6.1 Concepts of stability mathematical models are likely to be useful approaches when trying to understand why we observe the patterns we do see. In my class that I am currently taking (Conservation biology) we have discussed the liklihood of populations returning to a stable state after being disturbed by natural and anthropological events. This is also very good because it provides you with a good idea of whether or not it would be realistic to invest in conservation efforts for a group of species. If one species has a far better chance of reachieving stability, it could be concluded that you use more energy towards the species w/ the highest liklihood of success.

6.3 Species models are very important in determining how 1 species will react on it's own or when in contact with another species. using the terms $\frac{af_1}{aN_2}$ and $\frac{af_2}{aN_1}$ we can give these different signs to determine whether the interaction 2 species have is mutualistic, competitive, or predator prey. For mutualistic, both will have positive signs since they both are helping to increase the population of the other. For a competitive relationship, both will have (-) signs because it is a lose-lose situation. For predater-prey systems, one of them will be positive and the other (-), because as one population increases, the other decreases.

2. When we discussed density dependence in ch.6, ~~it~~ ~~set~~ the variable α_{ij} referred to the rate of the the population plus the perterbation, while when discussed in chapter 7 this variable referred to the ~~the~~ ~~of~~ rate of effect that 1 species has on another species, where if $\alpha_{ij} = \alpha_{ii} = 1$ meaning that one species has only the effect of itself taken to account.

$\alpha_{ij} = \frac{\partial F_i}{\partial N_j}$

species # 1, 2

effect of species on each other.

3. In this section the ultimate result of increasing ~~the~~ the ρ parameter ~~is~~ ~~in~~ (A (the fraction of people moving from NY~~C~~ → ~~NY~~), the population moves towards California until eventually at 1, 100% of the NY population moves to CA, and this value ~~only~~ ~~depends if~~ depends on the Q value. if Q is also 1 than the populations will just rotate back and forth.

https://docs.google.com/document/d/1rl0CLfqo6i4Z7OR_dhjU2i3C2wi9_47lu7-8iaiUiTw/edit