

Sunday, November 25th recording summary of JL remarks for the Bilderberg Conference for Friday, November 30, 2001.

I'm assuming you want to hear about anthrax; but I will need to say a few more words after that for a broader context.

Anthrax is a disease much better known to veterinarians than to M.D.'s. It is a recurrent problem in the western plains. It is not unusual to find fields fenced off where animals who have died of anthrax have been buried and the surviving spores are a hazard to other cattle and wildlife grazing thereon. This is very rarely transmissible to humans.

There are two forms, due to the same bug but one enters a break in the skin and causes cutaneous anthrax which is rarely lethal and the other by inhalation which causes a very serious disease which spreads to the thorax and intestinal lymph nodes. Human inhalational cases when they did occur earlier in the century were historically related to wool sorters and people who work with hides and bristles. But the last recognized U.S. case was in 1976. There may have been a handful undiagnosed since then.

In Russia, in 1979, there was a major outbreak at Sverdlovsk involving about 80 lethal casualties which has been traced to a release from a Russian biological weapons R&D facility which has been more or less unanimously omitted.

A good deal of the clinical information we have about anthrax comes from that episode, although to this day we do not really know what the level of dosage was to which people were exposed.

In the current outbreak in Washington and New York and that area, there have been 11 cases of inhalational anthrax; five deaths so far. Almost all of the latter cases were diagnosed very late in the course of the disease and therefore defied treatment.

Anthrax was on the list of offensive BW programs of the U.S. until 1969 and of the U.S.S.R. until well into the 1990's, perhaps even today. Iraq likewise. Anthrax as a human disease is almost synonymous with biowarfare.

We have been surprised at 1) the quality of the dried spore product. The author has plainly done his homework but could readily have gotten the necessary information from open sources and 2) we have all been surprised at the efficiency with which letters have successfully disseminated spores killing not only targeted individuals but also contaminating the postal handling facilities and the mail distribution system.

My own scenarios had included a firecracker, a burster to insure dissemination throughout a post office or other facility. I hadn't counted on the postal machinery providing the necessary boosting.

The current anthrax strain is a fairly common one. It was isolated either in 1950 or 1980 from cattle at Iowa's State University Vet School (perhaps both dates correspond to strains in circulation). It may very well be common as a veterinarian disease today but in any case it

has been maintained in hundreds of laboratories doing some level of research -- almost all veterinary -- there has been very little research on the human disease since it is not likely that you would find many volunteers to test themselves with it and it has been with such low incidence in the human population in the west.

Who dunnit is on everyone's mind. El Queda? Another transnational terrorist? A domestic one? The FBI is leaning towards a homegrown Unabomber, but there is nothing concrete to pin that down. It hardly matters. The genie is out of the bottle, to prove how readily we can be subjected to mass disruption... and if other groups had held back before, they surely will emulate or out do this example.

Mail threats have so much leverage. Unabomber may just decide to continue that harassment, against banks, schools, government offices, any industry you care to name. Then he has recourse to dissemination by every consumer product on the supermarket shelves. Our quest for perfect safety will necessitate mass evacuations -- and lawsuits against employers who hesitate.

Some 32,000 people have been formally medicated with cipro and other antibiotics. Who knows how many more took these antibiotics on their own. A vast experiment on the possible low level of side effects in a normal human population which the FDA is now investigating. Well, I really don't want to go on in this vein, and particularly not to obscure much larger scale attacks, for which the letters may be merely a prelude.

Taking account of the dearth of our fundamental knowledge about anthrax as a disease, our public health precautionary measures have worked reasonably well when viewed on a population risk basis. We can expect some marginal improvement if we are as may be reasonably well predicted to continue to be the brunt of attacks of this kind in future. Perhaps we will detect the occurrence of anthrax sooner; perhaps we can be more precise about its distribution but, of course, our attackers will be even more ingenious about where they will locate them so as to produce the maximum consequences.

Short of an eradication of terrorist intentions at their very numerous sources, it's very difficult for me to be optimistic about our being freed of these kinds of moderate level of harassments for the indefinite future. Although they may not be so moderate in their overall effect on our morale and on the economy. There is still a fairly modest price to pay compared to the penalty exacted by large scale warfare.

My own intention had been primarily focused on mini-scale and large scale attacks which still have to be a matter of some concern and for these we are in the process of developing remedial measures that we can expect or at least blunt their force, mitigate the casualties, let's say in the extreme case from being 90% of the attacked population to some much smaller percentage. Still a very greivous hurt but the conversion of a major catastrophe to a middle sized one where many thousands or hundreds of thousands of lives may be saved as a result of our careful precautions. These involve everything from the perfection of our diagnostic methodology environmental clean-up, research and development of new and improved vaccines and of medications with treatment of disease when it cannot be prevented.

So the bright side of the current anthrax episode is the warning it has given us to impel the development of much more far reaching public health and precautionary measures. In the largest sphere we can hardly begin to forget bombs and arson directed at our infrastructure with as much loss and suffering in the long run as as the lives lost at Ground Zero. We do need -- and this is going on -- a critical analysis of the techno-fragility of our economy: an imaginative forecast of our principal chokepoints. Some are already familiar in discourse, our telecommunications and electric power switching nodes, our municipal water supplies, our bridges and tunnels. Some may be less obvious: critical parts and devices ultimately dependent on a single manufacturer. Then, how do we defend and harden these critical assets.

While all this is going on, how to conserve our social capital which has been inherent in a civil free society?

I do plead for pre-planned consequence management on a substantially larger scale than is now practiced that can mitigate if not totally neutralize the hazards of bioattack. I do not offer much encouragement for deep seated comfort and security, but remind myself that worst case only eventuates part of the time: we haven't had gasoline trucks sent crashing into banks or skyscraper office buildings every day of the week, although that has been technically feasible.

In quest for answers, it is important that national security has been redefined, and that many minds are being exercised with these problems for the first time. At a technical level, research on a new anthrax vaccines and drugs that treat smallpox is being re-energized as we speak. Perhaps the most formidable problem we face is the dis-organization of government to cope with the disparate missions of public health, security and law enforcement. OK, let's see what Governor Ridge can do about that, especially if he really does have President's Bush's ear.

On the broader horizon, we have come to realize we need to win allies for this war. I won't go into that can of worms at a political level. I do think that we can do well by demonstrating still more leadership than we already do in a unified global campaign against all disease. TB, malaria, AIDS, overseas, as well as against the anthrax that ~~daily~~ afflicts this capital city of the world

newly

End of this segment.

BW civil defense challenges. Patterns of response

Prevention is next to impossible.

Complicated interweaving of policy and arcane microbiology

Objectives are damage-limitation and successful prosecution.

- **Detection of outbreak**
 - diagnosis of index cases
 - differentiate natural disease
 - environmental assessment
- **Triage of those exposed**
 - prophylaxis and treatment where appropriate
- **Coordinated public information authority**
 - to forfend stampede
- **Decontamination**
 - Protective gear
 - Pre-immunized disaster-mitigation personnel
 - Efficacy assay
- **Containment against further spread**
 - Prospects of epidemic?
 - [mailbags!]
- **Contingency plans for mass therapeutics**
- **Laying groundwork for law enforcement**
 - Certification of physical evidence
 - ID and apprehension of suspects
- **BDA -- battle damage assessment**
 - e.g. disruption of mails

BW civil defense challenges. Modalities of attack

Any medium that can carry particles to large numbers of people:

- Aerosol from high building; airplane (crop-duster)
mobile truck or boat cruising river
[above probably at night]
Crowded stadium -- vulnerable crowds!
- Air intakes -- major buildings, tunnels
- Local branch water main
- Foods: milk, bottled water, fresh fish and meat markets
- Transportation media: subways, tunnels
- Mechanical dissemination: letters, newspapers
... any consumer products
- May be combined with explosives, hindering rescue

- Informational media -- threats
Capt. Midnight

Short term research priorities

**Diagnostics - clinical - for triage
including drug-susceptibility**

**Diagnostics - environmental for safety assurance
early detection of major outbreak**

**Natural history of anthrax - insight
for diagnosis and management**

Anthrax vaccine R&D

**Variola vaccine R&D
assurance for immunocompromised**

Viral chemotherapy - to match antibiotics

Attack modeling