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**Marvin Lee Minsky**

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**Books & Edited Works**

(call numbers provided for UCI Library holdings)

*Emotion Machine: Commonsense Thinking, Artificial Intelligence and the Future of the Human Mind.* New York: Simon & Schuster. Forthcoming September 2006. ISBN: 0743276639.

*The Turing Option: A Novel*, (1992). Science Fiction Thriller with Harry Harrison. New York: Warner Books. **Call Number: PS 3558 A667 T88 1992**

*Perceptrons: An Introduction to Computational Geometry*, (1988, 1969). With Seymour Papert. Cambridge, MA: MIT Press. **Call Number: Q327 M55 1988**

*The Society of Mind*, (1986). New York: Simon & Schuster. CD ROM Version released, Voyager, 1996. **Call Number: BF 431 M553 1986**

*Robotics: The First Authoritative Report from the Ultimate High-Tech Frontier*, (1985). Garden City, NY: Anchor Press/Doubleday. **Call Number: TJ211 R557 1985**

*Catalog of the Artificial Intelligence Memoranda of the MIT AI Lab*, (1982). New York: Comtex Scientific Corporation. **Call Number: SRLF D0008100281**. Includes the Artificial Intelligence memos on microfiche.

*Artificial Intelligence*, (1974). With Seymour Papert. Condon Lectures. Eugene, OR: Oregon State System of Higher Education. **Call Number: Q335 M56**

*Semantic Information Processing*, (1968). Cambridge, MA: MIT Press.  
**Call Number: Q335.5 M5**

*Computation: Finite and Infinite Machines* (1967). Englewood Cliffs, NJ: Prentice Hall.  
**Call Number: QA 267 M55**

### **PhD Dissertation**

“Theory of Neural Analog Reinforcement Systems and its Application to the Brain Model Problem,” Princeton University, 1954

### **Chapters in Books**

“Richard Feynman and Cellular Vacuum,” (1999). In Hey, Anthony J. G. and Feynman, Richard P., *Feynman and Computation: Exploring the Limits of Computers*. Cambridge, MA: Perseus Books.

“Foreword,” (1986). In Drexler, K. Eric, *Engines of Creation*. Garden City, NY: Anchor Press/Doubleday.

“Why Intelligent Aliens will be Intelligible,” (1985). In Regis, Edward, *Extraterrestrials: Science and Alien Intelligence*. Cambridge, MA: MIT Press.

“Artificial Intelligence: Why People Think Computers Can't,” (1985). In Donnelly, Denis, *The Computer Culture: A Symposium to Explore the Computer's Impact on Society*. Rutherford, NJ: Fairleigh Dickinson University Press.

“Afterword,” (1984). In *True Names* by Vinge, Vernor. New York: Bluejay Books.

“The Problems and the Promise [artificial intelligence],” (1984). In Winston, P.H. and Prendergast, K.A., eds., *AI Business: The Commercial Uses of Artificial Intelligence*. Cambridge, MA: MIT Press: 243-54.

“K-Lines: A Theory of Memory,” (1981). In Norman, Donald A., *Perspectives on Cognitive Science*. Norwood, NJ: Ablex Pub. Corp. (originally published 1979)

“Framework for Representing Knowledge,” (1981). In Haugeland, John, *Mind Design: Philosophy, Psychology, Artificial Intelligence*. Cambridge, MA: MIT Press.

“Computer Science and the Representation of Knowledge,” (1979). In Dertouzos, Michael, and Moses, Joel, eds., *The Computer Age: A Twenty-Year View*. Cambridge, MA: MIT Press.

### **Translations**

Minsky, Marvin and Morreau, Michael, (1996). *Het Denken: De Mensekijke Geest Als Maatschappij, 2<sup>e</sup>*. Amsterdam: Uitgeverij Ooievaar (originally published by Bakker in 1988)

Harrison, Harry, Minsky, Marvin, and Sigaud, Bernard, (1994). *Le Probleme de Turing*. Paris: R. Laffont.

*Hankozo to Shite no Warai: Hakai to Saisei no Puroguramu*, (1993). Tokyo: Enutiti Shuppan.

Drexler, K. Eric, (1993). *La Nanotecnologia: El Surgimiento de las Maquinas de Creacion*. Barcelona: Gedisa. Prologue by Marvin Minsky.

Harrison, Harry, and Minsky, Marvin, (1993). *La Utopia de Turing*. Buenos Aires: Editorial Atlantida.

Minsky, Marvin and Anzai, (1990). *Kokoro no Shakai*. Tokyo: Sangyo Tosho.

*La Societe de L'esprit*, (1988). Paris: InterEditions.

*Robotica: La Ultima Frontera de la Alta Tecnologia*, (1986). Barcelona: Planeta.

Minsky, Marvin and Brinckmann, Ludwig, (1969). *Maschinen wie Menschen*. Munich: Desch.

Minsky, Marvin and Esaki, Reona, (1980). *Konpyuta Kagaku Gijutsu: Shin Joho Shakai no Suishin Gijutsu*. Tokyo: Konpyutaejisha.

Minsky, Marvin and Kanayama, Yutaka, (1970). *Keisanki no Sugakeuteki Riron*. Tokyo: Kindai Kagakusha.

### **Journal Articles**

Kestenbaum, D., Papert S., Kay, A., and Minsky, M., (2005). "The Challenges of IDC: What Have We Learned From Our Past?" *Communications of the ACM* 48(2): 35-38.

Singh, P., Minsky, M., and Eslick I., (2004). "Computing Commonsense," *BT Technology Journal* 22(4): 201-210.

Minsky, M., Singh, P., and Sloman, A., (2004). "The St. Thomas Common Sense Symposium: Designing Architectures for Human-Level Intelligence," *AI Magazine* 25(2): 113-124.

McCarthy, J., Minsky, M., et al., (2002). "An Architecture of Diversity for Commonsense Reasoning," *IBM Systems Journal* 41(3): 530-539.

"Commonsense Based Interfaces: To Build a Machine that Truly Learns by Itself will Require a Commonsense Knowledge Representing the Kinds of Things Even A Small Child Already Knows," (2000). *Communications of the ACM* 43(8): 66-73.

"Time for an Aspirin," (2000). *Nature* 403(6770): 592.

Kay, A, Papert, S, Hillis, D. and Minsky, M., (1998). "Interview: Inventing the Future," *IEEE Software* 15(2): 22-24.

"Technology and Culture," (1997). *Social Research* 64(3): 1119-1126.

Riecken, D. and Minsky, M., (1994). "A Conversation with Marvin Minsky about Agents," *Communications of the ACM* 37(7): 23-29.

"Negative Expertise," (1994). *International Journal of Expert Systems Research and Applications* 7(1):13-18.

"Will Robots Inherit the Earth?" (1994). *Scientific American* 271(4): 109-113.

Steele, GL, Minsky, M., et al, (1993). "Code of Ethics Reconsidered," *Communications of the ACM* 36(7): 17-18.

"The Future Merging of Science, Art and Psychology," (1993). *Applied Artificial Intelligence* 7(1): 87-108.

Laske, O., and Minsky, M., (1992). "A Conversation with Marvin Minsky," *AI Magazine* 13(3): 31-45.

“Logical Versus Analogical or Symbolic Versus Connectionist or Neat Versus Scruffy,” (1991). *AI Magazine*, 12(2): 34-51.

“Society of Mind – A Response,” (1991). *Artificial Intelligence* 48(3): 371-396.

Minsky, M., et al, “Software Patents,” (1990). *Dr. Dobb’s Journal* 15(11): 56,58,62,65-67,70-73.

Minsky, M., et al., (1989). “What Lies Ahead?” *BYTE* 14(1): 343+.

“Memoir on Inventing the Confocal Scanning Microscope,” (1988). *Scanning* 10: 128-38.

“Toward a Remotely-Manned Energy and Production Economy,” (1985). *Human Systems Management* 5(2):111-121.

“Communication with Alien Intelligence,” (1985). *BYTE* 10(4): 126-38.

Pagels, H.R., Minsky, M., et al., (1984). “Artificial Intelligence Research Illuminated Human Thinking,” *Annals of the New York Academy of Sciences* 426: 138-160.

“The Funny Thing about Thinking,” (1984). *Chemtech* 14(4): 270-8.

“Why People Think Computers Can’t,” (1983). *Technology Review* 86(8): 64+.

“Music, Mind, and Meaning,” (1981). *Computer Music Journal* 5(3): 28-44.

“Correction,” (1981). *Computer Music Journal* 5(2):3.

Minsky, M. and Roads, C., (1980). “Interview with Marvin Minsky,” *Computer Music Journal* 4(3):25-39.

“How to Teach a Robot,” (1972). *Naval Research Reviews* 25(12): 1-13.

“Form and Content in Computer Science,” (1970). *Journal of the ACM* 17(2): 197-215.

“Machines are More Than They Seem,” (1968). *Science Journal* 4(10): 3-43.

“Artificial Intelligence,” (1966). *Scientific American* 215(3): 247-260.

Minsky, M.L. and Pryor, C.N., (1962). “‘Self-Educating’ Pattern-Recognition Schemes,” *Proceedings of the Institute of Radio Engineers*, 50: 1707-8.

“A Selected Descriptor-Indexed Bibliography to the Literature on Artificial Intelligence,” (1961) *Institute of Radio Engineers Transactions on Human Factors in Electronics* HFE-2(1): 39-55.

“Steps toward Artificial Intelligence” (1961), *Proceedings of the Institute of Radio Engineers* 49(1):8-30.

### **Conference Proceedings & Government Reports**

Singh, P. and Minsky, M., “An Architecture for Combining Ways to Think,” (2003). International Conference on Integration of Knowledge Intensive Multi-Agent Systems. KIMAS 2003. Boston, MA, September 30-October 4: “Modeling, Exploration, and Engineering”. Piscataway, NJ: IEEE: 669-74.

International Conference on Complex Systems (2002) –  
<http://necsi.org/events/iccs/video/iccs2002wednesday/5-minskyclip.html>

“‘The Emotion Machine’: From Pain to Suffering,” (2000). Proceedings of the International Conference on Intelligent User Interfaces (IUI) by the ACM, New Orleans, January 9-12. New York: ACM: 187-200.

Minsky, M. and Lederman, S.J., (1996). “Simulated Haptic Textures: Roughness.” Proceedings of the ASME Dynamic Systems and Control Division, Atlanta, GA, November 17-22: 421-26.

Minsky, M., et al, (1990). “Feeling and Seeing: Issues in Force Display,” *Computer Graphics* 24(2): 235-243. From 1990 Symposium on Interactive 3D Graphics, Snowbird, UT, March 25-28.

“Conscious Machines” (1985). In “Machinery of Consciousness” Proceedings, National Research Council of Canada, 75<sup>th</sup> Anniversary Symposium on Science in Society, <http://kuoi.asui.uidaho.edu/~kamikaze/doc/minsky.html>

“Cellular Vacuum,” (1982). *International Journal of Theoretical Physics* 21 (6-7), June: 537-551. From the ‘Physics of Computation’ Conference, Dedham, MA, May 6-8, 1981.

“Concerning the Language of Music: Music, Mind and Meaning,” (1982). In Clynes, Manfred, ed., *Music, Mind and Brain: The Neuropsychology of Music*. Workshop on the Physical and Neuropsychological Foundations of Music, 3<sup>rd</sup>., in Ossiach, Austria, 1980. New York: Plenum Press.

Miller, Rene Harcourt, Minsky, Marvin, Smith, David B.S., *Space Applications of Automation, Robotics and Machine Intelligence Systems (ARAMIS)*, (1982). Washington, DC: NASA and reproduced by NTIS.

Minsky, Marvin, and Papert, Seymour, (1967). Linearly Unrecognizable Patterns. Reprinted from “Mathematical Aspects of Computer Science,” In *Proceedings of Symposia in Applied Mathematics*, vol. 19.

## **Inventions & Patents**

First LOGO “turtle” device (with Seymour Papert), 1972.

The “Muse” Musical Variations Synthesizer (with E. Fredkin), 1970.

Serpentine Hydraulic Robot Arm (Boston Museum of Science), 1967.

Concept of Binary-Tree Robotic Manipulator, 1963.

First Head-Mounted Graphical Display, 1963.

Confocal Scanning Microscope, 1955. U.S. Patent # 3013467.

Stochastic Neural-Analog Reinforcement Computer (SNARC), First Neural Network Simulator, 1951.

Mechanical Hands and other robotic devices.

## **Filmography, Media & Computer Files**

Advisor on the Movie, *A Space Odyssey* (2001) and is referred to in the movie and book

Merlis, George, et al., (2000). *How Does Technology Transform Thinking?* Lincoln, NE: Distributed by GPN. (Video).

“Artificial Intelligence,” (1999). In Hoffman, Paul, et al, *Great Minds of Science*. New York: Simon & Schuster Audio Tapes.

“Artificial Intelligence,” (1998). In Bakker, Robert T., *The Best of Great Minds of Science*. Seattle, WA: Unapix Entertainment. (Video)

*First Person: Marvin Minsky, the Society of Mind*, (1996). Irvington, NY: Voyager. (Laser disk).

*Artificial Intelligence*, (1995). San Ramon, CA: Pangea Digital Pictures. (Video).

Scholz, Julie, and Hoffman, Paul, (1995). *Great Minds of Science*. New York: UNAPIX Entertainment. (Video).

Wallace, Jane, et al., (1994), *Technology in the 21<sup>st</sup> Century*. Achievement TV. (Video).

*Marvin Minsky: The Society of Mind*, (1994). New York: Voyager. (Computer file).

“Mind as Society.” In Bloch, Arthur, et al., *Intelligence Systems* (1992). Berkeley, CA: Thinking Aloud Productions.

Mishlove, Jeffrey, et al, *Intelligent Systems*. (1992). Berkeley, CA: Thinking Allowed Productions. (Video).

Kahn, Phillippe, *The World of Objects* (1991). Borland, International, Inc. Thinking Allowed: Mind as Society Video.

Wonder, Stevie, Schank, Roger, Minsky, Marvin, et al., (1987). *The Age of Intelligent Machines*. Van Nuys, CA: AIMS. (Video).

*The Society of the Mind: A Theory of Intelligence*, (1985). Sound recording of Patten Foundation Lectures, Recorded, February 18, 1985, Indiana University, Bloomington, IN.

*Web of Thoughts and Feelings*, (1979). April 18, 1979. Cornell University, Ithaca, NY. (Sound Recording).

*Learning and Metaphor*, (1979). Cornell University, Ithaca, NY. (Sound Recording).

## **Interviews**

Scientist on the Set: An Interview with Marvin Minsky  
<http://mitpress.mit.edu/e-books/Hal/chap2/two1.html>

Consciousness is a Big Suitcase: A talk with Marvin Minsky  
[http://www.edge.org/3rd\\_culture/minsky/minsky\\_p2.html](http://www.edge.org/3rd_culture/minsky/minsky_p2.html)

Why A.I. Is Brain-Dead, Interview in *Wired Magazine*, August 2003  
<http://www.wired.com/wired/archive/11.08/view.html?pg=3>

## **Honors, Awards. Societies & Corporate Affiliations**

ACM Turing Award, 1969

Doubleday Lecturer, Smithsonian Institution, 1978

Messenger Lecturer, Cornell University, 1979

Dr. Honoris Causa, Free University of Brussels, 1979

Dr. Honoris Causa, Pine Manor College, 1987

MIT Killian Award, 1989

The Japan Prize, 1990

The IJCAI Research Excellence Award, 1991

Joseph Priestly Award, 1995

Rank Prize, Royal Society of Medicine, 1995

Computer Pioneer Award, IEEE Computer Society, 1995

Robert Wood Prize for Optoelectronics, Optical Society of America, 2001



Benjamin Franklin Medal, 2001  
In Praise of Reason Award, World Skeptics Congress, 2002

President, American Association for Artificial Intelligence, 1981-82  
Fellow, American Academy of Arts and Sciences  
Fellow, Institute of Electrical and Electronic Engineers  
Fellow, Harvard Society of Fellows  
Fellow, CSICOP  
Board of Advisors, National Dance Institute  
Board of Advisors, Planetary Society  
Board of Governors, National Space Society  
Member of the U.S. National Academy of Sciences  
Member of the U.S. National Academy of Engineering  
Argentine National Academy of Sciences  
Member, League for Programming Freedom

Director, Information International, Inc., 1961-1984  
Founder, LOGO Computer Systems, Inc.  
Extropy Institute's Council of Advisors (<http://www.extropy.org/directors/htm>)  
Alcor Life Extension Foundation's Scientific Advisory Board  
Founder, Thinking Machines, Inc.  
Fellow, Walt Disney Imagineering  
Co-Sponsor, Loebner Prize (<http://loebner.net/Prizef/minsky.html>)

### **About Marvin Minsky & Websites**

Marvin Minsky – Wikipedia, [http://en.wikipedia.org/wiki/Marvin\\_Minsky](http://en.wikipedia.org/wiki/Marvin_Minsky)

Marvin Minsky Homepage <http://www.media.mit.edu/~minsky/>

MIT AI Lab <http://www.csail.mit.edu/index.php>

MIT Media Lab <http://www.media.mit.edu/>

Big Thinkers – Marvin Minsky <http://www.kurzweilai.net/bios/bio0023.html?>

Founded the MIT Artificial Intelligence Laboratory with John McCarthy (1959)  
<http://www.csail.mit.edu/index.php>

Marvin Minsky's Usenet posts  
<http://groups.google.com/groups?enc-author=YgB1MhQAAAB1gYYqVvjyi9tx8YCDXE2y6ByVaTvQhk5i4n6ZEwWJug&scoring=d>