Drawing DAGs: puerperal fever & breakfast

Drawing DAGs

DAGs can be a wonderfully useful tool for thinking about causation. We're going to practice with the two examples we have been learning about and working with. In each case I would like you to, *at the whiteboard*, draw the DAG given how the people at the time were thinking about causation.

Here are some hints and reminders:

- The variables or "nodes" represent things that you could potentially measure or states of the system (e.g., "temperature" or "disease")
  - they are not processes (i.e., not "infection", but "infection status")
  - amounts of something (i.e., not "increased temperature," but "temperature")
- The arrows represent causation, such that $x \rightarrow y$ reads as, "a change in *x causes* a change in *y*"
  - the arrows do not mean "increase" or "decrease" (i.e., *x* could be increased or decreased and *y* would respond accordingly)
- It can be helpful to work backwards with the effect (e.g., if "infection status" is the effect of interest, then ask, what things control whether an individual is infected or not?)

Draw a DAG for Ignaz Semmelweis' understanding of puerperal fever in the maternity ward

Here are a list of the variables (nodes) of interest. Please use them to draw a DAG

- Bleach water
- Cadaver particles on hands
- Doctor's vs. midwives ward
- Puerperal fever
- Childbirth
- Doctor laziness
- Autopsies conducted

Draw a DAG for López-Gil and colleagues' understanding of how eating breakfast causes happiness

For this second one, I'm going to let you choose the variables of interest. you are welcome to use your notes.