Forcing Change

Great Scott! The Rise of the Soviet Technicians:

Engineering a New World - Part 2

NOTE: In Part 1 of *Engineering a New World*, we examined the core philosophy of Technocracy – the Religion of Humanity. In this section we'll probe into the organized side of the movement as it entered Western culture during the Great Depression. This is an historical overview, yet it's very relevant to our times. The lessons are in front of us; Man seeks to control the behavior of Man, and when that happens, arrogance becomes the bedrock. Who knows better than the controllers? The Twenty-First Century is fast turning into the Technical Century; where technology and behavioral sciences shape the masses. But somehow we don't see it. Could it be that we too are blinded by our own pride? Will we learn from history?

<u>Suggestion</u>: You may find it helpful to revisit the July issue of *Forcing Change* before reading Part 2.

By Carl Teichrib (www.forcingchange.org)

> **"Out of the ferment of modern science, education, organization, technology, there will emerge new shapes and spirits of cooperation and control, with new institutions and values, facing a new civilization."** – Charles E. Merriam [1]
>
> **"We at Technocracy consider Communist so far to the right that it's bourgeois."** – Howard Scott [2]

Carl Teichrib, Editor.

The Revolution of the Soviet!

Technocracy as an *organization* cropped up immediately after World War I. It started as the New York-based Technical Alliance, a study-group built on Thorstein Veblen's ideas and later organized by the enigmatic and flamboyant Howard Scott. Both believed that the *technical remaking of society was inevitable*.

Veblen, a professor and published economist, designed his theories around the "positivist science" of Darwinian evolution. One commentator noted that Veblen's Darwinism was the "loom upon which the whole fabric of economic thinking could be rewoven." [3] In his case, social evolution ended with the success of the "machine age." [4] Therefore, it was engineers and technicians who represented the highest form of advancement. The business community, the professor lamented, was overlooking the potential of technicians as shapers of a coming new world.

What Veblen ultimately envisioned was a "Soviet of technicians" to replace the present era of Capitalist *waste*. [5] This Soviet, or *collective*, would be headed by a *central directorate* or General Staff, which would extend its reach through "sub-centers and local councils." [6] Then, the General Staff could focus on the heartbeat of the nation's economy: Industry and transportation. Understand, Veblen's idea wasn't the Marxist version of "Workers of the World Unite," it was a higher form of *socialist evolution*; it was the technicians of the world coalescing, sabotaging the system, and placing themselves at the helm.
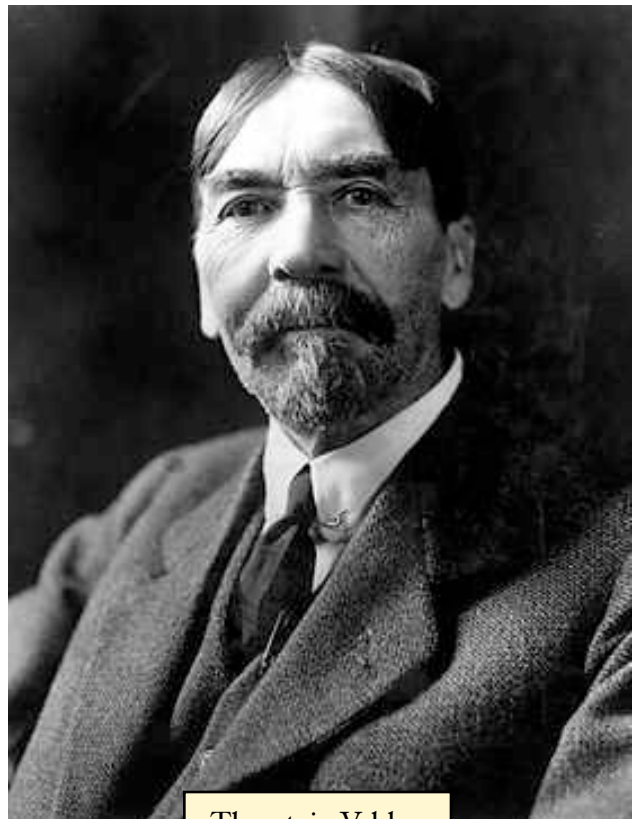
Thorstein Veblen

While Veblen was promoting an American Soviet of engineers in the United States, the Soviet Union welcomed American industrial technocrats as heroes. Henry Ford, who once said "Rightness in mechanics and rightness in morals are basically the same thing and cannot rest apart," recommended certain engineers to the Soviet government. [7] The most prominent Russian technocrat of the day, Gleb Maksimilianovich Krzhizhanovsky, an idolizer of Ford, made the following statement,

> "In reality, our age is the age of energy. Behind the machine there is energy…Mr. Ford in this instance hits the nail on the head… the production of energy is the base which guarantees the maximum possibility of possessing the earth." [8]

Krzhizhanovsky believed that the Soviet system, and not capitalism, was properly designed to handle technology. This isn't hard to understand. Capitalism allows the freedom necessary to develop technology, but it's viewed as inefficient. The market determines the life of the technology, but the market may also choose a different version, and in all probability there will be multiple options! A collectivist system, so the thinking goes, will rather harness the full potential of a technology and efficiently employ it within a greater, unifying ideal.

Lenin and Stalin recognized the importance of technocrats. Lenin was adamant; "We need more and more engineers, agronomists, technicians, scientific experts of every kind." [9] And in 1920 he said; "No dark power can withstand the union of the representatives of science, the proletariat and technique." [10]

Later he added that, "science…should really penetrate the skin and blood." [11] Accordingly, a multitude of technical institutions dotted the Russian landscape.

To Stalin, the Socialist Revolution and America's technical prowess were united. Indeed it was. American technical expertise practically built the Soviet Union; Stalin admitted that *two-thirds* of Communist Russia's industrial capacity had been built with American aid or assistance. [12] Chemical and fertilizer plants, tractor factories, hydro-electric facilities, and miles of railways were completed with direct involvement from American firms and engineers. Mr. Ford's production partner, Albert Kahn, went to Russia in 1928 where "he built 521 factories and trained 4,000 engineers." [13]

Charles Steinmetz, head of the research section at the General Electric Company of America, offered Lenin his assistance to electrify Russia. Lenin regretted that he couldn't take Steinmetz up on the offer but he sent the engineer a personal picture, which Steinmetz hung in his laboratory. Steinmetz "saw electrification as the chief agency of Socialism." [14]

Charles Steinmetz was a friend of Veblen, and a part of the New York Technical Alliance study group – along with Howard Scott, Basset Jones of the American Standards Association, and Walter Rautenstrauch of Columbia University. It was through these meetings that Veblen gathered his thoughts for what became his 1921 book, *The Engineers and the Price System*. [15]

Veblen's *Price System* book energized the idea of organized Technocracy. Moreover, he wrote that this American "Soviet of technicians" would only be accepted after *revolutionary action* – a general strike by engineers to "incapacitate the country's productive industry sufficiently." [16] Then the captains of industry and finance would see the need for this "new order of production," and a "self-selected, but inclusive, Soviet of technicians" could effectively "take over the economic affairs of the country…[and] take care of the material welfare of the underlying population." [17]

A general plan was needed. Veblen, therefore, proposed a roadmap. First, produce a comprehensive survey of industry, energy, and transportation. In doing so the "underlying population" – the average citizen – could see the excessive waste inherent in the system. The population would then be more inclined to a *better way*. More importantly, engineers would have access to complete data sets regarding skilled manpower, energy distribution, and material resources across North America. With this crucial information at hand, the technical soviet could effectively take control at the right time. [18] But all of this would take a special leader, one who could capture the public's imagination and unite the technical community.

Howard Scott was the man.

Great Scott!

Howard Scott seemed to pop up from nowhere. He claimed to be an engineer, yet this was contestable. Arriving in Greenwich Village just before the close of World War I, he spent much of his time rubbing shoulders with New York progressives, including Veblen and Steinmetz. Historian William Akin describes him as a "bohemian engineer."

> "In appearance, Scott looked the part of a flamboyant engineer-adventurer. Tall, lean, and rawboned at six feet five inches and two hundred pounds, his physical presence was commanding… he looked every inch like a project engineer out of place but self-confident in Manhattan." [19]

Akin further tells us,

> "Scott absorbed many of Veblen's fundamental themes. Veblen's scientific positivism and technological determinism was basic to Scott's subsequent thought. He adopted the technological tenor of Veblen's thought, seeing society as a mechanical operation." [20]

Scott was charismatic. He seemed to be the quintessential leader for organizing Technocracy. Dynamic and authoritative, he epitomized the type of person who could rally the public and the engineering community. In the Technical Alliance he took the title of "Chief Engineer."

Through the Alliance, Howard Scott hoped to form "one big union of professional experts." Membership would come from all specialty branches, including statisticians, educators, architects, and physicians. It would be a union of *technical elite*, [21] and behind the Technical Alliance was a unifying ideal: "Science Applied to the Social Order." [22]

However, the organization didn't live long. In 1921, the same year that Veblen published *The Engineers and the Price System*, the Alliance fell victim to financial woes. Ironically, the shortage of money was attributed to "bad management on the part of the chief engineer." [23] The Technical Alliance folded, but this didn't stop Howard Scott. Enamored by his own grandiose schemes, Scott continued promoting his technocratic dreams, including the replacement of money – a product of the "price-based system" – with an economic unit designed around energy measurements.

Howard Scott

In Greenwich Village, Scott was "haranguing all who would listen."[24]

And someone from Columbia University was listening: Former Alliance member Professor Walter Rautenstrauch, chairman of Columbia's prestigious Department of Industrial Engineering (the first of its kind in the United States) still saw the validity of Technocracy (Note: Scott was rooming with another Columbia figure at the time, M. King Hubbert, later known as the father of "Peak Oil"). Now a new project started: Rautenstrauch and Scott formed the Committee on Technocracy. Professor Rautenstrauch then introduced Mr. Scott to Nicholas Murray Butler, the President of Columbia, and the door of opportunity opened. [25]

Michael Rosenthal, Professor of Humanities at Columbia University, explains Butler's excitement.

> "Enthralled by Scott's messianic fervor, Butler invited him in 1932 to come to Columbia, working in the Department of Industrial Engineering, to conduct research into the history of American industrial development as seen through a complex series of energy measurements. When it became known in August that Scott

and his fellow technocrats were established at Columbia, interest in Technocracy exploded. A dance was named after it, Scott became a sought-after speaker, and *The Nation* proclaimed his theories revolutionary. Butler tried to dampen expectations about its potential… but it was clear that he was excited to have captured it for Columbia." [26]

Nicholas Murray Butler

Time Magazine called Technocracy "good meat to Nicholas Murray Butler." [27] And the January 17, 1933 edition of the *Berkeley Daily Gazette* was quick to point out that "without the cloak of Columbia University," technocracy would have remained in "obscurity." [28] Columbia was the goose that laid the golden egg for Technocracy.

All of this took place in the earlier phase of the Great Depression. With this economic crisis as the backdrop, and now linked to one of the most influential universities, Scott was hailed as a man "spouting a gospel of salvation." [29] From the platform of the Columbia his grandiose vision of the engineered society sparked a firestorm of excitement and hope, and the hype spread beyond America's borders. William Akin explains,
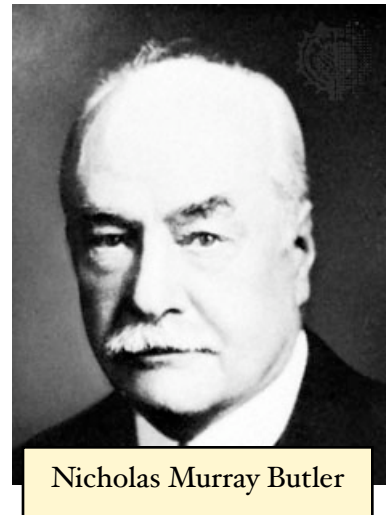
> "In 1932-33 the ideas of the technocrats overshadowed all other proposals for dealing with the crisis… Newspapers spread technocracy across the front pages; periodicals devoted more features to it than to Franklin D. Roosevelt; spontaneous organizations and study groups sprung up across the United States and spread across the boarder into Canada. For a moment in time it was possible for thoughtful people to believe that America would consciously choose to become a technocracy." [30]

For the masses struggling to make ends meet, the "engineered society" offered a wonderful vision,

> "A job for everyone between the ages of 25 and 45; support by the state after 45; 16-hour working week; no debts; more and higher quality of goods; and a standard of living corresponding to at least a $10,000-a-year income." [31]

Ten-grand was a tidy sum in those days. In a society torn by unemployment, this bright vision of technical prosperity shone like a new Sun. Mechanization and automation, harnessed for efficiency and guided by non-biased experts would rescue all. The great and ostentatious Howard Scott looked to be a hero; "Science, in short, in the person of Howard Scott, come to save the world." [32]

Harking back to Veblen, who died in 1929, the Committee on Technocracy started a survey of North America's material resources. Data was being compiled in Columbia with the vision of forming a Technate – the ordering of the continent along technical lines. Proposals were discussed for a money replacement: "Energy Accounting" or "Energy Certificates." And a hydrology study was initiated with the idea of diverting entire river systems, including Canadian waterways, into an efficient means of trans-continental transportation and hydropower. Socially speaking, Technocracy ridiculed Biblical standards while upholding Darwinian evolution, thus behavioral approaches to human management were taught in its 1934 *Study Course*. [33]

Harold Loeb, a (former) comrade of Scott and Veblen, was even willing to tackle sexuality in a scientific manner as opposed to the "taboos, originally imposed by Christian and Calvinist dogma." [34] From the perspective of Social Darwinian eugenics, and foreshadowing today's trans-humanist movement, Loeb stated that,

> "Technocracy envisages another form of domestication, a form in which man may become more than man… Technocracy is designed to develop the so-called higher faculties in every man and not to make each man resigned to the lot into which he may be born… Through breeding with specific individuals for specific purposes… A technocracy, then, should in time produce a race of men superior in quality to any now known on earth…" [35]

A new, high-powered way of creating and managing material wealth and human relationships sounded good to a desperate America. Across the US, other Technocracy organizations were birthed, including the Technocratic Party, which wanted to make Howard Scott the *dictator* of
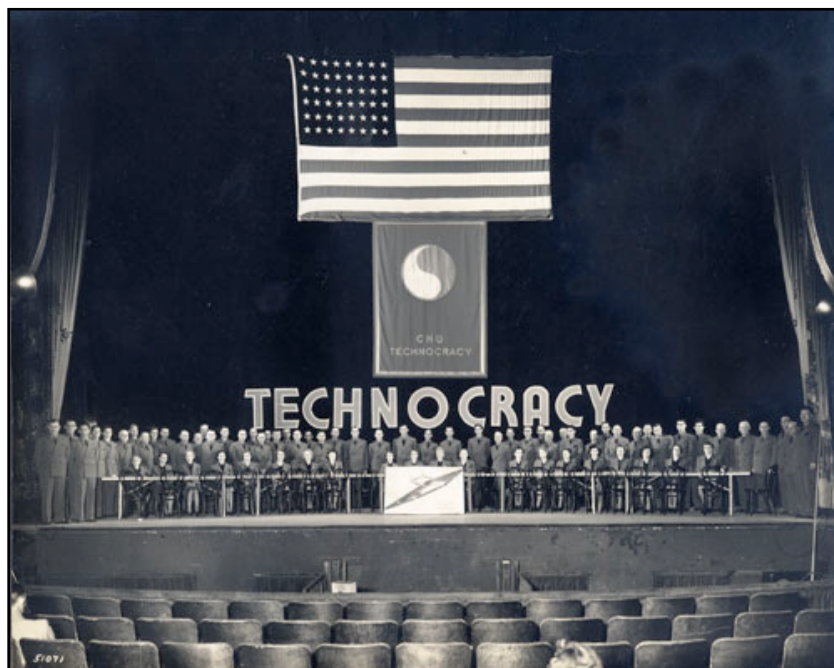
North America. Another group, the American Technological Society, "proposed the use of the Soviet Union as a model for the new order."

Institutions of higher learning gravitated to the progressive concept of Technocracy. Elements were either embedded in, or spread to universities far and wide; the California Institute of Technology, Cornell, the New School for Social Research (started by Veblen and American Fabians, and now known as The New School), the Massachusetts Institute of Technology, the University of Chicago, and many others had professors with Technocratic leanings.

In Canada, Technocracy was making headway in the Western Provinces. This was the same period when the Co-operative Commonwealth movement swept the prairies. The 1933 *Regina Manifesto*, although not an official Technocracy document, had a distinctive technocratic flavor in its call for the "planned society."

> "The [Co-operative Commonwealth calls for the] establishment of a planned, socialized economic order, in order to make possible the most efficient development of the national resources and the most equitable distribution of the national income.
>
> The first step in this direction will be setting up of a National Planning Commission consisting of a small body of economists, engineers and statisticians assisted by an appropriate technical staff.
>
> The task of the Commission will be to plan for the production, distribution and exchange of all goods and services necessary to the efficient functioning of the economy; to co-ordinate the activities of the socialized industries; to provide for a satisfactory balance between the producing and consuming power; and to carry on continuous research into all branches of the national economy in order to acquire the detailed information necessary to efficient planning… It is now certain that in every industrial country some form of planning will replace the disintegrating capitalist system." [36]

Nazi Germany too witnessed a Technocracy upswing. In 1933, *The New York Times* noted that Germany was "rising to the heights of prosperity through the proper application of technocracy." [37] Dr. Gottfried Feder, the author of early Nazi economic theories, [38] told an audience in Danzig that,

> "National socialism… realizes that mighty technical tasks and possibilities have remained which can only be solved by the planned mobilization of technique… the wealth of every people is measured by its capacity to organize its resources." [39]

Germans formed their own technocratic groups. The Technokratische Union, which had an office in Berlin, was in contact with Howard Scott *while in Columba*, and dreamed of jointly "cre-

ating an international technocratic organization." [40] And the German Technocratic Society produced a journal that published articles translated from the American Technocrat side. [41]

As National Socialism gained in power, these Technocracy groups dissipated under pressure from the Nazi regime. According to an essay in *Science, Technology and National Socialism*, "The Third Reich had room for individual technocrats, but not for a technocratic movement." [42]

Nevertheless, the ideals of technocracy as a system of social control were well rooted in Nazi operations; "...by the end of the war and the 'Thousand Year Reich', technocracy – and with it science and engineering – was emerging as one of the most powerful and last pillars of the National Socialist state." [43]

Strains of National Socialism also visited Howard Scott. One of his organizers, William Knight, worked for an American subsidiary of the German aviation industry. According to Akin's history of Technocracy, Mr. Knight "introduced paramilitary features to the organization." This included the wearing of a grey, double-breasted suit with a red and white yin-yang monad pinned to the cloth, and a special salute. [44] By 1940 individuals could order "Technocracy Grey" as an option for Mercury, Ford, Nash, and Chevrolet cars. [45]

In the brief span that Technocracy was in Columbia, the techno-ideal had spread internationally. In fact, had the Committee on Technocracy not come under the umbrella of Columbia, it's doubtful if Scott would have gone much beyond Greenwich Village, no matter how outspoken he was.

Scott was certainly the mouthpiece for Technocracy, but his tongue was a double-edged sword. His dynamism was appealing, but he was arrogant, and he became publicly abrasive. The Committee started to falter, and then collapsed.

What happened? Two developments occurred almost simultaneously. A split happened when Dr. Rautenstrauch found himself squarely facing the reality of Technocracy – the ascribing of "limitless powers to engineers" and absolute social engineering. [46] In a word: *dictatorship*. It was time for the professor to distance himself from what was looking like a subversive movement.

At the same time Howard Scott was unraveling in the media. His larger-than-life persona had caught up with him. It didn't help that when questioned he often refused to give tangible responses, and at times silenced questioners with a "pontifical belch." [47] After all he was Howard Scott, "the greatest prophet since Jesus Christ." [48] Hence, in the last days of 1932, *Time* magazine had framed his character in one line: "Technocracy was an idea; he was its intelligence; his

person and personality did not matter; listen and understand, if you can, but do not interrupt or pry into Howard Scott." [49]

Finally, in a highly publicized radio address given in front of the New York Society of Arts and Sciences, Scott fell apart. His speech was clumsy and in anger he refused to answer queries from the floor. Proverbs 16:18 tells us: "Pride goes before destruction, a haughty spirit before a fall." Even thought Howard Scott disdained Christianity, he seemed to live that verse.

Columbia, and more importantly President Butler, was now on the hot seat. By providing a home for Technocracy, Butler had given Scott enormous credibility. Now, Butler had to evict and distance himself from the dissolving Committee. But something happened on the way out that demonstrated staying power.

The month the Committee was expelled, President Butler announced the creation of a special task force to examine technological progress in the nation. Named to the commission were Edmund Day of the Rockefeller Foundation, Fabian socialist Walter Lippman, Alvin Johnson from the New School of Social Research (Veblen's university), Benjamin Anderson from Chase National Bank, and an assortment of professors from Yale, Harvard, and the University of Chicago.

Bulter explained, "The inquiry will be directed in particular to the technique of production and the technique of exchange… for the service of society." The topic of choice: The price-based economy and the adequacy of the present system in respect to "social welfare." [50] In other words, Technocracy.

This *wasn't* ironic. Technocracy was a perfect fit for Columbia. For as we will see, the heartbeat of Technocracy – complete with its design for social control – paralleled the heartbeat of one of the most important international figures of the day. And this individual, whose goal was the remaking of the world, resided in Columbia. From his ivory tower this man surrounded himself with the most important personalities; flirted with the most promising movements, including fascism; and partnered with the most powerful players. His core resonated with the ideals of Technocracy.

Without this individual and his phenomenal power matrix, Technocracy wouldn't have spread as fast or far as it did. This Columbia-man was, arguably, the "most brilliant mind in the educational and political life of America." [51] And if we want to understand how power flows, how Technocracy took firm root, and how today's quest for global governance – international management – fits in, we need to examine the remarkable life of *Nicholas Miraculous*.

Part 3 coming soon.

Carl Teichrib is the editor of Forcing Change (www.forcingchange.org).

Endnotes:

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2. Howard Scott, 1970 speech.

3. Richard Hofstadter, *Social Darwinism in American Thought* (George Braziller, 1965), p.155. For more on Veblen's evolutionary concepts of economics, see pages 152-156.

4. George Liagouras, "Socio-economic evolution and Darwinism in Thorstein Veblem: A Critical Appraisal," *Cambridge Journal of Economics*, 2009, 33, p.1053

5. William E. Akin, *Technocracy and the American Dream: The Technocrat Movement, 1900-1941* (University of California Press, 1977), p.12.

6. Thorstein Veblen, *The Engineers and the Price System* (Batoche Books, 2001. Originally published, 1921), p.89.

7. W.H.G. Armytage, *The Rise of the Technocrats: A Social History* (Routledge and Kegan Paul, 1965), p.222.

8. W.H.G. Armytage, *The Rise of the Technocrats*, p.221.

9. As quoted in Armytage, p.223.

10. Armytage, p.226.

11. Armytage, p.226.

12. Armytage, p.223.

13. Armytage, p.222.

14. Armytage, p.238.

15. Armytage, p.239.

16. Thorstein Veblen, *The Engineers and the Price System*, p.102, 103.

17. Thorstein Veblen, *The Engineers and the Price System*, p.102.

18. William E. Akin, *Technocracy and the American Dream,* p.25. See also Veblen, *The Engineers and the Price System.*

19. William E. Akin, *Technocracy and the American Dream*, p.29.

20. William E. Akin, Technocracy and the American Dream, p.30.

21. William E. Akin, *Technocracy and the American Dream*, p.34.

22. David Adair, *The Technocrats, 1919-1967: A Case Study of Conflict and Change in a Social Movement* (Simon Fraser University, thesis, January 1970), p.18.

23. William E. Akin, *Technocracy and the American Dream*, pp.36-37.

24. David Adair, *The Technocrats, 1919-1967*, p.21.

25. William E. Akin, *Technocracy and the American Dream*, p.61.

26. Michael Rosenthal, *Nicholas Miraculous: The Amazing Career of the Redoubtable Dr. Nicholas Murray Butler* (Farrar, Straus and Giroux, 2006), p.422.

27. "Technocrats Expelled," *Time*, January 30, 1933.

28. "Technocracy from Various Angles," *Berkeley Daily Gazette*, January 17, 1933, p.4.

29. Michael Rosenthal, *Nicholas Miraculous,* p.421.

30. William E. Akin, *Technocracy and the American Dream*, pp.x-xi.

31. "Technocracy, Which Promises New Deal for Common Man, Puzzles America," *The Lodi Sentinel*, Editorial section, January 26, 1933, page 2.

32. Michael Rosenthal, *Nicholas Miraculous*, p.422.

33. *Technocracy Study Course* (Technocracy Incorporated, 1934), Lesson 20: The Nature of the Human Animal.

34. Harold Loeb, *Life in a Technocracy: What It Might Be Like* (Syracuse University Press, 1933/1996), p.171.

35. Harold Loeb, *Life in a Technocracy*, pp.174-178. Although this quote is pieced together from different pages, it accurately reflects the central biological theme found in chapter 6.

36. *Regina Manifesto*, 1933. Point #1, Planning.

37. "Hitler Demands Troops Lead Reich," *The New York Times*, August 21, 1933.

38. Franz Neumann, *Behemoth: The Structure and Practice of National Socialism, 1933-1944* (Ivan R. Dee, 1944/2009), p.229.

39. "Hitler Demands Troops Lead Reich," *The New York Times*, August 21, 1933

40. "Germans Modify Our Technocracy," *The New York Times*, January 23, 1933. According to Ernst R. Berndt, in a Massachusetts Institute of Technology discussion paper, Howard Scott left the Columbia campus in March 1933. See Mr. Berndt's paper, *From Technocracy to Net Energy Analysis: Engineers, Economists and Recurring Energy Theories of Value* (MIT Discussion Paper N. 11, Studies in Energy and the American Economy).

41. Monika Renneberg and Mark Walker, "Scientists, engineers and National Socialism," *Science, Technology and National Socialism* (Cambridge University Press, 1994), p.5.

42. Monika Renneberg and Mark Walker, "Scientists, engineers and National Socialism," *Science, Technology and National Socialism*, p.5.

43. Monika Renneberg and Mark Walker, "Scientists, engineers and National Socialism," *Science, Technology and National Socialism,* p.9.

44. William E. Akin, *Technocracy and the American Dream*, pp.100-101.

45. Letter from Technocracy Incorporated headquarters, November 30, 1940. Subject: Symbolization of Technocracy.

46. William E. Akin, *Technocracy and the American Dream*, p.96.

47. "Science: Technocrat," *Time Magazine*, December 26, 1932.

48. William E. Akin, *Technocracy and the American Dream*, p.111.

49. "Science: Technocrat," *Time Magazine*, December 26, 1932.

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51. Michael Rosenthal, *Nicholas Miraculous*, p.7.

Smart Grid: The Implementation of Technocracy?

By Patrick Wood (www.augustreview.com)

Introduction

According to the [United Nations Governing Council of the UN Environmental Programme](#) (UNEP), *"our dominant economic model may thus be termed a 'brown economy*." UNEP's clearly stated goal is to overturn the "brown economy" and replace it with a "green economy."

> "*A green economy implies the decoupling of resource use and environmental impacts from economic growth... These investments, both public and private, provide the mechanism for the reconfiguration of businesses, infrastructure and institutions, and for the adoption of sustainable consumption and production processes*." [p. 2]

Sustainable consumption? Reconfiguring businesses, infrastructure and institutions? What do these words mean? They do not mean merely reshuffling the existing order, but rather replacing it with a completely new economic system, one that has never before been seen or used in the history of the world.

This paper will demonstrate that the current crisis of capitalism is being used to implement a radical new economic system that will completely supplant it. This is not some new idea created in the bowels of the United Nations: It is a revitalized implementation of Technocracy that was thoroughly repudiated by the American public in 1933, in the middle of the Great Depression. The Technocrats have resurfaced, and they do not intend to fail a second time. Whether or not they succeed this time will depend upon the intended servants of Technocracy, the citizens of the world.

Indeed, the dark horse of the New World Order is not Communism, Socialism or Fascism. It is Technocracy.

Background

Founded by Howard Scott and M. King Hubbert in 1932 during the Great Depression, Technocracy proposed a radical new solution for the world's economic ills. In 1932, Harry A. Porter wrote in *Roosevelt and Technocracy*,

> "*Just as the Reformation established Religious Freedom, just as the Declaration of Independence brought about our Political Freedom, Technocracy promises Economic Freedom*." [Foreward, iii]

Porter's plan included abandoning the gold standard, suspending the stock exchanges and nationalizing railroads and public utilities. Freedom notwithstanding, Porter then called for President-elect Franklin D. Roosevelt to be sworn in as Dictator rather than President so that he could overturn the existing economic system in favor of Technocracy: "*Drastic as these changes*

from the present order of things may be, they will serve their purpose if only to pave the way for the Economic Revolution - and Technocracy." (p. 63)

If Technocracy had truly been extinguished before the onset of WWII, we would not be concerned about it today. However, when Zbigniew Brzezinski wrote *Between Two Ages: America's Role in the Technetronic Era* in 1968, it was essentially a Neo-Technocratic treatise calling for a fourth and final stage of world history, or the Technetronic Era.

When David Rockefeller picked Brzezinski to co-found the Trilateral Commission in 1973, it was with the specific goal to create a "New International Economic Order." Without some knowledge of historic Technocracy, exactly what the Trilateral Commission ultimately had in mind with such a goal could not possibly have been understood.

Today, it is necessary to rethink these issues in order to determine a) if this radical movement is still operating, b) what are their goals and c) how do they plan to achieve their goals.

In *Carbon Currency: A New Beginning for Technocracy?*, the subject of historic Technocracy was introduced in the context of creating a new economic system based on energy accounting rather than price accounting. An energy-based accounting system uses "energy certificates," or Carbon Currency, instead of dollars or other fiat currencies. Periodic and equal allocations of available energy are made to citizens, but they must be used within the defined time period before they reach an expiration date. Furthermore, the ability to own private property and accumulate wealth would be deemed unnecessary.

The pressing and unanswered question is how would such a Technocratic system actually be implemented?

This paper will now address the strategy, tactical requirements and progress of establishing an energy-based Technate in North America. ["Technate" is the term used to describe the geographic region operated according to Technocracy. Thus, a North American Technate would include Canada, Mexico and the U.S. and they would all be under common control.]

Requirements

The *Technocracy Study Course*, written by Howard Scott and M. King Hubbert in 1932, established a detailed framework for Technocracy in terms of energy production, distribution and usage.

According to Scott and Hubbert, the distribution of energy resources must be monitored and measured in order for the system to work -- and this is the key: *monitoring* and *measuring*.

They wrote that the system must do the following things:

1.   "*Register on a continuous 24 hour-per-day basis the total net conversion of energy.*
2.   "*By means of the registration of energy converted and consumed, make possible a balanced load.*
3.   "*Provide a continuous inventory of all production and consumption*

4.   *"Provide a specific registration of the type, kind, etc., of all goods and services, where produced and where used*

5.   *"Provide specific registration of the consumption of each individual, plus a record and description of the individual."* [Scott, Howard et al, *Technocracy Study Source*, p. 232]

In 1932, such technology did not exist. Time was on the Technocrat's side, however, because this technology *does* exist today, and it is being rapidly implemented to do exactly what Scott and Hubbert specified: Namely, to exhaustively monitor, measure and control every kilowatt of energy delivered to consumers and businesses on a system-wide basis.

It's called: *Smart Grid*.

What is Smart Grid?

Smart Grid is a broad technical term that encompasses the generation, distribution and consumption of electrical power, with an inclusion for gas and water as well. America's aging power grid is increasingly fragile and inefficient. Smart Grid is an initiative that seeks to completely redesign the power grid using advanced digital technology, including the installation of new, digital meters on every home and business in the U.S.

These digital meters provide around-the-clock monitoring of a consumer's energy consumption using continuous 2-way communication between the utility and the consumer's property. Furthermore, meters will be able to communicate with electrical devices *within* the residence to gather consumption data and to control certain devices directly without consumer intervention.

According to a U.S. Department of Energy publication,

> *"The Department of Energy has been charged with orchestrating the wholesale modernization of our nation's electrical grid... Heading this effort is the Office of Electricity Delivery and Energy Reliability. In concert with its cutting edge research and energy policy programs, the office's newly formed, multi-agency Smart Grid Task Force is responsible for coordinating standards development, guiding research and development projects, and reconciling the agendas of a wide range of stakeholders." (See* [The Smart Grid: An Introduction](#)*)*

This is a relatively new initiative, but it is racing forward at breakneck speed. The Office of Electricity Delivery was created in 2003 under President George W. Bush, and elevated in stature in 2007 by creating the position of Assistant Secretary of Electricity Delivery and Energy Reliability to head it.

It is not clearly stated who "charged" the Department of Energy to this task, but since the Secretary of Energy answers directly to the President, it is assumed that it was a directive from the President. There certainly was no Congressional directive or mandate.

Implementation

On October 27, 2009, the Obama administration unveiled its Smart Grid plan by awarding $3.4 billion awarded to 100 Smart Grid projects. According to the Department of Energy's press release, these awards will result in the installation of:

- more than 850 sensors called 'Phasor Measurement Units" to monitor the overall power grid nationwide
- 200,000 smart transformers
- 700 automated substations (about 5 percent of the nation's total)
- 1,000,000 in-home displays
- 345,000 load control devices in homes

This is the "kick-start" of Smart Grid in the U.S. On January 8, 2010, President Obama unveiled an additional $2.3 billion Federal funding program for the "energy manufacturing sector" as part of the $787 billion American Reinvestment and Recovery Act. Funding had already been awarded to 183 projects in 43 states, pending Obama's announcement.

One such project in the northwest is headed by Battelle Memorial Institute, covering five states and targeting 60,000 customers. The project was actually developed by the Bonneville Power Administration (BPA), a federal agency underneath the Department of Energy. Since it is pointedly illegal for a federal agency to apply for federal funds, BPA passed the project off to Battelle, a non-profit and non-governmental organization (NGO), which was promptly awarded $178 million.

It is interesting to note that BPA takes credit for originating the Smart Grid concept in the early 1990's, which it termed "Energy Web." You can see from BPA's graphic depiction that it is comprehensive in scope from production to consumption.
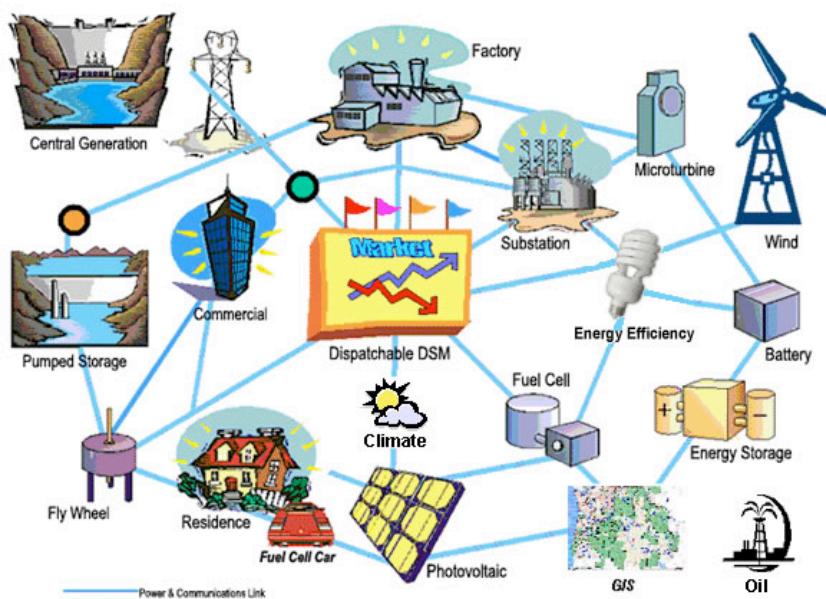
According to [Battelle's August 27, 2009 press release](#),

> "*The project will involve more than 60,000 metered customers in Idaho, Montana, Oregon, Washington and Wyoming. Using smart grid technologies, the project will engage system assets exceeding 112 megawatts, the equivalent of power to serve 86,000 households.*
>
> *'The proposed demonstration will study smart grid benefits at unprecedented geographic breadth across five states, spanning the electrical system from generation to end-use, and containing many key functions of the future smart grid,' said Mike Davis, a Battelle vice president. 'The intended impact of this project will span well beyond traditional utility service territory boundaries, helping to enable a future grid that meets pressing local, regional and national needs'."*

Battelle and BPA intend to work closely together and there is an obvious blurring as to who is really in control of the project's management during the test period.

In a "For Internal Use Only" document written in August 2009, BPA offers talking points to its partners. It states that "*Smart Grid technology includes everything from **interactive appliances** in homes to **smart meters**, substation automation and sensors on transmission lines.*" [Emphasis added]

A Network of Things

As the World Wide Web (WWW) is to people, the Network of Things (NOT) is to appliances. This brand new technology creates a wireless network between a broad range of inanimate objects from shoes to refrigerators. This concept is "shovel ready" for Smart Grid implementation because appliances, meters and substations are all inanimate items that technocrats would have communicating with each other.

For instance, In 2008 the Pacific Northwest National Laboratory (PNNL) developed this small circuit board called a "Grid Friendly Appliance Controller." According to a Department of Energy brochure,

> "*The GFA Controller developed by Pacific Northwest National Laboratory is a small circuit board built into household appliances that reduces stress on the power grid by continually monitoring fluctuations in available power. During times of high demand, appliances equipped with the controller automatically shut down for a short period of time, resulting in a cumulative reduction that can maintain stability on the grid.*"

According to PNNL's website,

> "*The controller is essentially a simple computer chip that can be installed in regular household appliances like dishwashers, clothes washers, dryers, refrigerators, air conditioners, and water heaters. The chip senses when there is a disruption in the grid and turns the appliances off for a few seconds or minutes to allow the grid to stabilize. The controllers also can be programmed to delay the restart of the appliances. The delay allows the appliances to be turned on one at a time rather than all at once to ease power restoration following an outage.*"

You can see how automatic actions are intended to be triggered by direct interaction between objects, without human intervention. The rules will be written by programmers under the direction of technocrats who understand the system, and then downloaded to the controllers as necessary. Thus, changes to the rules can be made on the fly, at any time and without the homeowner's knowledge.

PNNL is not a private enterprise, however. It is "owned" by the U.S. Department of Energy and operated by Battelle Memorial Institute!

All of this technology will be enabled with Wi-Fi circuitry that is identical to the Wi-Fi-enabled network modems and routers commonly used in homes and businesses throughout the world. Wi-Fi is a trademark of the Wi-Fi Alliance that refers to wireless network systems used in devices from personal computers to mobile phones, connecting them together and/or to the Internet.

According to the Wi-Fi Alliance, "*the need for Smart Grid solutions is being driven by the emergence of distributed power generation and management/monitoring of consumption.*" In their white paper, Wi-Fi for the Smart Grid, they list the specific requirements for interoperability posted by the Department of Energy:

1. *Provide two-way communication among grid users, e.g. regional market operators, utilities, service providers and consumers*
2. *Allow power system operators to monitor their own systems as well as neighboring systems that affect them so as to facilitate more reliable energy distribution and delivery*

3. *Coordinate the integration into the power system of emerging technologies such as renewable resources, demand response resources, electricity storage facilities and electric transportation systems*

4. *Ensure the cyber security of the grid.*

   Thus, the bi-directional and real time Smart Grid communications network will depend on Wi-Fi from end to end. This is easily understood from the two figures included in the Wi-Fi Alliance white paper:
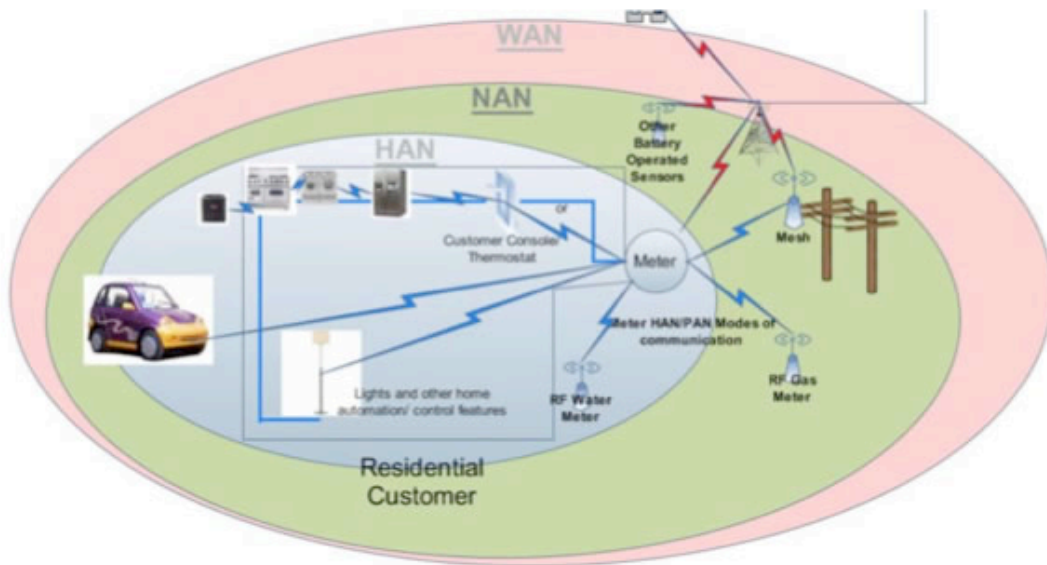

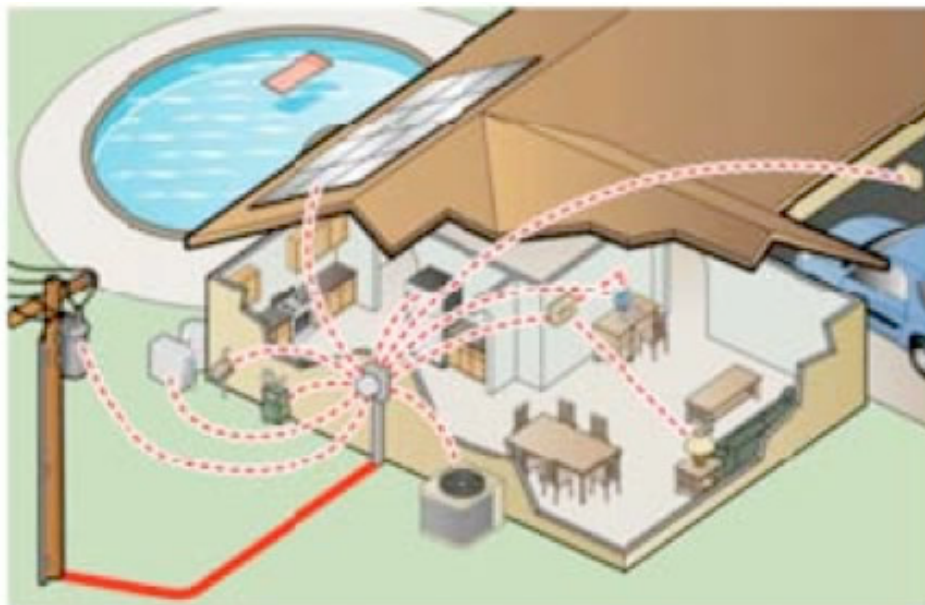**Figure 1: Three Smart Grid Segments**

Figure 2: The Home Area Network

While the consumer is pacified with the promise of lower utility costs, it is the utility company who will enforce the policies set at the regional, national and global regulators. Thus, if a neighboring system has a shortage of electricity, your thermostat might automatically be turned down to compensate; if you have exceeded your monthly daytime quota of electricity, energy-consuming tasks like washing and drying clothes, could be limited to overnight hours.

Smart Grid and the utility's control extends beyond electricity. Notice in Figure 1 above that there is a Wi-Fi linkage to gas and water meters as well!

Consumer Blowback?

Wall Street Journal reported "What Utilities Have Learned From Smart-Meter Tests..." on February 22, 2010, and revealed several important early aspects of smart grid implementation.

- A principal goal is to enable utilities to restructure rate plans
- A principal goal is to force consumer behavior to change
- Some utility executives anticipate and fear a consumer rebellion

Nevertheless, the big carrot for utility companies to go along with the government's Smart Grid is to balance electrical demand, cut back on new power generation facilities and enhance their profit picture.

Before the dust settles on Smart Grid, both consumers and utilities may learn some sharp lessons about government intervention: When the government shows up on your doorstep and offers to help you save money, everyone knows that is an oxymoron. Government does not function to help people or companies to save money or to be more efficient; rather, it functions to maintain and increase its own power and control over its citizens.

Going Global

The UNEP report mentioned above reveals that "*15 percent of the fiscal stimulus funds committed for 2009-2010, which exceed $3.1 trillion, can be regarded as green in nature…most green components are oriented towards energy efficiency and renewable energies in a variety of sectors.*"

A *BusinessWeek* article, "*How Italy Beat the World to a Smarter Grid*" stated on November 16, 2009 that "*After several false starts, 2010 finally could be the year when smart meters go global.*"

Indeed, it is:

- Italy has already implemented Smart Grid technology in 85 percent of its homes nationwide
- Earth2tech.com reports that Smart Grid will generate $200 billion of global investment in the next few years

- The International Electrotechnical Commission (IEC) has laid out a global roadmap to insure interoperability of Smart Grid systems between nations
- Global companies are rushing to gain their share of the global Smart Grid market: IBM, Siemens, GE, Cisco, Panasonic, Kyocera, Toshiba, Mitsubishi, etc.
- China is spending $7.32 billion to build out Smart Grid in Asia.

Other countries with Smart Grid pilot projects already launched include Germany, France, England, Russia, Japan, India, Australia, South Africa and a host of others. Regional organizations such as SMARTGRIDS Africa have been set up to promote Smart Grid in smaller countries.

Thus, the global rush is on. In every case, Smart Grid is being accelerated by government stimulus spending. The global vendors are merely lining up their money buckets to be filled up with taxpayer funds.

As is the case in the U.S., there was little, if any, preexisting or latent demand for Smart Grid technology. Demand has been artificially created by the respective governments of each country.

Conclusion

Smart Grid meets 100 percent of the Technocracy's original requirements as described above. In other words, it will monitor and control both delivery and consumption of energy and other green resources such as water and gas.

The Smart Grid initiative was developed and funded by government agencies and NGO's. It was the Energy Department's Bonneville Power Authority that invented the concept in the 1990's. It was the Department of Energy's Pacific Northwest National Laboratory that invented the Grid Friendly Appliance Controller. It was the Federal Administration that showered billions of dollars over the private sector to jump-start the nationwide initiative to implement Smart Grid in every community.

If the Federal government had not been the initial and persistent driver, would Smart Grid exist at all? It is highly doubtful.

Following the same pattern as the U.S., many other industrialized nations are implementing Smart Grid at the same time, using their own stimulus money. This synchronized implementation is certainly by design, and as such, it implies that there must be a designer. *Who* might be providing such top-down coordination on a global basis must be saved for another paper. One thing is certain: The technology being purchased world-wide all originated in the United States and is being marketed by the same global corporations as mentioned above.

Lastly, there is an assumption throughout Smart Grid literature that the Federal Administration will have full visibility of all data within the Smart Grid, even down to the individual household. They will also be in a position to set national, regional and local distribution and consumption policies, such as your "fair share" of available energy, gas and water.

International standards created for Smart Grid will also enable the U.S. Smart Grid to be connected seamlessly with Canada and Mexico, thus providing a comprehensive North American energy management and distribution system.

Is Smart Grid destined to be a global phenomenon? Yes. Is it designed to support a new global Technocratic, resource-based economic system? Yes.

Technocracy must be seen for what it is: An attempt to impose a totalitarian, scientific dictatorship. In 1933, it called for the inauguration of Franklin Delano Roosevelt as dictator in order to "pave the way for economic revolution." Fortunately at the time, they failed in their attempted coup.

If today's Smart Grid is successfully completed, it will enable the conversion of our existing economic system into something far different and far worse. This is why the American people repudiated Technocracy in 1933, and this is exactly why we (and citizens around the world) should thoroughly repudiate it today.

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Note: In preparing for this report, the editor would like to give special thanks to Dr. Martin Erdmann, Carl Teichrib and Dr. Michael Coffman, for their encouragement, testing of ideas and additional supporting research.

Forcing Change

FC is a monthly, online publication dedicated to documenting and analyzing the socio-religious, political and economic transformations now sweeping our Western world.

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Forcing Change
Box 31
Plumas, Manitoba
R0J-1P0

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