Progress Report - Collective Action Ecosystems

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Agent behavior: How do the agents behave

Based on some feedback in the class session, I am starting with a very simple model. Rather than moving around, turtles can see all of the patches, but the value to the turtle diminishes with distance. In addition, for this first version I am not going to create networks between turtles.

System behavior: How does the overall system behave

I haven't created the histograms of the distributions, but the coloring of the patches suggests that the code is doing something like what I want it to.

Rationale for agent rules

I decided against having agents move when they don't have a good patch to contribute to. Instead, they can contribute to other patches, weighted by how far away they are. I am trying to represent how projects provide heterogeneous benefits, modeling those benefits based on distance to turtles.

Model output

I still need measures for the outputs that I care most about. I have an aggregate measure of progress on projects, but I'm more interested in the distribution, which I haven't yet created. So, I'm not sure yet whether it matches my reference pattern.

Question about my model

I have a lot of questions about whether things are working how I want them to - e.g., if the parameters are such that distant contributors are ever recruited to a project, or if agents simply contribute to the few projects around them.

Next steps

I think that the next steps will be to create better graphs of the output (e.g., histograms and gini coefficients). I would also like to try to do more to figure out the mechanisms of what is happening at a more local level.

Model Analysis

I don't have any conclusions to draw yet.

What advanced feature do you plan to use?

I still think it would be fun to do something with LevelSpace, but haven't yet come up with a good way to use it.