
An Analysis Of Socio-Ecological Systems And The Hadza

The Hadza are a group of about 250 hunter-gatherers living around Lake Eyasi in Tanzania and have been roaming Africa since before the Agricultural Revolution 12,000 years ago (Finkel, 2009). The Agricultural and Industrial Revolutions changed human subsistence patterns and, as a result, have devastated the Hadza's way of living. This major change in human subsistence was the alteration of ecosystems for human benefit, known as agriculture. The manipulation of ecosystems can cause complicated issues known as surprises (Liu, et. Al., 2007). These surprises can create unforeseen circumstances for people like the Hadza, who do not intensively alter, and heavily rely upon, their ecosystems. For the Hadza these changes have been a reduction in prey, foraging, territory, and population. The Hadza have been fortunate to experience a time-lag on these consequences stemming from changes in human subsistence patterns during the Agricultural Revolution.

The environment of the Hadza has been changing rapidly since the agricultural revolution and, as with each human revolution, extreme changes have been made to Tanzanian ecosystems which the Hadza subsist upon. These changes have meant mostly a reduction in prey and edible plants to forage over many years. Such ramifications have been studied in-person by anthropologist and author Michael Finkel. In an article exploring the lifestyle of the Hadza, Finkel explains that the Hadza are resilient and continue to hunt anything that can be brought down with their poison (Finkel, 2009). This demonstrates one of the many ways that humans don't benefit from human advances. Many people may become worse off as a direct result of these advances, like the Hadza. In the article Complexity of Coupled Human Natural Systems, Liu et. Al. explains the principal of surprises, which are (mostly adverse) effects crop up from our inadequate understanding, and over-zealous modification of, our ecosystems (Liu, et. Al., 2007). The deterioration of the environment experienced by the Hadza is one such surprise. The Hadza can cope with a rapidly changing ecosystem due to their thousands of years of ancestral knowledge and the fact that they require little besides space to roam.

A changing environment isn't the only thing the Hadza must cope with. Recently the Hadza have been coming across other groups of hunter-gatherers in their territory. Due to the non-combative nature of the Hadza these groups can take the territory without any ramification. According to Face to Face with Tanzania, an article published in the Smithsonian in 2016, the Hadza have lost 90% of their roaming territory in the last century, mostly to other tribes (Gritz, 2016). This can be framed as a legacy effect (Liu, et. Al., 2007) of capitalist expansion. One of the central tools of capitalism is the commodification of land. One of the central needs of hunter-gatherer tribes is space. Space is a necessity because tribes must move from place to place in search of resources and sometimes to visit family or other tribes (Finkel, 2009). The commodification of land has wiped out any hunter-gatherer tribes in Europe, North America, and most of Asia. The only places hunter-gatherer tribes still live and thrive are in South America and Africa because these are the only places land ownership haven't completely taken hold. However, as we can see with the Hadza, this is quickly changing. Even in Africa tribes of hunter-gatherers are being pushed together and forced to compete for resources like space.

Another major social revolution is clearing a path to the Hadza: wage labor. Wage labor draws its origins from the Agricultural Revolution and boils down to working for a reward, which in the

end, feeds you. During the Industrial Revolution this form of subsistence was popularized, if not globalized, and it is partially to blame for the crowding of Hadza territory. Wage labor has made profound changes to the Hadza's way of life over a few decades. Only a quarter of all Hadza are still hunter-gathers, and many take part in wage labor as farm hands and tour guides to the people surrounding and visiting Lake Eyasi (Finkel, 2009). The commodification of land becomes twice the threat when combined with wage labor as a shift in values occurs. The Hadza have, and thus value, very little. According to Finkel each Hadza living in the traditional hunter-gather way only keep three to four items each (Finkel, 2009). The values of privacy and ownership have, over many years, changed the way humans interact with natural systems. As John Lancaster explains in his paper "The Case Against Civilization", published in the New Yorker, human "...adapt the landscape to our purposes." (Lancaster, 2017, p.2). These swift changes in human behavior have led us to completely consume the wilderness, leaving very little for people who subsist as hunter-gathers. The Hadza have felt the effects of these changes as they continue to lose family and territory to a more modern humans.

The Hadza are coping with a rapidly changing environment, both socially and physically. New ecological circumstances stem from a change in human subsistence patterns 12,000 years ago. Combined with a lack of knowledge about how these systems work, humans have consumed most of the wilderness on the planet and created a flurry of unforeseen complications. Socially the Hadza are experiencing crowding and the threat of wage labor taking over their hunting gathering way of life. Wage labor has been propagated throughout history and is now finally making its way to Africa, pushing many tribes of hunter gatherers together, and forcing them to compete for resources that were abundant in the past.