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**Thomas W. Malone**

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**EDUCATION**

B.A., Mathematical sciences, Rice University, 1974, *magna cum laude*  
M.A., Psychology, Stanford University, 1977  
M.S., Engineering-economic systems, Stanford University, 1979  
Ph.D., Psychology, Stanford University, 1980

**PROFESSIONAL EXPERIENCE**

<i>Region IV Education Service Center</i> Houston, TX	Consultant for Computer-Based Instruction	June 1974	Aug. 1975
<i>Xerox Palo Alto Research Center</i> Palo Alto, CA	Research Intern Member of Research Staff	Oct. 1979 June 1980	June 1980 Sept. 1983
<i>Massachusetts Institute of Technology</i> Cambridge, MA	Assistant Professor Douglas Drane Career Development Associate Professor of Information Technology and Management Patrick J. McGovern Professor of Information Systems Director, Center for Coordination Science Co-Director, Initiative on Inventing the Organizations of the 21st Century Head, Information Technology Group Patrick J. McGovern Professor of Management Director, Center for Collective Intelligence	Sept. 1983 July 1985 July 1989 July 1989 May 1994 Sept. 2000 Jan. 2004 July 2006	June 1985 June 1989 Jan. 2004 June 2006 Dec 1999 July 2009 --- ---

<i>Harvard Business School</i> Boston, MA	Visiting Professor	Jan. 1992	Dec. 1992
<i>IESE Business School</i> Barcelona, Spain	Visiting Professor	Sept. 2001	Aug. 2002
<i>New York University</i> New York, NY	Visiting Scholar Stern School of Business	Sept. 2011	Jan. 2012
<i>Stanford University</i> Stanford, CA	Visiting Professor Department of Psychology	Jan. 2012	Jun. 2012

## **AWARDS**

U. S. Presidential Scholar (1970)

Phi Beta Kappa (1974)

National Science Foundation Graduate Fellowship (1976-1979)

IBM Faculty Award (2004, 2013)

Outstanding Paper Award at International Conference on Collaboration Technologies and Systems (2011)

Honorary doctorate, University of Zurich (2012)

## **RECENT RESEARCH GRANTS (Last 10 years)**

IBM Faculty Award 2013

Center for Collective Intelligence 2006 -  
 Research center funded by National Science Foundation (Grant Nos. IIS-0963285, ACI-1322254, IIS-0963451, IIS-0968321, CCF-1442887, IIS-1144663, and IIS-1047567), Army Research Office (Grant Nos. 56692-MA and 64079-NS), BT, Cisco, Manpower, Inc., Genpact, Argosy Foundation, and others.

## **PROFESSIONAL ACTIVITIES**

**Member of editorial boards:** *Human-Computer Interaction* (1986-93), *MIS Quarterly* (1987-90), *Information Systems Research* (editorial board, 1987-94; advisory board, 1994-), *Organizational Science* (1988-91), *Management Science* (1990-2000), *Organizational Computing* (1991- ), *ACM Transactions on Information Systems* (1991-94), Cambridge University Press series on Human-Computer Interaction (1990-94), *Electronic Markets* (1999-2007).

**Conference program committees:** ACM Conference on Human Factors in Computer Systems (CHI) (Program committee member: 1983, 1986, 1991; Special Presentations Chairman, 1985; Doctoral Consortium Committee member, 1988), ACM Conference on Office Information Systems (1984), Conference on Computer-Supported Cooperative Work (Program committee chair: 1994; Program committee member: 1986, 1988, 1990, 1992), Workshop on Organizational Science (planning committee chairman, 1987), International Conference on Information Systems (1987), National Science Foundation Coordination Theory Workshop (planning committee chairman, 1988), AAAI National Conference on Artificial Intelligence (1990), National Science Foundation Workshop on Coordination Theory and Collaboration Technology (co-chair: 1991,1992), National Science Foundation Workshop on Information Technology and Productivity (co-chair, 1993), American Association of Artificial Intelligence (AAAI) Conference (2006), Collective Intelligence Conference (Founding Co-Organizer, 2012; Co-General Chair, 2014).

**Reviewer for:** National Science Foundation, National Institute of Education, *Communications of the ACM*, *ACM Transactions on Office Information Systems*, *ACM Computing Surveys*, *Operations Research*, *Management Science*, *Organizational Science*, *Sloan Management Review*, *Journal of Educational Psychology*, *Cognitive Science*, *IEEE Transactions on Computers*, *Operations Research*, International Conference on Information Systems, Cognitive Science Conference, Journal of the Association of Information Systems (JAIS), Conference on Computer-Supported Cooperative Work (CSCW), Collective Intelligence Conference.

**Congressional testimony:** Testified for US House of Representatives Committee on Education and the Workforce (Subcommittee on Oversight and Investigations), American Worker at a Crossroads Project, October 29, 1997. Congressional staff briefing for US House of Representatives Select Committee on Energy Independence and Global Warming, December 7, 2010. Congressional staff briefing for US House of Representatives Natural Resources Committee, January 25, 2012.

**Museum exhibit:** “Climate Collaboratorium” exhibit on the MIT Climate CoLab project, included as part of the “Sampling MIT” exhibit at the MIT Museum, Cambridge, MA (September 2009 – November 2011).

**Other professional service:** Member of National Science Foundation (NSF) Advisory Board for Information, Robotics, and Intelligent Systems Division (1988-91); Chairman of Subcommittee on "Fundamentals of Collaboration" for NSF Initiative on "The National Collaboratory" (1989); Member of NSF Review panels; Member of NSF site visit team; Subcommittee member and presenter for DARPA Summer Study on the Engineer's Assistant project (1990); Subcommittee chair for DARPA Human Computer Interaction Workshop (1992). Member of National Academy of Sciences (NAS) Committee on Network Science for Future Army Applications (2004-05)

**Member:** Association for Computing Machinery

## TEACHING

**Masters courses:** Decision Support Systems I; Management Information Systems; Inventing the Organizations of the 21st Century; Proseminar on Organizational Transformation; Electronic Commerce; Information Systems; Information Technology as an Integrating Force in Manufacturing; Distributed Leadership Workshop; Putting People at the Center of Business; Information Technology Essentials; Strategic Organizational Design.

**Doctoral seminars:** Organization Design; Workshop in Management Information Systems; Information Processing in Individuals, Organizations and Computers; Computer-Supported Cooperative Work.

**Executive education:** Artificial Intelligence: Implications for Business Strategy; Intelligent Organizations: Collaboration and the Future of Work; Distributed Leadership; Collective Intelligence; Future of Work; Building Organizational Capacity for Innovation.

## PATENTS

Malone, T.W., Lai, K.Y., Yu, K. C., & Berenson, R. W. Object-oriented computer user interface. US Patent Nos: 5,727,175 (March 10, 1998); 5,790,116 (August 4, 1998); 5,794,001 (August 11, 1998); 5,900,870 (May 4, 1999).

Malone, T.W., Crowston, K., Lee, J., Pentland, B., & Dellarocas, C. Computer system for displaying representations of processes. US Patent No. 5,819,270 (October 6, 1998).

Malone, T.W., Crowston, K., Lee, J., Pentland, B., & Dellarocas, C. A computerized handbook of processes. European Patent No. 0692113 (October 14, 1998). Canadian Patent No. 2,156,917 (April 22, 2003).

Malone, T.W., Crowston, K., Lee, J., Pentland, B., & Dellarocas, C. Computer handbook of processes. US Patent No. 6,070,163 (May 30, 2000). US Patent No. 6,349,298 (February 19, 2002).

Dellarocas, C., & Malone, T.W. Computer system and computer implemented process for representing software system descriptions and for generating executable computer programs and computer system configurations from software system descriptions. US Patent Nos: 6,370,681 (April 9, 2002); 7,017,146 (March 21, 2006). Canadian Patent No. 2,249,386 (June 27, 2003).

## **PUBLICATIONS**

### **Books**

Olson, G. M., Malone, T. W., and Smith, J. B. (Eds.) *Coordination Theory and Collaboration Technology*. Mahwah, NJ: Erlbaum, 2001.

Malone, T. W., Laubacher, R. J., & Scott Morton, M. S. (Eds.) *Inventing the Organizations of the 21<sup>st</sup> Century*. Cambridge, MA: MIT Press, 2003.

Malone, T. W., Crowston, K. G., & Herman, G. (Eds.) *Organizing Business Knowledge: The MIT Process Handbook*. Cambridge, MA: MIT Press, 2003.

Malone, T. W. *The Future of Work: How the New Order of Business Will Shape Your Organization, Your Management Style, and Your Life*. Boston, MA: Harvard Business School Press, 2004 (Translated into Japanese, Chinese, Spanish, Korean, Portuguese, and Russian. Favorably reviewed by *USA Today*, *Financial Times*, *Fortune.com*, *The Economist*, *Boston Globe*, and others).

Malone, T. W., and Bernstein, M. S. (Eds.) *Handbook of Collective Intelligence*. Cambridge, MA: MIT Press, 2015. (Named an “Outstanding Academic Title” for 2016 by *Choice* magazine)

Malone, T. W. *Superminds: The surprising power of people and computers thinking together*. New York: Little Brown, 2018.

### **Refereed journal articles**

Malone, T.W. Computer simulation of two-person interactions, *Behavioral Science*, 1975, 20, 260-267.

Malone, T.W., Suppes, P., Macken, E., Zanotti, M. and Kanerva, L. Projecting student trajectories in a computer-assisted instruction curriculum, *Journal of Educational Psychology*, 1979, 71, 74-84.

Malone, T.W., Macken, E. and Suppes, P. Toward optimal allocation of instructional resources: Dividing computer-assisted instruction time among students, *Instructional Science*, 1979, 8, 107-120.

Thomas, E.A.C. and Malone, T.W. On the dynamics of two-person interactions, *Psychological Review*, 1979, 86, 331-360.

Malone, T.W. Toward a theory of intrinsically motivating instruction, *Cognitive Science*, 1981, 4, 333-370 (Reprinted in D. F. Walker and R.D. Hess (eds.) *Instructional Software*, Wadsworth Publishing Co., 1984).

Malone, T.W. How do people organize their desks? Implications for designing office information systems, *ACM Transactions on Office Information Systems*, 1983, 1, 99-112.

Luconi, F.L., Malone, T.W. and Scott Morton, M.S. Expert systems: The next challenge for management, *Sloan Management Review*, 1986 (Summer), 3-14. (Reprinted in J. F. Rockart & C. V. Bullen (Eds.), *The Rise of Managerial Computing*, Homewood, IL: Dow Jones-Irwin, 1986. Also reprinted in R. H. Sprague & H. J. Watson (Eds.), *Decision Support Systems: Putting Theory into Practice* (Third edition), Englewood Cliffs, Prentice Hall, 1993.)

Malone, T. W., Grant, K. R., Turbak, F. A., Brobst, S. A., & Cohen, M. D. Intelligent information sharing systems, *Communications of the ACM*, 1987, 30, 390-402.

Malone, T. W., Yates, J., & Benjamin, R. I. Electronic markets and electronic hierarchies, *Communications of the ACM*, 1987, 30, 484-497 (Reprinted in: I. Greif (Ed.), *Computer Supported Cooperative Work*, Los Altos, CA: Morgan Kaufmann Publishers, 1988. Also reprinted in T. J. Allen & M. S. Scott Morton (Eds.), *Information Technology and the Corporation of the 1990s*, New York: Oxford University Press, 1994. Excerpt reprinted in M. Stefik, *Internet Dreams*, Cambridge, MA: MIT Press, 1996.)

Malone, T. W., Grant, K. R., Lai, K. Y., Rao, R. & Rosenblitt, D. A. Semi-structured messages are surprisingly useful for computer-supported coordination, *ACM Transactions on Office Information Systems*, 1987, 5, 115-131 (Reprinted in I. Greif (Ed.), *Computer Supported Cooperative Work*, Los Altos, CA: Morgan Kaufmann Publishers, 1988).

Malone, T. W. Modeling coordination in organizations and markets, *Management Science*, 1987, 33, 1317-1332. (Reprinted in A.H. Bond, & L. Gasser (Eds.), *Readings in Distributed Artificial Intelligence*, San Mateo, CA: Morgan Kaufman Publishers, 1988).

Crowston, K., Malone, T. W., & Lin, F. Cognitive science and organizational design: A case study of computer conferencing, *Human-Computer Interaction*, 1987, 3, 59-85 (Reprinted in I. Greif (Ed.), *Computer Supported Cooperative Work*, Los Altos, CA: Morgan Kaufmann Publishers, 1988).

Malone, T.W., & Smith, S. A. Modeling the performance of organizational structures, *Operations Research*, May-June, 1988, 36, 421-436.

Lai, K.Y., Malone, T.W. & Yu, K.C. Object Lens: A 'spreadsheet' for cooperative work. *ACM Transactions on Office Information Systems*, October 1988, 6, 332-353. (Reprinted in D. Marca & G. Bock (Eds.) *Groupware: Software for Computer-Supported Cooperative Work*, Los Alamitos, CA: IEEE Computer Society Press, 1992. Also reprinted in R. M. Baecker (Ed.), *Readings in Groupware and Computer Supported Cooperative Work*, San Mateo, CA: Morgan Kaufmann Publishers, 1993.)

Lee, J., & Malone, T. W., Partially Shared Views: A scheme for communicating among groups that use different type hierarchies, *ACM Transactions on Information Systems*, 1990, 8, 1-26.

Olson, J., Card, S. K., Landauer, T. K., Olson, G. M., Malone, T., & Leggett, J. Computer Supported Collaborative Work: Research Issues for the 90s, *Behavior and Information Technology*, 1993, 12 (2), 115-129.

Malone, T. W. & Crowston, K. The interdisciplinary study of coordination. *ACM Computing Surveys*, 1994 (March), 26 (1), 87-119 (Reprinted in: G. M. Olson, T. W. Malone, and J. B. Smith (Eds.) *Coordination Theory and Collaboration Technology*. Mahwah, NJ: Erlbaum, 2001; Malone, T. W., Crowston, K. G., & Herman, G. (Eds.) *Organizing Business Knowledge: The MIT Process Handbook*. Cambridge, MA: MIT Press, 2003).

Brynjolfsson, E., Malone, T. W., Gurbaxani, V., & Kambil, A. Does information technology lead to smaller firms? *Management Science*, 1994, 40 (12), 1628-1644.

Malone, T. W., Lai, K. Y., & Fry, C. Experiments with Oval: A radically tailorable tool for cooperative work. *ACM Transactions on Information Systems*, 1995, 13 , 2 (April), 177-205.

Malone, T. W. Is "Empowerment" just a Fad? Control, Decision-making, and Information Technology. *Sloan Management Review*, 1997, 38 (2), 23-35. (Reprinted in Malone, T. W., Laubacher, R. J., & Scott Morton, M. S. (Eds.) *Inventing the Organizations of the 21<sup>st</sup> Century*. Cambridge, MA: MIT Press, 2003. Excerpt reprinted in *BT Technology Journal*, 1999, 17, 4 (October), 141-144.)

Malone, T. W., Crowston, K. G., Lee, J., Pentland, B., Dellarocas, C., Wyner, G., Quimby, J., Osborn, C. S., Bernstein, A., Herman, G., Klein, M., & O'Donnell, E. Tools for inventing organizations: Toward a handbook of organizational processes. *Management Science*, 1999, 45, 3 (March), 425-443 (Reprinted in: Malone, T. W., Crowston, K. G., & Herman, G. (Eds.) *Organizing Business Knowledge: The MIT Process Handbook*. Cambridge, MA: MIT Press, 2003. Malone, T. W., Laubacher, R. J., & Scott Morton, M. S. (Eds.) *Inventing the Organizations of the 21<sup>st</sup> Century*. Cambridge, MA: MIT Press, 2003).

Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W. Evidence for a collective intelligence factor in the performance of human groups, *Science*, 29 October 2010, 330 (6004), 686-688; Published online 30 September 2010 [DOI: 10.1126/science.1193147] (Available on-line at: <http://www.sciencemag.org/cgi/content/abstract/science.1193147>).

Hines, James H., Thomas W. Malone, Paulo Gonçalves, George Herman, John Quimby, Mary Murphy-Hoye, James Rice, James Patten, and Hiroshi Ishii, Construction by Replacement: A new approach to simulation modeling. *System Dynamics Review*, 2011, 27, 1, 64-90; published online 28 July 2010 [DOI: 10.1002/sdr.437] (Available on-line at: <http://onlinelibrary.wiley.com/doi/10.1002/sdr.437/abstract>).

Introne, J., Laubacher, R., Malone, T. ROMA: A framework to enable open development methodologies in climate change assessment modeling. *IEEE Software*, 2011, 28(6): 56-61.

Engel, D., Woolley, A. W., Jing, L. X., Chabris, C. F., & Malone, T. W. (2014) Reading the mind in the eyes or reading between the lines? Theory of Mind predicts effective collaboration equally well online and face-to-face. *PLOS One* 9(12). doi: 10.1371/journal.pone.0115212 (<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0115212>).

Woolley, A. W., Aggarwal, I., and Malone, T. W. (2015). Collective intelligence and group performance. *Current Directions in Psychological Science*. 24 (6), 420-424.

Awad, E., Bonnefon, J., Caminada, M., Malone, T., & Rahwan, I. (2017) Experimental assessment of aggregation principles in argumentation-enabled collective intelligence. *ACM Transactions on Internet Technology*, 17, 3, 1-21.

Amelkin, V., Askarisichani, O., Kim, Y. J., Malone, T. W., & Singh, A. K. (2018) Dynamics of collective performance in collaboration networks. *PLOS ONE*. 13(10): e0204547. <https://doi.org/10.1371/journal.pone.0204547>

Engel, D., Malone, T. W. (2018) Integrated information as a metric for group interaction. *PLOS ONE* 13(10): e0205335. <https://doi.org/10.1371/journal.pone.0205335>.

## Other articles

Malone, T.W. What makes computer games fun? *Byte*, 1981, 6, 258-277 (Reprinted in *Computers in Education* (U.K.), 1982, 4, 14-21; and in D. Peterson (Ed.), *Intelligent Schoolhouse*. Reston, VA: Reston Publishing Co. (Prentice-Hall), 1984. Abbreviated version reprinted as: Guidelines for designing educational computer programs, *Childhood Education*, 1983, 59, 241-247.)

Crowston, K. & Malone, T. W. Intelligent software agents. *Byte*, December 1988, 267-271.

Malone, T.W., Yates, J. & Benjamin, R.I. The logic of electronic markets, *Harvard Business Review*, May-June, 1989, 67(3), 166-169 (Reprinted in *Revolution in Real Time: Managing Information Technology in the 1990s*, Harvard Business School Press, 1991.)

Malone, Thomas W., and Rockart John F. Computers, networks, and the corporation, *Scientific American*, 1991, 265, 3 (Sept.), 128-136. (Reprinted in *Proceedings of the GroupWare '92 conference*, San Jose, CA, August 3, 1992. Reprinted in P. Lloyd (Ed.), *Groupware in the 21st Century*, London: Adamantine Press, 1994. Reprinted in P. Gray & J. Jurison (Eds.), *Productivity in the Office and the Factory*, Danvers, Mass.: Boyd & Fraser, 1995. Reprinted in Kirn & O'Hare (Eds.), *Cooperative Knowledge Processing*, London: Springer-Verlag, 1996.)

Malone, T. and Streitz, N. Guest Editorial (for Special Issue on Computer-Supported Cooperative Work), *ACM Transactions on Information Systems*, 11 (4) (October), 1993, 319.



Berndt, E. R. & Malone, T.W. Information technology and the productivity paradox: Getting the questions right (Guest editors' introduction to special issue). *Economics of Innovation and New Technologies*, 3 (3-4), 1995, 177-182.

Bernstein, A., Dellarocas, C., Malone, T. W., & Quimby, J. Software tools for a Process Handbook. *IEEE Bulletin on Data Engineering*, 1995, 18, 1 (March), 41-47.

Malone, T. W. Invited commentary on article by L. Suchman entitled "Do Categories Have Politics?" *Computer Supported Cooperative Work (CSCW)*, 1995, 3, 37-38. (Reprinted in B. Friedman (Ed.), *Designing Computers for People--Human Values and the Design of Computer Technology*. New York: Cambridge University Press, in press.)

Malone, T. W. Foreword for D. Coleman & R. Khanna (Eds.), *Groupware: Technology and Applications*, Upper Saddle River, NJ: Prentice Hall, 1995, xix-xx.

Malone, T. W., Scott Morton, M. S., & Halperin, R. R. Organizing for the 21st Century. *Strategy & Leadership*, 1996, 24, 4 (July/August), 7-10.

Malone, T. (Interview). Free on the Range: Tom Malone on the implications of the digital age. *IEEE Internet Computing*, May/June 1997, 1 (3), 8-20.

Schwartz, P. Re-organization Man (Interview with Thomas Malone). *Wired*, July 1998, 134-135.

Lee, J. & J., Gruninger, M., Jin, Y., Malone, T., Tate, A., Yost, G., & other members of the PIF Working Group. The Process Interchange Format and Framework. *Knowledge Engineering Review*, 1998, 13 (1) Cambridge Univ. Press (Reprinted in: P. Bernus, K. Mertins, G. Schmidt (Eds.) *Handbook on Architectures of Information Systems*. Berlin: Springer-Verlag, 1998 (also in Second Edition, 2006); Malone, T. W., Crowston, K. G., & Herman, G. (Eds.) *Organizing Business Knowledge: The MIT Process Handbook*. Cambridge, MA: MIT Press, 2003).

Malone, T. W. & Laubacher, R. J. The Dawn of the E-lance Economy. *Harvard Business Review*, September – October 1998, 76 (5), 144-152. (Reprinted in: D. Tapscott (Ed.) *Creating Value in the Network Economy*, Boston, MA: Harvard Business School Press, 1999, pp. 55-67. J. Magretta (Ed.), *Managing in the New Economy*, Boston, MA: Harvard Business School Press, 1999, pp. 145-157. P. O'Meara, H. D. Mehlinger, & M. Krain, *Globalization and the Challenges of a New Century: A Reader*, Bloomington, IN: Indiana University Press, 2000, pp. 289-299 Revised versions reprinted in: Institute for Information Studies, *The Promise of Global Networks* (Annual Review of the Institute for Information Studies), Queenstown, MD: The Aspen Institute / Nortel Networks, 1999, pp. 119-136. *Financial Times*, March 1, 1999, Special section on "Mastering Information Management," pp. 2-4. Marchand, Donald A., Davenport, T. H., & Dickson, T. (Eds.) *Mastering Information Management*, London: Financial Times / Prentice Hall, 2000, pp. 137-142. Malone, T. W., Laubacher, R. J., & Scott Morton, M. S. (Eds.) *Inventing the Organizations of the 21<sup>st</sup> Century*. Cambridge, MA: MIT Press, 2003.)

Wolken, J. The Dawning of Opportunity: An interview with MIT's Thomas Malone (Cover story), *Contract Professional*, September 1999, 4, 1, 24-30.

Laubacher, R. J. & Malone, T. W. Entre dos mundos (English title: "Between two worlds") *Gestion*, November – December 1999, 4, 92-103. (Spanish translation of excerpts from the following working paper: Robert J. Laubacher, Thomas W. Malone, and the MIT Scenario Working Group. *Two Scenarios for 21st Century Organizations: Shifting Networks of Small Firms or All-Encompassing "Virtual Countries"?* MIT Initiative on Inventing the Organizations of the 21st Century, Working Paper No. 001, January 1997.)

Malone, T. W. & Laubacher, R. J. The Rebirth of the Guild (Op ed piece). *The Boston Globe*, August 24, 2000, p. A17.

Malone, T. W. State of the new economy / Voices / Thomas W. Malone (Interview), *Fast Company*, September 2000, p. 142.

Malone, T. W. The future of e-business (Editorial). *Sloan Management Review*, Fall 2001, p. 104.

Rosenfeld, Jill. Free agents in the olde world (Interview with Thomas Malone), *Fast Company*, May 2001, p. 136.

Malone, T. W. Making the decision to decentralize. *Harvard Business School Working Knowledge*, March 29, 2004.

Malone, T. W. Bringing the market inside. *Harvard Business Review*, April 2004, 82 (4), 106-114. (Reprinted in Chinese in *Harvard Business Review China*, July 2006.)

Malone, T. W. Competing in the marketplace for values. *Leader to Leader*, Summer 2004, 33, pp. 53-58. (Excerpt reprinted in *Science and Theology News*, June 2005, 5, 10, p. 5)

Malone, T. W. Pioneers that cultivate a new model of work. *Financial Times*, August 12, 2004.

Malone, T. W. Smarter companies. *Microsoft Executive Circle*, Summer 2004, 4, 2, p. 42.

Ancona, D., Malone, T. W., Orlikowski, W. J., & Senge, P. M. In praise of the incomplete leader. *Harvard Business Review*, February 2007, 85 (2), 92-100.

Malone, T. W. IT does not *drive* organizational change; it *enables* corporate transformation. Interview with Thomas W. Malone. (Article in Japanese) *Harvard Business Review* (Japan), January 2007, pp. 114-115.

Malone, T. W. & Klein, M. Harnessing collective intelligence to address global climate change (Invited Lead Essay). *Innovations: Technology | Governance | Globalization*, Summer 2007, 2 (3), 15-26.

Reeves, B., Malone, T. W., & O'Driscoll, T. 2008, Leadership's Online Labs, *Harvard Business Review*, 86 (5): 58-67.

Malone, T. W. Looking to Wikipedia for answers. *Financial Times* (FT.com), Nov 5, 2008.

Malone, T. W., Laubacher, R., & Dellarocas, C. The Collective Intelligence Genome, *Sloan Management Review*, Spring 2010, 51, 3, 21-31 (Reprint No. 51303. Also available at: <http://sloanreview.mit.edu/the-magazine/articles/2010/spring/51303/the-collective-intelligence-genome/#1>).

Kraut, R., Maher, M. L., Olson, J., Malone, T. W., Pirolli, P., & Thomas, J. C. Scientific Foundations: A case for technology-mediated social-participation theory (Cover feature), *IEEE Computer*, November 2010, 43, 11, 22-28.

Wigand, R. 20 years of research in electronic markets and networked business: An interview with Thomas Malone. *Electronic Markets* (2011) 21: 5-17.

Woolley, A., & Malone, T. Defend your research: What makes a team smarter? More women, *Harvard Business Review*, June 2011, 89 (6): 32-33.

Malone, T., Laubacher, R., & Johns, T. The Age of Hyperspecialization, *Harvard Business Review*, July-August 2011, 89(7/8): 56-65.

Weill, P. Malone, T. W., Apel, T. G., The business models investors prefer, *Sloan Management Review*, Summer 2011, 52 (4): 17-19.

Malone, T. W. Collective Intelligence / Interview: New Models for Human-Machine Collaboration. *Pictures of the Future. The Magazine for Research and Innovation*, Siemens, Spring 2011, pp. 90 (Reprinted in *Engine*, June 2011, pp. 6-7).

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Woolley, A., Malone, T. W., & Chabris, C. F. Why some teams are smarter than others. *New York Times*, January 18, 2015, p. SR5

[http://www.nytimes.com/2015/01/18/opinion/sunday/why-some-teams-are-smarter-than-others.html?emc=eta1&\\_r=1](http://www.nytimes.com/2015/01/18/opinion/sunday/why-some-teams-are-smarter-than-others.html?emc=eta1&_r=1)).

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### **Chapters in edited volumes (excluding reprintings of above articles)**

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Engel, D. and Malone, T. W. *Integrated Information as a Metric for Group Interaction: Analyzing Human and Computer Groups Using a Technique Developed to Measure Consciousness*, preprint, submitted February 8, 2017, <http://arxiv.org/abs/1702.02462>.

Woolley, A. W., Kim, Y., Malone, T.W., *Measuring Collective Intelligence in Groups: A Reply to Credé and Howardson*. Cambridge, MA: Massachusetts Institute of Technology, Center for Collective Intelligence Working Paper No.: 5431-18, June 2015. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3187373](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3187373).

### **Recent oral and other non-published research presentations (last 5 years)**

*Collective Intelligence: What is it? How can we measure it? And how can we increase it?* International Summer Institute on *Web Science and the Mind*, Institute of Cognitive Sciences (ICS) at the Université du Québec à Montréal, Montreal, Canada, July 17, 2014. Workshop with MIT Center of Brain, Minds, and Machines and German Science of Intelligence Consortium, Cambridge, MA, December 14, 2017.

*How can we create more intelligent organizations?* MIT Leader-to-Leader Program Alumni Event, MIT, Cambridge, MA, May 15, 2014. MIT Industrial Liaison Program Executive Briefing for MFS, Cambridge, MA, April 22, 2015. Insurance industry

consortium meeting (Presentation by remote video), University of St. Gallen, Switzerland, May 13, 2015. Fuji Xerox, Tokyo, Japan, June 8, 2015. Arthur Lok Jack Graduate School of Business (presentation by remote video), University of West Indies Conference on “The Future of Work and the War for Talent,” June 17, 2015. Workshop on “Collective Intelligence in the Insurance Industry,” MIT Center for Collective Intelligence, Cambridge, MA, February 18, 2016. AmChams (American Chambers of Commerce) in Europe Conference, Cambridge, MA, May 11, 2017. Alliance ARTEM Conference (Ecole Nationale Supérieure d’Art et de Design de Nancy, ICN Business School, Mines Nancy, Université de Lorraine, Métropole Grand Nancy), Nancy, France, November 17, 2017. MIT Industrial Liaison Program Executive Session for MFS, Cambridge, MA, December 12, 2017.

*Leveraging all human capital: Driving business success by achieving equal access to opportunities* (Panel member), National Academy of Engineering conference on “Making Value for America: A National Conversation on Value Creation and Opportunity in the United States,” Irvine, CA, February 27, 2014 (Video: [https://www.youtube.com/watch?v=bG8z0AO-rzA&list=PLJ8uEbBRJZKcZbNIM\\_NgR8bjFeEpjchrR&index=9](https://www.youtube.com/watch?v=bG8z0AO-rzA&list=PLJ8uEbBRJZKcZbNIM_NgR8bjFeEpjchrR&index=9)).

*Energy’s Innovation Dilemma: Scaling New Technologies* (Panel member), MIT Energy Initiative Innovation Dinner, CERAWEEK, Houston, TX, March 5, 2014.

*How is the Internet changing the way we work?* BBVA Open Mind Event, MIT Media Lab, Cambridge, MA, April 9, 2014.

*Are you ready for the shifting frontier of mind and machine?* (Panel member), MIT CIO Symposium, MIT, Cambridge, MA, May 21, 2014.

*Climate preparedness: How can we work together?* (Panel member), American Geophysical Union Science Policy Conference, Washington, DC, June 17, 2014.

*Defining Organizational Assets*, Aspen Institute Roundtable on Information Technology, Aspen, CO, July 10, 2014.

*The new human computer partnership* (Invited presentation), IBM event on “Watson in the Age of Discovery,” New York, NY, August 28, 2014 (Video: <https://www.youtube.com/watch?v=ms7PAAjpm3M&feature=youtu.be>. Malone segment of video is from 09:25 to 30:30.)

*Conversation on decision-making* (Panel member), Blouin Creative Leadership Summit, New York, NY, September 24, 2014.

*Tapping the crowd for insights and solutions: Crowdsourcing, Crowdfunding, and the Personal Data Economy* (Panel member), New Metrics of Sustainable Business Conference, Cambridge, MA, September 26, 2014.

*The future of work: How can we create more intelligent organizations?* Conference on “The Democratic Enterprise”, Technical University of Munich, Munich, Germany, February 12, 2015 (presentation by videoconference).



*Collective problem solving: Features and affordances of creative online communities* (Panel member), Computer-Supported Cooperative Work & Social Computing (CSCW 2015), Vancouver, BC, Canada, March 18, 2015.

*How technology platforms change the nature of entrepreneurship* (Panel member). MIT Innovation Initiative Roundtable Discussion on “Building a More Inclusive Innovation Economy,” MIT, Cambridge MA, April 16, 2015.

Kim, Y. J., Engel, D., Aggarwal, I., Woolley, A. W., & Malone, T. W. Retention of participants in online collective intelligence tests involving a panel design. Panel presented at the 2015 annual convention of the International Communication Association, San Juan, Puerto Rico, May 21-25, 2015.

*Using crowds for collective sensemaking*, Panel on “Developing Capabilities for Sensemaking,” International Risk Assessment and Horizon Scanning Symposium (IRAHSS 2015), Singapore, July 7, 2015.

*The future of work* (Panel moderator), International Risk Assessment and Horizon Scanning Symposium (IRAHSS 2015), Singapore, July 8, 2015.

*The market space* (Panel member), Center for Strategic Futures, Foresight Conference 2015, Singapore, July 9, 2015.

*Building better organizations with collective intelligence*. MIT Executive Education Webinar, July 22, 2015.

Dinner speaker (talk included summary of recent research on collective intelligence as well as other topics). Artesia High School Class of 1970 45<sup>th</sup> Reunion, Artesia, NM, September 12, 2015.

Opening and Closing sessions, Climate CoLab Conference on “Crowds and Climate,” MIT, Cambridge, MA, October 6, 2015.

Announcement of MIT Climate CoLab Grand Prize Winners, MIT SOLVE Conference, MIT, Cambridge, MA, October 6, 2015.

*Centaurs for Collective Prediction*, DARPA/ISAT Workshop on “Centaurs: Human-Computer Teams that Win Against Either Humans or Computers Alone,” San Francisco, CA, November 18, 2015.

Announcement of Climate CoLab contest in partnership with the United Nations Office of the Secretary General, United Nations Climate Change Conference (COP 21), Paris, France, December 2, 2015.

*Measuring Collective Intelligence*. MIT Industrial Liaison Program Executive Briefing for ExxonMobil, Cambridge, MA, January 13, 2016.

*How can we design online communities to do very large-scale collective problem solving: The case of the Climate CoLab.* Tepper School of Business and Human-Computer Interaction Institute, Carnegie Mellon University, Pittsburgh, PA, January 15, 2016.

*Global engagement and climate: Combining experts and online crowds to address climate change.* MIT Earth Atmospheric and Planetary Sciences Department Conference on “MIT on Climate = Science + Action”, Cambridge, MA, January 27, 2016.

*Climate CoLab: Competition or Collaboration?* MIT Collaborative Innovation Networks Consortium (C4C), Cambridge, MA, April 7, 2016.

*How will work change? Organizations will become more intelligent.* MIT Industrial Liaison Program Information and Communication Technologies Conference, Cambridge, MA, April 21, 2016.

*Toward very large-scale collective problem solving: The case of the Climate CoLab.* University of Michigan’s Gary and Judy Olson Public Symposium on Human-Computer Interaction. Ann Arbor, MI, May 5, 2016.

Malone, T. W. (Interviewed on stage by Jason Pontin, Editor-in-chief, MIT Technology Review) *The CoLab Methodology*. Joint Session of MIT Climate CoLab Crowds & Climate Conference and MIT Solve @ HubWeek Conference, Cambridge, MA, September 28, 2016.

*How can large online communities help solve complex problems?* MIT: Here | Now | Next: Inside MIT’s Vision for a Better World (Workshop hosted by MIT Campaign for a Better World), Cambridge, MA, October 28, 2016.

*Intelligent Organizations.* MIT Industrial Liaison Program Executive Session for SSE, Glasgow, Scotland (presentation via video conference), November 23, 2016.

Engel, D.\*, Kim, Y. J.\*, Woolley, A. W., Lin, J., McArthur, N., & Malone, T. W. (2016). What makes a strong team? Using collective intelligence to predict performance of teams in League of Legends. Paper presented at the 2016 Annual Meeting of the Academy of Management, Anaheim, CA. (\*authors contributed equally)

Malone, Thomas W. *The collective intelligence genome: An architecture for scalable self-organizing communities?* Defense Advanced Research Projects Agency (DARPA) Information Science and Technology (ISAT) Workshop on “Technologies for Scalable Self-Organizing Communities,” New York, NY, January 27, 2017.

Malone, T. W., Nickerson, J. V., Laubacher, R. J., Fisher, L. H., de Boer, P., Han, Y., Towne, W. B. Using contest webs to address the problem of global climate change. Paper presented at the 2017 Collective Intelligence Conference, New York City, NY, June 15, 2017.

Woolley, A. W., Riedl, C., Kim, Y. J., & Malone, T. W. More evidence for a general collective intelligence factor in human groups: A meta-analysis. Paper presented at the 2017 Collective Intelligence Conference, New York City, NY, June 16, 2017.

Engel, D., Malone, T. W. Integrated information as a metric for group interaction: Analyzing human and computer groups using a technique developed to measure consciousness. Paper presented at the 2017 Collective Intelligence Conference, New York City, NY, June 16, 2017.

Malone, Thomas W. *Tapping human intelligence: Why machines will never (completely) take over*. Real Business Intelligence 2017 Conference, Cambridge, MA, July 12, 2017.

Malone, Thomas W., Plenary panel on “The Impact of Technology and Innovation on the Future of Work,” Eisenhower Fellowships Future of Work Global Conference, Malaga, Spain, September 15, 2017.

Malone, Thomas W., *Creating more intelligent organizations*. MIT Sloan Alumni Online webinar, September 28, 2017.

Malone, Thomas W., Panel on “Mobilizing private finance towards sustainable infrastructure: Latin America’s experience of NDC implementation,” COP 23 (23<sup>rd</sup> annual “Conference of the Parties”) UNFCCC (United Nations Framework Convention on Climate Change) (UN Climate Change Conference), Bonn, Germany, November 14, 2017.

Malone, Thomas W. *Bringing the digital revolution to the climate change challenge: The Climate Action Plan Accelerator*. Real Colegio Complutense at Harvard Workshop on “New Trends on Sustainability,” Cambridge, MA, December 1, 2017.

Malone, Thomas W. *Superminds: The surprising power of people and computers thinking together*. MIT Book Launch Event, Cambridge, MA, May 21, 2018. IE School of International Relations Course, Cambridge, MA, May 21, 2018. MIT William Barton Rogers Reception, Los Angeles, CA, May 23, 2018. RamsayTalks, Toronto, Canada, June 19, 2018. Tortoise ThinkIn on “The Future of Listening,” Boston, MA, July 17, 2018. Eden McCallum seminar, London, UK, September 12, 2018. Nesta “In conversation” event, London, UK, November 27, 2018. Eden McCallum breakfast and discussion event, London, UK, November 28, 2018.

Malone, Thomas W. *The future of work* (keynote address). University of Zurich Digital Forum, Zurich, Switzerland, September 13, 2018.

Malone, Thomas W. *Moving toward the instinctive enterprise: Artificial intelligence, collective intelligence, and why they matter* (Panel member), MIT Technology Review / Genpact Symposium, Cambridge, MA, September 26, 2018.

