

Welmers: Nebraska's 'A Part' of World

Editor's note: This article and the two stories on missile bases and the Strategic Air Command which appear on pages two and three, are the second part of a series on the Midwest or, more specifically, Nebraska: its opportunities, its disadvantages, its problems. These stories describe the shift in role from the Midwestern solid line of isolation to America's first line of defense.

By Gretchen Shelberg
"Nebraska is 'a part' of the rest of the world."

These were the words of Dr. Everett T. Welmers, director of Satellite Systems for the Aerospace Corporation, who spoke at the University last week.

Dr. Welmers, one of the nation's leading space research executives, was referring to Nebraska's defense position being relative to the rest of the world, but he chose the same phrasing to describe the state's military situation as did Dr. Frank E. Sorenson and Dean Adam Breckenridge to describe the state's educational position.

Dr. Sorenson and Dean Breckenridge stressed the fact that Nebraska is not "apart" but "a part" of the nation

and the world. Both men, in the first article of this series on the Midwest, agreed that Nebraska is not provincial, separate or independent.

Dean Breckenridge said he would be alarmed if Nebraskans didn't leave the state because "I'd think they weren't qualified to compete in the nation's market."

Concerning the nation's defense, Dr. Welmers, in a special interview with the Summer Nebraskan, said, "Nebraska is tied with the rest of the world. The center of our whole defense system is just 40 miles away (Strategic Air Command Headquarters at

Offutt Air Base near Omaha). When asked if Nebraska was chosen as a location for SAC because it was more remote and inland, Dr. Welmers said, "Nebraska is as close to Russia as any other part of the United States may be because now we can fly directly over the pole."

He added, however, that he would prefer to see SAC located near Omaha rather than near Los Angeles because in the event of an alert or an attack, military staff would not be prevented from reaching the base due to traffic problems or freeway clogs.

When discussing missile base sites, Dr. Welmers said, "Location is a matter of vacant space." This Nebraska has, he added.

"You don't land missiles on populated territory," Dr. Welmers continued, discussing the placement of missile testing grounds in remote areas of New Mexico, Utah and Florida. "What the United States really needs is an island on the equator," he said.

This would also facilitate sending up satellites containing television transmitting equipment and other objects for research he said. If these satellites were sent straight

up, they would continue to pass over that same spot on the equator even though the earth revolves, he said.

There is no logic to the location of space and research firms such as the Aerospace Corporation of which Dr. Welmers is an executive, the director of satellite systems said.

"Universities near Boston and Los Angeles may be one cause," he suggested. "MIT, Stanford and California Institute of Technology can accommodate researchers, but any university has these potentialities," Dr. Welmers said.

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Scalapino: Recognize China

By Gretchen Shelberg

The "front line fight" in the world today is based on economic and social goals, not military policy, Dr. Robert A. Scalapino, professor of political science at the University of California, Berkeley, told a University convocation yesterday.

Scalapino, an authority on the far east, spoke on "Our China Problem." He was the second lecturer to appear on campus within the past week sponsored by the Summer Sessions World Affairs Previews series.

"As long as we can't close the gap between the haves and have nots in nations," he said, "we will have profound unrest."

Scalapino said he believes the issue of peace and war will be decided on issues like Berlin but, rather, by whether or not we can bring Communist China into the world peacefully.

China's Problems
The political scientist outlined several factors in the problem of Communist China today:

First, he said, Communist China is here to stay and will become one of the major powers of the late 20th Century.

"The chances are overwhelming that this regime is with us to stay," he said.

Scalapino said that this was in part due to the population of China. There are 670 million Chinese today with an in-

crease of 2.2 per cent, or 15 million people, per year. Crash control is needed before the population reaches one billion by 1980, he said.

The second factor in Communist China's problem is economic progress. Since 1949, Scalapino said, progress has been spectacular but uneven. "A society in a forced march program toward development has some unbalance and chaos in its 'great leap forward,'" he said.

But Communist China's greatest problem is in agriculture, he said. How to increase production to feed a growing population, yet allow for exportation and growth becomes difficult.

Agricultural Failure
Scalapino said he does not think the Chinese Communists have succeeded in agriculture "partly due to the problem of trying to mobilize the peasants."

There is, on the other hand, spectacular success in industrial production, he said. They have diversified industry and moved it into the interior.

"Communist China is going to be a society where rapidly rising state power and industrial activity, coupled with mass poverty, makes an explosive condition," Scalapino warned.

A third characteristic of the Communist China situation which Scalapino listed was the triumph of Communism in a situation where it used nationalism.



DR. ROBERT SCALAPINO

"There is a homogenized Nationalism-Communism. Their so-called 'Proletarian-Internationalism' is based on a nationalism of the people," Scalapino said.

Nation-State

Communist China presents a typical case study of the emergence of a nation-state with characteristics similar to America's when she was in that stage, Scalapino said.

He listed three characteristics a nation-state desires:

-to define and defend boundaries.

-to create a buffer state zone.

-to seek homogeneity or a homogenous character with leadership, not partnership.

"The basic issue confronting us with respect to Asia is how can we create more Finlands and fewer Hungaries, not how we can create more SEATO's," Scalapino said.

"This is what gives Laos and Cuba some identity."

A fourth condition contributing to our problem of Communist China, according to Scalapino, is that the Soviet Union has been important, to date, in the development of China.

But, "the Soviet Union will not solve our Communist China problem for us," he said.

Military Shield

He cited the 10,000 technicians Russia has provided to growing China as one reason for their strong ties. He added that "The Soviet Union stands as a military shield to China. China has a backward army

herself and is totally dependent on the Sino-Soviet Alliance for defense."

"Via China, world Communism has gotten a tremendous boost," he said. "There is an emergence of trouble within the Sino-Soviet block, however."

Scalapino said this was due to the fact that these are two dynamic states with separate interests and senses of leadership. It is also due to the fact that these two nations are in different stages of development.

"Russia is becoming a status quo nation. She is satisfied... and is beginning to urge peaceful coexistence on her own terms," he said. "The Chinese Communists are not a status quo power satisfied with their territories, buffer state system and world prestige. It is less certain that they can act peacefully."

Militant Left

"China is the militant left in the Communist block," Scalapino said.

In regard to American foreign policy concerning Communist China, Scalapino called for a change in our old "containment through isolation," saying this is no longer practical.

"We used to think we should isolate Communist China from the world and prevent at all costs her emergence into the United Nations," he said.

This rested on the principle that Communist China was not a peace loving society and her entrance might destroy the U.N. The United Nations is not, however, "a league of the pure, despite its charter," Scalapino said.

He added that non-communication and miscalculation often leads to war and the absence of direct bilateral communication can complicate foreign policy as in the case of Korea.

International Outlook

Another reason for allowing Communist China to enter the United Nations is that isolation aids totalitarianism, he said. "Don't allow select diplomacy and don't let China play the role of the international outlaw."

"By forcing a nation to take a stand on all world affairs, you make its foreign policy

more complex," Scalapino said, "and involvement is a better deterrent to totalitarianism than is isolation."

Dr. Scalapino said he believes America is being moved into an inflexible position.

"China is getting what she wants. She sees no need to compromise," he said. "The American policy is unrealistic."

He suggested two alternatives to the present American foreign policy toward Communist China:

Negotiation and exploration: "Involve China in a sense of responsibility and commitment," he said. "We have started with bilateral agreements and must move on to multilateral negotiations. This is a right step."

Fiction

"We cannot maintain the fiction that the Nationalist Chinese government is representative of China and T'wan's government represents T'wan."

Scalapino said we need to adopt a "one China one T'wan" policy. This would have the support of the free world, he said.

"No policy the United States creates (isolation) can survive unless we have the support of nations that surround China," he emphasized.

"We must create a pattern of our willingness to discuss and negotiate. This is an age when our super patriots are unpatriotic," he said.

The only other alternative to American foreign policy in China, as Scalapino sees it, is immediate recognition of China by the United States and immediate admittance into the U.N. This, he says, is impractical. It must be a gradual movement.

Dr. Scalapino concluded by which he feels mark our world today:

-End of an era of dominance of the world by the western nations.

-End of an era of classical nationalism at a time when some nations have not reached it (China).

-Dangers with respect to lack of law (space and international law have practically no restrictions).

-We have come to realize the importance of the common man.

Summer Enrollment Increases 14 Per Cent

Enrollment for the Summer Sessions at the University has jumped 14 per cent this year with 3,718 students, or an increase of 459 over a year ago, according to Registrar Floyd Hoover.

Dr. Hoover also anticipated an additional 150 would enroll for the post-session workshops, which would bring the

final total to 3,868—over 500 more students than last year.

Director of Summer Sessions Dr. Frank E. Sorenson estimated nearly 6,000 students are engaged in summer studies under the University's direction.

This figure includes regular University students and more than 1,500 high school students on the Lincoln campuses. There are 561 students enrolled in University High School, 319 in the All-State Fine Arts Course, 300 Girls' Staters and 355 Boys' Staters.

In addition, Dr. Sorenson said there are 214 elementary pupils at Bancroft School and 200 at Pershing Grade School, both operated this summer by the University.

Scholarships Office Changes Personnel

Two personnel changes in the Office of Scholarships and Financial Aids have been announced by Dr. Aubrey Forrest, director.

Daniel W. Pop is the new assistant director, replacing Mrs. Jane Wendorff who recently resigned; and Richard D. Mace is assistant director in charge of student employment.

Special Children Educators Meet

The Nebraska Federation of Councils for Exceptional Children will hold their annual convention in the Student Union tomorrow.

The convention will deal with four problems of Nebraska's exceptional children including the retarded, gifted, acoustically and visually handicapped, according to Marshal Hiskey, federation president and professor of educational psychology and measurement at the University.

Chapters from Beatrice, Lincoln, Omaha, Lexington, Scottsbluff and the Platte valley will be represented at the conference. Over 200 physicians, teachers, research workers and parents are expected to attend.

Ag Research Extensionists Discover Three Zones of Root Activity in Growth

After more than five years of basic research in plant growth, a scientific team of University of Nebraska research extensionists has found three zones of root activity during the growing season.

Working in the field with alfalfa plants, the researchers found that there is a surface soil zone where root activity is high in the spring but decreases during the dry weather of the summer and fall. A second zone of less activity exists at a depth of two to four feet and a third zone of moderate activity lies in the moist soil just above underground water sources, the research team discovered.

The investigation, according to Dr. R. L. Fox, research extensionist in agronomy, was made with the help of radioactive phosphorus in what is known as a tracer technique. This process allows radioactive substances to be taken in by the root system from



and foods from great depths," explained Dr. Fox, "we selected a test plot which had subsoil moisture, or a water table, at a depth of only about eight feet."

The research team placed radioactive phosphorus at various depths by two methods in order to compare the amount of phosphorus that the alfalfa plant roots removed from the soil. The first method involved drilling 36 one-inch holes to desired soil depths around the test plants.

"Six depths were drilled so that the phosphorus could be placed in the holes allowing us to determine, by measurement, where the roots were taking up the most chemical," said Dr. Fox. "The holes were drilled to one-half, one, two, four, six and eight foot levels."

In a similar manner a second test plot was used where the researchers drilled only nine three-inch holes around the plants. The holes were drilled to the same depths, according to Dr. Fox.

Phosphorus
In both test plots the phos-

phorus, which is a vital chemical to alfalfa growth, was placed in the holes which were then filled with dirt again. The plants were then allowed to continue their growth.

As the growing season began in the spring, plant samples from both test plots were harvested by the research team at two-week intervals. The harvesting continued at this regular interval throughout the growing season.

"After the sample plants were harvested at each period, they were placed in a mixture of acids which allowed us to measure the amount of radioactive phosphorus contained in the plant," explained Dr. Fox.

Both methods gave proof of root activity at various depths—an idea which is new to many farmers, he said.

Soil Moisture
Significantly, the scientists found that the alfalfa plant root's uptake of the radioactive phosphorus is influenced by the amount of moisture in the soil but that it is not

equal to the amount of water taken in by the root.

During the first half of the growing season when surface moisture was available, there was very little phosphorus taken in from the soil at lower depths. However, during the last half of the growing season, the plant's roots continued to remove a great deal of phosphorus from the top soil even after it had become dry.

"It is possible," concluded the research scientist, "for plants to use water without proportional or equal amounts of phosphorus uptake and to use phosphorus without appreciable water absorption."

It was also found through tests made at the research site on the soil that the newly discovered middle zone of less activity contained such a great amount of salt that conditions became unfavorable to growth.

Salts Meet

This middle zone of salt concentration, which causes alkaline soils, is caused, explained the scientist, by surface salts and salts from the lower depths being drawn together by the action of water. Rain water forces it down and the dry soil draws up the water from below which carries salt minerals with it.

Such knowledge of the activity of roots and the soil environment of plants has long been needed since previous studies at the University placed emphasis upon only soil environment and not the plant's root, according to Dr. Fox.

He said these previous investigations indicated the necessity to consider both the root and its soil in order to understand the plant's growth. Although each investigation presented evidence of root activity at these three depths, more detailed study was needed, he said.

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HUB OF DEFENSE WHEEL—Strategic Air Command Headquarters, the core of the nation's defense, lies literally buried, but by no means dead, just 40 miles from Lincoln. To learn about SAC's "power on the plains", see...

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RING AROUND—A series of missile bases are converting the isolation-minded Midwest into the first line of the nation's defense system. This story, part of the second portion of a series on the Midwest, explains the function of this ring of bases circling SAC. To gain a picture of the defense-minded Midwest, see...

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the soil and measured with a Geiger counter as it travels up through the plant.

Measurements
Dr. Fox, who headed the research team, said the investigations involved measurements to a relatively shallow depth and were conducted in areas where surface soil moisture is the main source of water for plant growth.

"Since this method cannot be used in studying plants which utilize subsoil moisture