

*This is the first interview in an oral history with Dr. Peter Piot, Executive Director of the joint United Nations Program on HIV/AIDS (UNAIDS), and Under Secretary-General of the United Nations on January 4th, 2008, in Washington, D.C.
The interviewer is Victoria A. Harden.*

Harden: Dr. Piot, would you please state your full name, and that you are aware that this interview is being recorded and that you have given your consent?

Piot: I am Peter Piot, and I'm very happy to do this interview with my full consent.

Harden: Thank you. Now, according to your United Nations biography, you were born on the 17th of February 1949, in Leuven, Belgium. Could you tell me a little bit more about your childhood? Who were your parents, your grandparents, what they did, what was the environment you spent your early years in?

Piot: Leuven is a university town. One of the oldest universities in the world is there, the Catholic University of Leuven, which has existed since 1245, or thereabouts. And its other claim to fame is the beer, Stella Artois. The brewery in Leuven is one of the oldest breweries in the world.

My father was an economist by training, and a civil servant. He worked his whole life in the Department of Trade and particularly in agricultural exports. As a result, I saw a lot of people coming over from other countries. I think that had some influence on me. He comes from a worker's family, and a farmer's/worker's family originally. He was the first of his whole family to go to the university during the war World War II.

My mother comes from a family of small enterprise, a construction company. She ran the construction company for a while, so there was a public/private partnership at home. That's why I know it's not always easy. Both parents come from a small village near Leuven. I grew up there until I was eight years old, and then we moved to a small town - - village, actually -- where I went to school. I have two brothers and one sister; I'm the eldest of the family. The village where we lived had quite a good school, also a boarding high school, which was in the woods. I grew up in the forest, basically, with no neighbors, and so I'm allergic to noise. Until I was 17, I literally lived and went to school in the woods. Retrospectively, I realize that it was a really good school, because it gave the kind of education that was like a global education. For example, we got history of the world, not just history of Belgium, which was very unusual in those days. We were taught the history of China, of India, of pre-Columbian America. And then secondly, there was a lot of culture, music, dance, theater, and languages at the school, so I learned my French, which is my second language. My mother tongue is Dutch, and French is my second language and English is my third language. I also took Latin six years, five hours a week, but I also had a lot of science education and mathematics. It was hard work.

But for me it was not that difficult, let's put it that way. And I was always the first in the class, and so on. But I was also, in these days, very much engaged in cultural and social

activities and writing the student magazine and being a bit of a rebel. We had to wear a tie; the other boys and I really resented that.

Harden: Whom did you admire? Who were your heroes?

Piot: In these days I must say I was very much into the liberation movements. Che Guevara was one of my heroes. And the scientists -- Einstein was a big hero for me because he seemed to combine scientific discovery with activism for peace and against intolerance. I was very much into literature, and several Dutch, Flemish writers and so on. Bob Dylan, was also a hero. I tried to learn English through Bob Dylan, which is hopeless. I still don't understand most of what he sings.

This was a time in Europe, and I think in the U.S. as well, of youth rebellion. But at the same time, one of my biggest heroes was Father Damien. I don't know whether you've heard of him.

Harden: No.

Piot: He was a Flemish missionary, a priest from the village next to mine, so I could bike to his place. I come from a place where you bike, a little village in Flanders. He dealt with leprosy. He died of leprosy, actually. He chose to minister to this colony of lepers in Molokai, Hawaii. I was really fascinated by that. He was not only the local hero, but he combined, again, my interest in something to do with diseases, with health. I was already interested in that: a disease, leprosy; the stigma; social justice; it all came together in him. He was like a local farmer's son who became a saint. I was raised in a Catholic family, so my hero would have been a combination of Father Damien and Che Guevara, if you want.

Harden: Had you decided on a medical career at this point?

Piot: No, not at all. I honestly didn't know what to do. I had so many interests, in the social sciences, in society, in physics. I liked physics and mathematics a lot. Medicine came, actually, later. When I went to the university I participated in the exams for the school of engineering and physics. I wanted to do physics, because math I really liked. I was admitted to that. But then after a month, after having seen all my colleagues and all the instruments, I said if something has more than two buttons that's bad for me, I am going to blow up the building, which is ironic because I ended up running a lab.

Then I moved to medicine, and the reason was mostly because I thought it would combine my interests in science and in people and society. They should come together in medicine. I thought also that it would give me a passport to the world. I wanted to escape from my village, which I found pretty suffocating as an environment. I come from a very traditional, conservative environment, and the country [Belgium] is so small. I wanted to see the world.

Today, in our system in Belgium, unfortunately, it would be difficult, I think, to change focus like that, but in those days, if you had the degrees and the grades, you could go into medical school. In those days that's the way it worked, and it was also easier because education is basically free in our country. I think the tuition fee was less than \$100. I think it's now \$300, for medical school or for anything else. But we pay more taxes to cover those costs.

Harden: Aside from Father Damien, was there any other teacher or mentor who you think guided your career?

Piot: Are we talking about high school, about my teenage years, or is it later?

Harden: No, I'm talking about your formative years; elementary, high school, parents, teachers, friends.

Piot: I recall the teachers of history and Dutch literature. Also, we were playing theatre, we went to modern theater. In Brussels you could go to theater in Dutch, English and French and at school we played pieces in these 3 languages – though all the teaching was obviously in Dutch. I was the one organizing that. What also had a big influence on me is that in the summers I always worked for a travel agency, going to Turkey one month, and one month to Morocco. This is in the '60s, when there was no touristic infrastructure. This was travel by bus; not the hippie type, but with teachers typically with an interest in Latin or ancient culture, and a lot of history teachers. Interesting, now that I think of it. I was like 15, 16, 17 years.

And again, it was great to be away, to discover other cultures and to also have to run things myself, to organize. I was the one to do the shopping, which was typically for 100 people, two, three buses. We would set up the tents and I would help with the cooking.

Harden: So you found that you liked to do a lot of different things, rather than just one thing.

Piot: Yes. I was also active in the Scouts. I was a Boy Scout for 10 years. These travels to Morocco and Turkey were very important for me. I was bitten by the virus to see the world. I was very interested in other cultures and all that, but at the same time I read a lot on science, and particularly physics and biology, two different things.

Harden: So you were at the university studying, and when did you specialize in medicine, moving toward a medical degree?

Piot: Well, in our system it's different. When I was 17, I went to the University of Ghent, starting with physics and engineering. And after a couple of months, I went to medical school immediately. My parents -- I had forgotten to inform them that I had changed the course! So in '67 -- yes, 1967. It's seven years, medical school, and the last year is a full-time internship, and then you get your degree if you pass all the exams. In medical school, to be honest in the beginning I was very disappointed, because I didn't

find either the science nor the social and the people parts, because it is, of course, an applied science; it's not a science in itself

But I went through, because I had this objective. Certainly in those days, and I guess it's still the same in most medical schools, there is not much attention paid to the social side and the psychological side of medicine, to interaction with patients, etc. I think it's probably gotten worse, because it's all based on machines and technology.

In medical school, there were a few professors that really had an impact on me. One was a professor; Nihoul was his name. He was a professor of microbiology. I must say, I avoided going to class as much as I could because I thought most professors were bad teachers. I thought we could learn faster reading by a book, and I always liked to read.

I remember things when I read; less so when I hear. People are different in that respect. But Professor Nihoul really was a good teacher, and also it was not only about microbes, but also about microbes and man. He gave historic perspectives, which I always like.

So that was one course that influenced me, and the other one was what we call social medicine, like public health. There was a professor in that course whom I liked Professor Voylsteke. He tried to explain things from a macro perspective, from a population perspective, rather than from the individual. It is interesting that these were the two professors who had the most influence on me, because my life has combined, on the one hand, an interest in the micro -- after all, after that I did a Ph.D. in Microbiology, so you zoom in and it's small, small; tiny -- and on the other hand, an interest in public health. But I didn't enjoy very much the medical school and the hospitals and so on, to be honest.

Harden: This is what I find with people who go into either public health or research. They are just not as comfortable with just day-to-day practice.

Piot: Right. I'm one of them. But when I was a student, I did start several things. One was a Community Health Center for migrants in Ghent. It still exists, now as a kind of private entity. At that time, the migrants didn't have access to medical care or much less with interpreters and so on, so we started that. And also we had an alternative medical student group, the official student association, but I thought they were too conservative, so I started another one.

At the same time, I was also what we called a research assistant, so I did some work in pathology, just because I had an interest in the lab and in research. These have been the two legs I have been walking on. On the one hand, I had the interest in research, and on the other hand an interest in the public health, the psychological.

Harden: One side question here. Did you have any medical history designated as medical history in medical school?

Piot: No, I don't think so.

Harden: So it was just up to professors of medicine to bring in anything historical to their courses?

Piot: Yes. Some of them did. Some did that very well, and some were really stuck in that. No, we didn't have it. Good question.

Harden: While you were doing your medical studies, you were also working on a DTM [Diploma in Tropical Medicine] in Antwerp, at the Institute of Tropical Medicine. Was this an expansion of your interests? What led you to do this?

Piot: When I was near the end of medical school I went to see a number of professors to ask for some career counseling, and asked what to do. I was interested in infectious diseases and tropical medicine, and they all said "No future in infectious diseases," except, of course, the microbiology professor.

Harden: I was wondering if you were going to get that advice, because many did in the United States, I know.

Piot: Yes, that was '73. You've got antibiotics, so infectious diseases are conquered, except for immuno-compromised patients with leukemia and that kind of thing, but that's super-specialized and had no future. But still, I'm also pretty stubborn; when I really want to do something, I do it. So I went against the advice I got. One of the few ways of doing that in our country is to do tropical medicine. I went to Antwerp, which is quite a big school in Europe, at least for tropical medicine, and so I got that diploma, but it was only a six-month course, that's all. But it was an eye opener. For the first time, I went to all classes. I really thought that was very interesting, with professors who would tell about real life experiences. It was very practical.

So there I found my niche, and I applied for a job as what we call a research assistant in a department of microbiology, because I was interested in doing research also, and trying to combine, again, laboratory-based research, because I felt still hungry after my medical school that I hadn't had the research and basic research experience, and at the same time, on issues for the developing world. And I could do that in Antwerp, at the Institute of Tropical Medicine. The professor I had there, Prof. Stefaan Pattyn, the head of the department, was a real bully type of guy, but very good. You learned a lot. Everybody was scared of him. For six months I was as well, and then I said, you know, "When he is naked, he is just like anybody else, so the next time he shouts at me I'll yell back." You know, in these days, certainly in Europe, that was not usual -- he was a big professor. Very hierarchal, authoritarian. They taught in the German tradition. But he was an incredibly hard working person. One of the things that I learned from him was don't only read about what you are doing, but read besides that. That's where you pick ideas, you can learn, and so he had a really broad interest in medical science. His field was mycobacteria, TB and leprosy, so my old interest in leprosy was figuring into it.

Harden: Again figuring into it, with the long heritage of connection between Belgium and Africa. I presume there had been a long period of building up knowledge in Antwerp.

Piot: Yes. That's true, absolutely true; an incredible body of experience, but also a very colonial type of mindset which did not exactly correspond to my own vision of the world. Just one anecdote on that. When I graduated from high school--I guess it's the same in the U.S.-- there's a ceremony, and the best student of the school gives a speech to thank the professors and teachers and parents for a wonderful education. That student happened to be me, and instead of doing that, well, I thanked them of course, but I read out of a speech of Patrice Lumumba -- you know, he was the first elected Prime Minister of Congo, after it achieved independence from Belgium. He had given a speech where he denounced Belgian colonialism and oppression, and I said to the graduation audience, "You didn't tell us the whole truth, in history. It was a great education, but all the crimes that we committed in the Congo, we were not told about that," and so on and so on. This created a big incident. The whole ceremony was canceled. It was a big thing. I had been awarded some kind of a medal for being the best student, someone who had been first for six consecutive years, but they refused to give it to me after my speech.

Harden: You were a rabble rouser from the start, I see.

Piot: But in a quiet way -- I was actually surprised. I'm not somebody who yells and shouts. I just say my thing, and I was surprised that people did not want to hear the truth, because this was evidence based, let's put it that way.

Harden: We'll come back to that. That's a very important thing. Now, after you finished your medical training, you did go directly into the Ph.D. program in microbiology?

Piot: That's right.

Harden: You've talked a little bit about how your goals were evolving into both research and public health. Is there more you can say, from that time, about your experiences? You took a course in clinical virology at Manchester, also. What was happening there?

Piot: I came to become a microbiologist -- not sure actually whether it was more microbiologist or macrobiologist -- but my purpose was to achieve more of a research career. But at the same time I was seeing patients. We had this clinic for tropical diseases, because it officially was a hospital for tropical diseases and for travelers and sailors. Antwerp is a big harbor; this goes back to 100 years. As a result of that we were seeing a lot of people with sexually transmitted diseases who came there.

Harden: And these were all travelers, not specifically government or military travelers?

Piot: Yes, but also, the people would have gonorrhoea so they would go there, both locals and travelers. That was not my prime research interest, but that's what I started seeing. I said, "Oh my God, what is happening here?"

Harden: These are not AIDS [acquired immunodeficiency syndrome] cases yet? Just STDs [sexually transmitted diseases] in the 1970s.

Piot: Yes, just STDs, but we were starting to see, just like everywhere else, particularly in the gay population -- and Antwerp has quite a gay population -- an increase in syphilis, hepatitis B and other things. The same thing was happening in the U.S. In these days it was a side thing for me. Historically, it becomes an experience that positioned me to deal with AIDS.

For a few years' time I had been trained in cell cultures, isolating viruses, isolating and recognizing bacteria. I'm a certified pathologist also, so I could run a clinical lab (I wouldn't recommend it today, because after 15 years in WHO and UNAIDS, I have lost the practical experience). In September 1976 we received blood and liver specimens of a dead nun, a Catholic nun who had died in Zaire, from "yellow fever?"—that question mark meant they weren't sure what infection killed her. We were a lab that was certified to work on arboviruses and yellow fever. We were all vaccinated, so we were absolutely safe. That's when we isolated the Ebola virus. It's not that you say, "I'm going to discover the Ebola virus." It just gets there.

Harden: But you weren't vaccinated against the Ebola virus—there is no vaccine!

Piot: No.

Harden: Tell me more about this episode.

Piot: I was part of a team with Guido van der Groen PhD [Professor Guido van der Groen] I mean, and Stefan Pattyn [Stefan Pattyn, M.D.]. We routinely inoculated the specimen on cells and checked it in baby mice; when you think of it, very, very primitive techniques, but that's how clinical virology works, and still works basically. That was before we had PCR [polymerase chain reaction].

Harden: So you knew you had something new, then?

Piot: Yes, because we looked at it under the electron microscope and because we couldn't neutralize the virus with any of the antiserum we had, so it was definitely not yellow fever. It was a real shock when we saw it under the electron microscope. It looked like the Marburg virus. It's a very long virus. We said, "Oh my God, what is this?" So we reported that. The specimens had been sent also to CDC [U.S. Centers for Disease Control and Prevention] in Atlanta, to Karl Johnson [Karl M. Johnson, M.D.] and his team. They had Marburg virus antiserum, so they could demonstrate that it was also not Marburg virus. So it was a co-discovery.

Harden: Did you know at that time that there was an epidemic in Africa?

Piot: Yes, we had some indication--mostly rumors that something was going on in Zaire, and that people were dying. Hundreds of people were dying, and no one knew why, but that happens all the time in Africa. Many villages in Zaire are in the middle of nowhere. But for once we had an actual clinical specimen, and it was well preserved. And Ebola is a pretty robust virus also, which made it possible to isolate it. But it was transported from Zaire to Antwerp just in a small container, like a coffee can. I mean, this is against all rules. Certainly, today you would go to jail, perhaps, for that. And then we were instructed by WHO to close down the lab, but we actually continued to work for a couple of days to satisfy our scientific curiosity and to do as many tests as possible.

Next, we wanted to go and have a look at what was going on in Zaire, but we didn't have money to do that. We had contacted the Department of International Development in Brussels and the Ministry of Foreign Affairs, and they said, "It's not a priority, we are not here to support research. This is not our thing."

But a couple of weeks later, I was sitting in Paris. I went with my wife to Paris, to go to a conference on antibiotic resistance. The head of the department had been invited and didn't find it interesting enough or whatever, so he sent me. Suddenly my name appeared on the screen with urgent instructions to call a number in Brussels. I could see the call number, but I didn't recognize it. I called that number, and it was the Ministry of Foreign Affairs, saying, "You must leave today for Kinshasa, for this epidemic." I said, "Is tomorrow okay? I'm in Paris." What had happened was that a team from CDC had just arrived in Zaire, along with somebody from South Africa and somebody from Institut Pasteur in France, on behalf of WHO. At that point, the Belgians said, "We must be there, too." It had become a political issue. That's the reason we suddenly found money.

I was asked to go for two weeks, and I stayed about three, four months. I remember I had only one suit, my wedding suit, because they told me, "You're going to meet the Minister there, so make sure you are decent," because I had long hair in those days. I had a passport, but it was not valid anymore, and I had taken out the picture for some membership thing somewhere, so I arrived at the airport and somebody gave me a ticket, and I said, "My passport has expired." They said, "Don't worry." So I went to Immigration and I showed my passport, and they say, "What is this? You don't carry a picture? Your passport is expired." I said, "I have to go to Zaire. I have to go there. There's an epidemic." "Yeah, yeah, yeah. Okay." So I was put aside immediately, but then somebody from Foreign Affairs showed a card and I got through.

I said, "Oh my God, if I have trouble getting out of my own country, how am I going to get into this other country?" I'd never been to Africa. I mean, Morocco, but that's not real Africa. So anyway, they said, "Don't worry. You get in touch with Mister so-and-so who is on that plane" -- who happened to be the head of a Belgian international corporation in Kinshasa -- "and see how it goes, and you just follow his instructions. You'll be okay." I was so excited I couldn't sleep. In those days planes couldn't fly directly to Kinshasa; they made a stopover in Greece, at about 4 o'clock in the morning.

When we stopped, I went out with a few other people and had some ouzo. The rest of the passengers were trying to sleep. The man whom I had to follow was there, and he started swearing, "It's always the same thing, and these idiots, they can't get their act together, and they're sending this new" -- I mean, I was 27, you know; no experience, and never been to Africa. He was not very friendly. But then we established that he had apparently played cards with my father when they were students, so that helped.

When we arrived, he said, "Follow me. Don't look left, don't look right; just follow me." So we went straight to the VIP room, and that's how I got into the country. And I said, "Oh my God, this is, how am I going to ever get out of the country" -- in the end they made a diplomatic passport for me while I was there.

Harden: I had a quote from Joel Breman [Joel Breman, M.D.]

Piot: Uh-huh. Oh, you know Joel?

Harden: I do. He described your contribution to this whole effort in Zaire as "Huge. Peter helped with the microbiology in the Antwerp lab, viewing and culturing the virus with Pattyn and van der Groen before going into the field in Congo, and working with me and others for over two months on epidemiology and control." So you saw patients then, in Kinshasa?

Piot: Yes. And before that I should say that there were two people who really had a major impact on my thinking—for different reasons-- because I was still in my formative years. Joel is one of them, and Karl Johnson, who was the team leader when I went over there, was the other. And, yes, I saw patients.

We arrived on a Monday morning, and I think it was the 18th of October, '76, and I spent half a day in meetings. Certainly in those days I hated meetings a lot. I have to do it now -- it is most of my life. And they were asking for volunteers to go to the epidemic zone. I immediately raised my hand. I will say that I was lucky, also, that I -- many people who were asked to do this didn't want to go; for some reason they were scared. But I was in kind of my adventurous years. I'm not sure today I would do it.

Harden: What was your sense of danger? And what did you find in reality?

Piot: Well, my sense of adventure and curiosity in the discovery was much greater than my sense of danger, but I was scared several times. In the whole team I was the only one with some practical laboratory experience, like doing blood counts--very simple things on the patients who were in Kinshasa. There we were, manipulating blood -- we didn't know how Ebola was transmitted, but that was maybe a bit irresponsible. Today we wouldn't do that.

I remember that some Belgians took me out for dinner. We went out until 3 o'clock in the morning, because I said, "I want to see Kinshasa." There was music, and it is quite a city, you know -- it has 5 million people, or at least more than 3 million. I slept only a

couple of hours, and in the morning we went on the C-130 and were dropped, literally, in the tropical rain forest.

That's when I met also Bill Close [William T. Close, M.D.], the father of actress Glenn Close. He was Mobutu's physician [Joseph Désiré Mobutu, or Mobutu Sese Seko, President of Zaire, 1965-1997], and director of the biggest hospital, of Mama Yemo's hospital. What impressed me was that during this experience, I saw a portable mobile phone for the first time. In those days a mobile phone was a really big box; they needed somebody to carry it. And Close would call a General, like a Chief of Staff of the armed forces in Zaire, and call him by his first name, and in French they have a conversation, not polite. He would say, "General Bumba, move here because I need a C-130 tomorrow by 4:30, okay?" And, boom--it would happen.

I thought, "This guy must be more than just a physician to the President." He had quite some authority. So we went to the epidemic zone with Joel Breman, Pierre Sureau [Pierre Sureau, M.D.] from Institut Pasteur Jean-Francois Ruppel, MD, M. Masamba, MD, V. Kintoki, MD. That was when the epidemic was still very active. We saw one patient after the other.

Harden: Did you suit up to examine them?

Piot: Yes, but we didn't have much. We had gloves and surgical masks, and motorbike goggles I had gotten from a missionary in the bush. That's all we had.

Harden: Did any of your team members come down with Ebola?

Piot: Well, we had one person who we thought had come down with it. He had developed a fever and so was evacuated. I thought one day I had it because I had fever and diarrhea and, you know, didn't feel well. And we were supposed to report that every day, but I didn't because I would have been put into quarantine and in a plastic bag, and sent to South Africa like with this other guy. And I didn't want to do that, so I waited. Fortunately, after 48 hours it was over. I had contracted one of the other multiple bugs around.

Harden: Now, you mentioned your wife. We haven't yet talked about your personal life, but you must have gotten married. You said you had your wedding suit. When did you marry?

Piot: In 1975.

Harden: And her name is?

Piot: Greta Kimzeke. I'll send that item, too.

Harden: What I'm getting at is that when you married, you had more than one person to have to think about when you considered going into a dangerous epidemic.

Piot: Yes, well, she was pregnant in addition.

Harden: And what was her view of your going to --

Piot: She was very supportive, but also not really knowing what we were going into. I was going to go away for 10 days, and she said "Fine."

Harden: So she didn't understand that you were putting yourself into grave danger --

Piot: Not really. No. Nobody did, really -- well, some people had an idea. I think Joel Bremen did, and certainly Karl Johnson did because he knew and had experience with Marburg. To be honest, I was so excited. It's like -- what's her name, who got the Nobel Prize? The Italian neurophysiologist, Montalcini [Rita Levi-Montalcini, Nobel Prize in Physiology or Medicine, 1986], one of the few women who got the Nobel Prize. She's from the Piedmont region in Italy, where you have the truffles, the white truffles. She says that when the discovery is coming, it's like the prickling sense of truffles, white truffles, in the air. I mean, it gets you a bit drunk, and you know, you forget about everything else.

It was very exciting scientifically, but also it was the adventure of my life. I was going to Africa, into one of the most backwards places on the earth, but also it was a rare privilege to work on something that no one had a clue how it was transmitted or what it was. If you're going to a cholera epidemic, you know. I mean, the Ebola epidemic was a total unknown. The same thing was true with AIDS in the beginning, you know?

Harden: I wanted to make that analogy, too, but it appears to me that it happened backwards with Ebola. That is to say, you isolated this virus before you knew about the disease. And with AIDS you knew you had a disease, but didn't have a virus to start with.

Piot: Yes. That's right. Good point.

Harden: And so, let's turn a little bit towards AIDS. But one more question, before we get there. During your Ph.D. training, you spent a year as a senior Fellow in Seattle. I presume that you went to Seattle to study with King Holmes [King Holmes, M.D., Ph.D.]. I did not know about his eminence when I began this research on AIDS, but I keep finding people who have gone there and studied with him.

Piot: Oh, there is a whole mafia, a whole network.

Harden: What I'd like to know is, what it is about Seattle and Dr. Holmes that attracted you, and then secondly, whom did you meet while you were there, who later worked with you?

Piot: Well, where to start? After the whole Ebola epidemic and the investigation was over, Karl Johnson and Joel Breen, who was then at CDC, they said, "You must come over." I wanted to go to the U.S. to further develop my training, because I found I was a bit stuck in Belgium. But it took about a year to get a fellowship. I applied for all kinds of fellowships to get money. I got a NATO [North Atlantic Treaty Organization] fellowship. It's part of the Fulbright fellowships in Belgium, and so it's competitive. I went to CDC first. And originally I thought about staying at CDC, but I didn't like it.

Harden: Why not?

Piot: I thought it was so bureaucratic. It's only gotten worse, but that is something else.

Harden: This was in what year?

Piot: In '78. I took the Epidemic Intelligence course, which was great. I really loved it. I met a lot of people. I met Bill Foege [William Foege, M.D.]; he was then the director of CDC. What was really great and unusual is that he invited the foreigners who took the course -- there were not many in those days; now there are far more -- and spoke with us. And I spoke twice with him. I knew about him--he was a hero because of smallpox--what he'd done. What I didn't know was what he was like as a human being. He is a very human person.

I worked also with Karl Johnson in special pathogens, but I thought that it was not really something for me. I mean, when we had been discussing what I would do at CDC, it was either work in a P4 lab -- I don't think I have the discipline for that; it's really extremely, extremely disciplined, you can't forget anything -- or it was to do the state epidemiologist type of work, and that's not my type of thing. Little did I know I would become a U.N. bureaucrat, but anyway. So I drove, then, to Seattle. I bought a car.

Harden: That's a long drive.

Piot: My wife, in the meantime, had had a son; Bram, the one she was pregnant with during Ebola. That was a great trip, to cross the U.S. once was a wonderful trip. It made me realize that the U.S. is more than New York and Washington. I mean, I'd never before been to the U.S. Atlanta was my first encounter with the U.S.

And so, why King Holmes? I'd become interested in sexually transmitted infections while I was in Zaire and working on Ebola. One of the things I had to do, since I was the most junior person on the whole team, was to go through hospital records. And I saw so many STDs in there, women with infertility, which was related to it, PID [pelvic inflammatory disease], and in the meantime, also because of what I'd seen in Antwerp, in gay men particularly.

And also, I had isolated a penicillin-resistant gonococcus that was from Africa. That was only the second one from Africa, and before it had been found in the Philippines. There were two strains, one strain from Accra, and one from Cote D'Ivoire. I've often had a

nose for new things, you know; penicillinase. So I became interested in gonorrhoea, and what was going on.

When I looked at the literature, there wasn't much else in these days. King Holmes was the first one to take a systematic, scientifically rigorous approach to the study of STDs. And I said, "I want to go there." I mean, I have these simple ideas. I had seen him at some meeting, I think in Rotterdam. I'm not sure of that anymore. I saw him afterwards. But anyway, I drove to Seattle; I didn't have a formal acceptance from King Holmes that I could work with him. And he interviewed me.

I gave a talk at his 70th birthday; a symposium in August [2007] for him, with all his former Fellows, and in that talk I told about how he had interviewed me. He had just left his wife, or vice versa. He was just separated, moved into another house, and he had invited me for lunch. I said, "Oh, Professor Holmes invited me for lunch!" It turned out to be a peanut butter sandwich. When I arrived at his new house, there was somebody on the roof -- and he was inside and I was outside -- all trying to make sure the TV antenna was in the right position -- in these days you had to do this.

Harden: Yes.

Piot: And then he asked me, "What do you want to do?" I wasn't prepared for that question, because in Europe, the professor tells you what to do. It is a great thing in the U.S. that you let young people develop their own ideas.

I worked with him on bacterial vaginosis, which didn't have a name yet. He introduced me to Stanley Falkow [Stanley Falkow, Ph.D.], who was another role model for me. In terms of the lab, I would say he is the person I learned the most from. He's retired; he is now at Stanford. He was chairman of microbiology at Stanford, and worked on pathogenesis, mostly of the enteric pathogens. Also, there I learned to work on plasmids, and to do the basic techniques of microbiology, alpha molecular biology, the western blot; all these things that were in full development. And Seattle was a big, big place for that; monoclonal antibodies were discovered there. It was an incredible environment. What I really liked was the advanced integration of lab science, of clinical science. There was King, and epidemiologist Russell Alexander [E. Russell Alexander, M.D.].

In the end I shared my time between the microbiology lab -- where I continued to work on my Ph.D. with Stan Falkow, and I was there on the same bench with Lucy Tompkins [Lucy Tompkins, M.D., Ph.D.], who then became his wife later on.

There was more work with King Holmes; more of the clinical work, the epidemiology. And that has marked me enormously, the King Holmes approach of bringing people together from different disciplines, from the social sciences to biochemists to microbiologists to statisticians, and putting that team on a problem, from all sides. That is, I think, King's strength. And in addition, many of them he wouldn't even pay. His foundation attracted money, and I learned how to raise money. He's a real entrepreneur. And I met a lot of people -- Tom Quinn [Thomas Quinn, M.D.] was one of them.

Harden: I was going to ask you about Tom Quinn.

Piot: Larry Corey [Lawrence Corey, MD], was in Seattle at the same time I was. He's still in Seattle; he's now the head of the NIH Vaccine Trials Network. I also got into touch with the team of Allan Ronald [Allan Ronald, M.D.] of the University of Manitoba, Winnipeg, and that's how I got involved in Nairobi, with the University of Nairobi. There was an outbreak of chancroid, a very old STD, in Winnipeg of all places. Because I had isolated some of the bacteria, *Haemophilus ducreyi*, which is very difficult to isolate, I went to Winnipeg, I remember, the first of May in '79. It was snowing, you know, not unusual for there. And so Allen and I decided to do some work together in Nairobi. That's how I got into the University of Nairobi, which is another story. Sorry it sounds confusing.

Harden: No, no, this is very good, thank you. We're at the end of the '70s, and I'm fascinated by the fact that molecular biology, molecular immunology, virology was all moving so fast at this time.

Piot: Yes.

Harden: But it wasn't fixed. You were learning new things at the same time, then, once AIDS comes into being, that you're trying to deal with this epidemic. Did you have a sense that all this molecular-level information is coming at you in a rush, or was it being teased out a tiny bit at a time? Things like PCR, for example, didn't exist. People just can't imagine that you did work without it.

Piot: Yes. That was for me the big eye opener when I was at the University of Washington: all these new techniques. We prepared our own western blots and we prepared the probes. It was very artisanal; today, you buy it, you give a call and they deliver it. And genetic sequencing was just starting.

Harden: Did you have a FACS [fluorescence activated cell sorter] machine?

Piot: I don't remember seeing one, but that doesn't mean it wasn't there... When you tell young people that today, they just can't imagine. I mean, cell phones were not there.

Harden: I often use a quote about needing an entire computer to do an analysis of something, because the power of computers was so small at that time.

Piot: And also, when we were working on the Ebola outbreak there was no communication. Frankly, if something really serious would have happened, we would have been completely isolated. We had radio communication through the mission network, from one mission to another. The military had some more powerful things, but not us. And on the lab side it was the same. It was a time of total revolution in biology, particularly driven by genetics and microbiology. But I never thought that basic research

would be the heart or the core of my career, because I didn't feel I had the skill to do that very basic research. And then, there was immunology--I still don't understand it completely.

I had a discussion with Tony [Anthony S. Fauci, M.D.] about this. I like genetics and microbiology because they are straightforward. Immunology involves more interactions. And I think immunology is probably far more important for the human species than the microbes are, but anyway. I always try to keep aware of what's going on with developments in lab science. These are the tools that are going to help us to solve all the other problems that I'm interested in. So I need to know, and I will find the best people in the field. That is one thing I learned from King, and he's still continuing to do that. It's amazing.

Harden: When you went back to Antwerp, you gave an interview to “Frontline” and described a Greek sailor who, you believe in looking back, had AIDS.

Piot: Yes, yes. We even kept the specimens. In 1985 we found that he had antibodies for HIV.

Harden: Would you tell that story again, and talk about the first few cases that you saw in Antwerp?

Piot: Yes. But at the time, we didn't know these were AIDS cases. We kept specimens frozen at -70 degrees centigrade, and so in '85, when the antibody test for HIV became available, we tested them, and yes, it was HIV. At the time, we saw only that the patients had opportunistic infections, cryptococcal meningitis, which was so rare outside AIDS; disseminated atypical mycobacterial infection. This Greek fisherman I remember, because I participated in the autopsy, was completely -- how to say it -- there were mycobacteria everywhere. Never seen that.

Harden: What went through your mind at that point? What did you think?

Piot: Well, actually, I didn't make a connection with anything. I was totally confused, and said, “How is it possible that this is an atypical mycobacteria, something that only affects people with compromised immunity?” But it was just one case, and I wasn't smart enough to see that this was a totally new syndrome.

Harden: I'm interested in how the medical community comes to realize there is something new.

Piot: Yes.

Harden: This was a sharp contrast with Ebola, where you had the virus.

Piot: Absolutely. The first AIDS cases gave us a confusing picture. Here and there we would see people with what is AIDS now, what we know as AIDS, all from Africa, from

Central Africa, the former Belgian colonies. I saw a number of them, and some of them came to our hospital of tropical diseases. And when in '81 the Morbidity and Mortality Weekly Report came out I was interested in it, particularly from the gay side, in the sense that these were gay men. And I said, "What is this?" I made a connection with what I'd been seeing in terms of syphilis and hepatitis in Antwerp and what I had heard in Western Europe. I said, "There's something going on, in general." And so, here gay men are hit by this Kaposi's sarcoma and antibiotic-resistant pneumonia. That started incubating in my brain. And then I went to a meeting of the American Society for Microbiology and the Infectious Diseases Society of America (ICAAC) in October -- I think it was in Chicago -- where we heard presentations on this new syndrome.

Harden: This is still '81?

Piot: '81. And I was there with a group of Belgians, and we said, "That's it. That's what we're having." But there's a problem. We were also seeing women.

Harden: You were seeing women as well as men at this time?

Piot: Yes. We were seeing women. And we had already started asking about our patients, who were not men who have sex with men. People cannot always be open about that, for sure, but it was like nobody we saw was gay. So we hadn't completely internalized the thinking that this was the same thing we were seeing because there seemed to be such a dogma that this was a gay disease-- you know, they called it GRID (gay-related immune disorder).

Harden: Why was it such a dogma? Tom Quinn said he saw a woman in Baltimore who, he realized retrospectively, had AIDS, and other people also saw women. What do you think solidified the thinking into, "This is a gay disease?" Was that a U.S. phenomenon?

Piot: No, because Europe was the same way. And then came injecting drug users. And we had the Haitians. That was a problem. I mean, they didn't fit at all. But all that evolved -- let's not forget that in 1981 we were talking about, by the end of the year, what, 50 people, worldwide? Who would have thought -- I was reading every week MMWR very faithfully, because that was the reference even today, you know, for outbreaks and so on -- that out of five cases, that 26 years later you would have 25 million people die? I mean, I definitely couldn't imagine that then. And it's really in '82 and early '83 that we started to have enough cases in Belgium to put it together and to say, "This is exactly the same thing." It was then also known that there was a depletion of CD4 lymphocytes. That took a while. We still didn't know the cause. We formed a group in Belgium of three hospitals that were seeing these patients; two in Brussels and one in Antwerp. There was a lot of rivalry, so people didn't really share the data and so on. It's the usual stuff. Rivalry occurs not only in the U.S., you know.

I was not really very much involved in that. My expertise was on the STD side. Then I contacted Jim Curran [James Curran, M.D.], because I had known Jim from my STD

work and from CDC, and said, “You know, Jim, we must go and have a look in Zaire.” But he didn't bite. That was at an STD conference in Seattle, in August '83.

Harden: Okay. There was also a conference in Vienna.

Piot: Yes. That was in September '83, and that's where I spoke with Tom Quinn.

Harden: And Dick Krause [Richard Krause, M.D.].

Piot: And Dick Krause and Jack Whitescarver [Jack Whitescarver, Ph.D.]. I remember-- something I see in my mind's eye is that I went to Dick Krause's hotel room, where Dick and Jack and I made a deal. I needed money, but I was a nobody, a young person in Antwerp. And you know, in Belgium nobody was interested in funding research on this new disease. All the research money was totally monopolized by a few Mandarins. Dick immediately agreed to fund a visit to Kinshasa together with Tom Quinn, with the first question being to try to document whether indeed there were more cases in Kinshasa like those we had seen. I always thought that if we saw 100 in Belgium, there must be thousands in Zaire, because only the people with money could afford to come to Belgium for treatment, or those who came at their government's expense. Dick basically wrote a check there. And being the Director of NIAID, he could do that without having to go through I don't know what kind of applications. Maybe today that would be very difficult.

Harden: Skip Francis [Henry L. “Skip” Francis, M.D.], was he involved too?

Piot: Well, Skip Francis, yes, he came on board, but much later. That was when we had started with Projet SIDA. But what happened next is that Dick Krause came to Antwerp in October, a few weeks later, to get this organized. And Joe McCormick [Joseph McCormick, M.D.] from CDC also called me. I had known him from the Ebola days, so there's also an Ebola connection; there's an Ebola network. There's a King Holmes network. There's a CDC network. Then I have an STD network. As a social scientist, you often think about that.

Joe had said, “I'm on my way to Zaire to study” -- it didn't have a name. It was a syndrome, that's all. So anyway, these two projects showed the huge rivalry, as you know, between NIH and CDC.

In those days it was terrible. And I got in the middle of that. It seemed to have been my destiny. I'm always into these complex collaborations. I said, “Let's go together. Let's do this together.” We made an agreement that we would work together, and that I would be a team leader of this enterprise. And I think it's because NIH definitely wouldn't have accepted somebody from CDC, and CDC wouldn't have accepted somebody from NIH, so that was my comparative advantage. I mean, this is my cynical half, you know, thinking that they certainly made use of that.

Harden: But out of this group effort came Projet SIDA.

Piot: Yes.

Harden: Would you talk about how it got going?

Piot: First, we could document after a while, because we needed permission from the authorities, that there was indeed an epidemic going on, and that as many men as women were infected. We decided to work together, to continue in the collaboration. I then applied for a grant to NIH, which went through the whole review process, was accepted, etc. The scientific site, however, was later on blocked by the U.S. Embassy in Kinshasa, because of intra-American, intra-HHS politics, you know.

Harden: Yes. This would have been in --

Piot: Eighty-four. Jonathan Mann [Jonathan Mann, M.D.] came to see me in March, I think, or April in Belgium; he was on his way to Kinshasa. So he was selected as the Director for Projet SIDA, when it was there. We also agreed to work together. But because I didn't get this NIH grant, I was without money, so I had to find other money.

Projet SIDA was phenomenal in that it documented the foundations of what we know about AIDS in Africa today. When you look at the publications that had come out, even the first paper that we published in *The Lancet* was one of the most quoted papers of the year (we checked it, but originally it was rejected by *The Lancet* because "it is only of local interest" as the then editor wrote!).

I had one paper turned down by the *New England Journal of Medicine*. One of the referees had just one line saying, "It's a well-known fact that AIDS cannot be transmitted from women to men." Because, coming back to your question, why this gay --

Harden: Blinders.

Piot: Yes. It's a blind spot, at some point, that all of us have, you know, about some things.

Jonathan Mann was also a very astute politician, in the sense that he made it acceptable to the Zairian authorities to conduct Projet SIDA. This was not so obvious. There was total denial when it became known there was AIDS in Africa, you know. There was a connotation of racism around AIDS, in the reporting and so on, and that didn't help. We also started the first campaigns, prevention campaigns, during Projet SIDA. Jonathan held it together with NIH and CDC, which was in itself not so easy, and then with the Belgians there.

That's when Skip Francis came there, and he had a hard time. Jonathan gave him a really hard time in the beginning. But Skip established the lab. He did a great job organizing a first-class lab, including virology, in that environment. By any standard, that's an achievement, which was not well recognized and appreciated because it involves a lot of

stupid, small things, but if you don't do them or if you don't do them right, it's impossible to do all the rest of the flashy stuff.

Harden: Jonathan Mann was a fascinating character. I'm sorry I never got to meet him. He obviously was charismatic and could get things done, but he really rubbed the bureaucracy the wrong way, and they rubbed him the wrong way. Would you talk some about his strengths and weaknesses?

Piot: He had problems particularly when he was in WHO. But also I saw, when in Projet SIDA in Kinshasa, he was also a micromanager. Or let's put it this way: he was a control freak. It's not the same thing. He wanted to control everything and to be in charge of it. For example, I wanted to go back to the equatorial region in Zaire where the Ebola outbreak occurred. This was something that Joe McCormick and I had discussed. We wanted to go and have a look. We had serum samples from 1976, thousands, well documented, whom and where and a random survey. And we had found when the antibody test became available for HIV that there was already -- I can't remember, 0.6 or 0.7 percent of the population there was HIV positive in 1976.

I said, "Let's go back and look there." Jonathan didn't want to go outside Kinshasa. I said, "Let's go in other parts of Zaire." He always stopped that. But as soon as he left, we did it. Skip Francis and I and Kevin De Cock [Kevin M. De Cock, M.D.], who's now WHO's head of AIDS.

But Jonathan was visionary in the sense that he really saw that AIDS was an epidemic that would have a major impact on society. He also saw the link with human rights violations. He made that connection immediately between politics and the epidemic. And his strength was he could convince you. I mean, he was very compelling, but on the other hand he was a very tormented type of personality. He had a high level of insecurity, and hence I think he became the control freak. He was definitely not relaxed.

Harden: But you seemed comfortable working with him. You came back and joined him.

Piot: I had no problem. He asked several times if I would join WHO, and I always said no. I joined when Mike Merson [Michael H. Merson, M.D.] asked me. But with Jonathan I always said, "No." The main reason was actually not so much Jonathan himself, but I didn't want to be in what I saw as a huge bureaucracy. I wasn't ready for it. I was still in my academic phase, and I wanted to do research. I was in Nairobi, I established a huge project in Nairobi, a big research group in Antwerp. That's when I was more of the academic. I wasn't right for the WHO.

Harden: All right. I may be confused here, then. I thought you became Associate Director –

Piot: In '92. Jonathan had already left; he had resigned in 1990. Merson became director of the WHO Global Programme on AIDS in May 1990. I came on in '92 under Merson. Later, Merson was Dean of Public Health at Yale and is now at Duke University.

Harden: But Projet SIDA went on until '91?

Piot: That's right. Then the war was there, civil war. I continued to work with Projet SIDA, with Robin Ryder [Robin Ryder, M.D.], who was the next director, and then Bill Heyward [William Heyward, M.D.], who was the last director, who had to evacuate. And we had quite a big Belgian contingent. In my group, we had several people. We were in charge of the clinical component and some of the lab side. We developed the first studies with prostitutes, with sex workers as they say these days, and we started to do interventions. My interest moved from documenting what was going on, what determined transmission, to what to do about it.

Harden: Who was paying for those studies? Did you have any trouble getting money for studies with the sex workers?

Piot: Well, yes, we had trouble. amfAR was paying for it. My first grants came from amfAR and from the European Commission. There was private funding, and then CDC was contributing quite a lot, also.

Harden: You didn't have any trouble, then, getting money from CDC or NIH? We were in a very politically conservative period in the '80s in the United States.

Piot: I don't think they knew the details of the work, to be honest. I don't think they knew. It was presented in a different way.

Projet SIDA was actually well funded, and I think it was more like a block grant than anything else. So it was a matter of internal arrangements with Jim Curran, Tony Fauci, and myself. We were the supervisors of the project, even under Jonathan Mann. We had regular meetings, and that's where my relationship with Tony goes back to. Jim Curran and I had a joint visit at least once a year. I think he's really a great man. He went through so much unfair trouble, particularly from the side of AIDS activists. I mean, knowing how he worked day and night and with his whole heart. I learned a lot from him also, because he is somebody with the highest degree of integrity you can think of. He succeeded in navigating this political minefield, and not getting too depressed. I mean, I really respect him enormously.

Harden: As we come to the end of today's interview, there is one thing I want to ask you, jumping way back to 1984. When Gallo [Robert C. Gallo, M.D.] published the four papers in Science, did you say, "Ah-ha, he's got it"? What finally persuaded you that the retrovirus we now know as HIV was the cause of AIDS?

Piot: The HTLV papers? I really didn't believe those.

Harden: Not the first HTLV paper, but the '84 papers.

Piot: I'll tell this story. We had sent serum from people in Zaire to Montagnier [Luc Montagnier, M.D.] and from people whom we thought had AIDS, and then from controls--healthy people, or people with other conditions, and under code. And Montagnier called me to give the results -- it was like in 1984 -- with these experimental antibody tests, with the LAV, as they called this virus. And that gave me goose bumps, because I had the code. And he said 14 positive, 13 negative, etc., etc. There were a few controls that were HIV positive. Today, we know there are asymptomatic carriers. We didn't know that then.

I said, "This is so perfect," because every single case of our diagnosis of AIDS, based on the clinical fact that they had opportunistic infections and CD4 counts below -- I can't remember which value, he had identified them with this test. That was before the publications, and that was published later in Science, in '84. We went to Kinshasa in October of '83, and then in '84. We had a lot debates when we were in Kinshasa about what this new disease was. We thought it must be caused by a virus—or at least some infectious agent, let's put it that way, because of the early focus on the gay lifestyle.

Harden: I'm interested in how the press—the American press, especially--feels a need to cast villains and heroes. And if you ever saw the movie "The Band Played On" --

Piot: No, but I read the book.

Harden: -- the French were pictured in soft focus, as being concerned about humanity, and Gallo's lab was pictured as very brightly colored and harshly industrial. That was not exactly an accurate picture of anybody.

Piot: I always refused to choose camps in this, because the world was divided into two camps. It was ridiculous, absolutely ridiculous. Montagnier had done some work on it before Gallo, but Montagnier was incapable of multiplying the virus. And frankly, Gallo's lab was more sophisticated. But let's say the personalities of both of them were also not helpful.

Harden: Somehow we expect all medical researchers to be saints, and to get along and to always understand that it's all for the public good. Which is a wonderful ideal --

Piot: Neither is a saint nor a villain. They're just human beings. Both have big egos, and that's what you find in people who make great discoveries. Both have their place in history, but I think it's really unfair to pick, let's say, the Gallo camp or Gallo as the villain. I don't buy that at all. I think it doesn't correspond to the facts, to the historic reality.

Harden: And it distracts from the knowledge that was gained by both that was essential to move forward.

Piot: Absolutely. I think probably it's even more of a symbiosis; I mean, one without the other may not have been successful. May have, may have not. I had forgotten about it, but it's so ridiculous. But that's one of the problems of our time, also. Everything has to be spectacular. I saw a book in a bookstore called *The Amplification of Risk*, and this is how with media and communication companies you can amplify risk. But in the case of AIDS, it's amplification of small differences. That's the story. There would have been no story if Gallo and Montagnier would have gotten along.

Harden: We should stop here for today. Thank you very much. I look forward to our next interview.