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## Never Ending Stories: Narrating Frozen Evidence of Infectious Epidemics Past

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By Joanna Radin

### [Early Elegy: Smallpox](#)

by Claudia Emerson

- The world has certified itself rid of
- all but the argument: to eradicate or not
- the small stock of variola frozen,
- quarantined—a dormancy it has
- refused, just once, for a woman behind a sterile
- lens, her glass slide a clearest, most
- becoming pane. How could it resist slipping
- away with her, that discrete first pock?

In 1979, public health officials announced the eradication of smallpox. This achievement was more than just an impressive demonstration of mass vaccination. It represented the ability of nations locked in a frigid Cold War to unite against a common enemy. From this point on smallpox became a prisoner of war, held hostage in the laboratory freezer or, to be more specific: two laboratory freezers. In 1984 the World Health Organization decided that only two entities could provide sufficient security to maintain freezers filled with scabs and cells that harbored smallpox: a Siberian lab called Vector in Novosibirsk and the other at the CDC in Atlanta.

The decision to allow two superpowers, the USSR and the US, to stockpile microbes as well as missiles provided cold comfort to experts concerned about germ warfare. Not only was there concern that one nation might choose to deploy smallpox as a weapon of mass destruction, there was also fear that the very idea that smallpox had been contained in two freezers was itself a fiction.

In 1987, virologist Frank Fenner asked members of the World Health Assembly to entertain the various ways in which smallpox could still

reemerge to wreak havoc on humankind. This included the possibility that it might still be spread by itinerant Chinese variolators (China had only joined the WHO in 1972), that it could be harbored by an animal reservoir, that it might be released through a laboratory accident, or that a rogue scientist could sell it on the black market. Fenner's recommendation to mitigate these hypothetical risks by destroying the remaining samples preserved in Soviet and American freezers [was denied](#).

Since then, the eradication of smallpox has often been championed as a potent example of the ability of humans to gain control over nature. It has also become the source of speculative narratives about the hubris of such a vision. These narratives are unique examples of what I call biomedicine futures: speculative visions about what will be that blur the line between the possible and the actual, the rational and the irrational in ways that produce potential truths that exert a tangible impact on the present.

If practices of cryopreservation enabled the creation of repositories of the end of particular infectious epidemics, the co-production of fictional and scientific narratives have contributed to maintaining them. These narratives can be found in flow charts and planning documents as well as the reports of science writers, from Richard Preston's 2002 best-selling account of bioweapons development *Demon In the Freezer*, to novels like Nelson DeMille's 1997 *Plum Island*, which used the eponymous high-security government biorepository as the setting for a thriller.

[Priscilla Wald, in her work on the "outbreak narrative"](#) has argued that popular and fictional accounts of epidemics have served as a way to educate the public about the threat and science of deadly infections. Citing Michael Crichton's *Andromeda Strain*, she also points out that fictional accounts of outbreaks do more than reflect and convey the lessons of science; they also supply some of the most common points of reference, which influence social transformation and disease emergence in their own right. This includes her documentation of the fact that Nobel Laureate and anti-germ warfare crusader Joshua Lederberg leaked the Ebola story to Preston. Decades earlier, Lederberg communicated about germ warfare with Michael Crichton upon the publication of the *Andromeda Strain*. When Crichton died in 2008, it was Preston who was asked to complete his novel *Micro*, a fictional critique of a corrupt bioprospecting enterprise.

In the case of smallpox, such narratives or hidden dialogues have informed the perpetual deferral of the destruction of the final "official" or symbolic specimens of the Cold War standoff. Even after Cold War tensions thawed, these two collections of smallpox remained in a state of suspended animation, renewing the logic of Cold War while generating still new apocalyptic anxieties. Take a recent example. In the summer of 2014 NIH scientists [discovered six vials in a freezer in Bethesda that were](#)

[subsequently confirmed as containing smallpox DNA](#). Soon after, the BBC examined fears that climate change could lead to the [release of smallpox that had been inadvertently preserved in nature's freezer, the arctic permafrost](#).

The specters of these twin threats of smallpox infection—one emerging from an improperly managed artificial frozen environment and the other from a natural environment transformed through human activity—were tamed by recourse to science fiction. Michael Lane of the CDC, who previously worked on smallpox eradication programs from 1970 to 1981, was not worried. He told one news outlet, “No one feels there’s a serious chance that global warming will melt the permafrost and unleash an epidemic.” While “no one” in Lane’s orbit at CDC may have been willing to go on record to admit climate change as a legitimate risk, [the article in which he was quoted](#) paired his succinct assertion with a cascade of speculation.

BUT: what an amazing plot possibility for a future biomedical thriller, as thawing corpses in the global north unleash waves of weird infectious terror on the people of the present day. Perhaps an oil exploration crew or a small group of archaeologists—or a few urban explorers, best friends taking a quick summer vacation to some ruined villages in the forest—find rotten body parts emerging from the mud and, unbeknownst to them, bring this virus back home to the city. It could be the plot of *28 Years Later*.

Like something out of Jeff Long’s airport thriller [Year Zero](#)—in which an ancient virus is accidentally released from a vial of Jesus Christ’s own holy blood, leading to a global catastrophe—viruses once thought conquered emerge from the ice once again, virulent, unstoppable, and coming soon to a film screen near you.

Such narratives of both scientific speculation and science fiction colonize the present in ways that prepare their readers for the radical uncertainty of the future. The laboratory freezer gives officials only the illusion of control over the ultimate fate of smallpox. The best efforts at [“planned hindsight,”](#) the ability to view the present as a future past, will always involve the simultaneous conjuring and containment of fiction and fantasy.

The interplay of these speculative visions scramble the ability to distinguish fact from fiction, producing new kinds of risks from old, cold substrates. As a result, these freezers—both artificial and naturally-occurring—are made to incubate an end that is not yet over.

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