

When looking at the world through an analytical lense, it is inevitable to begin looking at various everyday discourses as instances of systems. At a social gathering over the weekend, I began thinking about the space and the guests as a system, even while not actively trying to seek out Systems Thinking.

This system predominantly manifested itself through noise level. At any given time in the room, one of two general outputs could exist: one in which people could converse easily without feeling any need to compete for “noise space” by shouting over each other, and one in which shouting was needed. To me, the system did not become noticeable until shouting was needed to hear other people, meaning an increase in volume which triggered shouting acted as a perturbation to the system. Before this, I didn’t notice the system, like a fish who doesn’t notice water. I wonder, would the point at which competition for noise space begins act as a significant perturbation for others to notice the system? Would they need additional shocks to notice the system? This reminded me of the passage, “Confronted with anomaly or with crises, scientists take a different attitude toward existing paradigms and the nature of their research changes accordingly,” (p. 90) since it was the minor crisis of competition for sound that changed my viewpoint.

Now I will describe my observations of the system. I propose that for any given indoor space, given the size and acoustics of the walls, a certain amount of available “noise space” exists. If the total volume of speech in the room does not occupy the available noise space, everyone can talk at the desired level. Once speech is greater than noise space, people struggle to hear each other. This causes positive feedback since people must shout to hear each other. In this way, noise space acts as a threshold part of the system.

The other important parts to this system are the people in the system and their speech tendencies. There are a few rules which predict how loud a person will talk. At any given time, a person experiences a level of effort needed to increase their volume slightly, as well as a level of reward if they were to increase their volume. For each person, a graph could be constructed with curves for reward for increasing volume, and inverted cost of increasing volume. When there is not much noise in the room, meaning the speech is below the noise space threshold, there is a low cost, but also low reward for increasing volume. At this phase, system could be temporarily stable and people could continue talking at a comfortable volume.

Certain factors could cause the system to not be in this stable phase. Most predominantly, more people could enter the room, consuming more than the available noise space and triggering the snowball effect. I think there could be other cases that cause snowballing even when initial conditions are stable, since I have observed the same group of people go from a comfortable speech level to shouting. I think that every conversation varies in noise level over time with some random variation. If an exciting or other emotional topic occurs, the conversation could temporarily become louder. If enough conversations in the room had overlapping increases in volume, the noise space could temporarily be filled. However, since it is a threshold, snowballing would start instead of the expected return to normal conversation level. This forms a crucial relationship between the timing of random variations in conversation levels in the room.

I started to consider outside influences which could catalyze the system into a state where the noise space threshold became surpassed. What if a loud train drove by, occupying some of the noise space and causing some people to shout over each other? Would this not bring an otherwise stable set of initial conditions into the snowballing state of loudness? I am tempted to say outside noise is a part of the system, but since they are not in the room in which noise is considered, how can a line be drawn for which outside sounds count? It would be ridiculous to consider noise on the opposite side of the globe as a part of the system. Because of this, I cannot yet be sure whether this is truly a system.