

Intermediate A, Round One

TOPIC: *that we should use genetic engineering to revive extinct species.*

1. Type of Topic

This is a normative/model debate. The affirmative team must propose a model that describes the policy or change that they plan on enacting, which must involve using genetic engineering to revive extinct species. They do have some ability to define how this will occur, e.g. under what regulations/oversight, but not for which extinct species this will occur or how likely revival is. The negative team can choose to support the status quo, or they can propose a counter-model regarding extinction concerns that **does not** involve revival or use more resources than the affirmative does pursuing revival.

2. Background / Context

Over the past few decades, as technologies have improved, the concept of reviving extinct animal species has taken hold. There are now a few companies aiming to revive extinct species, most notably Colossal Biosciences and Revive & Restore. Most research is currently being done into efforts to revive the woolly mammoth, although some work is looking at other species like passenger pigeons.

Both Colossal Biosciences and Revive & Restore have claimed that reviving species could reform ecosystems, making them more resilient to climate change and acting as more efficient carbon sinks. Independent biologists have questioned the scientific benefit of revival.

Most approaches to revival involve finding healthy DNA or sperm from a mammoth in a frozen carcass. To date none have been found. A promising alternative approach involves using the DNA across multiple cells from multiple remains to sequence the genome of the mammoth. Then gene-editing technology would be applied to an embryo taken from the nearest living relative of the mammoth, elephants, attempting to recreate a mammoth embryo. The embryo can then be implanted into a surrogate elephant mother, allowing the birth of an

elephant/mammoth hybrid. It is presently unclear if the implanted embryo could ever be successfully born or survive for more than a few weeks.

Currently, both Asian and African elephants are considered endangered species.

3. Questions for Consideration

- How likely is it that revival attempts will succeed?
- What effects could this have on other endangered species, particularly elephants?
- What are the incentives of private companies pursuing revival?
- If successful what are revived species likely to be used for?

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