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Abstract: The use of differential equations models to study social processes has been increasing rapidly. There are, however, ambiguities in the interpretation of the parameters of these models. We suggest that the interpretation of the parameters can best be developed by focusing on the equation for the trajectory over time of the dependent variables (the integral), rather than on the equation for the instantaneous rate of change (the differential equation). The equation for the trajectory can be decomposed into two distinct and substantively meaningful components: one describing the speed of the process away from initial levels of the dependent variable, and one describing factors affecting the value of the dependent variable reached at equilibrium. The interpretation of parameters of dynamic models is illustrated with reference to research on two substantive topics: political mobilization and intragenerational mobility.

There are general observations about modeling in the social sciences and specific technical notions. political mobilization and intragenerational mobility are modeled in data with attention to interpretation.

Keywords: sociology, differential equation, model, interpretation, politics, political mobility, intragenerational mobility