

The relationship between social and ecological systems is push and pull, a two-way street. Social and ecological systems both affect and depend on each other in a variety of ways. The way that a social system is built is affected by the ecological system in which it is present, and the way that a social system operates shapes the environment around it. The ecological system dictates the way that the social system thinks about and approaches its environment, and vice versa. If the ecological system is hostile and makes survival difficult, then the social system will have to adjust accordingly and will spend a lot more time and resources on its relationship with the ecological system. If the ecological system is favorable and easily adaptable, humans in the social system may give less thought to the environment around them and not even notice how much they might be affecting it.

The way that humans in a society interact with their environment depends on their knowledge about it, and their intentions/values. If the society simply wants to make as much money as possible and does not care if they have to pick up and move once they have exhausted all of the available resources, they will definitely exploit the ecological system in any way they can. On the other hand, if the society sees the land as being alive or sacred, or feels connected to their environment, they will treat the ecological system with the utmost care and respect, and in turn, reap the rewards of a well-functioning environment. This past week in class we talked about traditional ecological knowledge, a way of thinking/knowing that is common in native communities, where knowledge, gained from experience with the ecological system, is passed down and built upon through generations. This way of knowing focuses on the qualitative, and can span a larger time scale than western knowledge surrounding the environment. Timescales are important because often, ecological systems have loops/cycles that take longer than a human lifetime to complete. If no one individual lives long enough to see this cycle through, or observe that it is happening, then society may be blind to it as well. Additionally, traditional ecological knowledge enforces environmental regulations through tradition and creating societal norms that emphasize the importance of respecting the environment. This way of enforcing regulations brings people together and helps them hold each other accountable. Societies which possess traditional ecological knowledge tend to value the health and well-being of their surrounding ecological systems. Sometimes, this value is even embedded in a very powerful and emotional institution, religion. For example, the creation of sacred groves is very useful and important in biodiversity conservation. Western knowledge often does not add emotions into the mix, and focuses more on the short term and the qualitative.

The way that economy is run in a human social system also hugely depends on, and greatly affects the surrounding ecological system. Industrialization led to huge pollution emissions, but that was not the only way that it hurt the environment. The ability to mechanize and mass produce using synthetic materials reduced the societal dependence on the ecological system, causing its value in society to plummet. Even for

economies that do depend on ecological systems, economic profit can be valued over preservation and environmental protection in many cases. For example, the coffee growers in India that Paul Robbin studied grew two different types of coffee. The more expensive type required shade, and therefore fostered very diverse forest landscapes. These coffee growers demonstrated the ability of economic and ecological interests to work together for the benefit of all. It is a common idea that economic success always comes hand in hand with ecological exploitation, but Paul proved that is not always the case. However, the second type of coffee, which was cheaper and more easily mass produced, was grown best in the sun and led many farmers to cultivate a monoculture forest system. Oftentimes, when their profits were going downhill, farmers who had originally attempted to grow the more expensive coffee and maintain biodiversity would switch over to the easier monoculture method. This shows that societal and ecological interactions not only depend on the specific values you hold, but also, how strongly you hold those values and how hard you are willing to work for them.

In the end, humans are an integral part of both social and ecological systems. We have the opportunity, and some might say the duty, to intervene and change the way that these two systems interact. If we are to do this, we would need to focus on societal values, economy, and ways of knowing. On the ecological side, we would need to look at biodiversity, resilience, water quality, air quality, etc. We would need to decide which environmental aspects were favorable, both for us, and every member of the ecological system. It is my personal belief that it would be in everyone's best interest if we had a thriving ecological system and a thriving social system. Asking which one we should focus on first would be like asking the chicken or the egg question, so I think we should work on both simultaneously.