Cognitive Ethnography | Hands-On

Entering my second quarter as a transfer at UCSD, I was more than grateful to have the ability to independently contribute to the research being conducted in the cognitive science department. There were limited research opportunities at my local community college, so I made a large effort to capitalize on the tools given to me by the university, and thus I was more than happy when I learned that I would be a research assistant at the Comparative Cognition Lab headed by Dr. Federico Rossano.

The Comparative Cognition Lab centralizes its research around the study of cognition by analyzing parameters related to cooperation, ideas of property, gestures, and child development. While children studies are of great importance, studying primate behavior in context is advantageous to our understanding of human sociality, as our nervous systems are similar enough for study. Thus, we can learn by analyzing cognitive phenomena pertaining to situated agents in an environment where norms are learned and distributed amongst a group. External validity may be at question due to constraints at the San Diego Zoo, but my personal observations are what I find valuable.

Orangutans, Siamangs, and Silverback gorillas were of priority, where the lab was performing a longitudinal study assessing relationships between newborns and their parents in an effort to better understand the kinematics of social behavior. I also had the chance to observe interactions among bonobos in their designated enclosure, but I found it difficult to distinguish the younger family members from the adults, as time enabled the young to grow into their larger suit. One immediate observation I made when arriving at the orangutan enclosure was that they were also isolated with the siamangs, a pairing unique to the San Diego Zoo. This was only possible since the two families were from similar natural habitats, and no competition for resources existed. As a corollary, a young siamang and orangutan could engage in friendly interactions without any conflict amongst the elders. The young orangutan went by the name Aisha, and the siamang was referred to as Sela.

Among the assigned enclosures, I was most excited to film and observe a mountain gorilla troop of size three. The youngest member was a male named Denny, and I'd have to be quick to adjust my film gear as the young male had his bursts of energy like the common human

boy. My studies encouraged me to constrain my perceptual field in an attempt to capture a few dynamic cues that were capable of facilitating my human understanding. For example, I might mark a tally for every time Denny clings to his mother, and this could be plotted against time to create a visual representation of this activity. If a particular behavior is repeated, the tallies could be transformed into an integer and further transformed into a rate, where this rate of interaction could be compared amongst rates generated by members of other troops for a wide-scale analysis. This is the nature of studying cognition in the wild, where perceptual lines can be defined in an effort to create context for understanding. This must be done carefully, as abstractions derived from results are limited to the same extent as the lines that outline the study. Abstractions are hierarchical, where they exist in a dimension directly above the studies results (output), and these results are a function of the researcher's employed restrictions on the phenomena under scrutiny. Hence, abstractions have the potential to be fairly variable.

This would be the appropriate method for generating measurable results for a longitudinal study focused on Denny, but my inability to consistently visit the enclosure would inhibit me from taking on such a task. Instead, I would resort to completing my weekly task of collecting video data, which would be used for detailed coding by other researchers within my lab. After each visit, or every iteration, I'd notice a slight change in my perception of the world and others around me. When I walked to the enclosures of my choice, I'd no longer see humans rolling their strollers, but I'd see large hairless apes. It was as if my visual cortex was slowly deciding to blur the lines of distinction between the apes I observed, and the ones capable of speaking "good morning." If I could swap eyes with Denny and observe the change, It'd be as if nothing happened. The emotion in his eyes was salient when I'd stand behind the glass that separated us, and it was apparent that the neocortex that nature bestowed upon us was responsible for the similarities I'd come to find. Kept brief, this neocortex is a mammalian asset that builds on the existing foundation instantiated by our primitive drive for survival, allowing us to derive and re-apply the patterns we encounter in the world. Between Denny and I, this ability would differ, as our bodies and thus the manner in which we traverse the land were unique to our species, forcing us to capture distinct self-serving patterns. More importantly, Denny's inability to speak

would prevent him from demanding more from others, as the curiosity in his eyes had indicated that he had analyzed his limited environment to the fullest extent, so he must move on.

As a resulting summation of the ideas above, I found myself more prepared for future projects involving tasks pertaining to cognitive ethnography, where lines are defined by the research team in an effort to collect meaningful insights from observational data. My particular task assigned by the lab was far from rigorous, as fixating a camera on an enclosed primate family seemed to be easy enough. However, the job allowed me to engage in a lengthy process of directed thought, where I could turn my head slightly to make comparisons between the families in their enclosures, and the ones who were temporarily visiting. I'd ask, does the male always control the group? Do the young gravitate toward the mother and not the father in most cases? Do the enclosed primates monitor their young during their play in a similar manner as the humans do with their children? Many questions can be asked, but it's up to the researcher to seek the appropriate context. I enjoyed observing the primates and reporting my data to the lab that allowed me to have this opportunity. While they helped me grow as a researcher, the dynamic observations I made were silent like Denny, an intelligent young male kept behind glass.