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OCEAN'S DEADLIEST: WHO IS MORALLY RESPONSIBLE FOR MICROFIBER POLLUTION?

Luka Cai Minglu

Mentor: Jason Gardner

Microplastic fiber pollution (MFP) is the persistence of microfibers (fibrous plastic particles less than 5mm in diameter and length) in the environment in levels sufficient to harm aquatic/marine ecosystems, primarily caused by the laundering of polyester garments. MFP is a compelling issue because it causes harm to natural habitats, animals, and human beings, harm that moral agents need to be held accountable for. I define moral responsibility as an agent's accountability for an act which they voluntarily committed/contributed to. Causal responsibility is the relationship between an agent and an outcome of the agent's act. I theorize that an agent's moral responsibility for an outcome is proportional to their causal responsibility for that outcome. An agent's causal responsibility for an outcome depends on both the directness to which the agent's act contributes to the outcome, and the degree to which the agent's behavioral change would alter the outcome. Most people might think that apparel manufacturers are most morally responsible for MFP. However, I argue that the global collective of individual launderers (GCIL) is most morally responsible for MFP. The GCIL, through the sum of individuals' laundering practices, contributes most directly to and holds the greatest potential to reduce MFP. First, the individual launderer is the central agent necessary to make laundering happen by physically carrying out laundering. Even one launderer laundering one garment is sufficient to cause harm to the environment. Second, the GCIL represents the crucial step in the microfiber's lifetime where agent intervention can most effectively prevent/reduce MFP. Since it is relatively easy for individuals to reduce their microfiber output, and individual launderers within the collective are capable of contagious acts that influence each other, the GCIL holds great potential to mitigate MFP through collective behavioral change. Hence, the GCIL is most causally and thus morally responsible for MFP.