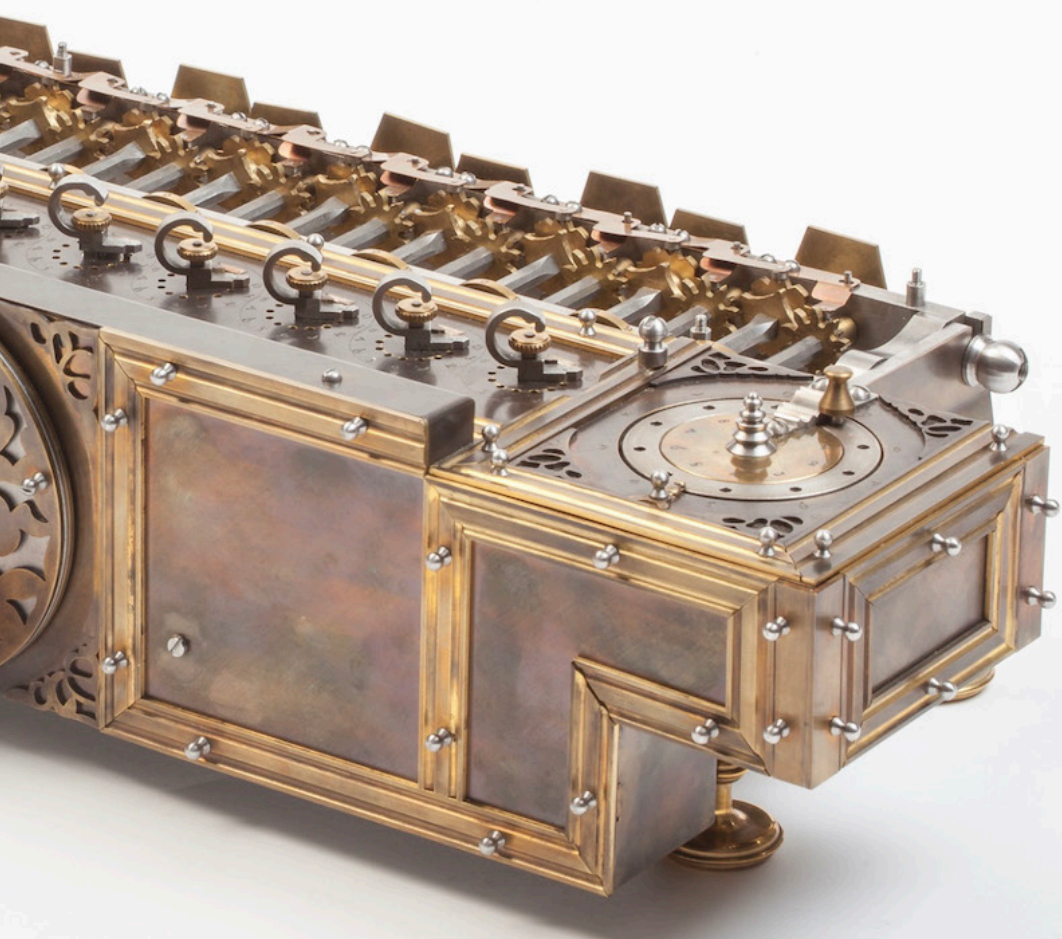
Gottfried Wilhelm Leibniz

1666



“When there are disputes among persons, we can simply say, ‘Let us calculate,’ and without further ado, see who is right.”

Gunalan Nadarajan, University of Michigan



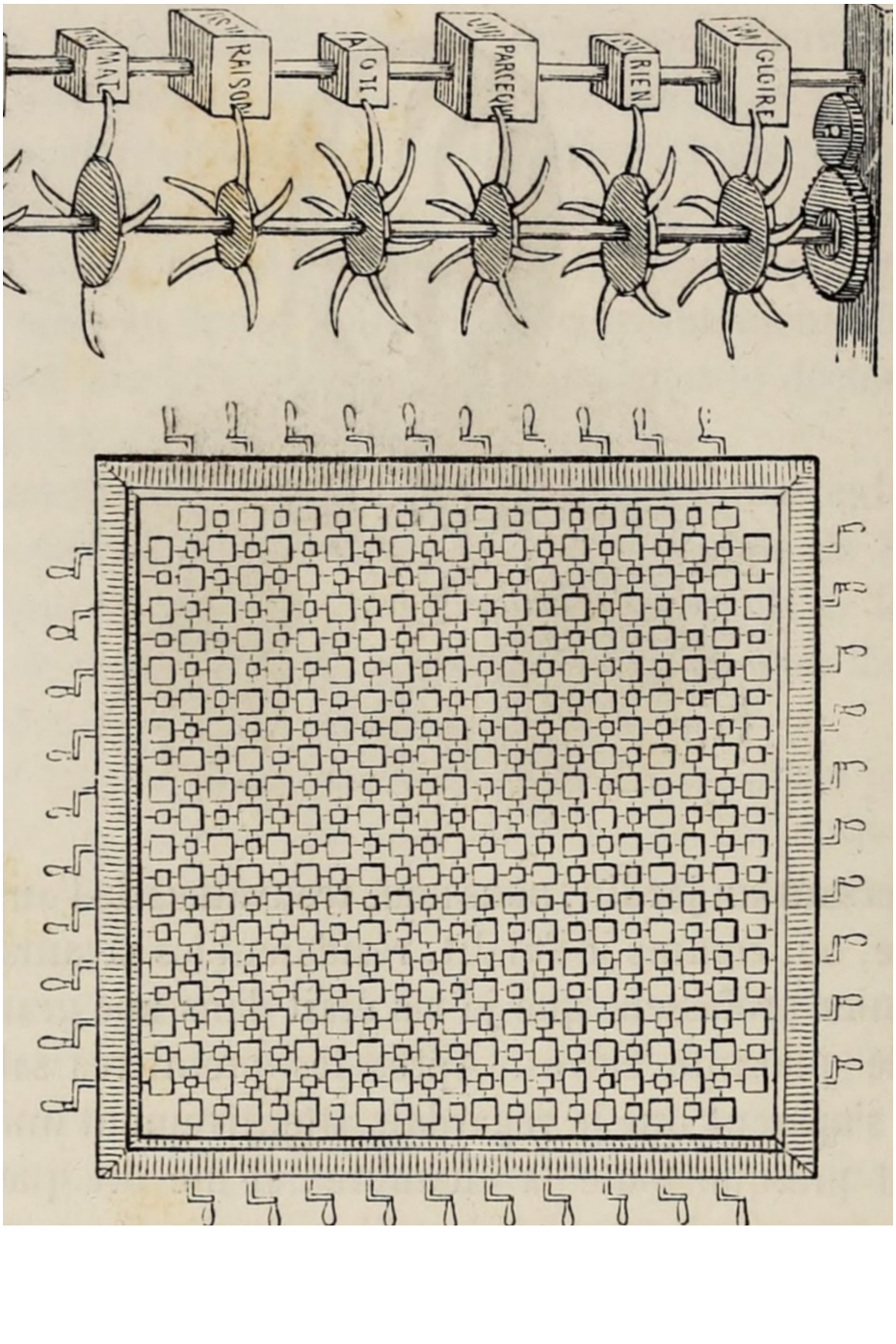
Combinatorial Art

The Engine in Gulliver's Travels

1642

"... Every one knew how laborious the usual method is of attaining to arts and sciences; whereas, by his contrivance, the most ignorant person, at a reasonable charge, and with a little bodily labour, might write books in philosophy, poetry, politics, laws, mathematics, and theology, without the least assistance from genius or study."

Jonathan Swift

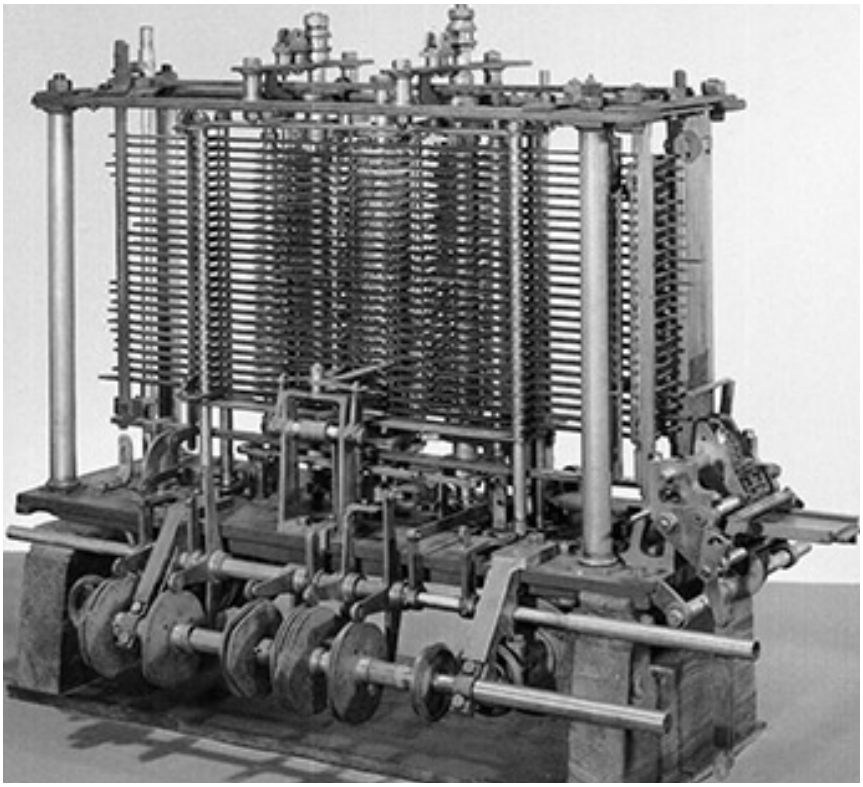

RAISON
PARCEQUE
RIEN
CLOIRE

Combinatorial Art

Analytical Engine

Charles Babbage

1833



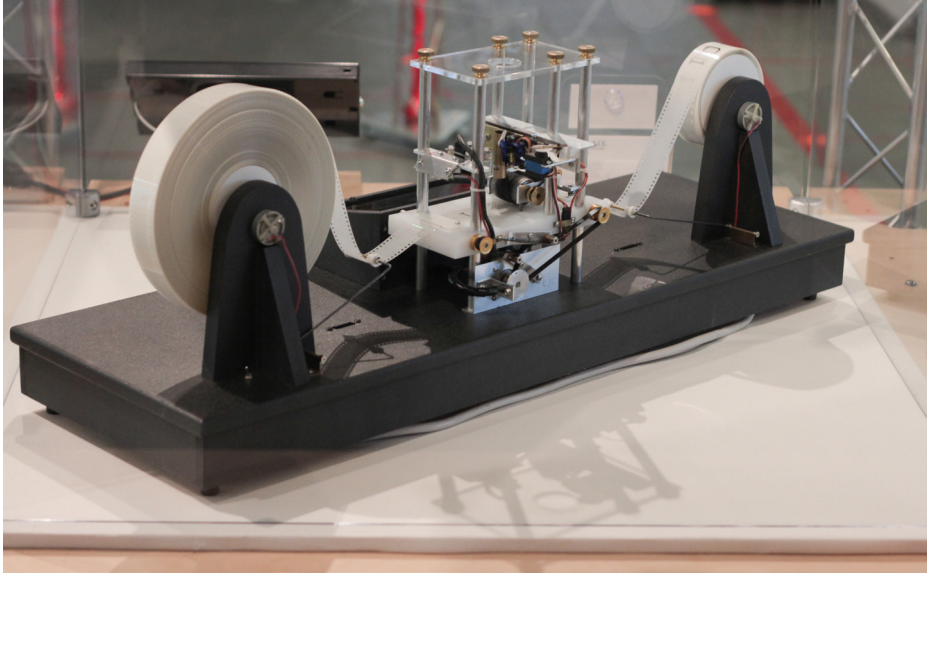
Combinatorial Art

Turing Machine

Alan Turing

1936

Gunalan Nadarajan, University of Michigan



(Deceptive) Promises of Automation and AI

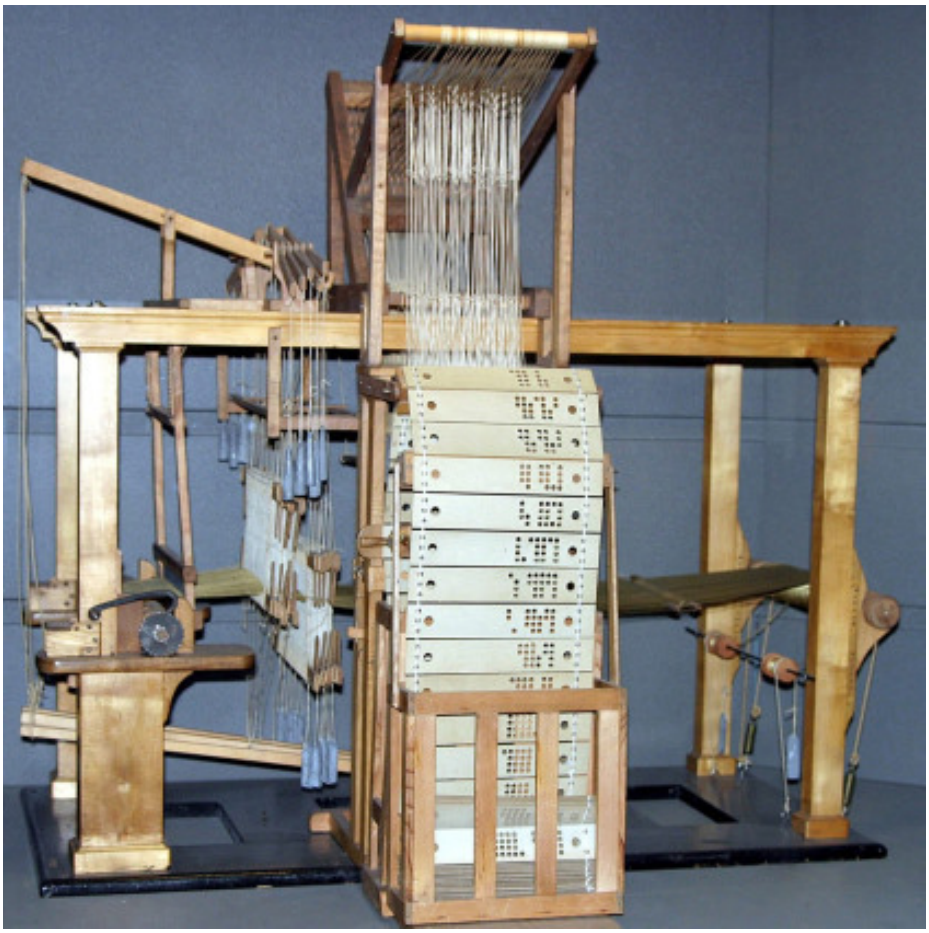
Action without EffortDecision without DeliberationKnowing without Learning

Gunalan Nadarajan, University of Michigan

Art as Creative Agency

Automating Creativity, Negotiating Agency

'Turntable' pottery wheel
Egyptian Wall Depictions
2000BCE



Automated Loom
Joseph Marie Jacquard
1804

View from the Window at Le Gras
Joseph Nicephore Niepce
1826