Model Examples - README

Modeling Psychological and Sociological Dynamics Workshop

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The following table describes the models discussed during the workshop and included in the supplementary material. Note that you use can iThink or Stella to run models created in Stella Pro.

Model	Platform	Comments
Battle Burnout, Take a Vacation	iThink/Stella, follow the link to download	This is a more elaborate burnout model. It uses the variable stress instead of burnout (high levels of stress are associated with burnout). In this model stress varies from 0 to 100. It has a more elaborate way of limiting stress to its maximum value than the examples given in the "Maximum Range Examples" model (see above). See the simulation at: http://forio.com/simulate/netsim/stal-vacation/run/ See the description at isee systems at: http://www.iseesystems.com/XMILE/index.php?route=product/product&product_id=102&search=burnout&description=true Download the model at: http://www.iseesystems.com/XMILE/index.php?route=account/download/downloadi&download_id=57
Burnout Model	iThink/Stella Pro	Shows burnout as a coflow. Adapted from Richmond, B. (2001). Adding Texture to Your Compositions, Modeling "Soft" Variables. An Introduction to Systems Thinking, iThink, isee systems: 179-184.and isee systems

Model	Platform	Comments
Dynamics of HIV Prevention and Care	PowerSim	A system dynamics model comprised of fifteen constructs was built for the purpose of fostering a greater understanding about the psychosocial dynamics of HIV/AIDS prevention and care in the community over a twenty-year time horizon, from the epidemic's inception (circa 1981) to the present (2001). In particular, the psychosocial dynamics of perceived stigma, complacency, and [dis]empowerment were studied in relation to the epidemiology of HIV/AIDS in Michigan. Applying a 'systems approach,' the study was informed by the results of an extensive qualitative research project that explored the current and emerging needs of persons living with HIV/AIDS (PLWHA) and by the insight and knowledge of a group of ten (N=10) core key informants from Michigan's HIV community.
Family Crisis	Vensim	The original model was not available. This model was created to illustrate concepts discussed in the workshop. It is a preliminary implementation. Levine, R. L. and H. E. Fitzgerald (1992). Systems and System Analysis. Analysis Of Dynamic Psychological Systems: Methods and Applications. R. L. Levine and H. E. Fitzgerald. New York, Plenum Press. 2: 1-16. This reference discusses the "family in crisis" example from the presentation slides in: Levine, R. L., Pearson, J. L., & Ialongo, N. (1988). Modeling the Dynamics of a Family in Crisis.
Hamlet	Versions in Vensim & iThink/Stella Pro	Adapted from Appendix in: Hopkins, P. L. (1992). Simulating Hamlet in the Classroom. System Dynamics Review, 8(1), 91-100. There is also a version of this paper on the Creative Learning Exchange: http://www.clexchange.org/curriculum/doc_search.asp?category=alldocs&searchstring=Pamela%20Lee%20Hopkins
Labor Experience Coflow with Learning Curve	Vensim	Adapted from Modeling with Insight, Jim Thompson/WPI
Maximum Range Examples	Versions in Vensim & iThink/Stella Pro	Examples showing algebraic and graphical means of controlling the maximum range of a variable.
Milgram Experiment	Vensim	Created from Appendix in: Doyle, J., Saeed, K., & Skorinko, J. (2009). Personal versus Situational Dynamics: Implications of Barry Richmond's Models of Classic Experiments in Social Psychology Paper presented at the Proceedings of the 27th International Conference of the System Dynamics Society, Albuquerque, New Mexico.
Physician Burnout	Versions in Vensim & iThink/Stella Pro	This model is used for the last exercise in the workshop. It is based on the "Battle Burnout, Take a Vacation" model

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Riots	Vensim, follow the link to download	Hayward, J., R. A. Jeffs, L. Howells and K. S. Evans (2014). Model Building with Soft Variables: A Case Study on Riots. Proceedings of the 32th International Conference of the System Dynamics Society. Delft, System Dynamics Society. Model in Vensim: http://www.systemdynamics.org/conferences/2014/proceed/supp/S1059.zip
Stanford Prison Experiment	iThink/Stella Pro	Created from an appendix in Doyle, J., Saeed, K., & Skorinko, J. (2009). Personal versus Situational Dynamics: Implications of Barry Richmond's Models of Classic Experiments in Social Psychology. Paper presented at the Proceedings of the 27th International Conference of the System Dynamics Society, Albuquerque, New Mexico. Also see the simulation at the Creative Learning Exchange: http://www.clexchange.org/curriculum/simulations/prison_simulation.asp
Schedule Pressure	iThink/Stella	
Virtual Hamlet	iThink/Stella, follow the link to download	A different version of Hamlet with a nice interface See the simulation at: http://forio.com/simulate/netsim/virtual-hamlet/run/ See the description at isee systems at http://www.iseesystems.com/XMILE/index.php?route=product/product&product_id=68 Download the model at: http://www.iseesystems.com/XMILE/index.php?route=account/download/downloadi&download_id=28