

RECHNENDE MASCHINEN

EINE HISTORISCHE UNTERSUCHUNG
IHRER HERSTELLUNG UND
ANWENDUNG VOM KAISERREICH
BIS ZUR BUNDESREPUBLIK

Hartmut Petzold

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Rechnende Maschinen Eine Historische Untersuchung Ihrer Herstellung Und Anwendung Vom Kaiserreich Bis Zur Bundesrepublik

J. Adam Tooze



Rechnende Maschinen Eine Historische Untersuchung Ihrer Herstellung Und Anwendung Vom Kaiserreich Bis Zur Bundesrepublik:

Statistics and the German State, 1900-1945 J. Adam Tooze, 2001-09-06 Tooze provides an interpretation of the dramatic period of statistical innovation between 1900 and the end of World War II At the turn of the century virtually none of the economic statistics that we take for granted today were available By 1944 the entire repertoire of modern economic statistics was being put to work in wartime economic management As this book reveals the Weimar Republic and the Third Reich were in the forefront of statistical innovation in the interwar decades New ways of measuring the economy were inspired both by contemporary developments in macroeconomic theory and the needs of government The Weimar Republic invested heavily in macroeconomic research Under the Nazi regime these statistical tools were to provide the basis for a radical experiment in economic planning Based on the German example this book presents the case for a more wide ranging reconsideration of the history of modern economic knowledge National Military Establishments and the Advancement of Science and Technology P. Forman, José M. Sánchez-Ron, 2001-11-30 To some philosophers seeking to understand the human condition technology is a necessary guide But to think through the complex human phenomenon of technology we must tackle philosophy of science philosophy of culture moral issues comparative civilizational studies and the economics of specific industrial and military technologies in their historical contexts The philosopher wants to grasp the technological factor in this troubled world even as we see it is only one factor and that it does not speak openly for itself Put directly our human troubles to a considerable extent have been transformed exaggerated distorted even degraded perhaps transcended by what engineers and scientists entrepreneurs and politicians have wrought But our problems are ancient problems of dominations struggles survival values in conflict greed and insane sadisms To get some conceptual light on the social reality which seems immediately to be so complicated a philosopher will need to learn from the historians of technology A few years ago the philosopher Elisabeth Straker concluded that a historical philosophy of technology is required since history and history alone provides all those concepts that form part of the repertoire of the philosophical analysis of technology And she added that this goes far beyond the triviality that like other cultural achievements technology has its historical development Now historical comprehension is no substitute for a logical methodology in the analysis of technological problems Rechnende Maschinen Hartmut Petzold, 1985 *Routes to the Information Revolution* Alexander Arbel, 2019-03-18 This book is a precise and comprehensive history of the digital computer It is the first collection of available information about the digital computer beginning with the philosophical and logical advancements in the early 20th century that led to it The book explores the histories and stories of the computer tracing its roots and routes It examines and analyzes commonly accepted views on the digital computer and its development and offers clearer and more accurate alternatives to them Its approach though dealing with the introduction and development of the digital computer is applicable to the history of technology in

general The central question considered here is why were the automatic digital program controlled calculating devices developed simultaneously in Germany the USA and the UK during the period 1935 1945 Astonishingly the technologies ideas calculating means and calculating techniques existed and were available long before the development of the automatic digital program controlled calculating device However only during the period 1935 1945 did they materialize Ideas that may be viewed as attempts to develop this type of device began early in the modern era Babbage 1834 and Ludgate 1909 took the first steps and constructed devices that may be viewed as something like computers Nevertheless the concrete fulfillment and practical use of these ideas was accomplished only in the period of 1935 1945 by a group of developers who acted in ignorance of what was done before This book opens with a detailed discussion of these processes

Meilensteine der Rechentechnik Herbert Bruderer, 2015-11-13 Die Anfänge der Informatik liegen bereits im Dunkeln In diesem Buch werden ausgewählte Meilensteine der Rechentechnik und der Frühzeit der Informatik vorgestellt Grundlage dafür sind u.a. Aufsehen erregende Funde von Geräten und Schriften die in den letzten Jahren gemacht wurden historische Rechenwerke weltweit Rechenwalze weltweit älteste erhaltene Tastenaddiermaschine bisher unbekannte Unterlagen zum Erfinder Zuse Zur Sprache kommen Analog wie Digitalrechner Rechenrahmen Rechenwerke mechanische Rechenmaschinen Rechenschieber elektronische Rechner usw. Zahlreiche Tabellen vermitteln einen weltweiten Überblick über die ersten Digitalrechner Einen Schwerpunkt bilden die deutschsprachigen Länder Deutschland Österreich Schweiz Liechtenstein mit einer umfassenden Darstellung von mechanischen Rechenmaschinen aus der Schweiz Zeitstrahl geben einen Überblick über frühe amerikanische britische und deutsche Rechenautomaten Der Verfasser geht auch der heiklen Frage nach Wer hat den Computer erfunden Eine mehrsprachige Bibliografie mit über 3000 Einträgen rundet den Band ab Das allgemein verständliche Werk richtet sich an alle die sich mit der Geschichte der Rechentechnik und der Informatik befassen

History of Nordic Computing Janis Bubenko, John Impagliazzo, Arne Søelvig, 2005-12-28 Computing in the Nordic countries started in late 1940s mainly as an engineering activity to build computing devices to perform mathematical calculations and assist mathematicians and engineers in scientific problem solving The early computers of the Nordic countries emerged during the 1950s and had names like BARK BESK DASK SMIL SARA ESKO and NUSSE Each of them became a nucleus in institutes and centres for mathematical computations programmed and used by highly qualified professionals However one should not forget the punched card machine technology at this time that had existed for several decades In addition we have a Nordic name namely Frederik Rosing Bull contributing to the fundamentals of punched card technology and forming the French company Bull Commercial products such as FACIT EDB and SAAB D20 series computers in Sweden the Danish GIER computer the Nokia MIKKO computer in Finland as well as the computers of Norsk Data in Norway followed the early computers In many cases however companies and institutions did not further develop or exploit Nordic computing hardware even though it exhibited technical advantages Consequently in the 1970s US computers primarily from IBM flooded the Nordic market

Milestones in Analog and Digital Computing Herbert Bruderer, 2021-01-04 This Third Edition is the first English language edition of the award winning Meilensteine der Rechentechnik illustrated in full color throughout in two volumes The Third Edition is devoted to both analog and digital computing devices as well as the world's most magnificent historical automata and select scientific instruments employed in astronomy surveying time measurement etc It also features detailed instructions for analog and digital mechanical calculating machines and instruments and is the only such historical book with comprehensive technical glossaries of terms not found in print or in online dictionaries The book also includes a very extensive bibliography based on the literature of numerous countries around the world Meticulously researched the author conducted a worldwide survey of science technology and art museums with their main holdings of analog and digital calculating and computing machines and devices historical automata and selected scientific instruments in order to describe a broad range of masterful technical achievements Also covering the history of mathematics and computer science this work documents the cultural heritage of technology as well

Punched-Card Systems and the Early Information Explosion, 1880-1945 Lars Heide, 2009-04-27 At a time when Internet use is closely tracked and social networking sites supply data for targeted advertising Lars Heide presents the first academic study of the invention that fueled today's information revolution the punched card Early punched cards helped to process the United States census in 1890 They soon proved useful in calculating invoices and issuing pay slips As demand for more sophisticated systems and reading machines increased in both the United States and Europe punched cards served ever larger data processing purposes Insurance companies public utilities businesses and governments all used them to keep detailed records of their customers competitors employees citizens and enemies The United States used punched card registers in the late 1930s to pay roughly 21 million Americans their Social Security pensions Vichy France used similar technologies in an attempt to mobilize an army against the occupying German forces and the Germans in 1941 developed several punched card registers to make the war effort and surveillance of minorities more effective Heide's analysis of these three major punched card systems as well as the impact of the invention on Great Britain illustrates how different cultures collected personal and financial data and how they adapted to new technologies This comparative study will interest students and scholars from a wide range of disciplines including the history of technology computer science business history and management and organizational studies

Exposing Electronics Bernard Finn, 2000-12-21 It is clear that artifacts have the power to provoke thought inspire action and arouse passions There is evidence of this in the ever increasing number of museums as well as in the ability of those museums to stimulate controversy through exhibits As a consequence much has been written analyzing the interaction between objects and museum visitors Less well recognized or understood is the value of objects for historical research In this series of books we propose to show by example how artifacts can be employed in the study of the history of science and technology in ways ranging from motivating a line of research to providing hard evidence in the solution of an otherwise insoluble problem The

first volume focused on medicine in this the second volume the topic our authors address is electronics As readers will discover there is considerable scope in the range of topics and in the range of uses of artifacts There is also a section that suggests to readers what kind of questions they might consider when they visit electrical exhibits and where those exhibits are to be found This series is sponsored by the Deutsches Museum in Munich the Science Museum in London and the Smithsonian Institution in Washington with help from professional historians in other museums and elsewhere *Prophets of Computing* Dick van Lente,2022-12-14 When electronic digital computers first appeared after World War II they appeared as a revolutionary force Business management the world of work administrative life the nation state and soon enough everyday life were expected to change dramatically with these machines use Ever since diverse prophecies of computing have continually emerged through to the present day As computing spread beyond the US and UK such prophecies emerged from strikingly different economic political and cultural conditions This volume explores how these expectations differed assesses unexpected commonalities and suggests ways to understand the divergences and convergences This book examines thirteen countries based on source material in ten different languages the effort of an international team of scholars In addition to analyses of debates political changes and popular speculations we also show a wide range of pictorial representations of the future with computers *A History Shared and Divided* Frank Bösch,2018-09-14 By and large the histories of East and West Germany have been studied in relative isolation And yet for all their differences the historical trajectories of both nations were interrelated in complex ways shaped by economic crises social and cultural changes protest movements and other phenomena so diffuse that they could hardly be contained by the Iron Curtain Accordingly *A History Shared and Divided* offers a collective portrait of the two Germanies that is both broad and deep It brings together comprehensive thematic surveys by specialists in social history media education the environment and similar topics to assemble a monumental account of both nations from the crises of the 1970s to and beyond the reunification era

Productivity Machines Corinna Schlombs,2019-10-01 How productivity culture and technology became emblematic of the American economic system in pre and postwar Germany The concept of productivity originated in a statistical measure of output per worker or per work hour calculated by the US Bureau of Labor Statistics A broader productivity culture emerged in 1920s America as Henry Ford and others linked methods of mass production and consumption to high wages and low prices These ideas were studied eagerly by a Germany in search of economic recovery after World War I and decades later the Marshall Plan promoted productivity in its efforts to help post World War II Europe rebuild In *Productivity Machines* Corinna Schlombs examines the transatlantic history of productivity technology and culture in the two decades before and after World War II She argues for the interpretive flexibility of productivity different groups viewed productivity differently at different times Although it began as an objective measure productivity came to be emblematic of the American economic system post World War II West Germany however adapted these ideas to its own political and economic values Schlombs

explains that West German unionists cast a doubtful eye on productivity's embrace of plant level collective bargaining unions fought for codetermination the right to participate in corporate decisions After describing German responses to US productivity Schlombs offers an in depth look at labor relations in one American company in Germany that icon of corporate America IBM Finally Schlombs considers the emergence of computer technology seen by some as a new symbol of

productivity but by others as the means to automate workers out of their jobs **Die Welt der Technik in 100 Objekten**

Wolfgang M. Heckl, 2022-05-31 Dieses Buch unternimmt eine Reise zurück in die Vergangenheit und am Schluss vorwärts in die Zukunft um zu erzählen wie die Menschen im letzten halben Jahrtausend die Welt mit Technik und Wissenschaft erforscht und dann verwandelt haben wie aber auch sie selbst und die Gesellschaft durch technische Erfindungen geprägt wurden und werden Es erzählt diese Geschichte anhand von Objekten die aus dem Deutschen Museum stammen die Bandbreite reicht von einem Zirkel aus dem 16. Jahrhundert der sich zugleich als Kompass und als Sonnenuhr verwenden lässt über den Benz Patent Motorwagen Nr 1 und den Segelapparat von Otto Lilienthal bis zu einer von philippinischen Frauen gefertigten Recyclingtasche Wolfgang M Heckl Was uns ein Mikroskop aus dem 17. Jahrhundert über den Aufbruch in eine neue Zeit berichten kann wie auf der Pariser Weltausstellung von 1900 gezeigte Teerfarbstoffe die Entstehung der modernen Malerei beeinflussten und was eine aus alten Safttönen gefertigte Umhängetasche über das Anthropozän verrät der Band beschreibt all diese Dinge nicht nur sondern erschließt uns mit ihrer Betrachtung immer auch ein Stück Welt und Technikgeschichte Jedes der hier versammelten Objekte wird auf mehreren Ebenen vorgestellt was zu seiner Erfindung führte für welche Zeit es geschaffen wurde wie es die Beziehung des Menschen zur Wirklichkeit und nicht zuletzt diese Wirklichkeit selbst verändert hat wie sein Lebenslauf aussah und schließlich auch auf welchen Wegen es in das Deutsche Museum fand Das reich bebilderte kurzweilige Buch zeigt die allgegenwärtige Welt von Technik und Wissenschaft in ihrem Zusammenspiel mit Mensch und Gesellschaft Natur und Kultur Luft- und Raumfahrtforschung in Deutschland 1900-1970

Helmuth Trischler, 2022-05-18 Die Geschichte der deutschen Luftfahrtforschung ist ein Spiegelbild der politischen Entwicklung im 20. Jahrhundert Das Buch analysiert die Entwicklung der Luftfahrtforschung mit Blick auf den politisch gesellschaftlichen Kontext Die Darstellung kreist um die Frage der Herausbildung und der Charakteristika der deutschen Forschungspolitik im internationalen Vergleich Unveränderter Nachdruck der Ausgabe von 1992 **International**

Bibliography of Business History Francis Goodall, Terry Gourvish, Steven Tolliday, 2013-12-16 The field of business history has changed and grown dramatically over the last few years There is less interest in the traditional company centred approach and more concern about the wider business context With the growth of multi national corporations in the 1980s international and inter firm comparisons have gained in importance In addition there has been a move towards improving links with mainstream economic financial and social history through techniques and outlook The International Bibliography of Business History brings all of the strands together and provides the user with a comprehensive guide to the literature in

the field The Bibliography is a unique volume which covers the depth and breadth of research in business history This exhaustive volume has been compiled by a team of subject specialists from around the world under the editorship of three prestigious business historians

Wissensproduktion im Staat Michael C. Schneider, 2013-10-02 Die Verwaltung moderner Staaten ist ohne die Arbeit ihrer statistischen mter nicht vorstellbar Am Beispiel des 1805 in Berlin gegr ndeten preu ischen statistischen Bureaus behandelt dieses Buch die Entfaltung der Prinzipien nach denen diese Beh rde in der zweiten H lfte des 19 Jahrhunderts immer umfassendere Datenmengen erhob Fundamentale methodische Innovationen begr ndeten wichtige Modernisierungssch be in der T tigkeit dieser Beh rde Verbunden damit war die letztlich entt uschte Hoffnung so auch Bewegungsgesetze der Gesellschaft schlechthin freilegen zu k nnen Dabei geriet das Bureau immer wieder in das Spannungsfeld zwischen wissenschaftlichem Anspruch und staatlich gebundener Verwaltungst tigkeit

Selbstreproduzierende Maschinen Nora Eibisch, 2016-02-24 Nora Eibisch fokussiert die bisher unbekannte sp te Werkphase des Computerpioniers Konrad Zuse und ordnet diese in ihren ideengeschichtlichen Kontext ein Zuse erscheint dabei als ein Vision r technischer selbstreproduzierender Systeme autarker Fabriken und k nstlicher Intelligenz Im Zentrum steht die Anfang der 1970er Jahre entwickelte Montagestra e SRS 72 In dem Projekt offenbart sich Zuses berzeugung automatisierte selbstreproduzierende Systeme realisieren zu k nnen Anhand der Auswertung von Archivalien wird beschrieben wie Zuse den Bau der Anlage umsetzte und wie er sich ihre Weiterentwicklung vorstellte Sie sollte zu miniaturisierten technischen Systemen f hren die sich analog zu biologischen Zellen verhalten und die Besiedlung des Weltraums vorbereiten Diese Vision wird in Zuses Konzept eines digitalen Universums eingeordnet mit dem er alle Erscheinungen der Wirklichkeit auf Prozesse der Informationsverarbeitung zur ckf hrte

Der lange Weg zum Internet Matthias R hr, 2021-09-03 Vernetzte Computer sind das wichtigste Kommunikationsmedium unserer Zeit Die Verschmelzung von Datenverarbeitung und Telekommunikation war allerdings kein gradliniger Prozess Das neuartige Medium Computer entwickelte sich vielmehr in einem komplexen Wechselverh ltnis von technologischen Innovationen dem Wandel von Wirtschafts und Wettbewerbspolitik sowie gegenkulturellen Str mungen In seiner zeithistorischen Studie analysiert Matthias R hr diesen durchwachsenen Verlauf und zeigt auf wie die Bundespost in den 1970er und 1980er Jahren mit Bildschirmtext und ISDN auf diese Entwicklung reagierte und warum Hackerkulturen als Reaktion hierauf f r ein Menschenrecht auf freien Datenaustausch eintraten

Erfindung des Computers, Rechnerbau in Europa, weltweite Entwicklungen, zweisprachiges Fachwörterbuch, Bibliografie Herbert Bruderer, 2020-09-23 Das preisgekr nte Werk Meilensteine der Rechentechnik liegt in der 3 v llig neu bearbeiteten und stark erweiterten Auflage vor Die beiden B nde die im Ganzen rund 2000 Seiten umfassen sind ein Gesamtwerk lassen sich aber auch einzeln nutzen Das Buch behandelt sowohl analoge wie digitale Ger te und geht auch auf benachbarte Bereiche wie historische Automaten und Roboter sowie wissenschaftliche Instrumente aus den Bereichen Mathematik Astronomie Vermessungswesen und Zeitmessung ein Gestreift werden zudem fr

he Schreibmaschinen und programmgesteuerte mechanische Webstühle Der zweite Band widmet sich überwiegend den Elektronenrechnern Erfindung des Computers weltweite Entwicklung der Rechentechnik mit Schwerpunkt Europa besonders Deutschland England Schweiz Er schließt dieses je ein umfangreiches Fachwörterbuch Deutsch Englisch und Englisch Deutsch ein Hinzu kommt eine umfassende weltweite Bibliografie mit Einträgen deutscher englischer französischer italienischer und spanischer Schriften Schwerpunkte des ersten Bandes sind Grundlagen mechanische Rechenmaschinen Rechenschieber historische Automaten und Roboter sowie wissenschaftliche Instrumente Entwicklung der Rechenkunst Schritt für Schritt Anleitungen für analoge und digitale Rechengerte Eine Fülle prachtvoller Rechenmaschinen Rechenbretter Androiden Figurenautomaten Musikautomaten Uhren Globen und Webmaschinen wird in Farbbildern vorgestellt Das Buch enthält ferner grundsätzliche Betrachtungen zu Themen wie digitaler Wandel und künstliche Intelligenz sowie zur Rolle der Technikgeschichte und der Erhaltung des technischen Kulturguts Beide Bände berichten über aufsehenerregende neue Funde von Dokumenten und Gegenständen und eine weltweit serienmäßig gefertigte Rechenwalze weltweit kleinster mechanischer Parallelrechner erster mechanischer Prozessrechner Das Buch das sich auch als Nachschlagewerk eignet ist allgemein verständlich Es richtet sich an alle die Freude haben an Technik Mathematik Informatik und Kunstgeschichte Einige Merkmale Mehrsprachige Bibliografie zur Mathematik Informatik Technik und Naturwissenschaftsgeschichte mit über 6000 Einträgen deutsch englisches und englisch deutsches Fachwörterbuch 20 Schritt für Schritt Anleitungen für die Bedienung historischer analoger und digitaler Geräte 700 Abbildungen 150 tabellarische Übersichten zahlreiche Zeittafeln ausführliches Personen Orts und Sachverzeichnis Herbert Bruderer ist Dozent im R am Departement für Informatik der ETH Zürich und Technikhistoriker Er hat zahlreiche Bücher zur Informatik verfasst und ist mehrfacher Preisträger

Geschichten der Informatik Hans Dieter Hellige, 2013-03-07

Unveiling the Energy of Verbal Art: An Emotional Sojourn through **Rechnende Maschinen Eine Historische Untersuchung Ihrer Herstellung Und Anwendung Vom Kaiserreich Bis Zur Bundesrepublik**

In a world inundated with displays and the cacophony of immediate transmission, the profound energy and mental resonance of verbal art usually diminish in to obscurity, eclipsed by the regular onslaught of sound and distractions. Yet, set within the lyrical pages of **Rechnende Maschinen Eine Historische Untersuchung Ihrer Herstellung Und Anwendung Vom Kaiserreich Bis Zur Bundesrepublik**, a charming work of fictional beauty that pulses with raw thoughts, lies an memorable journey waiting to be embarked upon. Penned with a virtuoso wordsmith, this magical opus courses viewers on a psychological odyssey, softly revealing the latent possible and profound impact stuck within the complicated web of language. Within the heart-wrenching expanse of this evocative evaluation, we can embark upon an introspective exploration of the book is main styles, dissect their fascinating writing design, and immerse ourselves in the indelible impression it leaves upon the depths of readers souls.

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