Complexity in the UN Climate Change Conference 2009 in Copenhagen

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Abstract

The UN Climate Change Conference in Copenhagen produced a vague outcome that disappointed those concerned with environmental issues. The hypothesis examined herein is that this result was to have been expected given both the complexity of the issues and the processes for their resolution. Suggestions are made for rethinking the institutions and processes for making international law in the context of a changing world.

Copenhagen

The fifteenth meeting of the Conference of Parties (CP) of the United Nations Framework Convention on Climate Control (UNFCCC) was held December 7-18, 2009 in Copenhagen, Denmark ("The UN Climate Change Conference in Copenhagen COP 15/CMP 5, 7 to 18 December 2009," n.d.). This conference was attended by 120 Heads of State and Government, 10,500 delegates, 13,500 observers, and coverage by more than 3,000 media representatives. Negotiations were conducted in over 1,000 official, informal and group meetings. Observers to the conference participated in more than 400 meetings. There were some 300 press conferences. The conference comprised the following sessions:

- Fifteenth session of the Conference of the Parties (COP 15)
- Fifth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 5)
- Thirty-first session of the Subsidiary Body for Implementation (SBI 31)
- Thirty-first session of the Subsidiary Body for Scientific and Technological Advice (SBSTA 31)
- Tenth session of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP 10)
- Eighth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA 8)

Whether this conference was the largest conference of an international institution is not known, but it was clearly very large in terms of number of direct participants and key influencers. This provided an opportunity for a large number of complex relationships as the

various issues associated with climate change were being negotiated. Added to this was the number of media in attendance, each of whom had their own interpretation of the events and results of the conference.

At its most abstract, the conference aimed to build on prior UNFCCC meetings to develop and promulgate international law to mitigate the effects of human activities on the global climate. Climate science is complex and whether the climate is endangered by human activities is under constant debate. Climate science is not perfect nor are the means of measuring climate change. However, the consensus of a sufficient number of members of the international community is such that the risk of waiting for perfection is sufficiently large that action needs to be taken now.

This, then, is the milieu in which the international community sought to move forward. There was significant structural complexity as outlined above. This translates into complexity in communications amongst the parties. The delegates and observers are strongly influenced by the political agendas of the participating states, involved non-governmental organizations (NGOs) and transnational corporations. All activities, public statements and documents are subsequently filtered through the media, adding color and texture through its interpretation of official activities. The reports of the media serve to inform other opinions such as the citizens of the world. These opinions are then fed back to the official delegations to the conference who subsequently may adjust their stands on issues.

The hypothesis under consideration here is that as complexity increases the difficulty in making meaningful international law also increases and/or the international law created is less effective than it might otherwise be. The results from Copenhagen are used as a basis for examining the validity of the hypothesis.

Results

Thirteen decisions were taken by the CP.

- Decision 1/CP.15 Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention
- Decision 2/CP.15 Copenhagen Accord
- Decision 3/CP.15 Amendment to Annex I to the Convention
- Decision 4/CP.15 Methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
- Decision 5/CP.15 Work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention
- Decision 6/CP.15 Fourth review of the financial mechanism
- Decision 7/CP.15 Additional guidance to the Global Environment Facility
- Decision 8/CP.15 Capacity-building under the Convention
- Decision 9/CP.15 Systematic climate observations
- Decision 10/CP.15 Updated training programme for greenhouse gas inventory review experts for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention
- Decision 11/CP.15 Administrative, financial and institutional matters
- Decision 12/CP.15 Programme budget for the biennium 2010-2011
- Decision 13/CP.15 Dates and venues of future sessions

The media focus on Decision 2/CP.15 The Copenhagen Accord (*Report of the Conference of the Parties on its Fifteenth Session, held in Copenhagen from 7 to 19 December 2009*, 2009, pp. 4-9) assured that it would be the defining article of the conference. The substance of the Copenhagen Accord amounts to some 1,250 words contained in 12 numbered paragraphs (single spaced, size 10 font) over about two pages. Of course, the Accord is but one of the 13 decisions produced by this conference, but the length of one of the critical documents is somewhat dissatisfying. One would anticipate, or at least hope, that inasmuch the UNFCCC entered into force in March 1994, and given the number of meetings under the auspices of the convention (see page 3), that more of substance would appear in the Accord and that a substantial commitment by the parties would be evident. Note the word "commit" or its forms appears three times, in paragraph 4 (once) and paragraph 8 (twice). Measurement of progress is against conformance to law and commitment, both of which were essentially missing from the Accord.

The complexity of the issue and the processes for addressing the issue compromised the ability to make meaningful progress at a global level. Moreover, this complexity, coupled with power, provided an opportunity for some states to advance their own interests. This latter development is explored in the next section.

Reaction

Three thousand media representatives and some 300 press conferences over the 12 day period of the conference provided a substantial opportunity for a large number of media reports. Insofar as can be learned, there is no count of the media reports issued during this period. Assuming, however, that each of the 3,000 media representatives files a report every other day, then there would have been some 18,000 reports about the conference. This does

not include any pre or post event reporting. A google search using the words "copenhagen climate conference media activity" returned about 81,100 results. The conclusion is that there was extensive media coverage of the event. The issue arises of deciding which sources to sample in order to get a general feel for the reaction to the conference.

The following example of media reporting is drawn from The Economist ("Copenhagen Consensus," 2010) and, more specifically, the article titled *Climate Change after Copenhagen: China's Thing about Numbers* ("Climate Change after Copenhagen: China's Thing about Numbers," 2009).

> When drafts of a last-ditch agreement began circulating on December 18th, which should have been the meeting's final day, the "80% by 2050" formula was still in place.[1] But, hours later, it vanished…the numbers were conspicuous by their absence.
>
> So too were a number of other conditions that Europeans and others would have liked, such as a date for peak emissions. "Why?"…"China don't [sic] like numbers."
> …
> The numbers that China had resisted were those that could be read in any way as commitments. It had insisted on stripping all figures, even ones that did not apply to China, out of the text that finally became the Copenhagen accord.

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[1] "80% by 2050" refers an agreement that rich countries would need to slash emissions to a level at least 80% below what they were in 1990.

> In their zeal to avoid being pinned down, the Chinese went further. They secured the removal of language contained in early drafts that spoke of a Copenhagen deal as a step on the road to a legally binding treaty. As the world's largest emitter (without which any agreement is dead), China was in a strong position, and it took full advantage.

China sees itself as a "developing country," willing to accept the benefits associated with being labeled as such, yet powerful, and feeling no obligation to accept rules made by other states as to how it should conduct its affairs. Philip Stevens, writing in The Economist, noted:

> The off-stated ambition of western governments is that the world's rising powers should bear some of the burden of safeguarding international security and prosperity. The likes of China, India and, dare one say, Turkey and Brazil, are beneficiaries of a rules-based global order and, as such, should be prepared to contribute. They should, in a phrase coined some years ago by Robert Zoellick, act as stakeholders in the system.
>
> Seen from Ankara or Brasilia, or indeed from Beijing or New Delhi, there is an important snag in this argument. They are not being invited to craft a new international order but rather to abide by the old (western) rules. As I heard one Chinese scholar remark this week, it is as if the rising nations have been offered seats

> at a roulette table only on the strict understanding that the west retains ownership of the casino (Stephens, 2010).

This incident suggests that China sees itself as an emerging hegemonic power. Robert Gilpin cites Robert Keohane in that the theory of hegemonic stability:

> …the theory 'holds that hegemonic structures of power, dominated by a single country, are most conducive to the development of strong international regimes whose rules are relatively precise and well obeyed…the decline of hegemonic structures of power can be expected to presage a decline in the strength of the corresponding international economic regimes' (Gilpin, 2004, p. 477).

The shifting of power between the nations of the world creates conflict where the rules are not relatively precise and not well obeyed. This conflict provides an opportunity for increasing levels of complexity in relationships. In the sometimes turbulent current of relationships it becomes less clear as to how a state, particularly a less powerful state, should behave. The following represents the nature of changing power relationships.

> On the final day, tension rose when President Obama was obliged to conduct negotiations with comparatively junior Chinese delegates. At one point, Mr. Obama expected to meet his Chinese opposite number one-on-one but instead found himself with the leaders of South Africa, Brazil and India as well ("Climate Change after Copenhagen: China's Thing about Numbers," 2009).

The Economist's view of the conference is to be contrasted against the view from China through the Xinhua News Agency, the official press agency of the government of the People's Republic of China. "Chinese Premier Wen Jiabao said Monday the country played an important and constructive role in pushing the Copenhagen climate talks to earn the current results" ("Premier: China's Role in Copenhagen Talks 'Important and Constructive'," 2009). Xinhua goes on to say "Wen told Xinhua in an interview after the two week-long Copenhagen conference, which concluded Saturday in the Danish capital after producing a **non-legally binding document** [emphasis added] on climate change."

The length of The Economist article (1,445 words) is to be compared to the length of the Xinhua article (297 words). Clearly there is different emphasis in these two view of the outcome of the conference. The former sounds very much like the words of the negotiating party who did not fare so well. The latter sounds very much like the words of the winner of the negotiation. These two different views of the Copenhagen Conference serve to underscore the complexity discussed herein.

Anthony Giddens claims, with considerable justification, that "Among elites, climate change lends itself to gestural politics – grandiose-sounding plans largely empty of content" (Giddens, 2009, p. 2). The challenge is to move from this to meaningful action.

Analysis

Described above is a system in which forces, orthogonal at best, and opposing at worst, converged to deal with a complex international issue that emanates from state actions and produces effects that are not confined by state boundaries. The process for dealing with the convergence is complex. The results of the process drive feedback loops that

subsequently affect the process as it reiterates over time. Everything -- outcomes, processes, forces, personalities, allegiances, ambitions, feedback loops -- constantly change and the change seems to increase in frequency. Complexity grows. This then is the environment in which international laws are formed and applied.

The issues associated with increasing complexity and consequent ineffectiveness in international law are twofold. First, there is the nature of global climate change. Included are matters of sustainability and care of the environment. For example, the accumulation of CO_2 is of major concern in the context of global climate change. Giddens reports that "about 25 percent of CO2 emissions over the past two centuries have come from changes in land use, of which deforestation is by far the biggest contributor" (Giddens, 2009, p. 225). Global climate change is, as illustrated by Copenhagen, intimately intertwined with politics, social consideration, and economics in a new Gordian Knot. The debate regarding human responsibility is more cacophonous than reasoned, especially in the popular media. Gaia represents the great commons of the human and needs to be considered and acted upon in consideration of its entirety and over a long period of time. However, this is difficult for two reasons. The first is the human inclination, especially as regards politics, to thinking in the short term. The second is that climate is less deterministic and more stochastic than many of the systems that are subjected to the rule of law. The making of law on the basis of probabilities is a difficult undertaking.

> In the summer of 1988 a major heat-wave in the US alerted the world's media to the issue of climate change. Ever since, climate scientists have been asked whether such extreme weather anomalies, which include catastrophic floods and hurricanes, occur

> naturally or whether they are the result of a rise in global temperature due to human activity. The problem is **that climate is a statistical phenomenon, which makes it difficult to find definitive answers** [emphasis added] to these questions ("Climate Change: Complexity in Action," 2004).

The second issue concerns the relationships between the parties negotiating international environmental law. Copenhagen attracted 10,500 delegates and 13,500 observers. These 24,000 participants can have as many as 576 million simple relationships. A simple relationship is a single relationship between two parties. In the context of global climate change, however, it is likely that two parties will have a number of relationships depending upon the specific issue under consideration. It is difficult to see an international conference with this many relationships in other than complex terms.

The climate and the conference are examples of what Joseph M. Sussman (Sussman, 2000) calls Complex, Large-Scale, Interconnected, Open, Sociotechnical Systems (CLIOS).

> A system is complex when it is composed of a group of related units (subsystems), for which the degree and nature of the relationships is imperfectly known. Its overall emergent behavior is difficult to predict, even when subsystem behavior is readily predictable. The time-scales of various subsystems may be very different (as we can see in transportation -- land-use changes, for example, vs. operating decisions). Behavior in the long-term and short-term may be markedly different and small changes in inputs or parameters may produce large changes in behavior. CLIOS have impacts that are large in magnitude, and often long-lived and of large

geographical extent.

Subsystems within CLIOS are integrated, closely coupled through feedback loops.

By open, we mean that CLIOS explicitly include social, political and economic aspects.

Often CLIOS are counterintuitive in their behavior. At the least, developing a model that will predict their performance can be very difficult to do. Often the performance measures for CLIOS are difficult to define and, perhaps even difficult to agree about, depending upon your viewpoint. In CLIOS there is often human agency involved.

What Copenhagen represented is the convergence of two CLIOS. Under these circumstances, there was no alternative to the development of international law under conditions of complexity and uncertainty. The surprise from Copenhagen would have been an accord calling for specific actions by specific states to meet specific commitments.

Conclusion

I want to make the somewhat startling assertion that, at present, *we have no politics of climate change* [emphasis in original]. In other words, we do not have a developed analysis of the political innovations that have to be made if our aspirations to limit global warming are to become real (Giddens, 2009, p. 4).

Law emerges from politics. Therefore, in resolving this matter of complexity the development of the politics of climate change is a prerequisite. However, this development at a global level seems increasingly problematical. As a consequence, resolving the issues associated with international environmental law will continue to be frustrating to some, satisfying to some, and confusing to most. In the meantime, Gaia's health is likely to continue to suffer.

When, in the fields of critical thinking and systems theory, the issue under consideration seems to refuse to yield the analyst will often turn to breaking the issue into subissues to reduce complexity and improve clarity. The issues of global climate change might better resolved if subissues are extracted and resolved. An example of this is The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries launched in December 2008 ("UN-REDD Programme," 2010). Here, the scope of the issue has been constrained to developing countries and a specific issue.

> The UN-REDD Programme brings together technical teams from around the world to help develop analyses and guidelines on issues such as measurement, reporting and verification (MRV) of carbon emissions and flows, ensuring that forests continue to provide multiple benefits for livelihoods and the environment, and supporting the engagement of Indigenous Peoples and Civil Society at all stages of the design and implementation of REDD+ strategies. The UN-REDD Programme also seeks to build consensus and knowledge about REDD+, to ensure a REDD+ mechanism is included in a post-2012 climate change agreement.

The views of developing countries as to what needs to be done to resolve this issue are likely to be different from either the developed or emerging countries. By narrowing the scope and including only those states likely to be substantially affected and likely to make meaningful commitment, the issue of deforestation is apt to be more successfully resolved than if it was included in a larger context. Member countries in UN-REDD are Bolivia, Democratic Republic of the Congo, Indonesia, Panama, Papua New Guinea, Paraguay, United Republic of Tanzania, Viet Nam and Zambia. Note that there is no regional affinity here.

This leads to the notion that specific issues could be addressed on a regional basis. Giddens describes just such in regards to the European Emissions Trading Scheme (Giddens, 2009, pp. 198-202). While the ETS "probably had some effect on emissions," the greater impact may prove to be its role as a precursor to the Clean Development Mechanism and as a prompt for "…the emergence of carbon trading markets elsewhere in the world" (p. 190).

Problem solving is often like this. While a "big bang" might be desired, where the issues are resolved at "the flip of a switch," this is unlikely when one is dealing with CLIOS. Preparation is essential. After all, the gardener does prepare the soil before planting the seeds. Small gains need to be nurtured and serve as a means to learn. Naiveté regarding the resolution of complex issues often manifests itself in the nattering of the uninformed which serves only to distract from the real job at hand. On the other hand, the uninformed often guard the gate through which one must pass if success is to be achieved.

Giddens addresses this matter in his call for political convergence, defined as managing the overlap between climate change policy and other values and political goals.

Political convergence is also "…crucial to how far climate change policy becomes innovative and energetic, but also whether it receives widespread public support" (p. 8). Giddens' recollection that "…George Bush senior, had gone further than his son, declaring at the 1992 Rio Earth Summit that 'the American way of life is not negotiable'" (p. 188) is an example of the necessity for political convergence.

This then brings into play the need for attitudinal changes at the state level. In 1758 Emer de Vattel defined two general laws (Janis & Noyes, 1997, pp. 424-426). The first concerns the contribution of a state to other states and the second is that the state's prime responsibility is to itself. The second law reaches the epitome in the hegemon. Robert Gilpin analyzed the role of the hegemon remarking "The hegemonic power is both willing and able to establish and maintain the norms and rules of a liberal economic order, and with its decline the liberal economic order is greatly weakened" (Gilpin, 2004, p. 477). The attitudinal changes are of two principal types. The first is an understanding that hegemonic actions have effect beyond the borders of the state and, given growing interdependency in the world, the state ignores these effects at its own peril. The second is that the redistribution of power amongst the states presages an era marked not by hegemons, but by a set of more-or-less equally powerful states. Gilpin echoes this redistribution when mentioning that "…that the theory suggests the world economy will be increasingly characterized by economic conflicts" (p.483). This can be observed (e.g., United States response to Kyoto; Chinese response to Copenhagen}. Giddens picks up this thought.

> Sovereignty does not have the same meaning as it did. This is surely obvious on an economic level, where states, no matter how large, cannot govern their economic affairs in the way in which they were able to earlier in the post-war period.
>
> Interdependence is a part of our lives in the twenty-first century, and states which act in denial of that situation will quickly be brought to heel in one way or another" (pp. 211-212).

The challenge for the international community is to develop new methods of cooperation and collaboration that will yield the required results. A complex set of pressures and developments are rearranging the world and, in the words of Albert Einstein, "We can't solve problems by using the same kind of thinking we used when we created them." The "same kind of thinking" is enshrined in the same kind of international institutions that have been in place since the end of World War II.

The transformation of international law should include the two features mentioned above; organizational structures that can deal with subissues and an acknowledged awareness on the part of powerful states that "…the hegemonic system is ultimately unstable" (Gilpin, 2004, p. 482). This acknowledged awareness needs to then be translated into a new form of international relations. It may be that a new generation of international leaders, educated and experienced by the period subsequent to the collapse of the USSR, will be required.

While, to recall Giddens, sovereignty may not be what it once was, it is still the most powerful international organizational principle. It is found in all types constitutions and regimes. It has, in a manner of speaking, achieved the status of *jus cogens*. Sovereignty,

especially as practiced by the powerful states, is at odds with the organizational principles required to enable new levels of efficacy in international law. Simply put, sovereignty is no longer sufficient. The issues confronting the globe transcend state borders. The need is to upend the emphasis in de Vattel's laws.

It is difficult, perhaps impossible, to see how this can practically occur other than over an extended period. The matter of a new generation of international leaders was raised earlier. It may well be that the time required for this transformation needs to be considered in terms of generations. The generational cycle is, of course, in conflict with political cycles. Some way will be needed to resolve this conflict if progress is to be made. Decomposing the issue of global climate change into subissues and resolving these, when possible, on a regional or bilateral basis is recommended. Regional and international institutions should also attract the most relevant knowledge, skills, and expertise and provide a suitable reward system that keeps critical personnel in place for the duration of the resolution of the issues. This may be in conflict with the notion of generations for critical issues may rise and fall in less than a generation. Some means of maintaining balance will need to be found.

There are numerous cycles that impinge upon international law. Two of these, political and generational, have been mentioned. There is also the notion of development cycles determined by state capabilities. An interesting example of this is found in the Chinese project to complete a port at Hambantota on Sri Lanka's south coast (Leahy, 2010). Two cycles are apparent in this story. The cycle associated with Sri Lanka's capabilities is represented by this statement:

> One of the Chinese team managing the project says a lack of equipment and local skilled labour means the centre is taking about one and a half times longer to build than it would in China. 'In China, this would be completed in one year,' he says.

International law developed without consideration of development cycles is likely to be inconsequential. A second cycle is represented by "For Beijing, the partnership with Sri Lanka offers secure access to the Indian Ocean through which most of China's oil passes. Some suspect the island could one day serve Beijing as a de facto navy base." This represents a longer cycle associated with the needs of China. International law has little to say about this cycle. Whether it should and, if so, how is a matter to which international institutions should give consideration.

Indeed, Sri Lanka consciously avoided international law.

> This led the International Monetary Fund to postpone in February the third tranche of a $2.6bn loan. The delay is not sparking a crisis - the government has adequate foreign exchange reserves and the central bank expects the economy to grow 6.5 per cent this year. But opposition politicians say the IMF's tight conditions give Colombo an excuse to move closer to China. **"What do you need good governance for when investors are coming in anyway?"** [emphasis added] says Harsha de Silva, an economist with the opposition United National party. Whatever critics might say, the fruits of Mr Rajapaksa's friendship with Beijing can be seen everywhere in Sri Lanka. Chinese engineers are putting the finishing touches to the National Performing Arts

Centre. "Friendship of Sino-Sri Lanka Will Last Forever" reads a sign on the site (Leahy, 2010).

Here is an additional example of the effect of the complexity in international law. States simply avoid what are considered to be complications by entering into bilateral agreements.

This leads to Giddens' notion of pro-active adaptation (Giddens, 2009, p. 163). Because the trends in global climate change develop over a long period of time, waiting until the trend becomes evident may render counteraction ineffective. Pro-active adaptation seeks to be anticipatory and preventive. The risk and uncertainty associated with creating relevant law rise when the objective is to be anticipatory and preventative. Success relies on continual improvement in the science upon which decisions are founded and a social conscious that accepts the necessity of being anticipatory and preventative in the context of trends that develop over extended periods of time. Giddens offers several examples of the success of pro-active adaptation, all of which are at a region or country level. Giddens also raises examples of effects produced by climate change that could possibly have been mitigated had pro-active adaptation been applied.

Law emerges from politics. Giddens calls for political convergence. Politics is the overarching determinant of what will be done and how it will be done. Wars have been won by states allied because, at least for a period of time, they were able to forge a political consensus. The 65 years since the end of World War II has seen a rise in the number of democratic states, and in economic well-being of much of the world. Countries have developed increasing capabilities and have used these capabilities to press state agendas.

Hence, the title of the Stephen's article, *Rising Powers Do Not Want to Play by the West's Rules*, in a recent edition of the Financial Times. However, by and large, it is the West that has shaped international law. That complexity and seeming inefficacy should result ought to be expected in these circumstances.

Politics shapes the state economic agenda which then determines the approach to international relations and the state role in international law. If international law is complex and ineffectual, then the way forward lies not only in the incremental steps espoused herein, but also in examining the fundamental principles upon which international law are based.

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