

SOCIOLOGY

Religious Issue in Voting

► **ALTHOUGH** President Kennedy emerged the winner in the extremely close election in 1960, the fact that he is a Catholic cost him an estimated million and a half votes, a University of Michigan Survey Research Center team found in interviews with voters.

One out of every nine ballots cast in 1960 reflected a change from normal voting behavior due to the religious issue, the research team told a news conference in Washington, D. C.

The television debates helped Mr. Kennedy more than Mr. Nixon, the study revealed. Members of each party among the viewers responded favorably to their own candidate, but among independent voters, Kennedy ran two to one ahead of Nixon.

Dislike of former Secretary of Agriculture Benson and his farm policy did not turn out to give Kennedy very many votes because it happened that the farmers who were most anti-Benson were the same group who, as rural Protestants, were the most anti-Catholic.

The University of Michigan research team has been interviewing voters since the election campaign of 1948. A scientifically selected sample of more than 1,500 voters

were questioned five times during the 1956, 1958 and 1960 elections.

People vote as they do because of basic predispositions such as party affiliation and the amount of their interest in politics and because of what the researchers call "short-term forces." In the election of 1952, the short-term forces included the Korean crisis, what the voters believed was a corrupt, "tired" party in power and the attractive personality of Mr. Eisenhower.

In 1960, the biggest of the short-term forces was the religious issue. This election had the highest proportion of late deciders since the 1948 election. Over one-third of the voters did not make their choice until the heat of the campaign.

Television was far more important in the 1960 election than it had been earlier. Voters saying that they paid attention to the campaign by watching television amounted to 87%. The figure in 1952 was only 53%.

The University of Michigan research team included Drs. Angus Campbell, Philip E. Converse, Warren E. Miller and Donald E. Stokes.

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criticized, he never gave detailed information about the results of his intended investigations and the chance reception of signals. Leland I. Anderson of Minneapolis reports in the current issue of the British journal *Nature*, 190:374, 1961, the experiences of Tesla, and thus has set off new speculation.

In Washington, D. C., SCIENCE SERVICE interviewed telephonically Dr. Frank Drake, a radio astronomer at the National Radio Astronomy Observatory in Green Bank, W. Va., who listened in on radio signals from space in the spring of 1960 in operating project OZMA sponsored by the National Science Foundation. At that time he used the 85-foot radio telescope for the studies of two stars, Tau Ceti and Epsilon Eridanus. These two stars are similar to the sun and thought possibly to have planets like the earth.

However, Dr. Drake did not record any radio signals from the vicinity of these stars that indicate a system of intelligent communication. He said that he plans in the future to listen in on space again and is now studying instrumentation "in order to do a better job of recording the radio noises the next time."

He said the U. S. Army has wax records of radio noises heard in the early 1920's at the time when Mars came close to earth in its travel around the sun. Dr. Drake said he has not been able to obtain these records, claimed to sound like intelligent signals, for study yet.

Marconi, the first to send radio signals, also reported hearing radio noises sounding like a system of communication similar to the Morse code.

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RADIO ASTRONOMY

Signals From Space?

► **RADIO ASTRONOMERS** today might have more to go on in trying to receive intelligent signals from space if criticism had not discouraged a scientist in 1900.

Nikola Tesla, electrical engineer and inventor, told the world at that time he had received radio signals from space at his experimental station at Colorado Springs the year before.

He said these signals suggested "number and order," as if a system of communica-

tion was involved. He felt certain that the signals were not due to any of the known causes of radio signals, including auroras, or "northern lights," or earth currents.

Only later did the idea occur to him that the source of the signals might have intelligent extra-terrestrial control. However, when he said that one of the great possible achievements of the next hundred years might be to confirm and interpret this planetary challenge and was harshly

NATURAL RESOURCES

100 Million Cattle Added To World in Eight Years

► **THE WORLD'S CATTLE** and buffalo population has increased by 100 million in the last eight years, a figure which slightly exceeds the number found in the United States alone. This brings the present tally to more than a billion head, averaging roughly one animal for every three persons, the world over.

The U. S. Department of Agriculture, Washington, D. C., reports that beef and veal output in the 44 principal meat-producing countries has increased 17%, partly because meat-packing facilities are being improved in Africa, northern South America and Central America.

But demand for beef also has gone up sharply, as has the price, and in many countries, little beef is produced because cattle are used mainly for milk, for work, or as evidence of wealth.

A decrease of one percent in North American cattle is traceable to Cuba, where cattle numbers dropped by more than a million and a half. USDA indicates that this decline has taken place "where there have been widespread changes in farm ownership as big ranches have been taken over by collective organizations."

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EIGHT-ROW-CULTIVATOR—Primarily used for soybeans and corn, a tractor-mounted cultivator, developed by Oliver Corporation of Chicago, handles eight rows instead of the usual four.