I. Introduction and Background.

I would like to take the opportunity of this workshop to be more personal and introspective than I generally am (at least in writing). I do so in the hope that my experiences and perspectives might be useful to others who are working with treaties. I realize there is an enormous variety in our college teaching jobs in terms of teaching loads (quantitatively and qualitatively), research expectations, etc. However, I believe most of us are asking similar questions and operating in environments with comparable opportunities and constraints.

When I started graduate school (at the University of Washington) in 1967, I had a vague notion I wanted to study something international and that I wanted to use quantitative methods. I took the standard first term courses and had space for one elective. I chose a survey of international law taught by Peter Rohn, an associate professor in the Department of Political Science. I was a top student in methods courses from the beginning (I had had differential equations; most of the other students did not know what differential equations were). I liked international law from the beginning, but it took a couple courses before I felt comfortable with the subject and started to think I might make it the focus of much of my research. I was too naïve to see the difficulty of combining my two principal interests, quantitative methods and international law, an unlikely juxtaposition to say the least.

Because of my mediocre grades as an undergraduate at the College of Wooster, the University of Washington gave me no money my first term quarter. Teaching assistantships were gone for that year, so I started looking for other possibilities. Peter Rohn was trying to start something then called the “Treaty Information Project.” I had taken Rohn’s survey course in international law and two seminars on international law by the end of my first year in graduate school. He told me about the project for which he had not yet
secured any funding. I was intrigued by the issue with which Rohn was wrestling: Treaties are interesting, important, and readily available. How do we move beyond the narrow, clause-by-clause view common in legal analyses of treaties? Certainly treaties were better indicators of country behavior than many of other measures political scientists were relying on. As Rohn put it:

Treaties were an obvious target in the search for relevant data. Treaties pervade the international system. They are important. They are made with care. They are recorded and published. They are relatively easy to standardize and categorize, and hence to quantify and cross-relate.

Between my first and second years in graduate school, Professor Rohn secured a large grant from NSF (about $2.5 million in 2006 dollars) to establish a center that would examine large numbers of treaties and store information about them on the university’s mainframe computer. I was in the right place at the right time and got in on the ground floor of this endeavor. I spent more than a year working 20 hours a week “coding” treaties from the United Nations Treaty Series (UNTS). I read literally thousands of treaties inductively developing a good feel of the range and variety of these things called treaties. My induction was impure—induction usually is—because I already knew a lot about treaties; McNair was a household name for me and I had studies the “treaty on treaties” emerging from the Vienna Conference. Many people found treaty-coding mind numbing; I loved it. I am infinitely curious and noticed a variety of patterns because I had enough time to read the treaties to satisfy my curiosity about almost anything, e.g., what are the differences between written Dutch and Afrikaans. Further, since part of Rohn’s project was to track the changing patterns of country relationships to treaties, I could apply what I had learned about signature, ratification, accession, and succession to treaties. I was forced to appreciate what I should have learned in graduate courses: to understand any treaty, one must know both the black letter law provisions and the complex set of state relationships to the treaty. Shortly thereafter, I was introduced to reservations, the subject of my dissertation and a focus of subsequent work. Perhaps half of my research has dealt with treaties, albeit with very different foci.

I worked for Rohn for about a year in what by then was called the Treaty Research Center. In 1969, the University of Washington School of Law lured Professor William Burke from Ohio State. Burke already was a leading scholar on the law of the sea. When the National Sea Grant Program started, Burke had money to study ocean-related treaties and asked me to work for him. I did so for my last 1½ years in graduate school and learned a good bit about the law of the sea, a very “hot” area because the movement to hold a Third UN Conference on the Law of the Sea to replace the flawed 1958 Conventions was gaining momentum. I learned a lot from Burke and took international law courses in the law school. In the middle of graduate school, I accepted a summer job at the Center for Naval Analyses in Washington, DC. The work there dealt with the 3rd UN LOS Conference, specifically how conference negotiating could be understood to protect the interests of the U.S. Navy.

I wrote my dissertation about multilateral treaties, using Rohn’s data for the period 1945-1965. I got my Ph.D. in 1971 and took a position at the University of Rhode Island teaching mostly in their interdisciplinary Master of Marine Affairs program but also in the Department of Political Science. Much of my teaching related to the law of the sea but within the context of U.S. oceans policy. After less than seven months as Assistant Professor of Marine Affairs, an unexpected death caused the University of Rhode Island
to offer me the position, Associate Director of the Law of the Sea Institute (LSI). I ran their conference in June of 1972, successfully, I guess, because by June of 1973 I found myself Executive Director of LSI.

LSI was a very successful operation respected around the world as a neutral forum. We had considerable soft money to run an annual conference and workshops most of which focused on the UN LOS Conference; my treaty interest had narrowed to the negotiation of one very important treaty. For three years (until I left to come to Penn State), I was in a superb position to watch the development of one of the major treaties of the 20th century. Delegates from most countries came to Rhode Island for our conferences. I negotiated the first attendance by representatives from the USSR and the Peoples Republic of China—a big deal in the 1970s. I got to know hundreds of delegates from scores of countries as I attended conference sessions in New York, Geneva and elsewhere. The LSI position provided an unprecedented opportunity to observe a major negotiation from many different angles. I felt I had the best of all worlds. I could go to Washington and talk to the U.S. State Department officials, but also had access to UN officials and many national delegations. People thought I knew more than I did so I was asked to speak at defense colleges, universities in the USSR, etc. In less than a decade, I learned a lot about treaties from numerous, complementary perspectives.

In 1976, I left the University of Rhode Island and came to Penn State where I have been ever since. My Penn State location, Behrend College in Erie, is a liberal arts-like college (now about 4,000 students) within the massive 24-campus Penn State system. Behrend has a substantial research expectation, but an expectation that is qualitatively different from that of many large research universities including Penn State’s “main campus” at University Park. To cite two examples, I get about the same credit for a textbook as for a research monograph and as much credit for an article in the German Yearbook of International Law as I would for International Organization. Several other aspects of my position at Penn State Erie made it easier for me to sustain my interests in treaties. I was able to develop an undergraduate course on International Law, fairly unusual in smallish undergraduate programs. About the year 2000, I developed a one-credit honors seminar on treaties. The idea was to reach several audiences including bright freshman from any discipline, political science majors, and students who might want to work on the CSDMT. This semester (Fall, 2006) I have added a bit of quantitative methods to the treaty seminar. We do not require any quantitative methods for our political science major; many students select political science in part because they wanted to avoid quantification. No doubt the nature of my position has made it easier for me to sustain my research interest in treaties.

My current research focus on treaties, the Comprehensive Statistical Database of Multilateral Treaties (CSDMT), is described in some detail in the subsequent section. This project is a product of my orientation and background. I believe treaties are interesting and important. In a sense, treaties are my dependent variable; although, if treaties are the only variable examined, the issue of dependent or independent variable is moot. Treaties are a good example of a complex, real world phenomenon where cause and effect reverse themselves. It is reasonable to assume it takes a certain amount of trust before states enter into multilateral treaties. If those treaties function well, trust will increase predisposing additional treaties addressing more subject areas. I have made
a value judgment that treaties, *ipso facto*, are significant. Further, I believe, if more people understood the number of treaties operating and the range of norms prescribed, the international system would function better.

II. The Contours of the CSDMT

When Professor Peter Rohn began his major effort to quantify treaties he wrote:

> Our ignorance of basic facts is impressive. For example, nobody knows how many treaties there are in the world today or how many there were 10 or 20 or 50 years ago. Nor is it known how the world’s treaties subdivide by signatories, topics, title, duration or reliance on international institutions, dispute settlement procedures or by any other criterion. Most of these matters are considered relevant to a legal analysis of any one treaty. And yet they are ignored in the global context of all treaties.

This lack of a broad, macroscopic perspective on treaties is due in part to the fact treaty scholarship has been dominated by lawyers and law professors some of whom are almost allergic to quantification. How dare we reduce the subtlety and complexity of a 300-page instrument to a few variables some of which seem arbitrary! The answer of course is that in-depth analysis of a 300-page treaty is enhanced by macroscopic analyses; it is easier to understand individual treaties if one has some idea of the forest in which these treaty trees grow. Prudence is the order of the day; Harvard Professor and PCIJ Judge Manley O. Hudson, who, among myriad other accomplishments, tabulated treaties, said “Count, by all means count, but count things that count.”

The CSDMT originated in 1998 with a review I prepared of Christian L. Wiktor, *Multilateral Treaty Calendar, 1648-1995* (1998) for the *American Journal of International Law*. I gave the book a very good review. It was the most comprehensive record ever compiled of all multilateral treaties and it covered 350 years and more than 6,000 instruments. One of the best honors students I have ever taught was in my office looking at the *Calendar*; he asked me broad questions, e.g., how many multilateral treaties have been signed (sic) over the last 400 years. I could not answer his questions. It occurred to me, if I could get a group of very good students together, we could produce a database starting with the Wiktor book. It was fortuitous that, in the fall of 1999, my college of Penn State had a group of honors students willing to undertake this project. Over the years, the project has grown in breadth and depth. We have checked many treaty series and indices to be sure we have included virtually all multilateral treaties. We have to develop a reasonable approach to what constitutes a multilateral treaty, e.g., omitting declarations, final acts. A quantum leap in the project occurred when we decided it was necessary to locate the text of each treaty to add information not obtainable from indices and other compilations.

Development of the CSDMT had to be realistic. We did not have soft money and could not compete with research centers that specialize on a particular subfield of international law, e.g., human rights law. Given the fact this was a cottage industry financed only with internal Penn State funds, we could only afford to spend perhaps 30 minutes on each treaty. We do not collect the two kinds of information most people think of when they envision a treaty: fulltext and a complete list of parties.

We have collected basic information (variables) for 6000-7000 multilateral treaties
signed during the 500 year period, 1500 and 2000. I selected variables that were straightforward, important and significant from an international law perspective.

- Headnote
- Name of instrument
- Nature of instrument: amendment, protocol, and questionably binding
- Regional focus
- Treaty series and location
- Laterality (plurilateral/ general)
- Signature date
- Force date
- Relation to IGOs
- Topic category #1 (UN's about 300, e.g., whaling)
- Topic category #2 (about 30, e.g., maritime/oceans)
- Topic category #3 (about 10, e.g., economic)
- Dispute settlement provisions
- Reservations provisions
- Duration clause (for the treaty)
- Duration clause (for parties)
- Length of text
- Official languages
- Code number: a rational numbering system for all multilateral treaties

III. Illustrative Findings from the CSDMT—Three Examples

A. 500 years of treaty-making: the broadest picture

Figure 1 provides an overview of 500 years of multilateral treaty-making, necessarily a macroscopic picture. Treaties are placed on a timeline according to signature date, the most accurate, least ambiguous way of displaying trends in treaties. Since multilateral treaties were concluded at a far faster rate after 1900, we have lumped all treaties before that date into a single group (the leftmost bar in Figures 1 and 2); there were only 470 treaties signed over the 400-year period, 1500-1899. Treaties from 1900-1999 are displayed in equal time periods of 20 years to facilitate comparison and analysis.
Most treaties are what we call “original instruments” represented by the larger solid bars. These treaties are not explicitly linked to, or dependent upon, earlier treaties. The majority of treaties are original instruments and most of these are relatively insignificant, *ad hoc* actions that have no possibility of triggering a derivative treaty. However, there are many treaties that, while they must be accepted by state parties to enter into force, are dependent upon and/or derivative from earlier treaties. These include protocols, amendments, and extensions. Some are significant, others trivial, but they clearly are qualitatively different from the original instruments. We use the term, “supplementary instruments,” to describe these. Another important finding from Figure 1 is the relative frequency of supplementary instruments. The pattern here is quite clear and probably confirms the intuition of many who have studied treaties. The portion of supplementary instruments is about 10–12% through 1920, increasing thereafter. By about the 1950s, it levels off and remains fairly constant at about 30%.
Figure 1 permits a much more precise statement about aggregate trends in multilateral treaty-making. Many scholars assert—usually based on no more than a hunch—that the glory days of treaty-making have passed. Usually they do not say exactly how they know.\textsuperscript{ xvii} The data from the CSDMT help us to formulate a more precise statement: \textit{The greatest level of activity in terms of new treaties occurred around 1970 with the rate declining somewhat thereafter but remaining at a high level compared to all the rest of the 20\textsuperscript{th} century. Further, since the 1950s, more treaty activity has taken the form of supplementary instruments.}

B. Changing Patterns in Language Choice

Figure 2 deals with an interesting issue, but hardly one in the realm of high politics. It shows trends over 500 years in the use of official or authentic texts of the treaties. This can be an emotional issue, since language often is an element of nationalism. It is interesting to go beyond the obvious, i.e., negotiating states can do whatever they wish in selecting languages.\textsuperscript{xviii} McNair, the leading treaty expert of his generation, said only that “parties are free to choose the language or languages in which a treaty is expressed.”\textsuperscript{xix} Treaties involving many parties create problems in deciding which national languages to use. One solution, famously ignored by the European Union, is adopting a \textit{lingua franca}. As Nicolson noted:

\begin{quote}
Until the eighteenth century the common language, or \textit{lingua franca}, of diplomacy was Latin. Not only did diplomats write to each other in Latin but they even conversed in that medium. Such treaties as those of Westphalia (1648) . . . were all drafted and signed in Latin and that was in fact the general practice.\textsuperscript{xx}
\end{quote}

Eventually Latin was replaced by French because of “the political ascendancy of France under Louis XIV.”\textsuperscript{xxi} Most scholars would agree that “French has lost its dominant position as the diplomatic language and, since 1919, English has become at least as important,” a supposition proven by Figure 2.\textsuperscript{xxii} The increased importance of English, mostly at the expense of French, is even more dramatic in bilateral treaties.\textsuperscript{xxiii}
Three broad conclusions emerge from Figure 2. First, to the consternation of President deGaulle and Premier Lévesque, the use of French has decreased drastically. For the 1500-1899 interval, 71% of treaties used only French compared to 4% for 1980-1999.
Second is much greater use of the English language both as the only authentic text and along with French for many bilingual treaties. For the earliest time period, English was an official language in only 5% percent of treaties, while it has become an official language in 85% of treaties in the most recent period. A democratization in language choice has emerged with more treaties selecting the language of all parties or the five or six languages of the UN. For the most recent time period, 39% of treaties fall into these “democratization” groups.

C. Duration and Importance: Towards Weighting Treaties

Figures 3 and 4 begin to address one of the most difficult problems facing the CSDMT project. The principal strength of the CSDMT probably is complete coverage, i.e., the project has virtually all multilateral treaties, but how does one accommodate the incredible diversity of these 6,000 treaties? They range from trivial trilateral agreements mandating minor changes in behavior lasting only for a few months to treaties such as the UN Charter that changed the contours of the international system, endured for decades, and created permanent institutions. Some of this stems from the legal milieu in which treaties are negotiated and studied. Like the sovereign equality of states, treaties, once in force, are assumed to be equal. Confounding the situation is the fact that thousands of multilateral treaties remain legally in force long after they have ceased to have any effect on state behavior. A permanent “solution” to this problem will take a concerted effort and many years. Reasonable assumptions are possible. For example, it is logical to assert that the importance of a treaty is the product of:

- what it obligates states to do
- how many states are so obligated
- the duration of the obligation

Operationalizing this scheme might be impossible; it certainly would be a major methodological task. Even attempting it would infuriate many lawyers and probably would not satisfy political scientists.

I undertook a modest test, really an experiment, where I tried to accommodate duration and importance level. I examined all original instrument, general treaties signed between 1900 and 1999, about 600 treaties in total. I read through the information collected for each and developed a simple scheme that, after several revisions and false starts, seemed to fit the treaties. Importance levels (values) assigned were:

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>NUMERICAL VALUE</th>
<th>% IN CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>1</td>
<td>45%</td>
</tr>
<tr>
<td>med./low</td>
<td>2</td>
<td>21%</td>
</tr>
</tbody>
</table>
I also made judgments about the duration of each treaty. Most had a significant effect only for their signature time interval, but some seemed to have an influence continuing into the future. It cannot be emphasized too strongly that this scheme is a tentative first step. It certainly will need to be refined.

Figure 3 follows a format identical to that of all previous figures except the 1500-1899 interval has been omitted. It shows the number of new treaties signed during each of five equal time periods from 1900 through 1999 and includes only general treaties that are original instruments for a total of 609 treaties. The graph shows a huge increase in activity after 1919 peaking in the 1960s or 1970s and a significant decrease thereafter. This trend is consistent with the pattern seen in Figure 1 and has been offered as
“proof” that the heyday of treaty-making has passed.xxv

Figure 4 shows the same subset of the CSDMT as Figure 3, but, this time, importance weightings and duration are taken into account. The values on the y-axis become an index of the aggregate effect of treaties operating for each time interval, rather than a simple count of treaties. The values were calculated by taking the numerical value for each treaty and adding it to each time period for which it was judged to apply. For example, the UN Charter, signed in 1945, has a value of 10 as a system-changing treaty. Ten would be added to 1940-1959 and to the two subsequent time periods.

Figure 4 shows quite a different picture than Figure 3. There is a steady increase in the effect of treaties until about 1960 and a plateau thereafter without the decrease seen in the other formulations. The overall conclusion is markedly different. Figure 3 posits decreasing importance for treaties, while Figure 4 shows a very high level has been attained and sustained. I believe Figure 4 is the more accurate description of global treaty-making, but realize my methodology can be questioned. In defense of that methodology and the information it coaxed from the data, I believe, if anything, it understates the cumulative effect. Taking the example of the UN Charter, it probably is more than ten times the importance than the modal treaty that has a value of 1.0. Furthermore, important treaties tend to have longer durations, although “importance” and “duration” need to be considered separately.
IV. Conclusions and Recommendations

I have already confessed my prejudice in favor of treaties. I believe that, if more Americans understood treaties and how they operate including the national interest balance struck when treaties are concluded, American foreign policy would be more enlightened. A hundred years ago, the first article published in the American Journal of International Law, written by U.S. Secretary of State Elihu Root, was entitled "The Need for Popular Understanding of International Law." For almost a century, many have accepted the desirability of educating a broader audience about international law, but how do we reach this goal? I believe part of the solution can be a better understanding of treaties, beginning with how many there are and how they create norms that all countries have a vested interest in following. The mass media tend to focus on a few conspicuous violations of treaties rather than on the fact that, in Professor Louis Henkin's words, "Almost all countries obey almost all the rules of international law almost all the time." This goal of better popular understanding of international law would be easier to accomplish if more undergraduate students took international law. I think an important question for the workshop to examine is whether participants teach international law and why.

It is unrealistic to think that all of us who do not teach international law will re-orient our teaching to do so. There are more modest steps we could take to cooperate in our research to make it easier to share information about treaties. As a first step, I have suggested a common numbering system for treaties, rather like a Library of Congress number for treaties. Many compilations, if they have any system, simply number treaties. Others, e.g., Wiktor's Calendar, have no numbers. A system that is flexible, intuitive, and not too cumbersome might take this form:

- First nine digits-- signature date: For example, 1958.0429 is April 29, 1958
- 10th digit can be L (LNTS), U (UNTS) or X (other to be determined later)
- 11th-15th digit will be LNTS or UNTS number or used differently for "X" treaties

This would make it possible for us to communicate more effectively and to determine whether or not we are on the same treaty page, as it were.

We know much more about treaties, especially multilateral treaties, than when Rohn first issued his warning. The CSDMT project provides a clearer picture of 500 years of multilateral treaty-making and a good deal about magnitudes and trends in treaties along with information about languages, topic categories, regional vs. global approaches, etc. Many have speculated that treaty-making is in decline. We have documented that this decline, if it exists at all, is modest and disappears entirely if one accounts for the importance level and duration of each treaty. There is a tendency to bounce between extremes with some saying international law does not exist and others expecting international law to be an unerring guide for all state behavior. Judge Manfred Lachs described this swinging from one extreme to the other as being either a Utopian
or a denier. Figure 1 refutes the denier’s argument. Notwithstanding important deficiencies, an enormous amount of treaty law is in operation. As many of us investigate treaties in different ways with different research goals, we can collaborate and learn from one another, heed Judge Hudson’s warning, and improve the way we count.

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1As an undergraduate at the College of Wooster I took a lot of mathematics, more than enough for a minor. However, the best professor I had at Wooster, the head of the mathematics department, almost threw me out of his office when I told him I wanted to study statistics. “Talented mathematics students do not waste their time on statistics,” he said. Probability was all right; I have never understood why.

iiTuition was $140 per quarter with no out-of-state penalty.

iiiPeter Rohn, World Treaty Index 7 (vol. 1, 1983).


viTreaties published in the UNTS are in some 140 languages basically any official text of the treaty.


ixAt the time, the University of Washington had a very effective grant getting machine. Except in agriculture, there was little competition in the state. Washington’s senators, Henry Jackson and Warren Magnuson, were in the top ten in seniority, during this period.


xiiiI have published in both International Organization, German Yearbook of International Law

xivFor a detailed discussion of where international law is taught, see John Gamble, Teaching International Law in the 1990s (1993).

xvFor an excellent discussion see Eric Corty, Using and Interpreting Statistics (forthcoming 2007).


xviiiThe Vienna Convention on the Law of Treaties not surprisingly does go beyond technical considerations. Article 13 states that “when a treaty has been authenticated in two or more languages, the text is authoritative in each language.”

xixMcNair, supra note 4, at 30.

xxHarold Nicolson, Diplomacy 231 (1939).


This calculation is complicated. English is used as a lingua franca, as one of five—later six—UN languages, and when the languages of all parties are used. The latter occurs quite often because some of the most prolific treaty-makers have English as a national language, e.g., the U.S., India and the U.K.


Elihu Root, 1 Amer. J. Internat'l. L. 1 (1907).

Louis Henkin, How Nations Behave: Law and Foreign Policy (2nd., 1979)

There is ample evidence that political scientists who teach international law enjoy doing so and their students love the course(s). See John Gamble, Teaching International Law in the 1990s (1993) and John Gamble, Chris Joyner (eds.) Teaching International Law: Approaches and Perspectives (1997).

Rohn, supra note 13.

ILA, supra note 17.


Rohn, supra note 14.