**SCHOOL OF ADVANCED INTERNATIONAL STUDIES**

# GLOBALIZATION AND DISEASE: ARE OUR EXISTING INSTITUTIONS UP TO THE JOB?

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**MR. FRANK FUKUYAMA:** All right. Let's—why don't we get started.

Due to the reorganization of the panel, as Scott Barrett mentioned, the order of the speakers is going to be different. I'm actually not sure what the title of this panel is any longer. It was originally supposed to be—I suppose I should introduce myself.

My name is Frank Fukuyama. I'm a Professor of International Political Economy here at SAIS and I'd like to welcome you to our fist panel. The title was Globalization And Disease: Are Our Existing Institutions Up To The Job? The afternoon panel was supposed to be Globalization And Infectious Disease Policy Options. I've never heard anyone speak on the question of the adequacy of existing institutions that didn't also have a lot of opinions about policy. So is suspect that we will address basically the same set of issues in both this and the first afternoon panel.

I want to make a couple of announcements. I would appreciate it if all of those of you with cell phones would make sure that they are turned off out of consideration for our speakers. I know I have turned off mine.

I also want to announce that I am going to be organizing a conference here in this room on February 10th and 11th on the International Governance of New Technologies, which will, in part, overlap with the topic of this conference. It's going to be half devoted to information technology issues and half to biotech issues, and it will be jointly sponsored by SAIS and by George Mason University.

We are extremely fortunate to have two very distinguished and interesting speakers to address the topic. The first is Dr. Seth Berkley, who is President and Founder of the International AIDS Vaccine Initiative. He's a medical doctor specializing in infectious disease epidemiology.

Prior to founding the Initiative, he was Associate Director of the Health Sciences Division at the Rockefeller Foundation, and was also an Adjunct Associate Professor at Columbia and at Brown. And he has previously worked for the Center for Infectious Diseases of U.S. Centers for Disease Control, the Massachusetts Department of Public Health, and the Carter Center.

Jeffrey Sachs, I'm sure, is known to many of you. He is the Director currently at the Center for International Development, and is a Galen L. Stone Professor of International Trade at Harvard University, and former Director of the Harvard Institute for International Development, who has been

involved in development issues over the years of Bolivia, Poland, and recently has done a great deal of work in infectious diseases.

The most impressive thing about his vita, as I would note, that he was promoted to full Professor at Harvard three years after receiving his Ph.D. It took me and most of the rest of us a great deal longer to do.

So, we'll have Dr. Berkley speak first. We'll have then questions for him. We'll have then Professor Sachs, and we will conclude the session at 12:30.

Thank you.

**DR. SETH BERKLEY:** Thank you very much and I'm delighted to be here with you today.

The question I was asked, are global institutions prepared to deal with infectious diseases and bio-terrorism, and the answer, I think, is absolutely not. And it's interesting because--I'm sorry that Tony, who's a good friend of mine, Tony Fauci, isn't here because I think Tony would've talked about all the important steps that have been taken, and I'll talk a little bit about that, but I'd like to talk about the steps that haven't been taken.

And I think the critical issue to start with, and it's what I want the take home message to be, it's the question I asked DA about. And that is that, infectious diseases are now a global problem. It's a global issue. You know, you have dinner in Nairobi, you have breakfast in London, you have lunch in New York. That's the way the world runs.

And, you know, studies have been done in the past looking at what would happen if, for example, smallpox was released in an airport. And, you know, by the time it appeared, it might be in as many as 75 countries. And so the real question is, how are you going to deal with that? Where's the infrastructure to deal with that.

I'm going to switch back and forth in my talk between U.S. issues, because that's what this conference is about, and the global issues. And I apologize if that's a little confusing.

The other thing that's important is, you know, what it is as today versus where we were on—before September 11. Clearly, there's more interest, but the fundamental problems are still there and that's why it's important that we deal with those.

One interesting thing, as somebody said, I should talk about China. I may do that in questions at the end, but the Chinese character for crisis comes in two parts. One suggests danger, but the other is opportunity. And I think, you know, if in this time, we focus on the opportunities and if we can marshal the resources and maintain the focus, we potentially can kill two birds with one stone, and that is improving the system for naturally occurring agents whilst preparing for bio-terrorism. And the

important point is a lot of the agents we're talking about for bio-terrorism are agents that are endemic in different parts of the developing world anyway.

In the developing world, about half of the deaths are attributable to infectious diseases and what's more extent is if you look at poverty. If you look at the 20 percent of poorest people in the world, 60 percent of their deaths are infectious disease deaths, versus the richest 20 percent of the world, which is around 8 percent. So again, 60 percent for the very poor, 8 percent for the very rich.

And so one of the reasons we're in the position we're in, and Lori's not here to talk about it, but she wrote about this in her book, is, you know, the complacency that occurred with this change. You know, the perception in the '60's and '70's were that we've conquered infectious diseases. Surgeon General Stewart in 1967 told state and territorial epidemiologist health officers that it was, in quotes, "time to close the book on infectious diseases and shift all national attention and dollars to chronic disease".

Now, you know, that's an amazing statement you think about now but, at that time, that was really the vision. What happened? Well, CDC—and I worked at CDC, switched more and more to violence epidemiology, chronic disease and suicide prevention, etc., and let the infectious disease skill set somewhat wither. It was still there, but let it wither.

You heard Lori on the WHO Surveillance System but, also, there were a set of labs around the world that were left over from the Rockefeller Foundation, Arbo virus labs. And these labs were left alone with virtually no budget. Some of them received, you know, a few thousand dollars from the World Health Organization but, in essence, you had labs around the world.

I used to live in Uganda. There was an Arbo virology reference laboratory there. There was no running water, no electricity. You saw some of the pictures earlier of what those look like, and that is the place we're relying on to do diagnosis and work on these.

And then, the other shift that really occurred, which is really important and I'll come back to, is the power of the market. And, you know, we worship the market here. In the manpower sense, the market drove people towards clinical medicine because that's where it was prestigious, that's where the money was versus public health.

It also drove people into ruminative, procedure driven specialties. So you had the huge rush of people into cardiology, gastroenterology, etc., whereas thinking specialties, such as infectious diseases, really did not get attention.

And the pharmaceutical companies, again, the market has driven consolidations. We have an era of billion dollar drugs and there was little incentive for antibiotic development for new drugs that (inaudible) for the developing world. And particularly, heavy marketing of the new drugs that did come out. So, you'd get antibiotics out and, rather than saving those for the resisting cases, we saw those used for sore

throats, viral sore throats even, and we saw them used in cases where they really were inappropriate and one of the reasons we saw rapid spread.

And lastly, I would argue that the fact that international health was not a priority. The developing countries themselves follow the leads of the north. So, they began to shift their resources into curative care as well. They began to focus away from public health, and you ended up with this really sad state of affairs.

Now, evidence grew after this period, that this wasn't true. The outbreak of infectious disease. You saw the picture Lori flipped up of plague, and she showed you some pictures of that in 1994 in India. What was shocking about that is that, not only was there an outbreak, you see outbreaks, but there was virtually no capacity to diagnose that outbreak. People were scrambling around the world for laboratories and facilities to be able to diagnose this. Again, there just wasn't this sense of keeping cadre there. It had become less of a priority and it created an enormous problem.

I lived in New York City and Peggy Hamburg told me about a story at the time where she made an appointment to see Rudy Giuliani about this and said, you know, my God, there's an outbreak of plague in India, and she made this emergency appointment, and he said, well, you know, what are you bothering me for? I've got other things to do. And she said, Mr. Mayor, are you aware that there are 50 flights a day that come into the New York area that, you know, have flights from India? And he was, oh, my God! Close the airports. But, I mean, that's really the point, is that it's all connected.

We also saw—we saw AIDS, toxic shock, legionnaires, a whole range of other infectious diseases appear and the resistance story. Lori's laid some of that out but, you know, pneumococcus, this is a bug that we treated with penicillin worldwide we began to see in mine workers in South Africa. That's where it began to be seen resistance spread.

Now, here in this country, 49 percent of children's ear infections are resistant to penicillin. That's what's happen in terms of the shift. We've seen—you heard about Vancomycin. I'm not going to go through that. We saw lots of food-borne outbreaks, and then the first attacks of bio-terrorism, at least in our modern era.

You know, I don't know if you know, but Native American people were pummeled with smallpox coated, you know, blankets, you know, years ago. So, this is not—bio-terrorism's gone on for a long time, but the first attacks in '84 with salmonella type immune in Oregon began to open us up.

So, all of this kind of led up to September 11th and the specter of widespread bioterrorism and we're in somewhat better shape now. You know, you've had the warnings. You had DA standing up, you have Lori. And it used to be on deaf ears, now people are paying attention, and we have some improvement.

Institutionally, there's interest in infectious diseases again. Certainly at CDC there's more interest, there's money, there's new buildings. The WHO has created an emerging infections unit, although you

heard it's not well financed. There's been investments in bio-terrorism in different parts of this country. The last three or four years, the Clinton Administration with CDC set these up. And there's been some increase in dollars, but not very much and I'll come back to that.

But there's still these major failures. We're going to talk a little bit about vaccines, but, you know, the army has been looking at vaccines, and they have a program called the Joint Vaccine Acquisition Program. There's a lot of complaints about whether that's working well or not. And a lot of issues now in terms of is this doing what needs to happen?

And also, I think you've all seen that the leadership in this country and other countries, you know, on the nature of the threats, they over estimate the preparedness for these threats, and they also over underestimate the crisis. And so you have this situation where, rather than getting clear public health messages out and preparing people for what's really going on, you have misinformation. And that creates, at least in the public health field, real problems.

So what's necessary? What's the opportunity? What do we need to do? Well, first of all, again, I cannot emphasize enough, this needs to be a global response. The idea that the U.S. is in isolation, yes, there's oceans on both sides, but is the wrong idea and I think we've got to remember that.

And so we need a public health system with preparedness at all times, at all levels, from primary care to the emergency room, from nurses to specialists, from public health sanitarians, and engineers to lab workers. We need that but, the point is, we don't just need it here, we need it around the world.

We need well coordinated plans of actions that are widely know and transparent. But I can tell you, I'm in the inactive reserves of the U.S. Public Health Service and I'm trained to deal with this type of thing. We didn't have a plan in place of how to call people up and bring people out and put them forward. And I can tell you that, in the rest of the world, there certainly aren't those systems set up.

And lastly I think we need, you know, political support to say what's necessary and particularly to fight off lobbyists when it relates to public health issues. And I'm going to talk about cases where the lobbyists have been right and activists have been wrong, and vice versa, because I think it's important to look at both ways.

So, without progress in health and development, without focusing on the developing world, we're not gonna have global security. Full stop. What do we need? We need people, we need policies, we need resources, and we need institutions. And these are critical, and the point is, and the reason I ask DA that question is, what you can hear is that HHS now is going to look at preparedness, and DA certainly cares about international, but is that connected to state? Is that connected to overseas development aid? And that's a critical question that's gonna come up, and I'm sure Jeff will talk about it as well.

So what do we need for people in human capital? Well, we need public health training that is appropriate, that's competency based, and we need it for developing countries. We need career incentives for these people, we need adequate remuneration, and we have to keep the training up to

date. And that sounds easy, but most places in the world, the public health workers are at the bottom of the ladder. They don't have any money, they're holding multiple jobs, and they're not out there prepared to do what needs to happen. And so you've heard DA say what they want to do for the U.S. We need similar types of ideas, not quite as grand, but in the developing world.

The U.S. approach to international health has been very paternalistic. My colleagues in the South describe this. They talk about three types of research. They talk about postal research, which means that you get the specimens and then you mail them back to us. They talk about parachute research, which is, you know, you drop in, spend a week and do research and then leave again. And they talk about annex-site research, which is you set up a little base of northern investigators somewhere and you have a lab.

Well, clearly, that may work for short term, but that's not how we're going to build these systems. So we need a system that is mutual trust and shared decision making, national ownership, emphasis on getting research results into practice, and development of national research capacity, and that's both at the individual level and institutional level. And those got to be sustainable, and we're not talking about a lot of money to do that.

Okay, what about the policy issue? We need public health policies. And Lori mentioned the antibiotic issue of the way we're dumping drugs into feed. I think the question there is, when do we stand up and say that, for public health reasons, we need to do something about that?

And I think that, you know—she also mentioned the patent issue. I think that, in that situation, we've got to make sure that we are paying attention to public health needs by dealing with pricing issues, etc., but, at the same time, we've got to respect the profit margin. The last thing we want to do is drive the pharmaceutical sector out of these areas, because they are the R&D engine. They've got the skill set. They know how to do this and that's a critical point.

A commitment of resources. You know, in a society that can spend $2.1 billion per plane and fly those bombers from the middle of the U.S. over there, these type of investments in international health are nothing. Less than 2 percent of donor assistance to countries is spent to control infectious diseases, and yet it's 50 percent of deaths.

Also, the research on these diseases is globally, globally under-funded. We're talking about overseas development aide, and I'm sure Jeff will talk about this, is in the range of $70 odd million a year. Less than 10 percent of that is focused on the developing world and very small percentage of that on infectious diseases.

If the donor countries were to raise to the UN target of .7 percent, which is the UN target, we would have an extra $125 billion a year we could invest in a whole range of development issues. That's nothing. That's nothing. The U.S. right now is at the lowest of the OACD countries, if you take out the support to Israel and Egypt, which is not exactly development aide. It's obviously related to security, etc.

So, I hope that we are going to link these, because this is what's critical to move it forward. And then, we need resources that are going to deal with the limitations of the market. We need better tools. We need diagnostics, drugs, and vaccines.

And the problem is that there's a market failure here. These are public-good type of products. For example, if you create a vaccine and you vaccinate a community, what you'll see is that the incidents will go down even in other members of the community who haven't been vaccinated. That's a public good product. So, there is—it makes sense for the public sector to invest in them. It's very different than other things, which are only for the individual.

So we've got to create a system that's going to deal with these. Now, again, it's very important to make sure that we do this in a thoughtful way. I think the activists, who have had this wonderful success with AIDS drugs, I think, you know, in a way they've won the battle, but they might have lost the war because, in big companies now, do you think the companies are now saying, my God, how can we invest large amounts of money to create new AIDS drugs that are going to be more expensive by definition, and that are going to treat the resistance that is spreading like crazy?

Well, I'm not sure of that and my hope is they will. But, if they don't, if we lose the pharmaceutical industry in this area, we are really in trouble because, you know, there's a lot of people out there who are on drugs now, who are alive, who are well, and who potentially will have resistant organisms and are able to transmit it, etc. So this is a huge public health problem.

Lastly, in term of this, we really need to think about how we're gonna make these products for tools of the developing world, technology for the poor. As DA said, this is a priority. There hasn't been investment. And I'll just say a word about what we're trying to do on this. The International AIDS Vaccine Initiative was established because there was an essence of market failure in AIDS vaccines. The public sector wasn't investing in it. It was investing in therapeutics and pathogenesis and a range of other important things.

And the private sector looked at this, said this was not a particularly lucrative market, and looked at the politics around AIDS. And so you had neither public nor private sector investing in it. If we can't get this right, if we can't get a vaccine for the worst plague, that's with us, now since the 14th century, how are we going to deal with the next diseases that appear and the next one, and the next one, and the next one?

So, you know, what do we do? We created this initiative, had four basic characteristics. One was to create global demand. Get the vaccine back on the agenda. Initially, we were the only voice that was out there pushing for this. I think now it's got more attention, but it is after all the only way you will ever end the AIDS epidemic. Which, again, has 60 million people that have been infected and ultimately will die from this disease and, by the time we have a vaccine, it'll probably be in the hundreds of millions.

We pushed very hard to get it on the GA's agenda, the media, the European Commission, the world bank, and others. And it's important, again, that it shouldn't be done by a lobbying organization, but we need to get the priorities out there.

The second thing we did was we moved forward and applied product development. And that was working with industry to get the best technologies in the world focused on the need that's out there. And that's important because, again, what industry was working was clearly focused on vaccines for the U.S. and Europe, where the market was. They weren't focused on the developing world. There weren't the incentives for that.

And yet, if you want to make a vaccine, the need is greatest in the developing world, but also, that's where you can best do testing. So even if you wanted to make a vaccine for the U.S., it might make sense to make one for the developing world.

And we tried to push forward a new concept, social venture capital, and I apologize to my Chairman, who has a much greater handle on this than we do, but the idea was to trade our investments, our public sector investments, into these companies for access. We don't want their IP, and, in fact, we want them to make money in the primary market. We don't want them to loot their market share. What we want is to say, look, we'll help, we've move it forward, just make sure the poor have access to it at a reasonable price.

The third strategy was to create incentives for industrial participation. And that was really to begin to think about tax credits, liability reform, the ability to get the products out there. And it's critical that, again, we try to create the incentives. Because the idea that we'll create a public sector institution and do all this, we don't have the expertise and we can't compete in the marketplace with the companies. So what we need to do is bring them in as partners, give them the incentives for that.

And lastly was assuring global access. So, how do you get a product out like this? Well, we need systems to produce it in large quantities, to distribute it, to finance it for the poor, and our paradigm is simple. We said we want north/south simultaneous access. That's not a science issues; that's a public policy issue. Can we make a vaccine available in the developed world and underdeveloped world simultaneously. No reason it can't happen. Yet, when we brought this up at UNGAS [sp] we had a problem, because the language we put, which in essence said when a vaccine appears we'll pay for it to get it to the poor. Donor countries said, well, that's a little bit too much of a commitment. You know, we're not sure we want that. Well, you know, again, are we thinking, you know, as Lori said, in the long-term.

All of these partnerships, all of our work on vaccines—we have nine vaccines we're moving forward and others are beginning to move them forward. The whole session is moving forward now. But they're done in partnership with developing country scientists and governments, and that's important because, again, it's a global problem, it requires a global solution.

And we kind of operate like a virtual vaccine company. We are hiring industrial project managers, we move forward with accountability, and this an important lesson. You can't lead this by a committee. It's got—somebody's got to be held accountable. And the important thing is this has to be done, not in competition with dealing with other things, but in parallel with it.

So, I wanted to lay those out because, from lessons then, we able to go from being a small organization when we started. The world was spending less than 1 percent of the global total on HIV on vaccines, and now we've raised a quarter of a billion dollars, the overall effort has quadrupled, and there really is attention now.

But, if I jump into another, just as an example, anthrax vaccines. Okay? Another example of a market failure. No interest in big companies in doing that. A former public sector vaccine developer, which then became a private company was doing it. There was some problems, fell short of the challenge. My guess is that we're going to have a serious effort for anthrax vaccines.

We might get a new improved anthrax vaccine before we get an HIV vaccine. There have been, as you know, four deaths of anthrax. There's been something like 20 cases, but there is going to be an outpouring and, again, the opportunity here is to look at the broad range of issues we need to do.

One of the issues that's happening, we're hearing about the possibility of creating a new military program to produce its own vaccines. I'm talking about $3.2 billion, $3.2 billion to move this forward. I don't know if this is the way and, if so, how is it going to link into the expertise in the private sector, and, you know, what is the scope going to be? So these are questions that have to be asked.

Lori did mention the issue of a global surveillance system. Again, another example, if we are going to really deal with this infectious disease challenge, we've got to have that system, not just in the U.S. globally. We've got real time systems. Why don't we have on CNN a map of global malaria and resistance patterns. Or a map of where cholera is or what's happening? And the point is, that's the way to get people to buy in, the people to pay attention and do that. It's not a lot of money, again, it's political will.

So, in summary, existing institutions, they don't have enough focus on infectious diseases. That is the huge problem in the developing world. We need to do more there. There's certainly not enough focus in the U.S. on international. We have got to build up the system. We can't have it be either or. It's got to be done together. There's not enough attention to capacity building and local infrastructure. Those are going to be the keys to being prepared for the future.

Not enough on leadership, and that's putting people into accountable positions, who will deal with this, and not taking enough advantage of the expertise in the private sector. Figuring out ways to give incentives to the private sector to work with us, not to beat them over the head with clubs.

And I'd just leave you with one thought. Is it time for thinking about a global coalitions for vaccines R&D, or diagnosis R&D's, not only for bio-terrorism, but for the diseases that cause morbidity and

mortality in the developing world. Because again, that is going to be the type of preparatory work that will get us to where we need to go. But the one thing that seems clear to me here is that there is real opportunity, as the Chinese character says, and I think the challenge is can we take advantage of it.

So, thank you.

**MR. FUKUYAMA:** Thank you.

Let's open the floor for questions to Dr. Berkley briefly now. You'll have a second go at him after Professor Sachs has given his talk. But if there are any questions or clarifications--.

Yes? Wait for the mic.

**UNIDENTIFIED MAN:** Thank you. You spoke to respecting the market and also to standing up to public health concerns. And I wonder, along that same lines, if you'll comment on Bayer's refusal to pull back from providing fluoroquinolones to the poultry industry upon request by the FDA?

**DR. BERKLEY:** I think that's a good example of, you know, we have to ask the question, who is going to decide if that's really a public health priority? And if so, then, what type of pressure is put on the system? And what's really interesting is that you've got—I mean, I think the fact that the price dropped so dramatically for Ciprofloxacin because they were worried about it, but you've heard, you know, all of the battles that went into getting prices dropped. What we need is not an adversarial relationship, but we do need a system that, at the end of the day, you know, calls people to task.

If it is true, and I certainly believe it is true, that it's not a good thing to have fluoroquinolones in the food supply when that antibiotic is a critical antibiotic, then we just have to say that and we've got to make sure it stops. And, you know, we can revoke authority for it, etc. But the issue there is, there is 15 different groups that are talking about this, it's discussed across different places, it's not necessarily made clear, and I think that's what's got to change. That's where the leadership comes in.

**MR. FUKUYAMA:** Yes? President Brody.

**MR. BILL BRODY:** Hello. Yeah, Bill Brody. You mentioned the $2 billion for a bomber fighter plane. And one of the difficulties with public health, and let's forget the events of 9/11, but before 9/11, is, in some sense, public health is all encompassing, it's very diffuse, and it's invisible.

So I'm going to give you the task. You're to go before Congress and you're to argue, rather than spending the $2 billion on another B1 bomber or whatever it costs, $2 billion dollars, you're going to take it in public health. What's your sales pitch to Congress? What are they going to buy? What are the deliverables? Because I think that's the dilemma that we face when we talk about public health.

**DR. BERKLEY:** Absolutely. And I think, you know, the challenge is we haven't used our secret weapons. I mean, I consider one of our secret weapons to be Lori Garrett. You know, Bill Clinton

read Lori Garrett's book and, you know, he was like, you know, damn it! We've got to do something about this.

I think the challenge is we've got to sell it right and we've got to sell it as not fuzzy. And I think, for example, public health training, you know, dirt cheap. We know this at Hopkins. We worked on—we created public health schools when I was at Rockefeller in four African countries and in Vietnam at an average cost of I think it was $200,000 per course. Those are percolating along now, training people in the countries. We've got an infrastructure of people on the ground who are going to do that.

That type of focused program, where you then go and show cost on the ground, is really the way to move and I think that's been the challenge. We have not sold--if you ask the average American, you know, person, well I mean, this is a little bit old data now, before the 11th, but you say, well, what do you think about overseas development? And how much does the U.S. spend on overseas development? Say too much. Well, how much do they spend? About 15 percent of the GDP. What should they spend? 5 percent. Well, you know, we were down at .1 percent. And then if you really look at where that money is going, it is not going towards credible things like this.

So the issue is you don't want to be a scare monger. You don't want to say, oh, my God, you know. But Ebola was a perfect example. I mean, look at when that movie came out, look at when there was an outbreak. There was huge attention to that. Now, how we didn't go back and say, you know, Ebola is a threat to everybody because one of those people could've been on an airplane, could've made it into New York or—and what would it cost then? What does the anthrax cost? You know, and why are we not preparing?

So I think it's making those arguments. If we had a better anthrax vaccine now, we'd probably be using it more widespreadly and there'd be less concern, etc. We know that's not a great vaccine and the challenge is, there's no incentive to make it.

And so, to me, that's the problem. We've done it in the military. I mean, you know, the truth is that there's huge cost overruns as we know, and things. You procure things at the high level. Well, we could begin to do that if we really thought it was a national priority. And I think that's why it's--I think now we have that opportunity but the real danger is, it's just going to be focused domestically. We're going to continue to ignore the rest of the world, and yet that's where the next, you know, problem's gonna come from.

**MR. FUKUYAMA:** Yes?

**UNIDENTIFIED WOMAN:** It seems to me that AIDS particularly is a disease that (inaudible) that AIDS is a disease that has a lot to do, or has a lot of potential for education to play (inaudible) an important role in control. And I wonder what you think of as the balance, in general, between efforts for new vaccines and drugs versus public education?

**DR. BERKLEY:** That's an excellent question, and I think the truth is, is that they have to go on in parallels. You can never rob Peter to pay Paul, and that's the really important take-home lesson there. But you know, we're fooling ourselves if we think "Just Say No" is gonna stop this global epidemic. I have watched country after country, first of all start off with "we don't have AIDS, it's not a problem, it's not an issue" and just watched it march forward.

And so I will say something about Southeast Asia. You know, everybody's focused on Africa, and you heard the numbers. They are horrendous in Africa. They are horrendous. I actually was the Ministry of Health Epidemiology in Uganda and helped set up that AIDS control program and did the national (inaudible) I didn't believe the results when I got them back. I thought the lab tests didn't work or there was a computer error.

But, where I'm worried about is not Africa, it's India. India. You've got now millions and millions of infections. You can argue whether it's three million, five million or ten million, but you've got it in every state and territory of India. You've got a massive epidemic of sexually transmitted diseases. You got no control system out there.

Same thing in China. You got, now, prostitution across the entire east coast. You got a drug epidemic in the west. You've got now infections all over China, again, in every province.

So the challenge for us is, yes, we should do everything we can to change behaviors in those places. But by the time you empower every woman in India, there's gonna be a lot of deaths. So what we need is a parallel track, and that's why maybe one comes out of the health budget and one comes out of an R&D budget, but they shouldn't be in competition. And the truth is, is that in a way, it's the developed world that ought to focus on that.

We're lucky in a way with AIDS, because you know what? People in the North care about AIDS because they've seen people die. What happens when the next bug appears and it's only seen in Central Africa? Okay, it's not a sex (inaudible). We won't invest that kind of money and we won't see a program and then, when it appears in the U.S., maybe we'll get it.

So I think the answer to that is there has to be a balance. It used to be zero. Most of the countries in the world spent zero on AIDS vaccines. I certainly don't think it ought to be 100 percent, but should we spend something like 10 percent of our overall effort on creating the tools that are necessary to end the epidemic? It's not just vaccines. Microbicides for women, better STD diagnostics, better treatments. You know, all of those things need to be part of a public health response to the epidemic. But R&D for the developing world is at the bottom of the list.

**MR. FUKUYAMA:** Any other questions? All right. One more.

**UNIDENTIFIED WOMAN:** My question is how do we deal with sovereignty issues? If you have a country like China, we can say this is what we need. We need STD testing or this and that. But if

China's not even recognizing their problem, how are, you know, from an international perspective, how are we supposed to deal with this?

**DR. BERKLEY:** That's an excellent question, sovereignty issues. One of the reasons that--I hope now, that after 9/11, we've re-recognized, you know, treaties, global issues, and things like that. Being part of a world community is critical.

I mean, in the area of infectious diseases, in a way you have an opportunity, because you know what? We care what happens in Iran and Iraq and everywhere else, even though we might not care on a whole bunch of other issues. But on infectious diseases, the whole world's there.

So, first of all is you need to have the whole world community engaged and you need to really make sure that the people in that country want to pay attention. The second thing is we gotta reach out to business people. You know, Bill Gates is a great supporter of our program. When he meets with the Chinese Premiere, when he meets now with the Prime Minister of India, when Jim Wolfensohn, head of the World Bank meets with them, you know, they say, "What's the number one problem?" They expect to hear open markets, you know, IT, except, no. It's about infectious diseases. It's about public health, etc. That's the message that has to happen. It starts happening from everywhere, people will pay attention. If the message is all we care about is trade and markets that's what we'll get back.

So I think you're right. We cannot force it, but we can, as part of the global community, pay attention. I know David will talk a little bit about this when he talks about where we are with global regulations in this afternoon's session.

**MR. FUKUYAMA:** Okay. Thank you very much. Professor Sachs?

**MR. JEFFREY SACHS:** Thank you very much. I want to thank Scott for inviting me to the most depressing conference I've been at in--I found that D.A. Henderson's image of Russian melons spiraling down, spraying smallpox aerosol, even outdid suitcase nukes for me. So I'm totally depressed by the end of the morning.

And indeed, it's--it is an inherently depressing topic, because we're talking about needless death, basically, and we're talking about needless death on a scale that is unimaginable to anyone in this room that hasn't had the opportunity to think about it. I think that's the case.

I know for myself, as a macroeconomist that came to understand some of these issues rather recently. For the first 15 years of my work as a macroeconomist, I turned lots of macroeconomic dials, but I didn't pay too much attention to these issues. And it's only in the last five or six years that I myself have come to understand some of the scale of what we're dealing with, and basically the lack of attention to any of this. But I find that I'm constantly being re-amazed at this issue.

I kind of felt, as I was off doing exchange rates and stabilization, and trying to end hyperinflations and things like that, which was fun and interesting, that someone surely was taking care of AIDS because

that was important. That was a big deal. And no doubt there was real expertise there, so don't have to worry about that.

And more and more, as I was personally engaged in developing countries, where the overwhelming feeling that I had was that the people were dying in incredible numbers around me, whether it was of AIDS or whether it was of malaria or tuberculosis or absolutely traditional causes, that I started to look myself and have not ceased to be absolutely dumb-struck at how we have blithely proceeded in this world, in the midst of untenable and very dangerous levels of suffering and death, doing almost nothing. It took a few deaths from anthrax to begin to wake us up to something. The first 60 million HIV infections in this country barely made a blip on the radar screen.

We in general, ladies and gentlemen, this country are asleep right now at the real nature of the world and, even more at what our response has been in the world. Because I don't think that Americans understand that, while we are the world's greatest beneficiary of a global network society, we're at the center of all the nodes of this network, we are the ones that benefit in our technology spreading around the world in a global marketplace, where we are the preeminent economic power in the world. Americans do not understand in general that we do almost nothing for the poor in the world and, therefore, leave at incredible danger in large parts of the world.

It's not just the hillsides of Afghanistan, where one maniac can outbid the Western world by giving a few million dollars of aide to a government over a few years. And that's seen as "well, he owns them" as if $20 million a year is something that you couldn't compete with from the rest of the world for trying to create some stability, to Africa where we don't have a policy to begin with. Not just on these issues that we're talking about, but on any issues.

We had President Obasanjo here from Nigeria last week at the White House, and there was the spectacle of the American President turning to the Nigerian President saying, "We really need your help. We really appreciate it." And here's a country where thousands of people are dying in ethnic violence, in the worst kinds of poverty that you can't imagine, ladies and gentlemen, until you see it firsthand.

With American foreign policy coming to the brilliant conclusion, month after month, year after year, that it's just really important for Nigeria to repay their debts on time, for a country where millions of people are dying deaths because of poverty, where the debt repayments have been five times the public health budget of that country, and where we haven't even lifted a finger to try to figure out something different, I have to tell you. And the deep reason is because, if we do something there, well then the Indonesians are going to ask and--because we don't care at all about Nigeria until we need some help one day for something. And then, when Indonesia explodes, well we'll figure out why you don't do something there, because someone else is going to ask.

And the truth is that these issues of public health being asleep at the switch, this is our endemic disease in this country, that we're not paying attention to almost any of this. I don't think actually that the overwhelming case, I may be wrong, this is a scientifically open question. I'm not sure whether the overwhelming case for being concerned is really whether plague is going to come from Surat to here, or

whether it's the international transmission of drug resistance that's coming here that's the real issue. I think we make our own nosocomial drug resistance just fine in this country.

But what I do think is that the idea that we live alone in the world, which we had up until 9/11, and which we can't figure out still what's really going on. The idea that somehow we're going to be safe somehow in the world with so many places in the world in turmoil. And we don't understand, ladies and gentlemen, that we have done nothing to invest for decades in trying to make something better in those places.

Disease is an important part of that, but we have to go beyond this, and that's why I'm so please that SAIS is doing this, because you have a voice here, sitting in the middle of our nation's capital, in the leading country that has had the most neglect of what's really happening in the world for decades, that maybe a word can go forward from here to wake up.

Waking up doesn't mean just bombing Afghanistan. That's not what I mean by waking up. And it doesn't just mean counter terrorism. President Bush has been very eloquent in the last week in several speeches. I'm very pleased to see it where he has said, "We're not going to win this war by military means alone. Only by spreading prosperity around the world."

He has invariably followed that with a line that says, "Therefore it's particularly important to have a new trade round." That's not wrong, but it's profoundly incomplete. I'm a trade specialist. I'm a macroeconomics specialist. I know what that can do. I believe in it. It's important. I can give you chapter and verse.

Some of my papers are quoted repeatedly by the Administration for these numbers. I know it is a small part of the reality that we're talking about if we're going to help make these countries work properly, and have a measure of stability. We are 4 percent of the world. Eighty-five percent of the world is in the so-called "developing" world, and half of the world is in the so-called "low-income" world. And there's a lot of death and struggle and difficulty and state failure associated with that.

Now, that may sound so big that, as President Brody asked, well, what would you do? You know, that sounds just hopeless. But actually, if you start thinking about it, and you start analyzing and you spend 20 years thinking about it hard, you actually see that there are some patterns. There are some ways to proceed. There's a lot of things we know. You can actually have success. You can have tactic strategy. You can do something. But you can't ever win this battle if you don't think about it, and that's truly what we've been doing.

About 30 years ago, all the rich countries said we pledge 0.7 of 1 percent of GNP to helping international development. And as Seth just said, we're down below 0.1 of 1 percent. And what we do for the poorest countries is 0.01 of 1 percent of GNP.

Now let me explain to you what 0.01 of 1 percent of GNP is. It is a penny for every $100 of your income. That's the safety that you're investing in our future. Because the real feeling in the rest of the

world, and I'm working all the time in these places, that's where I make my life, they don't see anything from us. They just see our wealth and they see our neglect. And they've seen in the AIDS pandemic 20 years of 25 million deaths before we've even started to get serious. I'm not talking about 20 infections and five deaths. I'm talking about 25 million deaths.

We're not talking about hypotheticals here, ladies and gentlemen. We're talking about the world's worst pandemic in modern history that has unrolled for 20 years, before our eyes, a newly identified pathogen as of 20 years ago that we have done almost nothing for the world.

And the African countries where I work don't have a penny to do anything on their own. And this is another thing that we can't understand. You and I and our country, we average $36,000 per person right now. That's our per capita GNP.

Try to understand for a minute what it means to be at $200 per capita. Most of that, by the way, not-monetized. That's the value of the casaba and the millets and the sorghum that you grow and that never makes it to the market, perhaps, but does help to provide those 1900 calories, which lead to the chronic insufficiencies of energy and protein and so forth.

But think about $200 per capita. Well let me tell you a little bit about $200 per capita. If you got wonderful leadership, as many places do, by the way. Because the other thing when you never think about anything, Africa's just one big, you know, one big mystery of corruption. But there are plenty of places in Africa with governments where they're struggling to try to help their people stay alive, for example.

But when you're $200 per capita, you may be able to mobilize, maybe. In fact one or two countries do it only. About 4 percent of GNP for your health spending. That's great. That gets you $8.00 per person, per year. $8.00. Try to do immunization, malaria control, fighting diarrheal disease, respiratory infection, nutritional supplementation, safe childbirth, prenatal and postnatal care of mother and infant, much less fighting the AIDS pandemic.

Well you know what? You can't. It's not a matter of will, it's not a matter of your corruption, it's not a matter of trying or not trying. You're so damned poor that your people are not living on the edge; they're dying over the edge. That's what I want you to understand.

This is not hypothetical. This is not people struggling for survival, it's approximately 16 million people a year dying from poverty. Every one of those conditions is preventable or treatable. We have done almost nothing in the rich countries to address this problem for decades.

And while we pledged our 0.7 of 1 percent of GNP, we have cut--every Administration, including this one now--the foreign assistance budget, year after year, 'til it has disappeared, except being a Middle East budget. We have no foreign assistance in this country. We have a shell. We have little name of a--we have an agency name. We have no scaled effort in this country.

President Clinton did the same thing that President Bush, Sr., did; the same thing that President Reagan did. We've been on a 20-year roll to make sure that we don't spend a penny abroad, and it's bipartisan, by the way.

To me, it's just morality, okay, but everyone has their own morality. So you can have a different morality. I get plenty of hate email that says "why should we care about those people, keep your hands out of my pocket." We're talking about a penny for every hundred dollars, mind you.

Okay, let's put morality aside. This doesn't make sense, ladies and gentlemen. This doesn't make sense for us. What kind of world do we want to live in where we're doing nothing, where we arrived, miraculously, at a state of wealth, where we could actually address these problems? Pennies on the hundred dollars and we go through--it was like a test.

We had $13 trillion of capital gains given to us. Did anything happen? No. We had $5 trillion taken away. Did anything happen? No. We had a peace dividend of 2 percent of GNP. Did we do anything more for the world? No. Now we have a terrorism thing. Did we do anything more for the world? No. And the Secretary of State said to me, "We have no money." At a time when we gave back $1.6 trillion in tax cuts. Now we're going to do another 100 billion now, and we have no money, ladies and gentlemen.

Okay, I don't mean to rant, except I'm a little frustrated. I think what everyone would like to know, and I actually, I believed for many years, I've really been in this business a long time and I've talked to every Senator and Congressman that I could find, and that's hundreds of them. And I've talked all over this country for years and years and years.

I don't think there's any deep resistance to doing something more. I don't think the American people would rebel against the idea of spending one penny for every $10 for the world's poor. I've never heard anyone stand up and say--I've never heard anyone in Congress, from the most conservatives to the most liberal say, "we're against immunizing children," even though there are millions of children that go unimmunized purely because they're impoverished. Absolutely demonstrable, top to bottom, beginning to end. No one's against this.

So the fair question is, is there actually something that you could do? And the answer is it wouldn't--it shouldn't surprise you to know that, if you actually put some thought to it, you can do amazing things.

D.A. Henderson told us some of the specifics of why smallpox eradication was possible. But still, it was an amazing thing that everybody doubted at the time. But with some effort, it turned out to be quite possible and thereby to save tens of millions of lives in the interim as he described.

I've just gone through a very detailed exercise as Chairman of a WHO Commission. I brought along the piece of paper, too, just on the desk so you can see there's real paper there, and it's got real numbers, projects, timetables, sequencing, that says what would you really do, what could you really

do, if the rich countries were ready to put up one penny for every $10 of income.  That's 0.1 of 1 percent of GNP for global public health.

What could be accomplished?  What could pragmatically be accomplished?  Not miraculously be accomplished, but actually looking at the conditions on the ground.  How you might make investments in public health facilities so that there's actually a doctor someplace.  You know, Africa loses its doctors by the thousands, the few that it has right now, because they end up in Toronto or Detroit or Riyadh or other places.  Why?  Because at $200 per capita, when you have the miracle of making a doctor in your society, you can't hold onto that doctor, because your $8 per capita doesn't pay for a doctor to stay.  The doctor leaves.

So you have to think strategically, you know, you have to think, how do we do this?  And you can make a budget, and you can ask how much does it cost to keep some trained personnel.  What are delivery times?  How many units do you need?  How could you do this kind of scaling up?

It's pretty much management.  It's not--this isn't profound science, it's not economics, it's management. I'd call in a management-consulting firm.  They've done excellent work on helping some countries define how to make the drugs flow from the port to the hospitals to treat AIDS, for example.  Well we did this for two years.

And we found, in this Commission on Macroeconomics and Health, so-called--and the report will be issued publicly next month--we found that you could pretty plausibly save 8 million lives per year, for one penny on $10 by focusing on the priorities.  And the priorities, as Seth explained, are the infectious diseases, so you have malaria, tuberculosis, HIV/AIDS, diarrheal disease, acute respiratory infection, some micronutrient deficiencies, attended childbirth, some parasitic diseases.

It's a relatively small, well-defined cluster that accounts for the overwhelming excess disease burden. And there are known ways to address these things because, every once in a while, by some accident, somebody actually does something.

It's an accident, but once in a while the donor world does something, gets organized, and then low and behold, you really can address Onchoceriasis, African river blindness.  You can really make tremendous progress on trachoma.  You can make tremendous progress on leprosy.

When the effort has been made, when donors and technology have been brought together by Novartis or by Merck or by Pfizer or by others, and it's happened occasionally.  And sometimes, like with the African river blindness, it's the damned good luck that what works for the dogs, for which it was developed, actually works for the people.  Because that's usually how you find things for poor people, not that you try to find it, but that accidentally you find that something else has worked.  And that's with Mectizan, with Merck's wonderful drug for Onchoceriasis.

When you try the effort all of these impossible obstacles somehow aren't so impossible.  Because, you know, Africans are human beings too, and they have their communities, they have their societies.  It's

not what you think, that it's this impenetrable, impossible place somehow completely ungovernable, and nothing can ever be done.

It's not like that at all. It is a lot of people suffering and dying, and watching children die in their arms for something that could be stopped for a dollar, because they don't have the dollar. And they're sent away from these clinics where user fees were imposed, where an impoverished family can't manage to scramble for a dollar or two for an anti-malarial in time for the child to be saved.

So you can actually plot out what to do, and we found that the diseases are well enough focused, the technologies are there, the strategies are pretty well-defined in terms of delivery, that you could have phenomenal effect in large parts of the world.

Now, someone's going to ask me, "well, what about Sierra Leon," or "what about in the middle of the following war zone," and I want to say that you couldn't help every place in the world right now. There are places that it's very hard to do good things.

But for me, the tragedy is something else. There are places with wonderful governments begging for help, and what they're told is B.S., to use a polite term. Which is some phony little scale--little non-scaled something, and don't come to us about anti-retrovirals, because we're not ready for that, and whatever it is doesn't really matter.

It's not--yes, there are bad governments, but there are so many places where we could act right now, and have incredible effect on stabilizing societies and on saving lives, and even there we don't act. So don't look to the hardest cases first. Look to places like Botswana or Ghana, or Tanzania or Uganda, or other places where you could do things.

Or Malawi or India, all over India, where tremendous things could be done. And yes, I don't know how to do it in some of the other places. But I know enough places where I worked month in and month out, where so much could be done, and it's basically there are no resources at all.

There just aren't resources, despite our pledges, despite global commitments, despite millennium development goals. President Bush has committed, in the initial offering, committed every American to give $0.70 to the new Global Fund to fight AIDS, malaria and TB. Seventy cents is what he put in our name, and then it was bumped up to $1.10 in our name.

That's not going to do it, ladies and gentlemen, because when you seriously look at the cost of fighting AIDS, Malaria, TB, we ought to be putting in not $300 million, we ought to be putting in $2.5 or $3 billion a year, scaled up by our partners to $10 billion a year.

So what we've tried to do is to talk sweet for a long time and to pay nothing, and we're going to learn that paying nothing is not a happy way to live in this world. We are not alone in this world, and we are not surrounded by happy people.

Globalization is a tricky subject and we live in a tricky world and, at another time, I'd be happy to give you 100 hours of lectures about why some countries do and some countries don't prosper in globalization because that's my real expertise. But I like talking about infectious disease, because it's important.

But I could tell you a lot about why economic growth does and doesn't work, but what I can tell you for sure is that you can't believe that whatever is done in Doja next week is enough. Or smiles or lectures about good governance or all those things, that that's really going to address the reality of the world that we face right now, which is more divided between rich and poor than ever before in human history.

But--where the good side is, that the rich are so much richer than ever before in history, that with a small amount of effort you could make magnificent, magnificent contributions to the real well-being of billions of people in the world.

Twenty-five billion dollars a year, that's one penny for every $10, would change the lives of the billion poorest people decisively. Their babies would not die in their arms. The mothers would not die in childbirth at 1000 times the rate they do in our country. That would change a tremendous amount in every way, not to mention the vision of America. Not to mention the sense of hope. Not to mention the belief in a true global community.

So I think that this is really what faces us right now. Every other part of this puzzle is small stuff. Without the money, there's nothing. With the money, a lot can be done.

I wanted to clarify, since Novartis was so kind to sponsor this meeting, something about this heated issue about patents and market access as well, in this context. There are a lot of countries in Africa where there are no patents on antiretrovirals, and nobody gets treated in those countries for the simple iron law of utter impoverishment.

Without the money, there's no answer. You can't treat, where there's 10 percent of the adult population HIV-infected right now, out of domestic resources in low-income countries. There's no money there.

And the drug companies, many of which gave discounts already two years ago--I think we're a little bit puzzled in fact, because I heard consternation of several CEO's at a meeting last year--we've already committed to drug discounts but nothing moves. Nothing's going to move until there's an international policy to help it move, paid for by the rich countries, and primarily by the taxpayers.

The patent issue has its small aspect of this, which is that for drugs under patent, it's absolutely vital that the pharmaceutical industry agree to provide those drugs at marginal production cost to a donor world ready to buy them, and help make them available, and help make them properly used. And recipient countries should have responsibility that those drugs don't reenter a black market.

And rich country politicians should have responsibility that those drugs, priced at cost, don't destroy the home markets in the rich countries, where the profits are the fuel for research and development, which made those antiretrovirals get discovered in the first place. But it's not rocket science again to do this, but the drug companies can't solve the problem on their own because the poor countries can't take a step on their own.

It's not a matter of willpower in Uganda or Malawi, and I get calls from Malawi every day. Impoverished country, a vice-president who's lost several family members to AIDS, they're desperate to do something. They've worked two years on detailed planning on how to treat HIV-infected people at four key hospital sites. It's been vetted with Harvard faculty, with Liverpool, with London School of Hygiene Tropical Medicine, with many places around the world, absolutely rigorous. They just can't get a penny from the donors.

So those are the places that I'm a little bit obsessed about right now, and a little bit obsessed in our country. Is there anything that can make us wake up, in this country, to how rich we are and how little we take care of ourselves in the broadest sense of helping to shape, in a favorable way, the world that we want to live in? Is there anything that can wake us up to these basic realities? Thanks a lot.

**MR. FUKUYAMA:** Okay. We'll take questions now and, if there are questions that you want to address to both speakers, you can take the opportunity to do that. Here.

**MR. ED BERGER [SP]:** Ed Berger. Jeffrey, you pointed to the--fundamentally, the view from mainstream America of international matters and about what's in our interest, as well as the rest of the world. You're absolutely correct. But as one who has watched this for 34 years in this city, I have to say that perhaps the peril of prosperity there has been a declining interest in international matters in this country for a very long time, seen in many, many ways. And that raises the question, well, what to do about that? How to accommodate that? It does take some leadership, and we've had some leadership in the past, but you just mentioned the one example of the Marshall Plan.

When the Marshall Plan was first announced, it was called on the Hill, "Operation Gravel." And it took three things to push it over the edge. One thing was an abrupt change in government in Czechoslovakia, a fear of Communism. The second one was a--the agreement by the White House to consult with the Congress, which meant giving them some rewards for all of this. And the third one was a year long, privately funded effort to educate the American public why it was in our interest to make that investment. And we have not had anything like that since then, in any of the areas we've talked about. Most of the successes of that sort have rested upon our concern for security, and I would propose that we think about a strategy that does that again.

**MR. SACHS:** Thank you, Ed, and Ed has been thinking hard and trying to educate people hard about this for many, many years, I know. and I appreciate that and appreciate the comment you just made also.

I was quite struck on September 12th, when many European voices immediately jumped to U.S. support with almost the verbatim sentence, "America rebuilt Europe with the Marshall Plan. We stand with America today!" And I thought that was--that's a remarkable sentiment for several reasons.

First, it is true that, as Winston Churchill famously said, the Marshall Plan was "the most unsorted act of history." It was a great initiative of this country.

Second, it struck me that it was 56 years ago. I'm sorry, 54 years ago, from 1947, when General Marshall made his speech--at Harvard commencement, by the way, which we're very pleased with--that they still remember. Not many things get referred to in unison across the continent, 54 years ago. Look at the goodwill, not to mention security, not to mention trading partnership, global alliance that the U.S. bought with that program. We bought more than half a century of goodwill.

And the third thing that struck me is that they couldn't think of something nice to say in the intervening 54 years. Because we haven't had a program like that since 1947. We haven't done it since then. We need our Powell Plan now. We have a General Statesman for the first time as Secretary of State, since 1947.

We need our Powell Plan now. We need to open a second flank in this war, if you will, and that's the flank of goodwill and good works in the world that shows what America is really up to in the deepest way. And again, I don't believe that it's a tremendous uphill political battle. I speak in too many places, too many small towns, too many big cities around the country to be fooled that there's somehow deep resistance, or that the American people have said, "I'm spending my one penny for every $10, and I say to hell with you!"

You know, they don't say that. They want to know what can work, what can make a safer world. You want another penny for every $10? Well, what could it go for? Eight million lives? Hey, that's pretty good, tell me about it. There isn't a deep resistance. But you know, President Clinton did not once tell the American people the truth of how little we do. President Bush has not told the American people the truth of how little we do. People have no metric. They don't know! They don't know! They've not been challenged. They've not been asked. This isn't where we need to overcome a groundswell of opposition.

So I believe that it's--I believe what you say is absolutely right, that we need to find ways to make the message, but I also--I have this feeling that, if President Bush would do it, that would be sufficient, because he won't find great resistance.

We've just done $1.6 trillion of tax cuts and we're about to do another 100 billion as I mentioned. Somewhere in there you could find more than $300 million to fight AIDS, malaria and TB. You really could, without great resistance. So I think that we need to do it every which way.

And one final thought, if I might on this. As I was chairing this Commission for WHO, I realized something that despite traveling seemingly incessantly without pause, that I hadn't really appreciated.

The European state of mind is completely different from the American state of mind on this right now. The divide is incredible. I hadn't felt it until I was doing the practical dollars and cents.

The Europeans are actually either already spending 0.7 of 1 percent of GNP, or country after country, because of public mood, raising their aid budgets. "Foreign aid" is a good word in Europe and it's actually an embarrassment to a Finance Minister if their countries aren't doing enough. I can't even imagine that, you know! I couldn't dream of it.

And so when I get questions from our side, you know, "how do you know this will work" and so forth, I get incredibly defensive, very annoyed, because I know it's just a trick not to spend any money. But when I heard the same questions in Europe, I also got defensive and so forth. But month after month of this Commission work, I finally came to understand that, when the question's asked in Britain by DFID, or when it's asked by SHDA [sp], it's not bad faith. It's actually, "Professor Sachs, we're so keen on making this work, what's really the best way? Should we do it this way or should we do it that way?"

We've got a divide in the world that's extraordinary. The divide between rich and poor I've described enough, but even the divide with our best friends in Europe, we are living in a different world, ladies and gentlemen. They see the world more clearly than we do right now. Why is that? It's remarkable to me.

Globalization has allowed--we've drifted apart, despite the much greater contact. I don't get it. I don't understand how it could happen, but deeply I do not understand this country right now. But mainly this city, because I don't think it's the country, I think it's this city, and I don't get it. We don't hear one voice in this city for more right now. For more realism of this sort. And we need to hear that. It's not as if it's a pitched battle, it's a non-existent battle right now. It's a bipartisan pledge of never talking about this issue.

**MR. FUKUYAMA:** Yes?

**UNIDENTIFIED MALE:** Yes, it seems much easier to distribute drugs to developing countries than it does to fix their public health infrastructures. And if drugs do become cheap and available before these infrastructures are mended, is there a danger that we would actually make the situation worse, or, you know, make a breeding ground for drug-resistant strains?

**MR. SACHS:** Yeah. I think the most important thing in all of this is to treat it with the seriousness that it deserves, in the following sense. Countries differ, regions within countries differ, disease categories differ. There's no one answer to any of these problems. But again, making the differentiation is a matter of professional expertise that does exist, so it's not so hard to do once we want to do it.

Your question mainly refers to treating AIDS patients with highly active anti-retroviral therapy because, in many of the other disease categories, it's not--there are issues but they're not so profound as the fact that, with HART, with the combination therapy, if it's done badly you get virological failure within the

individual and you can fairly quickly, most likely get the spread of the disease-resistant virus to others as well.

So, in our report, and in a statement that 140 of my colleagues at Harvard and I put together now about nine months ago on treating HIV-infected individuals, we stressed that that has to be done as a public health project with tremendous operational research surveillance and monitoring, and it has to be scaled up carefully over time. This is not a helicopter drop of drugs.

That's why just discounting the drugs by themselves also--it accomplishes nothing per se. It accomplishes nothing because, you know, you have literally 1 in 1000 HIV-infected individuals in Africa on HART, by current estimate. It probably goes 25,000 out of the 25 million infected that are on HART, are probably not receiving effective HART therapy to begin with.

But what you need to do, more than just dropping the drugs, is to have a strategy and a program. That's why we've been working with Malawi to scale up over many years. It's tragic for them but they're the first ones. The Vice-President who heads the National AIDS program is the first one to say, we can't treat everybody. Let's start with these four hospitals. Let's learn how to do it. Let's learn what kind of protocols we need, regimens to get high adherence. Let's figure out how to monitor this.

And so the answer is, public health is a science. There are techniques in public health that are known. Diseases differ in the nature of the response and, when you have these kinds of spillovers that you're talking about, or big risks of failure, you have to handle this, not on an individual patient and doctor basis, but as a public health, highly monitored and highly researched program of scaling up, and that's what we recommend to address exactly the problem you're talking about.

**MR. FUKUYAMA:** Thank you.

**DR. BERKLEY:** If I could just add another word to that, if you look at vaccines, the six antigens we use now cost less than $1. And you know the new vaccines aren't going to cost less than $1, but the delivery system for it is somewhere depending upon between $12 and $20, depending upon where you go. What's interesting though is, if you use that delivery system to do other things, the cost drops, and something else, the cost drops, and the cost drops.

So, building the infrastructure becomes critical, but it means you could do many of these programs, and that's really the way we have to think about it. If we're thinking about setting up completely separate systems for AIDS drugs and separate systems for TB, malaria, you know, etc., it is very expensive. But do it as a comprehensive thing, it is doable.

**MR. SACHS:** Yeah. And that's our proposal, of what is called a close-to-client system of really community-based delivery, but with structures that respect the public health realities.

**MR. FUKUYAMA:** Yes, in front here.

**UNIDENTIFIED MALE:** We live in a democracy, and I once heard that democracies change when big things happen. I think for years, people in the know have said our airline security is not up to standard. And now all of a sudden we discover that it's not and we're doing something.

We're here talking about bioterrorism, globalism. How can we use the fear of bioterrorism and the concern for those agencies outside this country that are trying to target us for terrorism, to try and turn this thing around? Because I see this is an opportunity to impact the voters, and people have been saying for years the public health system isn't up to snuff, and certainly that we're not doing enough overseas. And now we're seeing some of these impacts.

How can we leverage the fear? How can we leverage the anger that we're now starting to realize that is out there, and use that to make a change in this country?

**MR. SACHS:** I think it's very straightforward, and that's to tell the truth of what we have been doing and what we need to be doing, and just to explain straightforwardly what the linkages are.

It's quite fascinating that the national intelligence community in this country has been on this issue for a number of years. There's a national intelligence estimate on infectious disease which spells out these risks. The State Failure Task Force of the CIA, in a project that I admire very much, looked for correlates that predicted state failure. And we know that state failure leads to, whether it's civil war, terrorism or other problems.

And what did they find as one of their three main predictors of state failure? Life expectancy at birth or infant mortality rates. They found that a high disease environment was one of the most powerful predictors of subsequent state collapse.

I think this is pertinent. We have the case. You know the experts "agree with it." It's moving the money and the administration, and what I tried to explain is, it's not just public health. It's a whole way of thinking in this country, that where we went to sleep, thought we could pocket the peace dividend, enjoy the good life, enjoy our boom and never look back.

And so it's a broader problem of which the public health case is direct enough. To me, living through the world's worst pandemic in modern history, where we have reached 60 million infected individuals and 25 million or so deaths, and worse is to come, should have been enough.

Yeah, it's quite enough, you know? Because it's spread to the United States. Didn't start in the United States, it spread to the United States just like all these hypotheticals we're talking about. Here's a virus that spread to the United States and caused a million, there are a million people infected. It's there. This isn't hypothetical.

So we've just got--we don't invest almost anywhere, whether it's our domestic infrastructure, whether it's our foreign assistance, we're not investing in this country. Having reached this incredible level of prosperity, we're not taking the most minimal steps to protect our interests.

We're just--we're not investing in the environment. It's a state of mind. It's a state of mind. We did become obsessed with how fast the income can grow in the short-term, no matter what wilderness we're tearing down, or what disease is rampant or what risks are abroad. So unfortunately, again, and I'm sorry to be screechy, it goes beyond the immediate question.

But if the President of the United States, who says, and I believe him, that he cares deeply about AIDS, would look at the facts of what needs to be done, what can be done, and what the requisites are, I think it's a clear call. And the American people are not going to oppose him on it. They're going to go with him right now. That's the real use of this moment, is that leadership will bring the American people almost anywhere where it leads. So if they choose to lead in this direction, we're going to get good results.

**MR. FUKUYAMA:** Yes?

**UNIDENTIFIED WOMAN:** Thanks very much. At the risk of sounding a little cynical I'm thinking about how you could actually make all these changes happen. It seems to me that perhaps if you sent, that you and Laurie, and a couple of other people like D.A. and Al Summer and locked them in a room with Oprah Winfrey, Geraldo, and various other media types in this country, you might actually begin to achieve what your talking about. I think the American people would very genuinely respond to this. The problem is, they're not being given an opportunity to.

If you look at local news, most of it spent talking about the weather and sports, and then they squeeze in a few shootings and that's about it. And the vast majority of people in this country, particularly the less educated who are still nonetheless taxpayers, don't really read very much. They listen to the networks. And it's all very well having Larry King on CNN interviewing pundits, but they're not listening to that either.

**MR. SACHS:** I have direct proof for your proposition, because I have been kind of on a wondrous, three-year jaunt with Bono of U2 on debt reduction, and I'll tell you, Bono is worth several gazillion dollars of high-class lobbying. It does it, and he did it actually. I know the story and I know how he walked the oval and threw--you know, walked into the Oval Office or into 10 Downing Street or others at--and it's true that capturing the public attention is one way to do it, and the debt relief was a grassroots movement, the Jubilee 2000. That really was grassroots, and it was banging on the door and, as Treasury Secretary Paul O'Neill said charmingly a couple of weeks ago when he was asked, I think in a Congressional Hearing about that, he said, "I don't need to hear about debt reduction. I get 1,000 letters from Bono supporters every week." So this is one way to do it. The other way to do it would be for the President to do it, because the American people will follow. So either way I'd be happy to take it.

**DR. BERKLEY:** If I can just add though, you've gotta create demand as well. Because, I must say that, on the issue of AIDS vaccines, there's been unprecedented media attention and there's been a lot of interest. The problem is, it's sound-byte interest and the writers, who are really interested in this and

understand why it's important, are fighting with their editors to try to get coverage for this, and they're constantly pitching it.

And so it's not really necessarily the reporters. It's getting the whole system because, again, it's a big business and, you know, they're worried about selling rates. So it really has to be a change in mindset, which is what Jeff said, not just the pitching. Because the pitching works, but you know, it works for a nanosecond.

**MR. SACHS:** It's true. I sent in an Op-Ed recently to one of our major newspapers about the Powell plan, and got back a response, "well it was very interesting, but Professor Sachs, we don't really want to write that. But if you want to write something about aid to Afghanistan we'd be willing to take it." And so it's the kind of capacity to think a little bit more broadly. It's a problem.

**MR. FUKUYAMA:** All right. We have time for one more question. There, in the middle. Yes?

**UNIDENTIFIED WOMAN:** Well, you've told us about Bono and the Treasury Secretary. How about telling us about Jeffrey Sachs and General Powell at the State Department, and what--how is he thinking about a Powell Plan? Is he, or are you whispering in his ear? And if so, what are you whispering and what is he saying to the fellow who spends all his weekends watching football up at Camp David?

**DR. BERKLEY:** And--he doesn't whisper, though! Jeff doesn't whisper!

**MR. SACHS:** I hope he reads The Economist. That's fine. But you know, when I spoke with Secretary Powell before September 11th, he said there's--we need to do more but there's no money. And that was in a very formalistic sense an issue only formalistic, because after the first 1.6 trillion went out the window, it was a little bit harder to find some money, but it's all definition of where the money is, actually.

But he did express an interest in all of these issues, and I actually--I have to say I find him a remarkable person and believe that he is very interested.

I believe the President's very interested, but what I don't believe is that they see the link clearly between the money and the outcome. That's what I don't believe. I know the free market mind very well, I have to say, and I swim in this milieu and the free market mind is "get your act together and start swimming" you know, and so there's a deep belief from the editorial page of The Wall Street Journal into the White House and through this Administration.

There's a deep belief that the biggest problem in poor countries is that they're badly governed and if they would just get their act together the rest of the problems will solve themselves. There's elements of truth to every stereotype and there's elements of truth to that also, but it's understanding the complexity that's a bit more challenging. So that's where I find the hardest point that--I always--I'll stop in one moment. I know that we're way over, but I try to tell my students that a pathology text in medicine

doesn't just have one page in it. You know, there's not just one cause. Maybe we used to have the four humors of the body and you could put it on one page. Development is like that also. We don't have the one page where it's corruption at the top and good governing solves all problems. There needs to be a chapter about disease, a chapter about environmental degradation, a chapter about being land-locked in the Himalayan foothills. There are many aspects to this issue. We don't care enough to write the book, you know, that's the--or to read it, because I try to write it. I don't want too many competitors in that but I'd like them to read a little bit of it.

And that's the biggest obstacle, actually, is the mindset, because President Bush wants to make the world safer for Americans. There's no doubt. He wants to. And the speeches say it, and I believe him absolutely. And he's looking to the trade round to do that. But it's not a sufficient answer, but I know the people that believe that it is somehow. That's a big part of the problem. I always said, you know, you could send another 1000 IMF missions and the mosquitoes are gonna still transmit malaria.

**MR. FUKUYAMA:** You want a last word?

**DR. BERKLEY:** Well, I just--again, getting back to self-interest, and I'll get very narrow, now about AIDS vaccines, you know, we've talked about resistance. It's gonna happen. It's gonna happen, it's already happening, you know, we see in Baltimore. We're seeing primary resistance in 20-odd percent of people who are showing up with HIV. So we're gonna do that.

We need an AIDS vaccine here as much as we need it for the developing world, and again, if we can't get that in our mind, get wrapped around that, what are we gonna do for the rest of it? But, you know, we have all of these other problems, and again, it's a mindset. Are we thinking only about today's problems and dealing with them, or are we gonna take a long-term view as well? And if we do that, and take a long-term view then we're going to invest in these broader issues. But if we stay short-term, you know, and just bounce up and down based upon the issues, today it's anthrax, it'll be something else, but, you know, we've gotta think long-term.

**MR. FUKUYAMA:** All right. Well, thank you very much.

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