First let me thank Professor [Andy] Knight for giving me the opportunity to share with you some thoughts on a topic which has been of more than passing interest to me for much of my recent professional life. Over the years I have been able to reflect on my own experiences as a scientist and an international diplomat—or at least one who consorted regularly with diplomats. I hope I can draw some conclusions from those experiences that may benefit further development of the field of health diplomacy and help to prepare practitioners or aspiring practitioners in global health and professional diplomats for their work.

A large part of my early professional career was spent not only as a practising physician, but also as a basic and clinical scientist. I worked in a metabolic laboratory studying the physiology of childhood malnutrition and carrying out research on animals, mainly rats—man’s best friend. I investigated the metabolic pathways involved in the kidney’s production of glucose at the same time it produced ammonia in response to an increase in body acidity. I lived in the world of pipettes and balances, electronic tools and enzyme assays and was fascinated by the beauty of the organization of cellular metabolism. The mammalian cell was just the most marvelous piece of engineering that I had encountered. I was intrigued by the nature of science—and I am referring mainly to the STEM world—the world of natural science, technology, engineering and mathematics.

And then I would leave that world and enter an intergovernmental health organization—the Pan American Health Organization—in which basic decisions have political echoes and overtones and the voices of the diplomats are rarely absent. I began to learn about the canons of diplomacy and the rules of diplomatic engagement. I was exposed to health diplomacy—how matters of health within a state or that affected many states were dealt with through diplomatic negotiations. This relationship between states and the protection of the interests of each state individually has been at the core of traditional diplomacy from time immemorial. I like to refer to diplomacy as the art and practice of negotiation and conflict resolution that
is practised in almost every sphere of human activity and it is no longer the exclusive province of specialists in international relations and foreign policy, although the latter is the aspect that catches the public imagination. There is now sports diplomacy, cultural diplomacy, science diplomacy and of course health diplomacy. It is clear that diplomacy and international relations are not coterminous and the concept of diplomacy focusing only on narrow national interests is passé.

And here let me make one point that I think is important for all diplomats or those engaged in negotiation in any field. I believe as Roger Fisher teaches, that there are three essential features to any principled negotiation regardless of the sphere in which it is carried out. A principled negotiation must be wise, in the sense that it satisfies the legitimate interests of the parties, it must be efficient in the use of resources and amicable in that at the conclusion it leaves relations between or among the parties better or at least no worse than they were before the negotiation.

In this interconnected world, emphasis is not only on the health of the individual or groups, but on global health. Global health—world health—the health of all people and the reduction of health inequity which is the holy grail of much modern health action is impossible without health diplomacy. It cannot be addressed without international health, through activities that require combined action of several states. Health is a poster child for the essential sentiment of John Donne’s famous poem which begins “no man is an island, entire of itself.” Global health is only possible through collective action based on negotiation.

It is in the workings of the international technical organizations that any conjuncture or disjuncture between science and diplomacy can be seen clearly. These organizations, such as the World Health Organization, are supposed to be technical bodies whose programmes are designed and executed principally on the basis of scientific criteria. Technical cooperation with countries and the cooperation among countries are theoretically subject to minimum political or diplomatic input. However, much of the world of these organizations is dominated by political considerations and managed by diplomats in ministries of foreign affairs. The political alliances formed by diplomats for non-health reasons often impact heavily on the execution of technical programmes and even such matters as their budgets. The influence of diplomats is seen very clearly in the election of heads of these agencies, when the technical competence of the contestants is taken as a given and the decision is based on exchange of political favours, essentially by diplomats who see in these negotiations the opportunity to derive benefit for their particular state. You will not be surprised that the election of the director of these major agencies may not be unrelated to the interest of one or other country in the International Whaling Commission, for example.
These organizations to which all the Caribbean countries belong, obtain maximum impact from creating a forum for socializing governments into taking decisions collectively. It must be remembered that a collective decision to implement does not automatically translate into equal capacity or desire to execute nationally. The emphasis on striving so mightily to achieve consensus which means convergence of opinion around some defined challenge, is to some degree born out of an inherent belief in Mitranian type functionalism in the sense that shared interests and needs lead to greater inter-state cooperation and interdependence without necessarily leading to absolutist supranationalism. The concept of “health as a bridge for peace” which was operationalized so beautifully in Central America during the late eighties, is an expression of this ideal. Mitranian functionalism has to some extent lost favor with critics who believe it is impossible to separate the political from the technical and that there are really no true functional operations. I disagree and have posited that the strength and future survival of Caricom depends in great measure on the appreciation of the critical nature of functional cooperation.

One of the features of international work in health and a legitimate field of health diplomacy that has received little attention is the practice of diplomacy within these organizations as a feature of their cooperating technically with member states. This diplomacy is practised when it is necessary to convince all states with so many different characteristics to adhere to and meet the goals agreed collectively. The tools of diplomacy are as necessary here as in the ministries of foreign affairs. The great pity is that most executives come into this role without adequate formal preparation for it and may have difficulty in leading organizations in the appropriate direction.

This form of diplomacy may be made more difficult because there are no sanctions or rewards to be meted out as in the case of the traditional diplomacy practised among states with power as the ultimate lever. The diplomacy practised in these areas is more akin to what Heine refers to as network as opposed to the traditional club diplomacy. Diplomatic practice in health is increasingly multilateralized, given the number of actors who must act collectively and one of the essential tools for this must be scientifically sound evidence as to the nature of the problem and the benefits or externalities that derive from collective action. Work is often carried out with political and cultural regimes that are not the regional norm, but that does not preclude the use of diplomacy.

I accept that health may be a special case, given its essential non-conflictive nature and the general acceptance of the view as articulated so clearly in the American Declaration of the rights and duties of man which recognizes that “every person has the right to preservation of his health through the sanitary and social measures related to food, clothing,
housing and medical care, to the extent permitted by public and community resources.” Siddiqi makes an interesting observation in this regard. He argues that since “health is a “sacred” undertaking of international health work (of WHO), to which all member states are pledged, there can ideally be no place for the exercise of diplomacy in the classic sense—the conduct of business between states strictly on the basis of national interests. The conception behind an international organization is that its members, far from using it as a place to further their national interests, should subordinate their interests to the international interest.” I take a slightly different view. It is exactly in the area of international work where there is need to get a collective decision involving states of different sizes and interests that diplomacy plays a critical role.

Up until now I have been liberal in my use of the notion of the state as the entity whose interest is one of the prime concerns of the diplomat. But I wish to revisit this concept and pose a view that may not be accepted by some of my colleagues in international relations. The modern state really had its genesis with the Peace of Westphalia in 1648 which saw the demise of the Holy Roman Empire and promulgated the notion and practice of the sovereign state. As all students of international relations know, this was the birth of modern international action. The state was coterminous with the government which wielded executive authority with the exclusive use of the power to deprive citizens of life and liberty. But I contend that over time we have seen the evolution of the pluralist state in which the state and government are no longer one and the same. I argue that the essential components of the modern state are the public sector or government, the private sector and civil society in its many and varied forms. Thus, *sensu strictu*, there can be no non-state actors. What we refer to as international organizations are really intergovernmental organizations and in my view it is unfortunate that diplomatic initiatives to achieve collective action rarely take account of those parts of the state beside government. As these other actors assume a greater and greater role in national welfare and even national policy there has to be more diplomatic embrace or at least acknowledgement of their actions and potential. I was therefore most gratified to note the comment of the Foreign Minister of Trinidad and Tobago at the most recent meeting of the Caricom Council for Foreign and Community Relations emphasizing that diplomacy could no longer be confined to capitals, but must embrace a wider cadre of participants including non-government actors. To that I say amen!

Science and scientists have long played a role in traditional diplomacy as well as in health diplomacy. However some semblance of order or boundaries was brought to the field recently by the British Royal Society and the American Association for the Advancement of Science. They described three major facets of science diplomacy: science in diplomacy, science for diplomacy and diplomacy for science.
Science for diplomacy embraces all those efforts and activities undertaken with the proposition that science can bring persons from different political systems and interests together for civil discourse. The health sciences figure prominently here in that there is good evidence of health as a non-conflictive area functioning as a platform for dialogue and indeed joint action. This is the sphere of the soft power so elegantly articulated by Joseph Nye who laments that more use is not made of it in modern times. It is here we find that the interaction between scientists served to blunt some of the rhetoric of the Cold War. David Hamburg, in his recent book “Give Peace a Chance,” describes brilliantly the work of the Carnegie Commission under his chairmanship in bringing USA and Soviet scientists together, which indeed may have contributed to avoiding nuclear war and as a result of their scientific contact with Mikhail Gorbachev, possibly contributed to a change in Russian foreign policy.

Diplomacy for science embraces the joint work of international actors for science and the increasing international collaboration for research and notably health research. It is reported from the OECD that from 1985 to 2007 the number of scientific articles with single authorship decreased by 45%. During the same period articles with domestic co-authorship increased by 136% while those with international co-authorship increased by 409%. Many of the world’s major problems will only be or have been solved by this collaborative research and action, as the benefits of research are global. While the Hadron Collider located at the CERN (European Organization for Nuclear Research) laboratory, which is the largest highest-energy particle collider ever made and involved the work of thousands of scientists from around the world is always mentioned as an example of this collaboration, I like to cite the genuine international collaboration that is being carried out now in the final push to eradicate poliomyelitis from the earth based on well proven scientific concepts. In a rather optimistic comment, one author claimed that “the new peacekeeping force of the twenty-first century is not made up of soldiers; it is made up of scientists, diplomats and others working together to address global challenges.”

But it is science in diplomacy that is most challenging.

Can science make a meaningful contribution to diplomacy? There are three aspects that I will address. First, there is the role scientists play as diplomats and here I refer to the doyen of scientist/diplomats, Benjamin Franklin. I believe that his scientific background and training allowed him to be stoical in the midst of many of the travails he underwent and certainly his scientific credentials gave him access to what were then described as philosophical circles that might have been closed to others less famous. So great was his reputation that on one occasion when he was being criticized in the House of Lords, Lord Chatham referred to him as “one whom all Europe ranks with our Boyles and Newtons, as an honor, not to the English nation only, but to
human nature itself.” I would not go as far as saying that scientists make the best diplomats, but I would argue that diplomats should not be ignorant about science and its possibilities for improving human welfare.

Then there are the many examples of the traditional view of scientific knowledge facilitating diplomatic discourse as occurred in the development of international health organizations. Interstate negotiation for global health goes back over five hundred years, but the modern developments can be traced to the sanitary conferences of the nineteenth century. It was the prevention of epidemics and the impact quarantine practices could have on trade and commerce that were the basic motivation for these early efforts. Quarantine represented not only a hindrance to travel and trade as well as financial losses, but also presented opportunities for bribery and corruption.

In the first international sanitary conference of 1851 there were 12 states, each represented by a doctor and a diplomat. The length of the conference: 6 months, and the arguments by doctors over the merits and demerits of the theories of contagion versus those of sanitation led to the decision that if progress was to be made doctors who represented the scientific opinion of the day should be excluded. Thirteen of these were held and despite the fact that the vibrio of cholera was discovered by Pacini in 1854 and rediscovered by Koch 30 years later and indeed Koch participated in two of the Sanitary conferences, the basic approach of the international effort was dominated by the thesis that the best thing was to keep the infections out of the country and the major debates on how best this was to be done was mainly within the purview of diplomats rather than scientists.

The main infectious disease of the Americas—yellow fever—was of little interest to the European nations, so the Fifth Sanitary Conference was held in Washington in 1881. This was a meeting essentially of diplomats with four experts in medical matters brought to give a patina of science to the proceedings which were essentially administrative. It was here that Carlos Findlay presented the major scientific theory that yellow fever required a vector and subsequently described that vector as the mosquito that came to be known as *Aedes Aegypti*, which is still a scourge to the countries of the Americas. But at the First Sanitary Conference of the Americas in 1902 at which the Pan American Health Organization was created, there appears to have been a different tone. At the opening of the Conference, the Surgeon-General of the United States as host was very clear. He said “Our deliberations will relate to scientific investigations which alone enable us to be rational in both quarantine and sanitation and which form the foundation and the iron girders of our hygienic structure.” Goodman describes in detail the evolution of these conferences into the International Office of Public Health in Paris. When World War II ended the United Nations was established, WHO was born and
some of the impetus for their work would have come from Point 4 of President Truman’s 1949 inaugural address in which he pledged “We must embark on a bold new program for making the benefit of our scientific advances and industrial progress available for the improvement of underdeveloped areas”.

The global pattern of disease has changed with increasing dominance of the chronic non-communicable diseases (NCDs) over the communicable diseases. More people now die of NCDs—cardiovascular diseases, diabetes, cancer and chronic respiratory disease—than of communicable disease and the incidence of these diseases is rising in all countries, among the rich and the poor. The need for joint and cooperative action is just as great as before. The control of the vectors of these new diseases is often beyond the capacity of a single nation state although the responsibility for the health of its citizens is to a large extent the state’s or rather government’s responsibility. This is not to remove individual agency, but the necessary change in many of the factors which affect the health of the population as a whole are outside the capacity of the individual. The social determinants of health as the term implies, are not under individual control.

Here I must refer to a Caribbean experience which represents one of the outstanding examples of collective Caribbean diplomacy leading the world. It was the science of the magnitude of the burden of the NCDs in the Caribbean countries that persuaded their Heads of Governments to invest political and diplomatic capital in moving the issue from the regional level to the Commonwealth and then to the level of the United Nations General Assembly. It is science that will facilitate the diplomatic wrestling with issues such as climate change, antimicrobial resistance and the global preparations for a possible influenza pandemic. The growth of interest in the nexus between health and foreign policy in the United Nations and more generally, is in part due to the ability of the health sector to produce the science that facilitates dialogue. I refer to science generally and must admit that it is disciplines beside those in the STEM world that come into play here, especially the social and behavioral sciences.

But the more fundamental question that is rarely debated and has import for the training of all diplomats is whether the essential canons of science are of any relevance in diplomatic practice and discourse. The STEM world in which I dwelt originally would have grave difficulty accepting many of the tenets of diplomacy. I confess that I was weaned scientifically on the works of Sir Peter Medawar and treasured his affirmation that “no scientific theory ever achieves apodiptic certainty.” (That it is demonstrably true.) I swore by Karl Popper and his concept of the falsifiability of hypotheses. I believed that science was a logically connected network of theories that represented our current opinion of about what the natural world is like. It is basic to
science that assumptions and the data supporting them are subject to review and reassessment and change through criticism from peers and the production of new data. Scientific data and information are public while making information public and inviting validation and possibly rejection is normally anathema to the traditional inter-state diplomacy.

The hypothetico-deductive approach to addressing problems elaborated by Popper which is central to scientific endeavour is not part of the diplomatic tool-box. If anything there is more of a tendency towards the inductive approach of JS Mill. The scientist is deeply suspicious of and avoids any form of relativism which accepts the validity of varied explanations. Science cannot accept that there are many different truths about the phenomena of the natural world, while the essence of the diplomatic negotiation is the non-judgmental position. It is interesting that there is renewed debate about the diplomacy of relativism. Pope Francis in a recent address to the diplomatic corps was sharp in his rebuke of what he dubbed the “Tyranny of Relativism” and emphasizing the need to hold to what are designated absolute and essential truths, which in fact do not derive from other than philosophical or theological discourse. These questions are often at the heart of traditional inter-state diplomacy, because if there are no absolute moral truths, then the defence of such international codes as those on human rights is unsustainable. But scientists always point out that their disciplines cannot address such issues.

In the final analysis it is through the production of evidence that science can best inform and support diplomacy. The best evidence is physical evidence which is a result of observation and experiment and here I show the bias of the STEM disciplines, but in its absence diplomats will have to negotiate armed with documentary evidence which may be more within the realm of the social sciences. But evidence is necessary but not sufficient. When evidence aligns with interests in institutions or individuals party to the diplomatic negotiation then there is no problem. The possibility of evidence trumping interests depends very much on the nature of the evidence and the power behind the interests. If the power behind the interests is strong enough, then the strength of evidence is irrelevant. The equation of power determines the extent to which evidence supports or trumps interests. Power resides not only in individuals, but also in institutions which by definition do not pursue or entertain interests that are inimical to their survival, regardless of the validity of evidence produced. The classic case is the power of the tobacco industry to continue to sell a product designed to kill in spite of the irrefutable evidence acknowledged by the industry itself. The evidence base for plain packaging of cigarettes to limit tobacco use is incontrovertible, yet the tobacco interests fought Australia to the High Court on it and are now threatening small counties with action before the World Trade Organization. But this applies to countries as well. I have
seen countries very reluctant to report disease when the evidence of its occurrence was indisputable, because it was felt that such reports would not be in the country’s economic interests.

Is any of this relevant to contemporary Caribbean diplomatic and international relations teaching and practice? I believe so. First, I trust that health concerns will figure more prominently in the deliberations of our diplomats and our students of international relations will pay attention to the scientific developments in health and the interplay between health and science diplomacy. We must be sensitive to the emerging global issues and trends as far as they may involve health diplomacy. For example, the forthcoming conference on Small Island Developing States is a critical event. The Caribbean and Pacific islands have made common cause as regards the need for continued global attention to health and particularly the NCDs. The impact of these diseases in the Pacific is probably even greater than in the Caribbean. We must pay attention to the debate around the post 2015 human development agenda and here I show bias in drawing attention to the need for this agenda to include the health issues that concern especially the poor, and NCDs figure prominently among them.

In conclusion, science has always played a role in diplomacy and health diplomacy must figure in international relations and diplomacy. The intergovernmental health organizations of today whose effectiveness in aiding the practice and possibilities of global health depend heavily on health diplomacy for their internal and external workings. Science for diplomacy and diplomacy for science are relatively well understood and there are many examples of them. But the practice of science in diplomacy brings some queries especially in relation to the applicability of the canons of science to diplomatic practice.

Professor Knight, let me thank you again, and I would like your students to take away the following messages.

1) Diplomacy as the art and practice of negotiation and conflict resolution is applicable to many fields, including health.

2) The modern state is a pluralist entity and is not coterminous with the government. Much of our international action is essentially inter-governmental and diplomatic practice must increasingly involve non-governmental state actors.
3) Health diplomacy is central to international health which is necessary for
global health. It is a vibrant field that must continue to be informed by
scientific evidence.

4) Health diplomacy is integral to science diplomacy which has three facets:
science in diplomacy; science for diplomacy and diplomacy for science. It is
in the area of science in diplomacy that there is room for reflection as
whether the canons certainly of the natural sciences can find place in
diplomatic practice.

5) Finally, there have been some impressive Caribbean achievements in health
diplomacy at the global level of which we can be proud.

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