

Literature Review Agent Based Modeling Systems – Legal Simulations

- I. Introduction - Agent Based Modeling Systems & Legal Simulation – Agent-Based Modeling Systems** is a software approach to modeling the behavior of discrete entities in a complex environment. It may be used, for example, to predict the behavior of a pathogen in an epidemic.
- II. Agent Based Modeling Systems – Overview** – These articles cover the overall field of agent-based modeling, together with basic tutorials on using ABMS and simulations in the social sciences. There are also several articles comparing the various systems currently available. Drs. Macal & North appear to be the lead authorities on ABMS for social modeling.

Macal, C M, & North, M. J. (2010). Tutorial on agent-based modelling and simulation. *Journal of Simulation*, 4(3), 151-162. Palgrave Macmillan. doi:10.1057/jos.2010.3

Macal, Charles M, & North, M. (2008). Agent-Based Modeling and Simulation: ABMS Examples. *Proceedings of the 2008 Winter Simulation Conference S. J. Mason, R. R. Hill, L. Mönch, O. Rose, T. Jefferson, J. W. Fowler eds.* (pp. 101-112).

Macal, Charles M, & North, M. J. (2005). Tutorial on Agent Based Modeling and Simulation. *Proceedings of the 2005 Winter Simulation Conference M. E. Kuhl, N. M. Steiger, F. B. Armstrong, and J. A. Joines, eds.* (pp. 2-15).

Macal, Charles M, & North, M. J. (2006). Tutorial on Agent-Based Modeling and Simulation Part 2: How to Model with Agents. *Proceedings of the 2006 Winter Simulation Conference L. F. Perrone, F. P. Wieland, J. Liu, B. G. Lawson, D. M. Nicol, and R. M. Fujimoto, eds.* (pp. 73-83).

Macal, Charles M, & North, M. J. (2007). Agent-Based Modeling and Simulation: Desktop ABMS. *Proceedings of the 2007 Winter Simulation Conference S. G. Henderson, B. Biller, M.-H. Hsieh, J. Shortle, J. D. Tew, and R. R. Barton, eds.* (pp. 95-106).

Macal, Charles M., & North, M. J. (2009). Agent-based modeling and simulation. *Proceedings of the 2009 Winter Simulation Conference (WSC)*, 86-98. Ieee. doi:10.1109/WSC.2009.5429318

Railsback, S. F., Lytinen, S. L., & Jackson, S. K. (2006). Agent-based Simulation Platforms: Review and Development Recommendations. *Simulation*, 82(9), 609-623. doi:10.1177/0037549706073695

Roberts, D. (2005). Agent-Based Modeling Toolkits NetLogo , RePast , and Swarm. *Compare A Journal Of Comparative Education*, 525-527.

Robinson, W. N., & Ding, Y. (2010). A survey of customization support in agent-based business process simulation tools. *ACM Transactions on Modeling and Computer Simulation*, 20(3), 1-29. doi:10.1145/1842713.1842717

- III. Agent Based Modeling Systems as a teaching or rhetorical tool** – These articles discuss ABMS as a teaching or visualization tool and cover considerations in creating a new simulation.

Guerin, S. M. (2004). Peeking Into the Black Box: Some Art and Science to Visualizing Agent-Based Models. *Proceedings of the 2004 Winter Simulation Conference*.

Hayward, Elizabeth O Plass, Jan Homer, B. (2009). Design Factors for educationally effective animations and simulations. *J compute Higher Education*. doi:10.1007/s12528-009-9011-x

IV. Legal Simulations – These articles discuss use of simulation and ABMS in the law and legal policy / legislative context. This is actually a fairly exhaustive list.

Emergent Order , Agent-Based Modeling , and Economic Analysis of Accident Law A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at George Mason University By Chad W . Seagren Master of Science Naval Postgraduate School , 2003 Bachelor of Science United States Naval Academy , 1998 Director : Richard E . Wagner , Professor Department of Economics Fall Semester 2009 George Mason University. (2009).

Hollander, P. a. (1977). The Uses of Simulation in Teaching Law and Lawyering Skills. *Simulation & Gaming*, 8(3), 319-340. doi:10.1177/003755007783002

Howard, W., & McBride, A. (2010). *Banking and Asset Bubbles : Testing The Theory Of Free Banking Using Agent-Based Computer Simulations And Laboratory Experiments A dissertation submitted in partial fulfillment of the requirements for the degree of By. Simulation.*

Jeong, B.-K. (2010). *DIGITAL PIRACY : AN ASSESSMENT OF CONSUMER PIRACY RISK AND OPTIMAL SUPPLY CHAIN COORDINATION STRATEGIES* by Bong-Keun Jeong A dissertation submitted to the faculty of The University of North Carolina at Charlotte in partial fulfillment of the requirements.

Laver, M. (2010). *Agent-based models of politics*. New York (pp. 2010-2012).

Lee, J., & Yu, C. (2010). *The development of Urban Crime Simulator. Proceedings of the 1st International Conference and Exhibition on Computing for Geospatial Research & Application - COM.Geo '10* (p. 1). New York, New York, USA: ACM Press. doi:10.1145/1823854.1823921

Ludwig, S. A. (2008). Agent-Based Assistant for e-Negotiations. *Work* (pp. 514-524).

Pickert, R. C. (2012). Simple Games in a Complex World : A Generative Approach to the Adoption of Norms. *University of Chicago Law Review*, 64(4), 1225-1288.

Rajen, S. (2008). Developing and testing a theory of legislative party fragmentation.

Polhill, J. G. (n.d.). Agent-based modeling of socio-economic processes related to the environment : Example of land-use change. *Media*, 61-76.

Sain, M. K., Henry, E. W., & Uhran, J. J. (1973). An algebraic method for simulating legal systems. *Simulation*, 21(5), 150-158. doi:10.1177/003754977302100507

Seagren, C. W. (2009). Agent Based Modeling and Austrian Analysis of Accident Law.

V. Repast Symphony ABMS – These articles and presentations are specific to using Repast Symphony, my current system of choice.

Collier, Nick North, M. (n.d.). Repast Java Getting Started.

Crooks, A. (n.d.). An Introduction to the Repast Software. *Most*.

Narzisi, G., & Modeling, A.-based. (2008). Agent-Based Modeling in Repast Lecture outline.

Ozik, J., & Team, R. D. (n.d.). *Relogo Getting Started Guide* (pp. 1-48).

Repast Development Team. (2011). *Repast Symphony Frequently Asked Questions Programming with Repast Symphony. Development* (pp. 1-22).

Tatara, Eric North, M. (n.d.). *Repast Flowchart Getting Started. Building* (pp. 1-24).

Turtlebender. (2009). *Repast Symphony Reference Manual*.