

Leibniz, and embodying the fruits of the collaboration between Huyghens and Leibniz on this matter. Leibniz generalized this to the notions of work and power, defining the notion of *technology*, which he invented, in terms of the general principle of a heat-powered machine enabling "one man to do the work of a hundred."

It also bears directly on our working point here, that Leibniz specified, in the 17th century, the need to develop the cartridge and breech-loaded weapon, and also emphasized the necessary changes in warfare's arms required by such an increase in firepower.

The point we are stressing is that it is a grave error to fall into the *post hoc ergo propter hoc* school of military science, in which the credulous attempt to explain the necessity for certain developments to have occurred in the time and specific sequence they were deployed in history. Once we realize that the naval steam-powered vessel should have, and could have been developed during the first decade of the 19th century, with decisive effects on the strategic outcome, we have confronted ourselves with what should be for many specialists a stunning, health-giving refreshing of their criteria of judgment.

This reflection forces us to look more deeply into the differences between the geometry of Carnot's statecraft and that of Napoleon Bonaparte. It is the peculiarities of the policy-making geometry of the mind of governments which affect the shaping of military capabilities, as well as actions, often to tilt the balance between defeat and victory. It is the whole policy of government which must be considered in this whole overview of strategic thinking, not merely matters deemed military per se by convention.

It instructs us to eliminate from power to make policy decisions those who either underrate the urgency of orienting naval policy to the age of relativistic-beam weapons, or who imagine that we can enter the age of beam weapons while tolerating savage constraints on our NASA and fusion-energy development efforts.

What can be the effect of long-wave phenomena in targeting naval vessels, including submarines? What is the significance of generating gravitational waves in naval as well as land and missile warfare? What is the environment of naval warfare within a geometry in which space-based x-ray or gamma-ray beam weapons can punch through the atmosphere to strike naval craft?

The basic military doctrine of the United States must be to be absolutely first, and a leap ahead of everyone else in both the research and development tasks of the most-advanced technologies, and in not only their general application, but in situating military technology and ordering of the arms of warfare in terms of such technology.

Let us hang a slogan in every naval planner's office: "Think like Lazare Carnot."

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## *The Delphi Method*

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# Has the Pentagon been brainwashed?

by Lonnie Wolfe

A group of men and women are sitting around a large table in a windowless room. At the center of the table is a small TRS-80 computer with a video display terminal. In each of the participants' hands is a small device resembling a pocket calculator, joined by wire to the computer terminal.

At the head of the table sits a man with a large stack of papers. To his left and right sit two nervous gentlemen clutching black looseleaf notebooks. The man at the head of the table begins to speak. "Well crew, you know why you are here. Today's question is: 'If the U.S. government gives sophisticated weapons to China, what will the Soviet Union do? Or more precisely, what is our risk of nuclear war in the near term and in the long term?' The parameters of the aid program and intelligence on the Soviet leadership personality profiles are in the papers you have already received. You've done this before, so you know the ground rules. Let's begin with you, Sam. What are your feelings on the subject?"

Sam speaks for approximately five minutes, followed in turn, by each person at the table. If someone rambles too long, or if he gets off the topic, the man at the head of the table cuts him off curtly saying, "Let's stick to the topic. You know the ground rules. You're a pro."

After each person has spoken, the man at the head of the table speaks again. "Well, you've all said your piece. Let's see if we can get a consensus. You know how to use the consensor. Let's rate the risk of a Soviet nuclear strike on the U.S. on a scale of 1 to 10, with 1 being least likely. Let's do it first for the near term. Please, only press the consensor once."

Each person grabs for his little calculator and pushes the button. A few seconds later, the man at the head of the table, looking at the graph on the video screen, announces proudly, "I do believe we have a consensus."

The Soviets are not likely to launch a nuclear strike in the near term. Let's see if we can strengthen the consensus. Sam, I think you can see now that you were way out of line saying that the Soviets would definitely nuke us. Maybe you would like to revise your feelings on the matter. . . ."

And the process is repeatable.

According to members of the Futures Group, the Connecticut-based think tank, this is how a Delphi session of a program called Political Stability Prospects works, and it is today playing a large role in shaping all U.S. national security doctrine, including the 1981-86 secret consolidated guidance of the Department of Defense.

Prospects was designed by the Futures Group during the Carter administration for the U.S. Joint Chiefs of Staff (JCS). The program forms the core of the JCS Long Range Appraisal and as such is the basis for all U.S. defense posture policies, including such policies as arms sales to the People's Republic of China. Similar programs are also used in the National Security Council and the Haig State Department.

In the growing field known as "strategic risk analysis," the Prospects program and others like it are now dominant. All share the use of the Rand Corporation's Delphi method for manipulating a group of experts toward a rigged conclusion. The Futures Group, as the cream of the Rand Delphi practitioners, boasts the most sophisticated program. It is certainly the most well connected. "We've hooked the Defense Department and the JCS pretty good on our method," brags Futures Group treasurer Hal Becker. "It simplifies their decision-making process."

When boiled down to essentials, Prospects is a series of Delphi sessions linked together by a simple computer program. The specific form of the Delphi computer "razamatazz" is termed Trend Impact Analysis, a system developed by Futures Group founder and president Ted Gordon.

The centerpiece of Prospects is a summary index of the potential for instability in any given country. A yearly time series of destabilizing events is listed, including riots, strikes, and terrorist acts, along with a second time series measuring economic deprivation. A historical index is developed by combining the two.

Then the oracle of Delphi comes in.

"We Delphi a consensus," said a Futures Group member. "We feed this material to a group of experts. They decide how much a political assassination is worth versus a riot or two, or how much a bad harvest should be weighted against growth expectations. We judge perceptions. We look at the way people perceive things both in leadership and in a given country as a whole. It is role-playing on a grand scale. Then we Delphi it. We get a consensus on all the key points, on what the economies

will look like, on the importance of riots, of the growth of terrorism."

The weighted numbers emerging from the Delphi sessions are then plugged into this computer program. Presto. The oracle of Delphi speaks through a computer graph which charts a country's probable instability. This is then presented to the assembled Joint Chiefs of Staff or their representatives. The Prospect printout with appropriate comment is then dispatched to the policy planners, who have their own Delphi sessions and arrive at an action-policy consensus. This is how U.S. security doctrine is made.

At several stages in this Delphi process, the Futures controllers dispatch their patented consensor, the handheld calculator-like device that enables experts to score their feelings on a particular question from 1 to 10 and watch as the consensor tallies their responses on a video screen.

"It is the great equalizer," said Becker, describing the consensor as if it were more than an elaborate adding machine. "Decision-makers or experts, faced with a complicated set of variables will either push themselves to an extreme or they become paralyzed. With the Delphi method and the consensor, we avoid this. We produce a nice neat consensus, so that no single expert opinion matters more than any other. This simplifies things for the people who make the decisions. They will perceive power behind the consensus. They will be more likely to act, especially where the choices are difficult. They feel part of a group, not so alone."

According to Becker, Prospect confirms the worst prognostications of such lunatics as Gen. Maxwell Taylor who has proposed writing off most of the developing sector, letting more than 1 billion people die. "Taylor or somebody like him could scream till he is blue in the face," said a Futures Group source, "but Prospects shows a consensus to policy-makers and will prod them to act—even if they don't like Taylor or his ideas. That is the beauty of the Delphi method. The consensus is what is important, not the people who make it."

The Futures Group has worked for the State Department to plan U.S. response to Third World demands at international conferences for technology transfer. Another Futures Group study, classified, analyzes other advanced sector nations' policies toward technology transfer. By acting against technology transfer programs, the State Department blocks economic development in targeted Third World countries. Prospects shows that there will be "dozens of Irans, El Salvadors, and Cambodias," said Becker. Its results have been used to change U.S. military doctrine toward Taylor's and former Defense Secretary Harold Brown's Rapid Deployment Force. "Why should we have a military to fight wars we are not going to fight," he

said. "The new wars will be population wars in the developing sector. That is where the battlefields will be."

It was pointed out to Becker and his cohorts that policies formulated by the JCS, the State Department, and the National Security Council from Prospects could have the effect of turning trend predictions into self-fulfilling prophecies. "Do we do some things that create instability?" Becker asked himself. "Certainly. You should have asked whether it was intentional. . . . That you have to ask the State Department."

The Prospects program, according to Becker, also routinely analyzes advanced sector nations, including Atlantic Alliance members Italy, West Germany, and France.

### **A consensus for war?**

The obsession of such futures planners as Becker is the Soviet Union. "It is our most important adversary," said Becker. "It is our biggest mystery, the key to all our other puzzles. . . . You bet we are obsessed a little with it."

Becker and other Futures Group Delphi planners feel that what they call the "Soviet Empire" is entering into a period of decline that will occur over decades.

Their idea is to persuade the Soviet leadership that succeeds Brezhnev into accepting a "new Yalta" agreement—global redivision that would hold until internal contradictions would begin to rip the Soviet bloc apart. In the meantime, the Soviets can be induced into building a costly moat around their country, as the NATO allies trigger instability along the Soviet border. The Soviets, say Becker and his futurists, would react militarily to each of these provocations, moving as they did in Afghanistan. To accomplish this strategy, countries on the Soviet border like Pakistan and Turkey would have to be sacrificed, explains Becker.

"We throw the bear some bones and hope he chokes on them," said Becker, spinning out his scenario: crises fester in the bloc countries and in the Balkans; Iran plunges into anarchy, and the Soviets move in. At this point, the United States deploys its RDF and there is a small shooting war. Tactical nuclear weapons are used, but neither side fires its strategic weapons systems. The fighting quickly stops, and the new Yalta is agreed to.

The new Yalta would not eliminate conflict, but merely provide a code of conflict, eliminating the threat of superpower strategic confrontation.

"We are talking about agreeing on how to crisis-manage things like major population reductions," said Becker. "We want to keep things under control."

Becker, who drafted a new Yalta scenario in a January 1981 document, says that the concept originally met with stiff resistance. Several Delphi sessions later, however, Futures Group people say that it is now the

*operational policy mode*. In other words, the new Yalta is live.

The thinking behind Becker's scenario, as he openly states, is that the Soviet Union will never resort to the first use of strategic nuclear weapons. According to Becker, Delphi groups on this subject produce an overwhelming consensus that a general strategic war cannot happen.

The recently leaked U.S. consolidated guidance, signed by Defense Secretary Caspar Weinberger, is a product of this consensus. According to well-placed sources in the defense community, the guidance was produced by a combination of Delphi planners, including the Futures Group-created planning unit in the Joint Chiefs Long Range Appraisal. In fact, one knowledgeable source reported that the first-strike orientation of the guidance was lifted almost entirely from the JCS planning group, J-5, or five-year-plus strategic planning perspective. J-5 uses the Futures "Prospects" program to develop its baseline estimates.

According to these sources, the Weinberger guidance had three basic purposes, all of which were linked to the concerns expressed in Becker's scenario. The purpose of the leak is to make explicit the threat to strike the Soviets anywhere in response to Soviet pressure in the Persian Gulf, the threat to go to first-use of tactical nuclear weapons, and most importantly, the implicit first-strike capability of the Europe-based Pershing II and the cruise missile systems.

The Delphi planners find the U.S. out-gunned and out-manned *via-à-vis* their Soviet adversary, a fact they admit among themselves, if not always in public. Nonetheless, by threatening first strike, they assume they can bluff the Soviets—or at least keep them out of a strategic nuclear exchange. The United States is operating in what the Delphi planners call a "crazy state" mode, borrowing a concept developed by the Tavistock Institute for Human Relations, the psychological warfare training center of the British royal family. The idea is to create an international, controlled aversive environment, within which to manipulate the Soviets. They define a "crazy state" as a nation whose doctrine is in fact the deliberate manipulation of perceptions in an attempt to create a new strategic reality. By acting insane, U.S. "strategic" thinkers hope to force the Soviets to accept the world on their terms.

But what if the Soviets don't buy the whole scheme? What if they choose instead to launch strategic nuclear war against an unprepared West? What if the Delphi people have miscalculated? "That is not the consensus," said the Futures people. "That is not the consensus. The Soviets won't go to all out war. They just won't." And what if these oracles of Delphi are wrong? "Well, I really don't think that we should spend too much time considering that," said Becker.