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Second Last Chance: On the Ethics of Radical Conservation

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As many might already be aware, the Northern White Rhino is now functionally extinct. The last male of the species died in March 2018, leaving only two related females, both too old to have any real chance of breeding successfully. This being the case, it seems that the species is doomed to oblivion; consigned, like many other species that have crossed paths with human beings, to the pages of books and to our memories and imaginations.

That being said, the White Rhino may yet have a chance at survival. Scientists around the globe have preserved sperm, egg, and tissue samples from many members of the species. These samples could theoretically be used resurrect the creature through either in vitro fertilization or some more fantastical technology (say, cloning). However, it does seem worth asking, now that the damage has been done, whether forcing the species back into existence would be in humans', the rhino's, or the planet's best interest. Given the high black market value of rhino horn, it seems that any new members of the species would either have to live in captivity, or run the risk of being poached, neither of which seems to be in the best interests of the animal.

Another reason we might think that reincarnating the White Rhino is ethically problematic is because of the immense costs and difficulty of doing so. The most commonly suggested, and most plausible, way of reviving the species is IVF (in vitro fertilization). In a nutshell, IVF involves taking eggs from one of the two females left alive (or from previously preserved samples), fertilizing them with harvested sperm, and implanting them in a Southern White Rhino (the species' closest relative) surrogate.

However, as is so often the case, this is easier said than done. In the past decade, IVF in rhinos has resulted in fewer than ten births. The process is extremely expensive and incredibly complex. It is, in fact, so complex that researchers do not, as of yet, have a means of implanting embryos with any surety of success. This process is not made easier by the fact that rhinos can weigh in the ballpark of two tons and are not known for being particularly cooperative.

As a further illustration of the difficulty of this procedure, let's look at human IVF. Though IVF is a relatively common in humans, it still has a less than 50 percent success rate even under perfect conditions where the surrogate is in perfect health and fairly young,is taking fertility drugs, and the embryos are in as good a condition as they can be. That means that when the IVF process has gone perfectly, the odds of this working correctly are no better than flipping a coin. Human IVF also costs roughly 20,000 dollars per attempt, which is not exactly cheap, but there is reason to believe (when you factor in the additional transportation costs and specialists that would be required for rhino IVF) that the figure could be multiplied by a factor of five or ten. National Geographic quotes a researcher saying the price tag could be as high as 9 million for the successful birth of a calf.

Even if we think the benefits outweigh the costs, there's also the hiccup that, in order for any population to be genetically stable, that is to avoid inbreeding, there needs to be a few dozen genetically unique members of the species. If you'll recall, there are currently only two related members. Although it's not impossible to overcome this bottleneck, (the 20,000 Southern White Rhinos that exist today are all the descendants of an original population of 30) it is also not easy. There's a big difference between a breeding herd of 30 and two aging females. Even if a population could be created it would require maintenance and protection.

Otherpossible routes to the creature's salvation are through cloning, hybridization (with the Southern White Rhino), and/or stem cells. This is a sort of kitchen sink approach intended not so much to save the rhino as to preserve some aspect of it. Indecently, these are also the techniques researchers say could be used to bring back the Woolly Mammoth, a species that has been extinct far longer than the Northern White Rhino. However, all these techniques are in their infancy, none have ever been used on a rhino, and they would likely be almost prohibitively expensive.

Therefore, the prospects for bringing the White Rhino back are slim. In the future, cloning technology might advance to an extent where producing full organisms from a small genetic sample is easy. However, as it currently stands, the difficulty of producing viable embryos is simply too high. All things considered, some conservationists argue that it would be better to devote the resources IVF would require to other causes, say preserving currently endangered species that might have a better chance of survival.

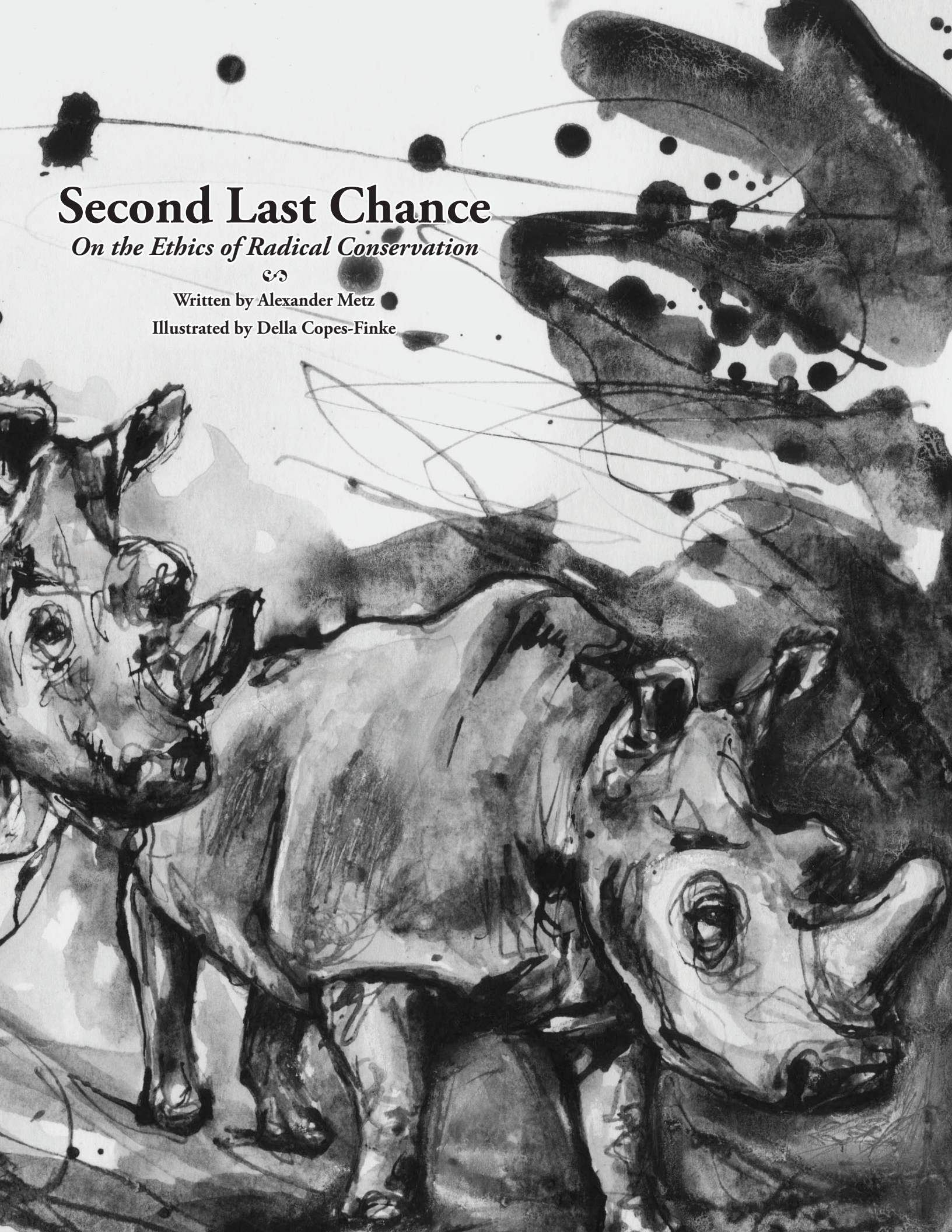
As a point of clarification, the above inquiry is distinct from the question of whether or not Northern White Rhinos ought to have become endangered/extinct in the first place. The answer to this is obviously no. However, this leads to another question. Whether it is ethical to bring a species back from extinction. If you've seen the film Jurassic Park you're familiar with the concern here. However, there seems to be a morally relevant difference between bringing back a species whose extinction was caused by natural selection, and bringing back a species that was hunted to extinction by humans.

Therefore, one may well think that preservation of the species rights some transgression humans have imposed on the rhino. This notion has a sort of intuitive appeal: since we caused them to go extinct, we ought to cause them to become un-extinct. However, there are several reasonable objections to this line of thinking, apart from the aforementioned financial concerns, that suggest the revival of the Northern White Rhino would be good neither for ecosystem nor, counter intuitively, for the rhinos themselves.

For one thing, insofar as poaching is still an extremely extensive problem for wildlife conservationists, any animals that were brought back to life would be targets for poachers. This seems a particular worry if the goal of conservation is to reintroduce a herd of rhinos into the wild. One might propose the counterpoint that stricter anti-poaching regulations, along with a potentially dwindling demand for rhino horn, might help keep new rhinos safe. However, even if this were the case and future rhinos truly would be able to live their lives free from human intervention, there's a subtler ecological concern that makes reintroducing the species seem less than ideal.

Namely, in that the White Rhino hasn't existed in the wild in any significant numbers for decades, there is some concern that either the habitat would no longer suit them, or they would no longer suit the habitat. If a sufficient amount of time is allowed to pass (say the amount of time required for scientists to produce a viable herd of rhinos) it is likely that the species' former habitat will have adapted to life without them. Therefore, the White Rhino could effectively become an invasive species in its own territory, causing a more ecological damage than the initial extinction. Possibly more likely is the converse, that the habitat would no longer be able to provide for a large number of rhinos.

In either case, it seems irresponsible to, in the current climate, bring back a creature only to see it suffer (whether that suffering comes from poaching or lack of resources). And, since breeding the creatures to exist solely in captivity seems cruel in its own sense, there seems to be moral reason to believe the species should, at least for the time being, remain extinct. Hopefully, in the near future, something will happen that will allow the White Rhino to return without fear of persecution. Until that time however, I suggest that we keep these creatures in only our thoughts, so that their non-existence may protect them from further pain.



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