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Project summary

For my project I illustrated the concept of the red queen hypothesis in the context of sexual evolution. The creative goal of the project was to communicate the idea of the red queen hypothesis in a single 2 dimensional illustration. This was challenging because the red queen hypothesis is an idea that covers large amounts of time and many generations of evolution. Compressing it into a single image required the use of several symbols and metaphors. The red queen hypothesis explores the relationship between organisms trapped in coevolution [4], in this case, the relationship between a host and a parasite. In my illustration the red queen is represented as a red stone woman bearing two children. An unknown host has destroyed the woman soon after birthing the two children. The sexual nature of the host was important to communicate with the red queen hypothises because of the significant advantages to survival for sexual organisms, compared to asexual organisms when battling an evolving threat [5]. Her offspring are confronted by the evolving threat in the form of a cat. The evolution is represented as a cat to communicate how the threat tries new combinations to find a weakness in its host, normally exploited by finding some familiarity in host [2]. In this case the familiarity comes from lineage as the children are related to the woman that the cat is emerging from. While sexual organisms have an advantage over asexual organisms when coevolving to survive, many parasites will “prefer” organisms belonging to a familiar lineage [1]. Of the two children, the older girl pulls on her brother’s arm to warn him about the threat the cat represents. This gesture of resistance is meant to symbolize the advantage that variation has on evolving threats such as this one [3]. The girl is suspicious while the boy is curious.

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Source one reinforced the parent child message in the illustration since that source explored the idea that parasites may have an affinity for sexual hosts with a lineage. Source two was explored by showing the decay and praying nature of the parasite to its host, also fear of the parasite from future hosts. Source three is used in the image by representing the offspring variation and hinting at this to be a resistance to the evolving threat. Source four laid out the general information of the red queen hypothesis and inspired the use of a parasite like threat. Source five reinforced the idea of "outcrossing" being a successful strategies for fighting an evolving parasite, this was represented in the image by showing both a male and female child. Source six explored coevolutionary trait changing in DNA, explaining counter evolution and response counter evolution. This is represented by the black hand transforming into the cat. Source seven inspired the connection between the red queen and the environment, symbolized by the red tress, the cut tree trunk, and the falling leaves.