

MGM 315 Extra Credit Assignment - Due 5/12/04

Create a Causal Loop Diagram based on the description of the dynamic in the first two full paragraphs on page 8 (below) of the "The Counterintuitive Behavior of Social Systems" by Jay Forrester (<http://sysdyn.clexchange.org/sdep/Roadmaps/RM1/D-4468-2.pdf>).

"The results both confirm and explain much of what has been happening over the last several decades in cities.

"The investigation showed how depressed areas in cities arise from excess low-income housing rather than from a commonly presumed housing shortage. The legal and tax structures have combined to give incentives for keeping old buildings in place. As industrial buildings age, employment opportunities decline. As residential buildings age, they are used by lower-income groups who are forced to use them at higher population densities. Therefore, aging buildings cause jobs to decline and population to rise. Housing, at the higher population densities, accommodates more low-income urban population than can find jobs. A social trap is created where excess low-cost housing beckons low-income people inward because of the available housing. Unemployed people continue coming to a city until their numbers sufficiently exceed the available jobs that the standard of living declines far enough to stop further inflow. Income to the area is then too low to maintain all of the housing. Excess housing falls into disrepair and is abandoned. Extreme crowding can exist in those buildings that are occupied, while other buildings become excess and are abandoned because the economy of the area cannot support all of the residential structures. Excess residential buildings threaten an area in two ways—they occupy land so it cannot be used for job-creating buildings, and they attract a population that needs jobs.

"Any change, which would otherwise raise the standard of living, only takes off the economic pressure momentarily and causes population to rise enough that the standard of living again falls to the barely tolerable level. A self-regulating system is thereby at work which drives the condition of the depressed area down far enough to stop the inflow of people."

Indicate the causal links (arrows with Ss and Os at the arrow) and loops (R or B) using the variables in the diagram. Indicate link and loop polarities. Also, indicate links from programs and policies to the variable each influences.

Hints: There are two B loops and one R loop. Some links are not in loops. Be sure the cumulative effects of the links in your loops agree with your R or B loop assignment.

