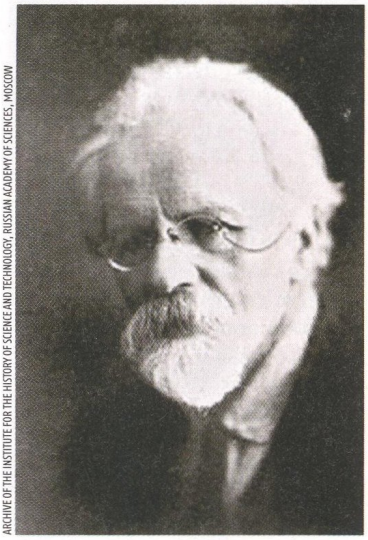
How to breed a model citizen



ARCHIVE OF THE INSTITUTE FOR THE HISTORY OF SCIENCE AND TECHNOLOGY, RUSSIAN ACADEMY OF SCIENCES, MOSCOW

In February 1926, Russian biologist Ilia Ivanov set out for Guinea in French West Africa, where he planned to perform one of the world's most sensational experiments. Ivanov was an expert in artificial insemination and had used his ground-breaking methods to create an assortment of hybrid animals. Now he was going to try something even more radical – crossing an ape and a human. His trip to Africa was expensive and its purpose highly questionable, yet the Bolshevik government not only sanctioned it but also financed it at a time when few Russians were allowed to leave the country. Why would so eminent a scientist risk his reputation? And why did the Bolsheviks back him?

IT WAS the story with everything: secret papers, an evil Soviet dictator and a zealous zoologist hell-bent on breeding a creature that was half man, half ape. When details of Ilia Ivanov's attempts to create an ape-human hybrid emerged in the 1990s from the newly opened Russian archives, they prompted a rash of lurid headlines. Ivanov became the "Red Frankenstein". His proposed liaisons were invariably dangerous. There was even the suggestion that he had been ordered to breed super-strong hairy warriors for what *The Sun* in London dubbed "Stalin's mutant ape army".

Yet Ivanov's efforts during the 1920s to create an ape-human hybrid had been anything but secret, according to Alexander Etkind, a Soviet-born specialist in Russian history now at the University of Cambridge. Ivanov's project was a sensation at the time and generated almost as many headlines as it would later on, but when no ape-man materialised the fuss died down and his research was forgotten. Some 60 years later, scholars reconstructed events from scattered letters, notebooks and diaries held in assorted government archives. Despite years of digging, however, one vital part of the story remains elusive. "None of these documents reveals why he did it," says Etkind. After examining the available evidence, he thinks he has an answer (*Studies in History and Philosophy of Biological and Biomedical Sciences*, vol 39, p 205).

At the start of the 20th century, Ivanov was internationally acclaimed for his pioneering work in artificial insemination (AI), and having perfected his methods he was keen to see how they could be applied. His first big project was aimed at improving imperial Russia's bloodstock, using sperm from the best stallions. Before long, he was pondering the possibilities of hybridisation: with AI, he reckoned he might be able to create novel types of domestic animal by crossing closely related species. Soon he had produced a zeedonk (zebra-donkey hybrid), a zubron (European bison-cow cross) and various combinations of rats, mice, guinea pigs and rabbits. In 1910, he told a gathering of zoologists that it might even be possible to create hybrids between humans and their closest relatives.

At that stage, Ivanov was simply speculating, but a decade and a revolution later, he was making plans to put theory into practice. In 1924, he put his proposals to the government. Despite the disapproval of the scientific establishment Ivanov got the go-ahead – and the funds to mount an expedition to Africa to collect apes. Documents show that the decision was pushed through by leading members of the Bolshevik government.

In February 1926, Ivanov set off for Africa. His first stop was Paris, where he won the enthusiastic support of the directors of the Pasteur Institute and the promise of access to the chimps at its new primate centre in Guinea, then part of French West Africa. He reached Guinea in late March only to discover none of the chimps was mature enough to breed. He would have to return later in the year to capture some chimps of his own.

Ivanov passed the summer in Paris, where he spent some of his time at the Pasteur Institute working on ways to capture and subdue chimps, and some with the celebrated surgeon Serge Voronoff, inventor of an increasingly fashionable "rejuvenation therapy". In a now notorious operation, Voronoff grafted slices of ape testes into those

> "Five women offered to carry half-ape babies in the interests of science"

of rich and ageing men hoping to regain their former vigour. That summer, he and Ivanov made headlines by transplanting a woman's ovary into a chimp called Nora and then inseminating her with human sperm. While the press waited for the outcome, reporters turned their attention to Ivanov's unusual project. The idea of an ape-human hybrid was both shocking and fascinating. Was it possible? Were humans really that closely related to apes? What would the result be like? And what were the Soviets up to?

In November, Ivanov returned to Guinea, captured his chimps and with considerable difficulty eventually inseminated three of them. By now, he had a second experiment in mind: to inseminate women with chimp sperm. Knowing that no local woman would agree, he planned to do this under the pretext of a medical examination, but the French governor forbade it.

None of the three chimps conceived. Disappointed, Ivanov headed home with 20 chimps to stock a new ape nursery in

For more on Ilya Ivanov read Alexander Etkind's article at DOI: 10.1016/j.shpsc.2008.03.004

CYRIL RUOSO/JH EDITORIAL/MINDEN

Like mother like daughter – and it's probably best if things stay that way

the subtropical Soviet republic of Abkhazia. He knew now that his best chance of creating his hybrid was to find Soviet women willing to carry half-ape babies in the interests of science. In the event, only four chimps made it to Abkhazia and so while the nursery set about acquiring more apes, Ivanov looked for volunteers.

At least five women volunteered. But although the nursery did get hold of an assortment of apes, they never flourished, and by the time Ivanov was ready to proceed the only adult male left was Tarzan, a 26-year-old orang-utan. Ivanov pressed on until fate dealt his project a fatal blow. Tarzan had a brain haemorrhage. "The orang has died, we are looking for a replacement," Ivanov cabled the woman he had lined up to receive Tarzan's sperm. More chimps arrived in 1930 – but Ivanov fell victim to the widespread purge of scientists and was exiled to Kazakhstan. He was released the next year but died soon after.

So why did Ivanov want so badly to produce a baby that was half-ape, half-human? And why did the Bolsheviks encourage him?

When Ivanov put his proposal to the Academy of Sciences he painted it as the experiment that would prove men had evolved from apes. "If he crossed an ape and a human and produced viable offspring then that would mean Darwin was right about how closely related we are," says Etkind.

When Ivanov approached the government, he stressed how proving Darwin right would strike a blow against religion, which the Bolsheviks were struggling to stamp out. Success would not only bolster the reputation of Soviet science but provide useful anti-religious propaganda to boot.

That might seem motive enough, yet as Etkind points out, some have suggested that the ageing Bolshevik leaders had something less intellectual in mind. "There is conjecture that Ivanov was sent to Africa to bring back apes in order to provide them with glands for rejuvenation." The Kremlin's doctors certainly dabbled in rejuvenation treatments and Ivanov did have links to Voronoff, but Etkind is not convinced. "If you want to cover up a bizarre scheme to rejuvenate ageing politicians then you wouldn't choose an even more bizarre project that's going to attract a lot of publicity."

There is a third possible motive – that Ivanov's research was part of an ambitious plan to transform society. The high-ranking Bolsheviks who backed Ivanov were intellectuals who saw science as a means of realising their dream of a socialist utopia. "Politicians could change the political system, nationalise industries and turn farms into vast collectives – but the task of transforming people was entrusted to scientists," says Etkind. "The aim was to match people to the socialist design of Soviet society."

One way to do that was through "positive eugenics", using AI to speed up the spread of desirable traits – a willingness to live and work communally, for instance – and to get rid of "primitive" traits such as competitiveness, greed and the desire to own property. "There were many projects aimed at changing humanity," Etkind says. "Ivanov's was the most extreme but if he succeeded then that would show that humans could be changed in radical and creative ways."

Etkind believes this is the most likely reason why the Bolsheviks backed the project and that it was also what motivated Ivanov, at least in part. Like many others, Ivanov was swept along by the Bolshevik dream, he says. "He had proved that AI had the capacity to change nature, and testing its limits was perfectly in tune with the revolutionary times." At the end of the day, Ivanov was a typical Russian intellectual. "His ends and means today sound truly radical. But if you think about it, a successful hybridisation with apes is no more fantastic than a happy life in a communal apartment." **Stephanie Pain** ●