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I propose to talk about global risk; infectious disease is on my list, but it is only one of the items on my list. There are many risks in each of our individual lives, and managers of firms and governments face risks. I will confine myself to risks with a global impact. It turns out to be quite a long list. One way to divide it up is to distinguish among those risks that involve deliberate human action, those that are unintended consequences of human action, and those that involve no human action but nonetheless affect society. The last group includes earthquakes, tsunamis and typhoons; we have seen dramatic examples of each of those in the last three years. I will include impacts by asteroids in that list because the media have done so. These are things that can affect our lives but which we cannot do much at the moment to affect, but which we must accommodate if they occur.

The other extreme of motivated human actions includes terrorist acts, where someone or some group of people has decided to take actions which put society at risk; we have seen some of those and will probably see more. I would include here cyber-attacks, which we heard about earlier. Those two could be combined as cyber-attacks by non-governmental organisations, which could be loosely called terrorists, trying to damage or complicate the lives of governments.

Those are the two extremes, motivated human actions and those beyond human control. Then between them there is a vast territory of developments that can take place as a result of human action, but are not directly motivated by human action. Climate change falls into this category, where societies are doing all kinds of things which are leading to climate change. Nobody intends for them to lead to climate change, although I have to note as a technical footnote that the first scientist who identified the likelihood of climate change was a Swede in the late 19th century, and he welcomed it, as a producing warmer winter in Sweden. That is a case of unintended consequences, but they could be extensive over time. I will not say much about climate change, because it is important in framing risks to specify a time horizon, and somewhat arbitrarily my time horizon is the next two decades. The main impacts of climate change, though we will see them gradually, will fall outside that period; however, I take note of how it can affect pathogens or the insect vectors of pathogens even now. Similarly, no one intends to spread infectious diseases, but humans are unwelcome transmitters.

Then there is a whole class of things falling into the domain of politics, including wars and civil conflicts which end up with global implications. There is much civil conflict without global implications, though with modern technology and information and trade in weapons, we see increasingly that conflicts which historically would have been localised take on international significance. One which would have an obvious global impact with a potentially serious risk is civil conflict in Saudi Arabia, just because we are all so dependent not just on Persian Gulf oil but on Saudi oil in particular, eight million barrels a day. We have watched serious internal conflict in one Arab country after another, Tunisia, Egypt, Yemen and now Syria, possibly spreading to Lebanon; if that internal conflict were to occur in Saudi Arabia it would have truly global consequences which everyone would feel, not just through the news but directly, through oil prices.

Another possibility is sectarian strife in the Middle East. I am not an expert on Syria, but my superficial impression is that Sunni-Shia sectarian strife has already started there. It has not spread extensively, but one can at least imagine a Middle East version of the European Thirty Years' War over religious differences, reflecting cultural differences and conflicting political ambitions, which of course would have direct worldwide implications through oil as well as through the attention it would attract.

We cannot rule out the possibility of inter-state conflict. The places that usually come to mind are Kashmir, between India and Pakistan, both of which are nuclear-armed, so one could imagine a series of developments getting out of control and being catastrophic for millions of people. Taiwan is traditionally on this list. The Taiwan situation is being managed pretty well at the moment. That may not continue indefinitely, but at the moment it moves way down the list. There is the Korean peninsula, a hardy perennial. And now we have the Chinese-Japanese spat, which runs the risk of becoming much more serious, over some islands which are uninhabited and, as far as I can tell offer nothing more



than symbolic value. Of course, in the minds of these two peoples, there is oil all around them; whether that is true or not will be discovered in the course of time, but not so long as the islands are in aggressive dispute. National sentiment has become involved in these islands. It would be vastly premature to talk about serious conflict over them, but next year is the centenary of the beginning of World War I, which provides a cautionary tale.

We have a lot of academic entrepreneurs at Harvard, and one of them has decided to hold a conference on the centenary of the beginning of World War I. He asked me to look at the relationship between the European economy in 1913 and the War. The late 19th century was the last great period of globalisation, between 1870 and 1913. Despite the extensive economic interdependence that had built up by 1913, European countries went to war. I have been reviewing my history on the origins of World War I, and I found it absorbing. It provides an example of a dynamic, or you can call it a domino effect or a sequence of games of chicken, leading to an outcome which no one intended. Each country thought it could out-bluff its potential adversaries. All proved to be wrong and were drawn into a war which utterly changed Europe. The difference between 1913 and 1919 was enormous, even leaving aside the influenza epidemic which killed off tens of millions of people and was spread by soldiers returning from the war.

The point of mentioning this is that we need people who take these possibilities seriously, even though they seem remote. Diplomacy that works turns out to be really important to avoid things which, if it works, none of us will ever see. That is one of the unappreciated products of good diplomacy, that bad events do not occur. It is a serious mistake to denigrate our diplomats because they do not appear to be doing anything, as it is often the outcomes they avoid that are most important.

It is not enough to identify potential risks; as economists will tell you, you need to weigh the probabilities, and some of these events are extremely improbable. You may know that the Earth has had five great extinctions so far, the last one being 65 million years ago; we probably would not exist if the dinosaurs had continued. It could happen again; it is a very low-probability event, but that we have quite a network of asteroid watchers, and we are building up a database of those over 10 km across, and people are thinking of how we might deflect them if they come our way. I am very happy to learn that this community exists, but I attach a very low probability to a catastrophic asteroid impact.

Were you to ask me what the high probability events are, I would say that a serious terrorist attack is very likely; we have seen them every five years or so. I am not talking about car bombs but a serious attack on society. I am afraid I would answer the question put to Carl Bildt at lunch a little differently; I think Edward Snowden has blood on his hands. Exposing the major source of information about discovering terrorist networks is extremely damaging. I attach a reasonably high probability to such an event. The key thing is not the event, since terrorists cannot destroy modern society, but the reaction of modern society and its leaders to such an event, which if unintelligent could destroy modern society. It is very important that the leaders stay cool and communicate closely with one another. One can imagine the possibility of bringing down the whole interdependent system, stopping travel for example, so it is very important that we achieve a cool, level-headed response to any terrorist attacks and prevent the public from panicking.

The other high probability event I would identify is a financial crisis. The first meeting of the World Policy Conference was in 2008, just after the Lehman Brothers crash, but I daresay it had been planned before that collapse, so at least the acute version of the financial crisis was not foreseen when the conference was planned. We have had a very bad experience with the financial crisis and the subsequent recession. The financial crisis was more or less confined to both sides of the North Atlantic, but the recession it provoked spread worldwide and hurt millions of people all around the world. We have been trying to fix the system up, and by "we" I mean the US, Canada, the European countries and Japan, and a number of emerging markets have also joined the discussions. That has all been a necessary process, but I am not highly sanguine about the outcome so far. The big financial institutions have resisted tooth and nail the regulatory changes that I think are necessary in this process, and I believe we are setting ourselves up for another financial crisis sometime within my timeframe, which is the next couple of decades. I hope we will do a better job of insulating what economists call the real economy, that is to say, the production of goods and services, and the wellbeing of families, from the next financial crisis.

The only way to put it is that our big banks are simply dangerous. Hardly a week goes by in which some new charge does not come out that they are not simply dangerous but that they are crooks, or they have crooks in them. I will not go through the list, which includes illegal price fixing and money-laundering both for criminal organizations and for



states under sanction. The conclusion I reach is that either the top managers of these banks are also crooks, presiding over the crooks in the mid level, a conclusion I am reluctant to reach since some of them are personal friends of mine, or that these institutions are just too large to manage, that there is no way that the CEOs can manage effectively these very large, very complex financial institutions. We need to break them up. But to say that and to translate that into action are two very different things, and I understand that, but it should be in the back of our minds that, as the occasions present themselves, we should encourage them to disperse and decentralise, separate their different and often incompatible functions.

A final class of risks I want to mention is major technical change. An advantage of major technical change is that there are pluses in there for somebody, but there are also often minuses for somebody. Concretely, some changes make old business models obsolete. We are seeing that; we have heard about how the print media are under extreme pressure from modern electronics, and perhaps conventional television will follow. The impact of longevity on the business models of insurance companies is another example; I note the diverse and complex influence of technical change in passing in order to stimulate later discussion.