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Angela Vierling-Claassen* (avierlin@lesley.edu) and **Dorea Vierling-Claassen**. *How Does Acceptance of Lesbian and Gay Men Spread in a Social Network?*

According to a 2006 study by the Pew Research Council, acceptance of lesbians and gay men is rising dramatically. How does this kind of societal change come about? Can individuals or advocacy organizations do anything to increase acceptance levels in specific communities? Mathematics can be part of the answer to these questions through studying this change by modeling a social network with a random graph and using a dynamic process to alter opinions and rewire social connections. This model can then be assessed by students for how well it predicts current social changes, and the parameters of the model can be altered to determine how changes in the attributes of people (nodes) and edges (social ties) impact the acceptance level over time. Such a project can involve students at a wide variety of skill levels, creating opportunities for discussion and cooperation between students in introductory and advanced courses. I will discuss a classroom activity that can be used to model the spread of acceptance of gays and lesbians and the use of computer scripts to explore a more sophisticated model (code for R will be posted online). (Received September 20, 2011)