

METEOROLOGY

Rainmaking Not Proved

► AN OFFICIAL committee of the American Meteorological Society, appointed to look into the claims of the rainmakers, will declare that the possibility of artificially producing any useful amounts of rain has not been demonstrated so far, Science Service has learned.

The findings of the committee will appear in a future issue of the *BULLETIN OF THE AMERICAN METEOROLOGICAL SOCIETY*, signed by the four members, Dr. Bernard Haurwitz, chairman of the department of meteorology at New York University, Gardner Emmons, research associate at NYU, Dr. George P. Wadsworth, professor of mathematics at Massachusetts Institute of Technology, and Dr. H. C. Willett, professor of meteorology at MIT.

Dr. Haurwitz, chairman of the committee, told Science Service that he personally did not believe that last winter's rainmaking efforts of Dr. Wallace Howell under contract to New York City resulted in any "appreciable amount added to New York's reserves because of seeding." This, however, was not part of the report of the committee.

The committee report begins by complimenting Dr. Irving Langmuir, Vincent Schaefer and their co-workers of General Electric and Project Cirrus for the great advance in recent years in the understanding of the formation of atmospheric ice and water particles.

It states that because these matters are still imperfectly understood and because weather forecasting is still not perfect, it is extremely difficult to evaluate claims of success in rainmaking.

Then the committee tackles the problem from two angles. First approach is to estimate the probable rain if no attempts to make rain by cloud seeding had taken place. Looking into experiments by Dr. Langmuir and others in New Mexico last year, the committee declares that weather conditions at the time were quite favorable

and adequately explain the moderate amount of rain that occurred.

Dr. Langmuir has claimed that the Weather Bureau did not forecast the rain that he said was produced by his cloud seeding.

Concerning later papers by Dr. Langmuir which stated that seeding in New Mexico last winter may have produced dry conditions there but abnormal amounts of rainfall in the Mississippi valley, the committee declares that it is even more difficult to judge the effects of seeding. However, the members claim, the rainfall and weather patterns were quite similar to a number of corresponding periods in the past. What happened last winter, they imply, happened before without benefit of seeding.

Second approach to the problem, the committee says, is statistical. Dr. Langmuir has never said that his seeding produces rain. But he has said that the chances were only one in ten to the 26th power—that is the figure 10 with 26 zeros after it—that the rain which fell in New Mexico after seeding was produced by chance alone.

The committee claims that the necessary precautions in this kind of figuring have not been observed. It declares that necessary to such a calculation of odds is a complete analysis of the entire situation, starting with a statistical analysis of the original data on moisture distribution, winds and rainfall in relation to topography.

Since these and other factors have not been observed, the committee says, the odds cited cannot be accorded scientific credence.

This is not the end of the argument on rainmaking. However, concurrent with the argument, attempts are being made to bring the two sides together so they can at least agree on a body of facts from which to draw their conclusions. Conferences between proponents of the two sides may be expected to produce results sometime in the future.

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SOCIOLOGY

The Cost of Death

► AMERICANS pay more for funerals than they do as patients in hospitals.

Death costs more than \$700,000,000 yearly. This is the estimate of Dr. William M. Kephart, of the University of Pennsylvania, who reports a survey he made in Philadelphia to the *AMERICAN SOCIOLOGICAL REVIEW* (Oct.).

Largest item of expense is the casket, ranging in price from about \$75 to \$15,000. The former is cloth-covered, the latter of solid bronze. In Philadelphia, there is practically no sale for the bronze type although

it is reported that four or five are sold each year in New York City to customers other than gangsters. Lavish gangster funerals, Dr. Kephart reports, are largely mythical and evidently a Hollywood invention.

Class distinctions that set off the rich Philadelphian from his poorer neighbors are still in force after death. But they are not the same as they were in past years.

Historically, the rich man was buried in a large cemetery lot and his grave was marked by a large memorial or mausoleum. Today, if you see a mausoleum it probably

still marks an upper class grave, but there are fewer now than formerly. Class distinctions show up in the location of the grave, upper class desirability depending upon such factors as who is buried nearby and whether the lot is on "high ground."

At the "end of the line" so far as social class is concerned is the potter's field. Lower class families will go to almost any length to avoid burial there. Bodies interred at potter's field are stripped of all the traditional symbols. They are buried without flowers, without clothes, without graves and without names. Burials are in long rows of trenches with a number on a wooden paddle marking each body. If the body is not claimed in a certain length of time, it is dug up and burned in an adjoining crematory to make room for new bodies.

Aside from this treatment of bodies in potter's field, cremation is an upper class custom. Cremations have increased from 7% to 17% in the last 10 years in Philadelphia, almost entirely in the upper classes. This trend presents a serious problem not only to funeral directors but to cemeteries. Cremation urns cost only a fraction of what caskets do. Also the normal four- or six-grave lot holds eight or 12 bodies in caskets, but it will hold an almost unlimited number in urns.

More or less public "viewing of the body," is a poorer class custom; upper class families restrict the viewing to members and do not exchange comments on the appearance of the body. One out of ten of those on the social register have no viewing.

There appear to be no class differences in the kind of flowers used at funerals or in cemeteries; that depends on the season. But there is a difference in flower arrangement. The rich like baskets and sprays. The poor prefer wreaths, pillows of flowers, "bleeding hearts" and set pieces such as "gates ajar."

The wearing of mourning and mourning bands and use of crepes on the door are going out of style completely in all classes. But a small minority of poor people still shutter the windows and stop the clock to show the hour of death.

If you see a 20- to 30-car funeral procession, it is probably that of a poor person. When an upper class funeral leaves the funeral parlor, the majority of those attending do not proceed to the cemetery. Among the poor practically everyone goes.

Ministering to the dead is big business in the United States, Dr. Kephart reports. There are about 25,000 funeral directors and some 520 casket manufacturers currently in business, and the number of cemeteries has been estimated at about 40,000.

Funeral directors want to be considered a professional group and require a course at a mortuary college in addition to high school graduation for members of the group. There are 24 mortuary colleges in the United States, two affiliated with major universities.

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