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On Turing

The relationship between story and game, and related questions of electronic writing and play, examined through a series of discussions among new media creators and theorists.

First Person

Written by a distinguished cast of contributors, Alan Turing: Life and Legacy of a Great Thinker is the definitive collection of essays in commemoration of the 90th birthday of Alan Turing. This fascinating text covers the rich facets of his life, thoughts, and legacy, but also sheds some light on the future of computing science with a chapter contributed by visionary Ray Kurzweil, winner of the 1999 National Medal of Technology. Further, important contributions come from the philosopher Daniel Dennett, the Turing biographer Andrew Hodges, and from the distinguished logician Martin Davis, who provides a first critical essay on an emerging and controversial field termed "hypercomputation".

Prefiguring Cyberculture

An historical analysis of main topics of Wittgenstein's work. Part 1 deals with the "game" of mathematics. Part 2 discusses Wittgenstein's development up to 1930 and Part 3 looks at philosophical and psychological problems arising from the

possiblity of artificial intelligence.

Encyclopedia of Cognitive Science, 4 Volume Set

This volume presents new contemporary research in the areas that were of most interest to Prior: temporal and tense logic, modal logic, proof theory, quantification and individuation, and the logic of agency.

A Bibliographic Guide to the History of Computing, Computers, and the Information Processing Industry

As a field, computer science occupies a unique scientific space, in that its subject matter can exist in both physical and abstract realms. An artifact such as software is both tangible and not, and must be classified as something in between, or "liminal." The study and production of liminal artifacts allows for creative possibilities that are, and have been, possible only in computer science. In It Began with Babbage, computer scientist and writer Subrata Dasgupta examines the distinct history of computer science in terms of its creative innovations, reaching back to Charles Babbage in 1819. Since all artifacts of computer science are conceived with a use in mind, the computer scientist is not concerned with the natural laws that govern disciplines like physics or chemistry; instead, the field is more concerned with the concept of purpose. This requirement lends itself to a type of creative thinking that, as Dasgupta shows us, has exhibited itself throughout the history of computer science. More than any other, computer science is the science of the artificial, and has a unique history to accompany its unique focus. The book traces a path from Babbage's Difference Engine in the early 19th century to the end of the 1960s by when a new academic discipline named "computer science" had come into being. Along the way we meet characters like Babbage and Ada Lovelace, Turing and von Neumann, Shannon and Chomsky, and a host of other people from a variety of backgrounds who collectively created this new science of the artificial. And in the end, we see how and why computer science acquired a nature and history all of its own.

Colossus

The mathematical genius Alan Turing, now well known for his crucial wartime role in breaking the ENIGMA code, was the first to conceive of the fundamental principle of the modern computer-the idea of controlling a computing machine's operations by means of a program of coded instructions, stored in the machine's 'memory'. In 1945 Turing drew up his revolutionary design for an electronic computing machine-his Automatic Computing Engine ('ACE'). A pilot model of the ACE ran its first program in 1950 and the production version, the 'DEUCE', went on to become a cornerstone of the fledgling British computer industry. The first 'personal' computer was based on Turing's ACE. Alan Turing's Automatic Computing

Engine describes Turing's struggle to build the modern computer. The first detailed history of Turing's contributions to computer science, this text is essential reading for anyone interested in the history of the computer and the history of mathematics. It contains first hand accounts by Turing and by the pioneers of computing who worked with him. As well as relating the story of the invention of the computer, the book clearly describes the hardware and software of the ACE-including the very first computer programs. The book is intended to be accessible to everyone with an interest in computing, and contains numerous diagrams and illustrations as well as original photographs. The book contains chapters describing Turing's path-breaking research in the fields of Artificial Intelligence (AI) and Artificial Life (A-Life). The book has an extensive system of hyperlinks to The Turing Archive for the History of Computing, an on-line library of digital facsimiles of typewritten documents by Turing and the other scientists who pioneered the electronic computer.

It Began with Babbage

The camera supposedly never lies, yet film's ability to frame, cut and reconstruct all that passed before its lens made cinema the pre-eminent medium of visual illusion and revelation from the early twentieth century onwards. This volume examines film's creative history of special effects and trickery, encompassing everything from George Méliès' first trick films to the modern CGI era. Evaluating movements towards the use of computer-generated 'synthespians' in films such as Final Fantasy: the Spirits Within (2001), this title suggests that cinematic effects should be understood not as attempts to perfectly mimic real life, but as constructions of substitute realities, situating them in the cultural lineage of the stage performers and illusionists and of the nineteenth century. With analyses of films such as Destination Moon (1950), Spider-Man (2002) and the King Kong films (1933 and 2006), this new volume provides an insight into cinema's capacity to perform illusions.

The Publishers' Trade List Annual

In this manifesto for the Information Revolution, "techno-humanitarians"--engineers, programmers, computer scientists, and activists--see a future in which computers help humankind strengthen democratic values.

Electronic Inventions and Discoveries

Includes authors, titles, subjects.

The Cumulative Book Index

This book presents a mini-encyclopedia full of valuable information on practically all inventions in electronics from 1745 to 1996. This fourth edition has been brought up-to-date and made more attractive by a complete redesign while still maintaining the successful features of previous editions. The first nine chapters supply concise yet comprehensive histories of the main areas of the subject. Subsequent chapters provide a list of inventions by subject and succinct descriptions of each invention in date order with over 1,000 references. The book concludes with a list of acronyms and abbreviations, a list of books on inventions and inventors, and a comprehensive index.

Papers of John Von Neumann on Computing and Computer Theory

At last - the secrets of Bletchley Park's powerful codebreaking computers. This is a history of Colossus, the world's first fully-functioning electronic digital computer. Colossus was used during the Second World War at the Government Code and Cypher School at Bletchley Park, where it played an invaluable role cracking enemy codes. Until very recently, much about the Colossus machine was shrouded in secrecy, largely because the codes that were employed remained in use by the British security services until a short time ago. This book only became possible due to the declassification in the US of wartime documents. With an introductory essay on cryptography and the history of code-breaking by Simon Singh, this book reveals the workings of Colossus and the extraordinary staff at Bletchley Park through personal accounts by those who lived and worked with the computer. Among them is the testimony of Thomas Flowers, who was the architect of Colossus and whose personal account, written shortly before he died, is published here for the first time. Other essays consider the historical importance of this remarkable machine, and its impact on the generations of computing technology that followed.

The Calculating Machines (Die Rechenmaschinen)

This mid-range concepts text is important for courses with equal emphasis on computer concepts and hands-on learning. It is composed of chapters 1-10 of the Introduction to Computers text.

Machine Learning, Neural and Statistical Classification

Written but never published during his lifetime, this memoir of the founding father of computing is an indispensable primary source of information about Babbage's personal character and work. It brings to light his astonishingly wide range of interests, from mathematics to political economy and social reform, and dispels the myth of an "irascible" and "eccentric" personality, helping to clarify Babbage's position in the history of science.Buxton's memoir was written between 1872 and 1880 and is volume 13 in the Charles Babbage Institute Reprint Series for the History of Computing.

Peter Norton's introduction to computers

This brief text assists students in understanding Turing's philosophy and thinking so they can more fully engage in useful, intelligent class dialogue and improve their understanding of course content. Part of the Wadsworth Notes Series, (which will eventually consist of approximately 100 titles, each focusing on a single "thinker" from ancient times to the present), ON TURING is written by a philosopher deeply versed in the philosophy of this key thinker. Like other books in the series, this concise book offers sufficient insight into the thinking of a notable philosopher, better enabling students to engage in reading and to discuss the material in class and on paper.

The Universal Turing Machine

A Companion to Philosophical Logic

Memoir of the Life and Labours of the Late Charles Babbage Esq., F.R.S.

Turing's Legacy

A multidisciplinary compilation of essays and other writings explores the antecedents of Internet technology in the works of Plato, Aristotle, Descartes, Mary Shelley, William Gibson, and others. (Technology)

Philosophia Mathematica

An exciting reference work which captures current thinking about the workings of the mind and brain, focusing on problems that are as old as recorded history, but reflecting new approaches and techniques that have emerged since the 1980's. The Encyclopedia contains 696 articles covering in depth the entire spectrum of the cognitive sciences. Reviewing the common themes of information and information processing, representation and computation, it also covers in depth the core areas of psychology, philosophy, linguistics, computer science, and neuroscience. Ancillary topics such as education, economics, evolutionary biology and anthropology are also covered. The articles have been written to provide multiple levels of information so that readers from various levels can benefit from this set – from undergraduate and postgraduate students to university lecturers. With extensive cross-referencing, a glossary and subject index to further aid the reader through the

book, the Encyclopedia of Cognitive Science is an essential addition to any library or office shelf. The Encyclopedia of Cognitive Science (ECS) includes: 4 Volumes 4000 pages 696 articles Contributions from the world's leading experts 1,500 illustrations Detailed indexes and appendices Extensive cross-referencing

Technomanifestos

An exhaustive work that represents a landmark exploration of both the philosophical and methodological issues surrounding the search for true artificial intelligence. Distinguished psychologists, computer scientists, philosophers, and programmers from around the world debate weighty issues such as whether a self-conscious computer would create an internet 'world mind'. This hugely important volume explores nothing less than the future of the human race itself.

Philosophica

Volume 10 in the Babbage Reprint Series contains two archival papers by Alan Turing-the ACE report (1945), a seminal paper detailing the design for an electronic universal machine called the Automatic Computing Engine (ACE), and Turing's Lecture to the London Mathematical Society (1947) amplifying the ideas outlined in the ACE report. Turing's report was the first time that the notion of artificial intelligence was discussed as a real possibility and Turing went on to devote the next decade to AI. Michael Woodger's paper, The History and Present Use of Digital Computers at the National Physical Laboratory (1958) gives a brief history of the construction of the pilot ACE, the first functional version of Turing's universal machine.

Science and Scientists

Mathematical Logic

Mathematical Logic is a collection of the works of one of the leading figures in 20th-century science. This collection of A.M. Turing's works is intended to include all his mature scientific writing, including a substantial quantity of unpublished material. His work in pure mathematics and mathematical logic extended considerably further; the work of his last years, on morphogenesis in plants, is also of the greatest originality and of permanent importance. This book is divided into three parts. The first part focuses on computability and ordinal logics and covers Turing's work between 1937 and 1938. The second part covers type theory; it provides a general introduction to Turing's work on type theory and covers his published and unpublished works between 1941 and 1948. Finally, the third part focuses on enigmas, mysteries, and loose ends. This

concluding section of the book discusses Turing's Treatise on the Enigma, with excerpts from the Enigma Paper. It also delves into Turing's papers on programming and on minimum cost sequential analysis, featuring an excerpt from the unpublished manuscript. This book will be of interest to mathematicians, logicians, and computer scientists.

The Origins of Digital Computers

This volume commemorates the work of Alan Turing, who not only introduced the most influential concept of a machine model of effective computability, but who also anticipated in his work the diversity of topics brought together here. Among his major contributions, Turing's "On Computable Numbers, With an Application to the Entscheidungsproblem," first published in 1937, is acknowledged as a landmark of the computer age. Part I of this volume explores historical aspects with essays on background, on Turing's work, and on subsequent developments. Part II contains an extensive series of essays on the influence and applications of these ideas in mathematics, mathematical logic, philosophy of mathematics, computer science, artificial intelligence, philosophy of language, philosophy of mind, and physics.

Proceedings

Wittgenstein on Mathematics, Minds and Mental Machines

Philosophy and Computing explores each of the following areas of technology: the digital revolution; the computer; the Internet and the Web; CD-ROMs and Mulitmedia; databases, textbases, and hypertexts; Artificial Intelligence; the future of computing. Luciano Floridi shows us how the relationship between philosophy and computing provokes a wide range of philosophical questions: is there a philosophy of information? What can be achieved by a classic computer? How can we define complexity? What are the limits of quantam computers? Is the Internet an intellectual space or a polluted environment? What is the paradox in the Strong Artificial Intlligence program? Philosophy and Computing is essential reading for anyone wishing to fully understand both the development and history of information and communication technology as well as the philosophical issues it ultimately raises.

Alan Turing's Electronic Brain

Bibliographic Guide to Computer Science

Logic and Reality

AI and Education. Automated Reasoning: automatic programming, planning and scheduling, rule-based reasoning, search, theorem proving, uncertainty, truth-maintenance systems, constraint-based systems. Cognitive Modeling. Commonsense Reasoning: qualitative reasoning, design, diagnosis, simulation. Impacts of AI Technology: organizational, economic, and social implications. Knowledge Acquisition and Expert System Design Methodologies: techniques for designing expert systems and acquiring domain knowledge. Knowledge Representation: knowledge-representation systems, inheritance, nonmonotonic logic, nonstandard logics, temporal reasoning. Machine Architectures and Computer Languages for AI. Machine Learning. Natural Language: generation and understanding; syntax, speech, dialogue. Perception and Signal Understanding: vision. Philosophical Foundations. Robotics. User Interfaces.

Performing Illusions

Documents the major breakthroughs in science from ancient times to the present with emphasis on the modern era.

Turing

During the second half of the twentieth century, the use of computers has transformed working life in the developed world. The National Physical Laboratory (NPL) is one of the cradles of this revolution. This book outlines its contribution to modern computing history, covering the vital role played by Alan Turing, the Pilot ACE and ACE computers developed from his plans, and the fertile marriage of computers and communications in the 1960s.

Alan Turing: Life and Legacy of a Great Thinker

This bibliography provides a general introduction to the literature of the data processing industry, covering a broad range of technologies that stretch back to the pre-history of information processing. Grouped into nine chapters and under nearly 100 subheadings, the materials surveyed include both recent and historical publications, as well as ongoing current publications such as computer magazines. Each chapter contains a short review of historically important issues and comments on the literature, and an annotation for each entry.

A.M. Turing's ACE Report of 1946 and Other Papers

Choice

Parsing the Turing Test

This final volume in the Charles Babbage Institute Reprint series brings to light an extremely rare German account of the calculating machine industry in the first quarter of this century when the use of office machines became common in American and European business, government, and science.Ernst Martin wrote Die Rechenmaschinen to address the issues and questions that the public had raised about the many calculating devices that were appearing on the market in the early 1920s. His little book is, in fact, a developmental history of calculating machines in catalog form - invaluable for collectors of old machines. The introduction describes the seven major types of machines that had been produced by 1925. The corpus of the book consists of a running list of specific calculating machines, arranged by the date the device was first patented or produced.

Philosophy and Computing

Computing Fundamentals

List of Accessions to the Library

This collection of newly comissioned essays by international contributors offers a representative overview of the most important developments in contemporary philosophical logic. Presents controversies in philosophical implications and applications of formal symbolic logic. Surveys major trends and offers original insights.

AI Magazine

Myths and Legends in Learning Classification Rules

A world list of books in the English language.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION