Deliberate Extinction?

**Step 1**
Throughout history, humankind has caused the extinction of numerous ecological systems and species. These extinction events have resulted from both direct and indirect human activities, and the frequency of extinction events is now occurring at an alarming rate. Most extinctions likely were the inadvertent consequence of some anthropogenic impact on the landscape, but some of these may have been predicted.

For centuries, the smallpox virus was one of the worst scourges of humankind. It killed more people over the world than any other infectious disease, particularly in non-immune populations such as Native Americans. The World Health Organization’s (WHO) campaign against smallpox, launched in 1967, was highly successful, and resulted in WHO’s formal declaration of the eradication of this disease by 1979. The WHO is currently considering destroying the two remaining stocks of smallpox virus, located in two high security laboratories in the USA and Russia.

While there may be compelling reasons to do so, the purposeful eradication of entire biological systems or species from the face of this Earth has never been proposed before and presents an ethical dilemma: Do we have the right to deliberately and directly cause the extinction of an ecosystem, a community, or a species? If yes, under what circumstances? And, if nor, why?

**Step 2**
Dr. Albert Jardim is the director of a laboratory of research on infectious diseases. Dr. Jardim acknowledges that the WHO’s argument to eradicate the virus was based upon the following reasons: (1) the risk of accidental escape and infection; (2) the risk that the virus might be used for biological war; (3) its present irrelevance for scientific purposes; and, (4) the symbolism of the total eradication of such an evil entity.

Unknown to anyone else, he has a sample of this virus frozen in his laboratory. Yet, Dr. Jardim knows that (1) the risk of accidental infection from his laboratory is practically nil; (2) the risk of military or terrorist use makes no sense since there are much more effective and readily available biological agents for warfare throughout the world; (3) the destruction will not, in itself, guarantee that the disease may not re-emerge eventually from unknown samples (e.g., dead bodies preserved in frozen regions, or other forgotten samples in unreferenced laboratories such as his own); (4) further, significant virological knowledge can be obtained only from intact viruses.

Dr. Jardim holds the conviction that each biological entity of the planet is the unique and irreproducible result of a long evolutionary history, which makes it a precious and irreplaceable entity of complexity and organization. He is aware that some members of the scientific community share his point of view. Dr. Jardim concludes that his stock of the smallpox virus should not be destroyed, and he decides to consult with the only two collaborators who also potentially have access to the virus stock. If he obtains unanimous agreement from his colleagues, his laboratory will keep the smallpox virus secret.

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