

communities in this country by the policies they are setting up."

Mattox continued: "Mr. Speaker . . . I feel . . . embarrassment when we have the Federal Reserve come before our committee and see them engage in just a callous disregard for the industries of America, particularly when we see the automobile industry just on its knees and going into bankruptcy and when we see all the big homebuilders, unable to even operate at anywhere near a profitable level based on the monetary policy that is being followed.

"I think we are going to continue to have this kind of problem until this Congress draws unto itself the power that was granted to use by the Constitution, the power over the money system and the money supply. . . . Until we get the power and draw it unto our own bosom, we are not going to be able to solve this problem.

"When we have the Federal Reserve floating around and we have a man like Mr. Volcker there just exercising that arrogance, things are going to be bad not only for our country but it is obvious things are going to be bad for our party also. [Representative Gonzalez] and I know that. It is time that we took this power unto ourselves and got the people to work with it.

"It is unfortunate that Mr. Volcker and the present administration have the exact same philosophy of trying to solve this inflation problem with high interest rates. They do not seem to understand that high interest rates feed inflation. . . . They are forcing inflation higher and causing more and more problems."

Gonzalez took up the theme of the political ramifications of the Fed's high interest rates. "Let me say that . . . unless and until the Congress does something about it, nothing is going to be done about high interest rates. High interest rates are just one of the concomitants deliberately and premeditatively brought about by the usurious [policies which] drain the lifeblood of our businessmen, the real business element of our country . . . not the mastodons who are struggling over the huge resources of banking credit that seem to be available in order to knock off another giant such as Conoco, and not the speculation which has played into the hands of the speculators in Zürich, Switzerland, in London . . . they have lost literally the economic shirts of the American people and the average small businessman."

Referring to this distinction between productive and nonproductive, purely speculative uses of capital, Gonzalez concluded: ". . . the choice is between abdicating the only vested national and international leadership that we have in the world toward a new and unselfish world order, economic, and not reviving—and this is what we are doing—an old-world economic system which has been tried over and over and failed, and through which I believe the American people will be doomed to economic slavery."

---

## Interview

---

# DOD's DeLauer talks about technologies

*Dr. Richard DeLauer is the undersecretary of defense for research and engineering. For more than 20 years before assuming his current position, DeLauer was with TRW, one of the nation's foremost high-technology corporations, where he directed fusion energy, laser isotope separation, and other programs. The interview with EIR's Stanley Ezrol was conducted on Aug. 10, the first business day after the Defense Department's controversial announcement on neutron bombs.*

**Ezrol:** What major military technologies is the United States interested in developing, and what priority do we place on each?

**DeLauer:** As you know, very high speed integrated circuit technology is being pursued vigorously, and its initial capabilities are better signal processing, which is the whole story of antisubmarine warfare, for example.

**Ezrol:** What percentage of our R&D budget is in that area?

**DeLauer:** It's a small percentage, around a quarter of a billion dollars. But on the other hand, there's an awful lot of research being done in the private sector. They're investing more than the Department of Defense is.

**Ezrol:** What sort of priority do we place on the development of space-based ABM systems?

**DeLauer:** We're getting a pretty good start on the phenomena-oriented research: We have a pretty good program, as best as can be carried out with the kind of people involved, what it takes to do it, and the resources—not the dollar resources, but the intellectual resources. I think the program is structured pretty well. We're not pushing toward the device end yet, because it's not clear that we know all of the answers on (1) how to do it and (2) what are the countermeasures.

**Ezrol:** In your view, what are the requirements for a system of that sort in terms of industrial capabilities,

civilian technological capabilities, manpower, and so on?

**DeLauer:** Well, you need good high-energy physics people. It's a marriage of the national labs who are doing a lot of work on the physics side of it, particularly as it pertains to the correlation between that work and weapons work, and the industrial side of it, to be able to eventually design and produce and test it—a real operational system—and that's not exactly right around the corner.

**Ezrol:** Do you have any assessment of where the Soviets stand on the way toward developing such a system?

**DeLauer:** No, nothing but what I read in *Aviation Week & Space Technology* and in your publication. You guys are the experts. Old Robbie [Lt. Flood] here told me you guys are supposed to know more about it than anybody else.

**Ezrol:** The requirements for such a system would be a space station and high-energy plasma-generation equipment. In the area of space-station deployments, the Soviets seem to be ahead of us.

**DeLauer:** Well, I don't know. What's a space station? We had one, we had a space station in orbit. The orbiting lab [Skylab] was up there—that's a space station. The Soviets have had a bit more activity of late because we've been putting the development money into the Space Shuttle. The Shuttle is supposed to be the forerunner of the Space Transportation System. Until we get that in business, really going, I think space-station activity is just a matter of spending money and putting the stuff up there, and we've shown that we can do those things.

I don't think the space station is the key to weapons in space, however. The key to defensive weapons in space has to do with survivability and capability. That's more than just being able to generate a high-energy stream of electrons or particles. You must have pointing accuracy; you must have target acquisition; you must have all the things that make a weapon out of it. If you look at some of the schemes for generating streams of electrons, they use pretty precise equipment. Take a look at the magnetic fields required, for example, and the precision in tailoring the magnetic fields generally. At least the ones I'm familiar with are permanently set in big pieces of concrete so they don't move around. You've got to re-engineer that into a space-borne capability, which certainly can't be in the same form. You've got to have different types of engineering.

**Ezrol:** Are we concerned that the Soviet SS-20 would be able to target U.S. submarines in the North Atlantic, the Mediterranean, and other areas?

**DeLauer:** Yes, I think everybody should have some concern with that. But again, that depends on their targeting capability and their ability to predict. For the

SS-20 at that range, even given the best trajectory, it must have at least a 12- to 15-minute flight time. If that's the case, you've got to be able to predict where it's going. But on the other hand, with the advent of the Trident system you're moving farther and farther away, well out of the range of the SS-20.

**Ezrol:** Are you satisfied that the economy can provide the sort of industrial base that we'll need for high-energy beam weapons and other advanced technologies? Studies indicate that the current high interest-rate situation is depleting the sort of capital base that we need.

**DeLauer:** I'm satisfied to a degree, but not completely. We'd like to see people who really would like to make investments in advanced technology, but that's not the case right now. People are not making large investments into programs that have a payoff in 10 or 15 years. The industrial environment doesn't seem to lend itself to that. You hope the new tax bill and some of the things we're trying to do will encourage that. Look at the sorry state we're in because we didn't make investments in beating the Japanese in making a little car until it was forced on us.

Long-term investments are not a very attractive option to many industrial managers. When the profit rate and the inflation rate are 10 percent, the return on assets employed has got to be almost double that in order for you to just keep up with about 5 percent real growth. And that's hard to do with a program like space-based lasers. That's why more people will get into very high speed integrated circuits. There you don't have any problem of high interest rates keeping people from making investments.

**Ezrol:** Are we having to orient our development of technology and of weapons systems to a lower cultural level, a lower literacy level within the armed forces?

**DeLauer:** We haven't attempted that. You know, it's always a question for discussion, but I don't think that's the issue. I think the issue is how you train them. To see the same group of young people you're talking about, go to any arcade where they've got Atari games, Space Cadet, and all the games they're playing. They seem to be able to handle that sort of stuff. Now you have a problem with maintenance and so on, but I think that can be addressed with proper training and proper equipment design.

I think it's a much broader issue than just the Department of Defense. We haven't been successful in raising the standards of education; if anything, the standards have been going down. There's some evidence that they've flattened out, but it's not clear whether they've flattened out to go up or to be on a plateau. We haven't been successful in creating an overall literacy capability. Kids don't read as much and comprehend as well. We're

educating more of them, so you'd think we'd have more bright ones, but we're not doing that well.

Certainly, we're not educating enough engineering and scientific and technical people. We're starting to pick up a little now, but we've neglected most skills for a decade. Not only academic skills, we've neglected very high grade blue collar skills—tool-makers, electronic technicians, and the like—that we'd like to have in our overall industrial capability, let alone the DOD. We've neglected it, and we have to redress that.

**Ezrol:** One area you're familiar with from your civilian experience is plasma physics and related research. We've looked closely at the importance of understanding Bernhard Riemann's work on shock waves propagated through an infinite cylinder, which has relations both to hydrogen bomb technology as well as to high-energy beam-weapon technology. It's our assessment that this is much better understood among Soviet physicists than among Americans.

**DeLauer:** Well, I wouldn't sell the American scientists short. How many guys do you need to understand that and do what we want to do? You don't need a cast of thousands.

**Ezrol:** In the Manhattan Project we had a cast of thousands.

**DeLauer:** The Manhattan Project was a cinch compared to what we're talking about. People keep saying, "go analyze." Look at what the separable parts were. There's the whole question of isotope separation. They had a process called the diffusion process, so they went out and handled the diffusion process all by itself. They went to Oakridge and got a lot of power out of TVA; and they got a good industrialist and he designed it. Then you had the question of criticality, and you had the best guy in the world who understood it all, Enrico Fermi. The hard part was the calculations. We didn't have the thing, so the War Department supported work at the University of Pennsylvania and at Princeton University, von Neumann and the early computers. Then they had the separate plutonium chemistry problem. Then you had Oppenheimer and the Los Alamos crowd, who were worrying primarily about the explosive issue.

But each problem was separable, which is a lot easier than trying to build an airplane or a missile system, in which they've all got to be put together. I was in the bomb business myself.

Developing high-energy beam weapons is a factor of 10 beyond even missiles. Everybody says, "Well, you did the Manhattan Project, so you ought to cure cancer" or "You ought to be able to do beam weapons." The same group that built the atomic bomb had been trying to build beam weapons, and that's called fusion, controlled fusion. We've been trying to do it for 20 years or more.

When I left Los Alamos in 1957 everybody was fighting for who's going to get the Nobel Prize for making the first useful fusion device for energy. We still can't get one sustained really. You use fusion devices and you get power out of them, but you don't get a sustaining one that gives you a net positive contribution. It's a hell of an engineering problem because the parts are all put together, and you've got to make the mirrors, you've got to contain the plasma. Sure, the Soviets claim they have it with the big toroidal thing, but they're still building fission plants and burning oil. I think trying to get controlled beam energy is a damned tough problem.

**Ezrol:** Most publicity over the last few weeks on new military technology seems to be focusing on Pershing II's and cruise missiles. A number of people, including our own contributing editor Lyndon H. LaRouche, Jr., have argued that these are really not very advanced technologies at all.

**DeLauer:** It all depends upon your guidance schemes. I mean the reliability of a thing like that. Some of them have pretty advanced guidance schemes in the cruise missile. That's not exactly a kid's toy, it's a highly accurate system.

**Ezrol:** Would you say that this is a stop-gap, or fallback system given that we don't have the capabilities to go with directed beam systems yet?

**DeLauer:** No, I don't think the cruise missiles or the Pershings have anything to do with defensive systems, which is what applications of beam systems would be. They're not something you put on something and go someplace with as an offensive system.

**Ezrol:** We have a situation of economic stagnation in the United States right now in which the number of physics graduates, engineering graduates produced per capita has been declining, and yet we're trying to confront the Soviets with new technologies and weapons systems while their scientific manpower has been increasing as never before.

**DeLauer:** Well, I think that's true, but I think you have to look at the underlying reason for the decline of numbers of people in the scientific disciplines. We had almost a decade of "the greening of America." Science was bad, nature is great. That whole malaise started in the mid-1960s with the disenchantment of the Vietnam War and was carried on with a bunch of gurus who kept saying, while they're driving around in their father's car or their own and using gasoline, that you ought to do away with all of that. The gurus went down to the supermarket and took advantage of food stamps and a distribution system that was built on modern technology, and yet they're sitting there saying this is all phony. I think it had an effect on our schools, I know it did.