Exercises

- *Getting used to it.* Plot equilibrium adoption in the SIS model as a function of *recovery-rate* for different values of *transmissibility*, *turning-angle*, and *speed*. Describe the relationship(s).
- *Vaccinate!* Modify the SIS model so that a fixed proportion *V* of the population is vaccinated so they cannot be infected. Start with a single infection, and consider whether the infection spreads (and reaches an equilibrium) or dies out (so that no agents are infected any more). Run a small batch of runs to consider the proportion of runs for each parameter condition in which the contagion failed to spread, varying the *transmissibility* and *recovery-rate* for at least two values each for arbitrary movement parameters. What is the relationship between *V, transmissibility,* and *recover-rate* in whether an infection spreads?
- *Don't copy those people.* Consider how to extend the model to include two groups who both adopt the product via social influence (and maybe even spontaneously), but are inclined to dis-adopt if they perceive it to be overly represented in the outgroup. How might you modify the contagion models we covered to do this?