

Dr. Ziegler Assesses Role of Government

Scientists



DR. HANS K. ZIEGLER

FT. MONMOUTH — Hans K. Ziegler, the top scientist here, thinks working for the government strikes a happy balance between working for industry or searching for knowledge at a university.

Dr. Ziegler, an effervescent man who once worked 10 years in industry and now has 20 years with the government behind him, says there is pressure in both.

He also feels that in government there is "some constraint on things you can and cannot do." And once in a while, Dr. Ziegler thinks, "By gosh, I would like to be back."

But by and large, Dr. Ziegler said, "There is a lot of freedom."

IN comparing the role of the scientist in the university, industry, and the government, he said that in a university there is a great deal of freedom of thought but no means to implement an idea because funds aren't available.

In industry, he said, a scientist's thoughts must have practical application and "be attractive for the future." In other words, will the idea make money?

In government, he said, a scientist generally can get the funds to develop an idea, since funds are provided for research, development, and immediate consideration.

Dr. Ziegler said that about \$1.5 billion is earmarked annually for the Army's Electronics Command, headquartered in The Pentagon. Of this, 10 per cent or 150 million is for research and development. About \$10 million is "for real long-range thinking."

THE ROLE of the Army scientist, as the government and Dr. Ziegler see it, is to amass the engineering and technical know-how to assemble a piece of equipment, such as a night vision instrument.

"We're equipped to make equipment but that job usually goes to industry," Dr. Ziegler said. "There's no doubt that's the way to do it. It's a closeknit team — government and industry."

The Army, and other governmental agencies employing scientists, also have close links with campuses across the country.

In 25 states including New Jersey, Dr. Ziegler said, universities have government contracts and a few universities are given outright grants to research and develop new methods.

In addition, there is an advisory council that meets at least twice yearly to kick around ideas. And there are periodic conferences, seminars and institutes and trips back to college for courses where scientists up-date one another on new techniques.

DR. ZIEGLER took a six-week refresher course two years ago at Brooklyn Polytechnical Institute.

"The only way of keeping up is by getting re-educated," he said.

As an example of changing technology he cited radio, which first aroused his curios-

"You look back and on the stony road there always came a milestone," he said. "Ft. Monmouth did something that took off like a bird."

By the end of World War II, all the equipment was in tubes, Dr. Ziegler explained, and then came the transistor, representing "a tremendous

change in design and philosophy of building radios."

He added, "Today, we do not care about single transistors. There's hundreds of micro-transistors where one transistor was."

Dr. Ziegler said that by compressing equipment the infantryman has benefitted. During World War II, radio equipment was carried in a truck. Now it can be carried by a soldier.

HE also takes pride in the fact that a technique widely used throughout the electronic industry — assembly line solder-dipping of printed circuits — was invented and perfected by two Ft. Monmouth engineers. The technique is used by most color television manufacturers.

"We pushed industry into micro-electronics," he said.

The Electronics Command also has some other notable accomplishments behind it. It gave birth to the space age in 1946 when Project Diana established the feasibility of space communications when a radar signal was bounced off the moon.

Yet, Dr. Ziegler acknowledges that working as an Army scientist is not a glamorous job and this image or

lack of it, is a deterrent in recruiting top-flight talent.

"IT'S not a glamorous job," he said. "You have to help the foot soldier — let's call him the helicopter soldier — do a better job in the field."

He says the government more often than not loses out to industry in competition for top-level scientists. He said money is a consideration, but he believes government salaries are competitive.

Recruiting young scientists, fresh from the campuses, has been a problem, though. But he said a half-dozen lieutenants have stayed at the post as civilians after leaving the Signal Corps.

"That's a good indication," he said.

IN addition, Ft. Monmouth's recent seminar for 25 professors seemed to impress on them the importance of the Electronic Command's role, and they in turn will probably steer undergraduates toward Ft. Monmouth in the future, Dr. Ziegler predicted.

He said the recruiting situation may improve as people get to know more about the fort.

"There's a lot of good in Ft. Monmouth for a young man," he said. "Unfortunately, it's not well enough known."

Yet Dr. Ziegler, looking back on his 20 years since coming from Germany at the end of World War II, believes Ft. Monmouth's achievements are second to none.