

Towards Quantum Politics.

Jim Dator

(From a book on "Fairness and Globalization" written by Dator, Pratt and Seo)

Most contemporary attempts at governance reform try to make a very old system operate in an environment quite different from that in which it was intended to operate. Merely reforming existing systems of governance to cope with current challenges and opportunities--especially to act fairly towards present and future generations in the face of globalization--is literally like trying to adapt a horse and buggy so it will take off on a jet runway: it might be possible, but it won't be nearly as effective as it would be if we were to abandon the horse and buggy as a once-novel and splendid but now obsolete vehicle, and envision, design, and build something intended to operate in the current and future aviation system (and, I might add, the aviation/transportation system itself desperately needs to be re-imagined and designed as well, but that's another matter!)

Though there are many elements in the civil society, deliberative democracy and cosmopolitan democracy discussion we greatly admire, we feel that all current governance reforms are still inadequate on two grounds--cosmological and technological:

1. They are cosmologically inadequate because they are all based on old "Newtonian" notions of causality and intentionality. It is essential that new forms of governance be based on what the best science and humanities of all cultures can tell us about human and other systems, artificial as well as natural.

2. They are technologically inadequate because they were invented at a time when communications technologies were quite different from what they are now--initially limited to human speech and handwriting, later augmented by the very labor-intensive and slow printing presses of the day. At that time, literacy was low, books were few and rare, and newspapers little more than a few pages of local announcements and opinion.

Indeed, the specific structures of government adopted--a *written* constitution (instead of a mathematically-expressed, or audio-visual one), voting for "representatives" who would act for you or in your interest (instead of voting directly for yourself via the Internet), the separation of powers into three but only three "branches" (instead of four or more--for future generations, or the media, or education, or CEOs, or the military; or no "branches" at all, recognizing that real governance operates by "Iron Triangles" that cut across the three branches), and federalism (the division of power between a central government and regional polities rather than "non-spatial governance" [FN Tonn] that facilitates function rather than privileging the happenstance of geographical place)--all of these structural features and more can and should be viewed as "*communication technologies*" that were *adequate, often brilliant, for their time, but are now challenged by newer and arguably better technologies for governance* although their use also needs to be as carefully crafted in accordance to modern scientific and humanistic knowledge and values, and thus

"checked and balanced" as appropriate for the present as were any of the original design solutions for their time and circumstance.

Why Quantum Politics?

It is typical for technologies, social institutions, human values, and even expressions of art to reflect/be based on the dominant cosmology of the time [FN: *Beyond modern sculpture*]. Thus, ideas of governance, the good life, as well as architectural and sculptural works of the classical Greek period derived from the philosophical worldviews of that era. The same was true during the Roman and then Medieval periods in Europe. In many ways, the best example of this unity was during the early modern period when Newton's ideas of the physical world came to permeate all of the major institutions and cultural expressions of the time.

Since the United States Constitution was written during this time by people profoundly influenced by Newtonian ideas it is not surprising that the Constitution was based upon them as well. However, the dominant intellectual paradigm of our time is quantum physics. There would be no "electronic age" without the discovery and manipulation of the electron. What might be the principles and resulting structures and processes of a "quantum politics" based upon quantum physics?

Inspired by some ideas of Glendon Schubert, (especially Glendon Schubert, "The evolution of political science paradigms of physics, biology, and politics" *Politics and the Life Sciences*, Vol. 1, pp. 97-110, 1983) a group of professors and graduate students at the University of Hawaii formed a "Quantum politics study group" in the early to mid 1980s. Members included Glen Schubert, Rudy Rummel, Dick Chadwick, Ted Becker, Christa Slaton, Chris Jones, Sharon Rodgers, Kenn Kassman, Tim Dolan, Jim Dator, and perhaps others. Several research projects and publications resulted from this.

As a result of this, Dator wrote two papers, "Quantum politics and political design," in Rolf Homann, ed., Changing Lifestyles as Indicators of New and Cultural Values. Zurich: G. Duttweiler, 1984, and "Confessions of a Quark Smeller; The Implications of Quantum Physics for Political Design," paper for a panel chaired by Ted Becker for the American Political Science Convention, Chicago, September 3, 1987. He introduced "quantum politics" to his graduate political design courses, and generations of students have subsequently been exposed to the concept and been tempted to develop it.

Becker however edited a volume titled *Quantum politics*. New York: Praeger, 1991. It contained essays by several of the members of the UH study group and others. Christa Slaton also used the theoretical perspective of quantum politics for a book, *Televote: Expanding citizen participation in the quantum age*. New York: Praeger, 1992.

After a general introduction by Becker, *Quantum Politics* opens with a presidential address to the American Political Science Association delivered by William Bennett Munro in 1927 titled, "Physics and Politics--an Old Analogy Revised." Munro himself opened his statement by referring to a book written by the famous 19th Century political philosopher, Walter Bagehot fifty-five years earlier called "Physics and Politics." Thus

we are immediately reminded that this is not a new idea, only a neglected one. Other political scientists who have written about the relation of theories in physics to constitutional and political design include James Robinson who published an article "Newtonianism and the Constitution" in 1957, Martin Landau, in 1961 (Martin Landau, "On the use of metaphor in political science," *Social Research*, Vol. 28, pp. 331-353), and Harvey Wheeler, "Constitutionalism" in Fred Greenstein and Nelson Polsby, eds., *Governmental institutions and processes. Handbook of Political Science*, Volume 5, Reading, MA: Addison-Wesley Publishing Company, 1975, especially pp. 6 and 76f).

Note the title of Robinson's article. It makes clear one of the central points in the quantum politics perspective: that the constitutions of all nations today, beginning with the US Constitution of 1789, derive from a Newtonian worldview dominant in the 18th Century. This world view is rationalistic, mechanistic, posits immediate cause-and-effect, predictive, and assumes an objective real world which can be objectively observed and measured with no interference or bias on the part of a trained, neutral observer.

This view is further incorporated into the law and legal systems of all nations which assume that humans are rational actors deterred, or encouraged, to obey or defy of the law on the basis of a careful, self-interested calculus by which they compare the advantages in breaking or upholding the law with the penalties and punishments for breaking or upholding it each time one acts. Moreover, everyone is supposed to be fully informed of the law and its consequences. "Ignorance of the law is no excuse," assuming that everyone clearly knows what the law is before breaking or abiding by it. Similar assumptions underlie all modern political systems, and most theories concerning voting and other political activities (not to mention most modern economic theories).

But most social and behavioral science theories developed since Newton make it clear that these assumptions are not an adequate basis for understanding, controlling, or encouraging actual human behavior. Darwin and Freud, to name two intellectual giants of the 19th Century, have quite different paradigms that suggest how marginal indeed rationality, predictability, and objectivity are in human decision-making and actions. But from the early 20th Century onward, quantum physics and more recently related disciplines seemed to go even farther.

Some physicists suggest that there is no real world "out there", or at least no single real world (there may be many worlds--perhaps an infinite number [FN]). Moreover, even if a single objective real world exists in which we all inhabit, it is impossible for a human to say anything certain about it (at least at the micro level), because every act of observation and every attempt at measurement disturbs the thing or process being observed. Thus humans participate with the universe, and do not just act in it, or observe its independent operation.

There are no immutable natural laws to be discovered. Everything that seems lawful is at best probabilistic, and perhaps fundamentally random. Anything that seems to be immutable is merely a consequence of the "law" of large numbers and/or the limited time horizon of humans. Nothing can be predicted with certainty (therefore no "science of the future" which presumes to be able to predict the future is possible). This is importantly

the situation on Earth where if there once ever were "natural" processes that could be observed objectively without human bias or interference, humans by now have so impacted, interrupted, and/or changed them that it is necessary to view all aspects of our environment as "artificial", requiring continual human attention, management, re-imagination, and re-creation.

Another important perspective from quantum physics is *simultaneity*--the validity, or at least utility, of certain contradictory statements about the apparent behavior of a phenomenon. The classic example is that light has observed characteristics of both a wave and a particle. "Commonsense" says it can't be both. Observation shows it is.

Moreover, "everything is connected to everything else," so that "action at a distance"--rather than only localized cause-effect--also exists. Yet, this is not to say that we simply live in a larger system than we imagined. "System theory" of this mechanistic sort is erroneous as well. In its place we have "field theory" where the interaction of quanta themselves, rather than the operation of discrete units in a system, appears to be primary.

Ted Becker, Christa Slaton, and Gus diZerega, each in separate chapters, developed these and other (sometimes competing) notions of quantum physics and quantum politics in contrast to various mainstream political theories based on the obsolete (or at least limited) Newtonian physics. DiZerega also relates them to the ideas of post-modernity, ecology, and Eastern mysticism, and derives a theoretical basis for a Green politics. It is worthwhile adding at this point that though there may be no direct genealogical inheritance, these views seem to be in fundamental accord with certain features of the "postmodern", "deconstructionist" school that dominates much of the scholarship of the humanities and social sciences presently [FN]. The Green/quantum connection is a bit more dubious in my mind

Certainly the cleverest chapter in Becker's book is by E. Sam Overman. Though dryly titled "Policy Physics," it is cast as a fictional discussion between the seminal quantum physicist, Niels Bohr, and the equally seminal political scientist, Harold Lasswell (who can be credited with instigating almost everything new in political science before and after the Second World War, including an idea of policy sciences that is very compatible with a quantum perspective). Auguste Comte, who of course must be viewed as the granddaddy of the entire social physics perspective, also gets some positivistic licks in at the end of this imaginary conversation.

The chapter by Laurence Tribe, a distinguished professor of law at Harvard Law School, originally appeared in the *Harvard Law Review* in 1989 . Subtitled, "What lawyers can learn from modern physics," it is the first and only attempt I am aware of to apply quantum physics to law--primarily constitutional law--in the US.

Tribe says that modern physics differs from Newtonian physics in at least two ways that are useful for a better understanding of law and governance. One, at the most macro level, is "that objects like stars and planets change the space around them--they literally 'warp' it--so that their effect is both complex and interactive." The other, at the micro

level, shows that "the very process of observation and analysis can fundamentally alter the things being observed and can change how they will behavior thereafter (171)."

"Thus, it is the picture of the court as a largely passive observer, and of the state as a subject exerting force from a safe distance upon the natural world regarded as external and pre-political object...that I think can be usefully dissolved, and then helpfully refocused, from the perspective of twentieth-century physics\" (185). [Laurence H. Tribe, "The curvature of constitutional space: What lawyers can learn from modern physics," *Harvard Law Review*, Vol. 103, No. 1, pp. 1-56. Also in Theodore Becker, ed., *Quantum politics: Applying quantum theory to political phenomena*. New York: Praeger, 1991, pp. 169-200].