

Book Review

Edward Hooper, *The River: A Journey Back to the Source of HIV and AIDS*
Harmondsworth, Middlesex: Penguin Books, 2000.
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This is a big book in a number of ways. It is more than a thousand pages long, has nearly 2,500 footnotes, is based on ten years of unrelenting research, and, for all of that it is eminently readable. Strange as it may seem this is not a turgid endless summing up of facts and figures, but a well-researched, closely argued and well written book that is accessible to anybody with an interest in Africa, its people, its history, and the Aids epidemic.

Hooper's argument is simple and straightforward. In the 1950s virologists working for drug companies attempted to develop a commercially viable polio vaccine in central Africa. Inadvertently they allowed the vaccine to become contaminated with the Human immune deficiency virus (HIV), the virus that causes the disease known as Aids (Acquired immune deficiency syndrome). As a result thousands of people came to be infected with HIV/Aids during the clinical trials carried out in central Africa between 1957 and 1960.

Hooper begins his book by describing his visit in 1986 to Kasensero, a small town in southwestern Uganda, where, on the shores of Lake Victoria, villagers told Hooper of a disease that had entered the settlement in 1982 and had taken at least one hundred people in the years that followed:

These persons had died in a variety of nasty ways. The mouths and throats of some had filled with a strange, creamy paste that would not go away; others had been racked with coughs and fevers, had developed sores on face and body, or had been plagued with constant diarrhea. (p. 34)

The disease, known as 'Slim' on account of the emaciated condition of all of its victims, was Aids, and Kasensero went into media history as one of the 'Aids villages' of Uganda. Whilst in Kasensero Hooper was struck by the immensity of Aids and the manner in which it ravages human society. Writing on the deaths of friends in Kasensero Hooper noted:

Like so many others in Rakai district and in Uganda, and elsewhere around the world, they too had ended up paying an inappropriate price for those few brief moments of pleasure and intimacy. (p.36)

It is Hooper's humanity and caring for others, apparent in the above, that drove him to complete *The River* and that permeates his writing. At no stage does Hooper descend into stereotypical descriptions. The people whom he deals with are people, with emotion, feelings, worries and cares.

Following his experiences in Kasensero Hooper began his quest to seek the source of HIV/Aids. Hooper describes in great detail the beginning of the epidemic in America and western Europe, and shows that in both cases the disease originated in Africa, where Simian Immunodeficiency Virus (SIV), had been transferred to humans to become HIV. By 1990 it had been shown that two SIVs (SIVcpz and SIVsm) found in chimpanzees and sooty mangabey apes were related respectively to HIV-1 which is found primarily in central Africa, and to HIV-2 which is found primarily in west Africa. But how did SIV come to be transferred to humans and become HIV?

For some time now it has been suggested that hunters and cooks may have become infected by the bites, scratches and blood of captured and butchered primates. This seems to

be a fairly straightforward and plausible explanation, but Hooper rejects it on the following grounds:

The fact that the African monkeys live comfortably with their SIVs suggests that the simian viruses have been present in these species for a considerable period of time, and that the two have adapted to each other. By contrast, the fact that both HIV-1 and HIV-2 cause Aids in humans suggests that virus and host are not in equilibrium, and that the HIVs are comparatively recent introductions to *Homo sapiens sapiens*. And yet African monkeys and apes, we can safely presume, have been hunted and skinned since the dawn of our species. So, why have the HIVs not emerged before now—and not once, but twice, in the space of a few years in the latter half of the twentieth century? (p. 163).

What clinches the argument for a recent transfer of SIV from apes and monkeys to humans is viral DNA sequencing which indicates that the transfer occurred at some stage no more than sixty years ago.

After the Second World War massive vaccination campaigns were started to rid the world of numerous diseases. Of these polio (poliomyelitis) and smallpox are amongst the best known. In the case of polio, oral vaccines (OPV) were developed which had been prepared in cultures of primate kidney tissue. In later years it was discovered that numerous simian viruses had inadvertently been transferred to humans in the course of the vaccination campaigns on account of contaminated kidney cultures having been used for the preparation of vaccine. Referring to one of these viruses SV40, Hooper notes:

This was actually the fortieth contaminating monkey virus to be discovered in monkey kidneys, but fortunately it appeared that neither SV40, nor any of the others, had increased people's susceptibility to diseases such as cancer (pp. 173-4)

In early 1992 Tom Curtis published an article in the *Rolling Stone* in which he suggested that a batch of OPV named CHAT, which had been developed by Hilary Koprowski and colleagues at the Wistar institute in Philadelphia, might have been contaminated with SIV. Curtis noted in his article that between 1957 and 1960 this OPV had been fed to more than three hundred thousand Africans in what is now Congo, Ruanda and Burundi—"the very area now thought by many scientists to be the hearth, or source, of the epidemic of HIV-1 related Aids" (p. 190).

Though Hooper would undoubtedly have arrived at conclusions similar to those of Curtis in the long run, it is clear that the article by Curtis helped Hooper along. Following on from the work of Curtis, Hooper delved into the life and times of Hilary Koprowski and his colleagues in their search for a commercially viable polio vaccine. What Hooper discovered were a number of research teams each driven by the demands of global commerce to develop the cheapest effective commercial polio vaccine. One of these research teams, most notably that led by Hilary Koprowski, was based at Lindi five miles downstream from what was then Stanleyville, present day Kisangani. Here with an ample supply of primates, be they monkeys, apes or human beings, Koprowski and his colleagues worked at developing and testing an OPV known as CHAT.

Apart from entertaining Sabena airhostesses, the research team injected chimpanzees, which had been captured in the forests surrounding the camp and beyond, with CHAT and exposed them to virulent polio viruses. However, in addition to testing CHAT on chimpanzees, the OPV was also tested on thousands of Africans before it was licensed in the West* Hooper suggests that at this stage some batches of the CHAT OPV were produced through the use of Chimpanzee kidneys, and that in this manner SIV was transferred to humans where it became HIV, the virus that leads to Aids. It was, according to

Hooper, the mass experimental CHAT vaccinations carried out in French speaking Africa that led to the sudden and rapid spread of the disease throughout central Africa. Those seeking to digest the huge book in a nutshell would do well to read chapter 54, which contains charts and maps showing a near perfect overlap between sites of vaccination and plausible cases of Aids prior to 1980.

HIV causes Aids, let there be no misunderstanding about that. This is not a book that adds substance to those that claim that Aids is a figment of western donor and pharmaceutical company imagination. However, Hooper does argue forcefully that Aids did come about through the inadvertent actions of western virologists anxious to develop a commercial polio vaccine. I, for one, believe that Hooper's claims should be taken seriously and subjected to further investigation. For the time being I would urge anyone with an interest in humanity to read this book.

Notes

1. In the light of revelations regarding the conduct of Pfizer employees in Kano, Nigeria, in the course of a meningitis epidemic, very little has changed. See the following web-sites:

<http://www.pfizer.com/pfizerinc/about/press/pfizerstatement.html>;

<http://www.pfizer.com/pfizerinc/about/press/trovanq&a.html>;

<http://www.hsph.harvard.edu/bioethics/archives/200012/msg00009.html>;

<http://www.hsph.harvard.edu/bioethics/archives/200101/msg00006.html>;

<http://washingtonpost.com/wp-dyn/articles/A63515-2001Jan15.html>