

# Monkey business

John Launer

I am probably not the first person to have wondered if human beings are so close to some of the other great apes, including chimpanzees, that a mad scientist somewhere might secretly have tried to create a hybrid. It was only recently that I discovered such experiments did indeed take place. They were led by a scientist who, far from being mad, was one of the mainstream researchers of his time. They were also carried out without any secrecy at all. As it turns out, the story has a lot to teach us about the political nature of scientific research and its driving forces. The project took place in the Soviet Union in the 1920s, with lavish funding, a fanfare of international publicity, and support from the United States, France and elsewhere. The man who led the hybridization experiments was a Russian professor of zoology called Ilya Ivanov. He had already become famous earlier in his career for perfecting the technique of artificial insemination in horses, as well as producing hybrids between a donkey and a zebra, a bison and a cow, and various kinds of rodents.

In 1910 Ivanov gave a presentation to the World Congress of Zoologists in Graz in Austria, proposing that it should also be possible to produce a hybrid between a human and one of the great apes by using the same technique. After the Russian Revolution of 1917, his idea attracted interest from the new Bolshevik government. By 1924, he had obtained the enormous sum of \$10,000 dollars to fund an expedition to Africa to catch chimpanzees and start his insemination experiments. Ivanov's own motive appears to have been mainly one of scientific curiosity, although he sold his plan to the government as a way of proving Darwin's theory of evolution, and therefore providing a conclusive justification for the atheism that lay at the heart of Soviet ideology. The Russian historian Alexander Etkind argues that the politicians who supported the scheme may have had other, more complex motives as well.<sup>1</sup> Some Soviet leaders, including the radical politician Leon Trotsky, may have seen the mission as part of a futuristic project to produce the perfect 'new Soviet

man', free of undesirable traits such as the wish to own property. Others may have had a more personal aim: to obtain a secure supply of ape glands for implantation into ageing humans – a treatment that was widely believed to lead to rejuvenation.

## DIFFERENT RACES

In the west, the plan received enthusiastic support from the Association for the Advancement of Atheism. One of their leaders, the American lawyer Howard England, proposed that chimpanzees should be crossed with white people, gorillas with black people, and gibbons with Jews. He considered that each of those apes must be the ancestor of these different races. Quoted in the *New York Times*, he suggested that it would be possible in this way, 'to produce the complete chain of specimens from the perfect anthropoid to the perfect man.'<sup>2</sup> Although Ivanov himself does not seem to have had such precise ambitions for interbreeding, he had no moral qualms in some other respects. Setting up base in the French colony of Guinea, with the keen co-operation of the Pasteur Institute, he began to impregnate female chimps with human sperm, possibly from his son. He initially intended to persuade local black women to accept payment in dollars for artificial insemination with chimpanzee sperm. When they failed to show any enthusiasm for the idea, he planned to do so without their consent, in the guise of gynaecological examination. In spite of Ivanov's angry protestations that bourgeois prejudice was obstructing science, the French governor and then the Soviet authorities forbade him from doing so.

Ivanov was not discouraged for long. He returned to the Soviet Union with twenty chimpanzees, although only four survived the journey. He set up a 'primatological nursery' in Abkhazia on the Black Sea, where he evidently found five women who were willing to consent to insemination voluntarily, as loyal communists and in the interests of science. The demise of the remaining chimpanzees, and Ivanov's failure to achieve a single conception from a batch of sperm from new arrivals, put an end to the project. Ivanov was arrested and exiled in 1930, probably for unrelated reasons, and died from a stroke not long afterwards. The primatological nursery

survived for much longer, providing apes and monkeys for experiments in space in the 1960s. A friend of mine, who worked for an American television company in Russia in 1979, tells me he was proudly shown some chimpanzees in the botanical gardens in Sukhumi that were said to be descendants of Ivanov's original apes. The nursery finally closed during the war with Georgia in 1992.

## SCIENTIFIC POSSIBILITY

Ilya Ivanov's dream – or nightmare – may not have been so improbable, at least in scientific terms. The divergence of humans and chimpanzees from a common ancestor possibly took place in two distinct evolutionary stages, with interbreeding for over a million years before a definitive separation of the species took place.<sup>3</sup> Humans have two fewer chromosomes than other great apes but, as Ivanov knew, there have been many successful hybrids created from different species of horses, where the variation in chromosome count can be far greater. Some of these equine hybrids even have been fertile for a further generation.<sup>4</sup> With modern reproductive technology including intra-cytoplasmic sperm injection, it is possible that all the scientific difficulties that Ivanov faced could be overcome.

Assuming that no-one else has succeeded in doing this by clandestine means, the obstacles standing in the way are probably cultural beliefs rather than in science itself. Trotsky's dystopian vision of an engineered perfect citizen vanished with his own exile from the Soviet Union and subsequent assassination. The faith of Soviet leaders in monkey gland treatment became a focus for ridicule. The racist beliefs that underpinned the project have also become abhorrent to most scientists, while concern for animal welfare would make the idea just as appalling in the eyes of many nowadays. Nor does anyone think that experiments like this are necessary to prove Darwin right (although, bizarrely, Ivanov's failure is sometimes cited nowadays by creationists as proof that humans and the great apes were never related in the first place.)<sup>5</sup> Yet Ivanov's hybridization project, and the assumptions that lay behind it, were in line with similar scientific projects that continued well into living memory, both under dictatorships and democracies. This happened in areas like eugenics, animal experimentation, drug trials in the developing world, and experiments infecting prisoners with lethal diseases.

Ivanov's work is also a reminder that there is rarely such a thing as 'pure'

**Correspondence to** Dr John Launer, Faculty Development, Health Education England, Stewart House, 32 Russell, London WC1B 5DN, UK; john.launer@nwl.hee.nhs.uk

science. Politicians and the scientific community decide where to invest their time and money according to the values, assumptions and aspirations of the time. It is possible that future generations may look back at some of our own grandiose research endeavours – particularly those devoted to providing marginal benefit to wealthy folk in the northern hemisphere and astronomical profits for a few corporations – and consider these just as

distasteful as some earlier forms of scientific monkey business.



CrossMark

**To cite** Launer J. *Postgrad Med J* 2015;**91**:117–118.  
*Postgrad Med J* 2015;**91**:117–118.  
 doi:10.1136/postgradmedj-2014-133229

## REFERENCES

- 1 Etkind A. Beyond eugenics: the forgotten scandal of hybridizing humans and apes. *Stud Hist Phil Biol Biomed Sci* 2008;39:205–10
- 2 Soviet backs plan to test evolution. *The New York Times*, 17 Jun 1926.
- 3 Patterson N, Richter DJ, Gnerre S, *et al.* Genetic evidence for complex speciation of humans and chimpanzees. *Nature* 2006;441:1103–8.
- 4 Chandley AC, Short RV, Allen WR. Cytogenetic studies of three equine hybrids. *J Reprod Fertility* 1975;23:356–70.
- 5 Bergman J. Human-Ape hybridization: a failed attempt to prove Darwinism. *Acts and Facts* 2009;38:12.