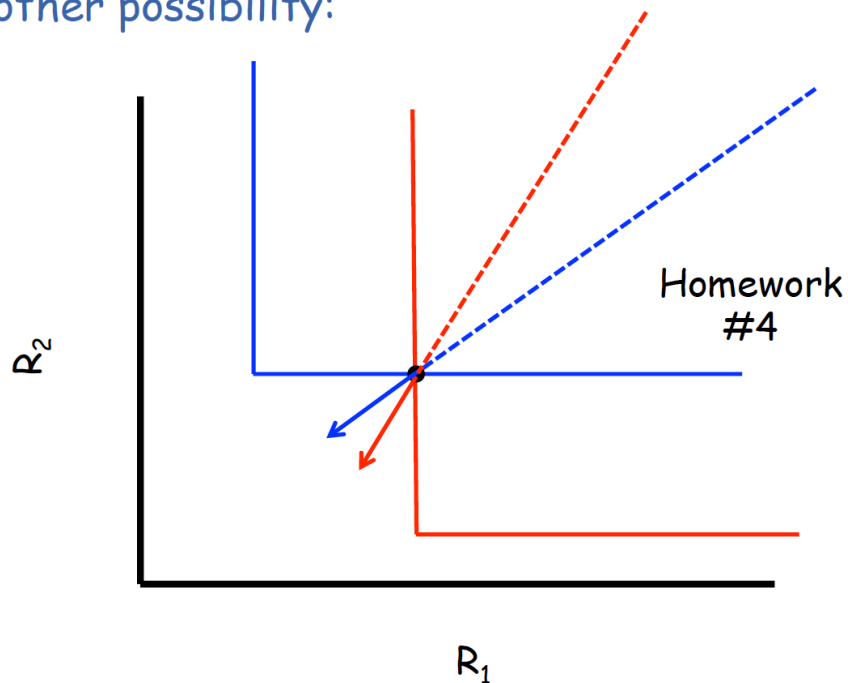


## 8310 HOMEWORK 4.

The goal is to help you gain comfort in working with (and evaluate your understanding of) ZNGI's.

Given the following diagram from lecture:

Another possibility:



- 1) Determine "who wins" for each region in the above graph.
- 2) Evaluate co-existence based on invasibility, when there is an equilibrium that potentially allows the two consumers to persist
- 3) For a supply point in the wedge (between the two dashed lines), *sketch* out (i.e., think; do not code up a simulation) the dynamics (densities through time for the two resources and the two consumers) if you start the system with very low numbers of each consumer (and resources at their maximum level: i.e., at the supply point). [Once you've done this, you, of course, are free to code this up or implement it in a program, if you'd like.]

Submit via email to Osenberg by 5pm Monday.