

Course Literature

Main texts about NetLogo platform:

Wilensky, U., & Rand, W. (2016). *An Introduction to Agent-Based Modeling: Modeling Natural, Social, and Engineered Complex Systems with NetLogo* (MIT Press). MIT Press.

Railsback, S. F., & Grimm, V. (2011). *Agent-Based and Individual-Based Modeling: A Practical Introduction* (Edición: New.). Princeton: Princeton University Press.

Mandatory text:

Session 1 - 2:

Epstein, J. M. (1999). Agent-based computational models and generative social science. *Complexity*, 4(5), 41-60.

Gilbert, N., & Terna, P. (2000). How to build and use agent-based models in social science. *Mind & Society*, 1(1), 57-72.

Schelling, T. C. (1978). *Micromotives and Macrobehavior*. Norton.

Session 3 - 4:

Wilensky, U., & Rand, W. (2016). *An Introduction to Agent-Based Modeling: Modeling Natural, Social, and Engineered Complex Systems with NetLogo* (MIT Press). MIT Press [Chapters 2 & 3]

Schelling, T. C. (1971). Dynamic models of segregation. *The Journal of Mathematical Sociology*, 1(2), 143-186.

Wilensky, U., & Rand, W. (2016). *An Introduction to Agent-Based Modeling: Modeling Natural, Social, and Engineered Complex Systems with NetLogo* (MIT Press). MIT Press [Chapters 4 & 5]

Session 5 - 6:

Centola, D., & Macy, M. (2007). Complex Contagions and the Weakness of Long Ties. *American Journal of Sociology*, 113(3), 702-734.

Deffuant, G., Neau, D., Amblard, F., & Weisbuch, G. (2000). Mixing beliefs among interacting agents. *Advances in Complex Systems*, 3(01n04), 87-98.

Session 7 - 8:

Axelrod, R. (1997). The Dissemination of Culture: A Model with Local Convergence and Global Polarization. *The Journal of Conflict Resolution*, 41(2), 203-226.

Deffuant, G., Huet, S., & Amblard, F. (2005). An Individual-Based Model of Innovation Diffusion Mixing Social Value and Individual Benefit. *American Journal of Sociology*, 110(4), 1041-1069.

Session 11:

Bruch, E., & Atwell, J. (2013). Agent-Based Models in Empirical Social Research. *Sociological Methods & Research*, 0049124113506405. <http://doi.org/10.1177/0049124113506405>

Tapia, E. (2021). Groups' contribution to shaping ethnic residential segregation: a dynamic approach. *Journal of Computational Social Science*, 1-25.

Recommended readings:

Banos, A., Lang, C., & Marilleau, N. (2015). Agent-Based Spatial Simulation with NetLogo Volume 1 (1 edition). London: ISTE Press - Elsevier.

Bruch, E., & Atwell, J. (2013). Agent-Based Models in Empirical Social Research. *Sociological Methods & Research*, 0049124113506405. <http://doi.org/10.1177/0049124113506405>

Deffuant, G., Huet, S., & Amblard, F. (2005). An Individual-Based Model of Innovation Diffusion Mixing Social Value and Individual Benefit. *American Journal of Sociology*, 110(4), 1041-1069. <https://doi.org/10.1086/430220>

Epstein J. (2006), *Generative Social Science: Studies in Agent-Based Computational Modeling*, Princeton, Princeton University Press.

Epstein, J. M. (1999). Agent-based computational models and generative social science. *Complexity*, 4(5), 41-60. [https://doi.org/10.1002/\(SICI\)1099-0526\(199905/06\)4:5<41::AID-CPLX9>3.0.CO;2-F](https://doi.org/10.1002/(SICI)1099-0526(199905/06)4:5<41::AID-CPLX9>3.0.CO;2-F)

Epstein, J. M. (2007). *Generative social science: Studies in agent-based computational modeling*. New

Epstein, J. M. (2008, October 31). Why Model? Retrieved May 5, 2015, from <http://jasss.soc.surrey.ac.uk/11/4/12.html>

Gilbert, N. (2007). *Agent-based models*. California: Sage Publications Ltd.

Gilbert, N., & Troitzsch, K. G. (2005). *Simulation for the social scientist* (2nd ed.). Glasgow: OpenUniversity Press.

Goldthorpe, J. H. (2001). Causation, Statistics, and Sociology. *European Sociological Review*, 17(1), 1-20. <https://doi.org/10.1093/esr/17.1.1>

Hedström, P., Ylikoski, P. (2010), "Causal Mechanisms in the Social Sciences", *Annual Review of Sociology*, 36, pp. 49-67.

Helbing, D. (2012). Agent-based Modeling, in Helbing, D. *Social Self-Organization. Agent-based Simulations and Experiments to Study Emergent Social Behavior*, Springer-Verlag Berlin Heidelberg (ch. 2).

Helbing, D., & Balmelli, S. (2013). *How to Do Agent-Based Simulations in the Future: From Modeling Social Mechanisms to Emergent Phenomena and Interactive Systems Design* (SSRN Scholarly Paper No. ID 2339770). Rochester, NY: Social Science Research Network

Luis Izquierdo, *NetLogo 5.0 Quick Guide*, (<http://ccl.northwestern.edu/netlogo/resources.shtml>)

Lytinen, S. L. and Railsback S. F. (2012), "The Evolution of Agent-based Simulation Platforms: A Review of NetLogo 5.0 and ReLogo" (http://www.swarm.org/index.php/Software_Reviews)

León Medina, F. (2017), "Analytical Sociology and Agent-Based Modeling: Is Generative Sufficiency Sufficient?", *Sociological Theory*. Volume: 35 issue: 3, page(s): 157-178

Macy, M. W., & Willer, R. (2002). FROM FACTORS TO ACTORS: Computational Sociology and Agent-Based Modeling. *Annual Review of Sociology*, 28(1), 143–166. <http://doi.org/10.1146/annurev.soc.28.110601.141117>

Manzo, G. (2007), "Variables, mechanisms, and simulations: can the three methods be synthesized? A critical analysis of the literature", *Revue Française de Sociologie - An Annual English Selection* -, 48, Supplement, pp. 35-71.

Manzo, G. (2007). Variables, Mechanisms, and Simulations: Can the Three Methods Be Synthesized?: A Critical Analysis of the Literature. *Revue française de sociologie*, 48, 35-71.

Miller J. H. and Page S. E. (2007), *Complex Adaptive Systems: An Introduction to Computational Models of Social Life*, Princeton, Princeton University Press.

Nikolai C. and Madey G. (2009), "Tools of the Trade: A Survey of Various Agent Based Modeling Platforms", *Journal of Artificial Societies and Social Simulation*, 12(2)2.

Squazzoni, F. (2010). The impact of agent-based models in the social sciences after 15 years of incursions. *History of Economic Ideas*, 18(2), 197–234.

Stefik, M., & Bobrow, D. G. (1985). Object-Oriented Programming: Themes and Variations. *AI Magazine*, 6(4), 40.

Tisue, S. and Wilensky U. (2004), "NetLogo: Design and implementation of a multi-agent modeling environment" (<http://ccl.northwestern.edu/papers/>).

Wooldridge M. (2009). *An Introduction to MultiAgent Systems*, John Wiley and Sons, Ltd.