evidence for a theory that would account for how the law came to be written as it is, leading to a conclusion that if such is the basis for the wording of the law, then it follows that this is the way the law should be interpreted in this case.

The court must make a decision (it cannot, as in a scientific controversy, simply decide that there is not enough evidence to decide), and that decision, depending on the terms of the court's option, can fall anywhere in the wide area between the union's view that the basic law requires the AEC to make the same safety findings for a construction permit as for an operating license, and the government's implied view that the law allows the AEC great freedom on what regulations it should write on the requirements for a construction permit.

Rival Theories

Each side wants a decision as close to its view as possible. It offers theories that would justify a decision at various points in the gray area between the extremes which are different from, and what is worse, sometimes contradictory of the theory that it would rely on if it wanted to stake everything on the chance of winning complete victory. This raises the danger of arguing so well for a compromise theory that contradicts your main theory that you convince the court your main theory is wrong. In this case the result of such problems was that neither the government nor the unions offered a completely clear presentation of any one theory. The details of the case made this especially true for the unions. From the union's argument (that the law requires the same safety finding for construction as for operation) it seemed to follow that the pertinent AEC regulation (50.35) was itself a violation of the law, for the regulation was designed to allow leeway on a reactor of untried design "where, because of the nature of a proposed project, an applicant is not in a position to supply initially all of the technical information . . ."

The unions never followed this argument through to its apparent conclusion. Instead they emphasized a theory that although regulation 50.35 is legal in itself, it is to be interpreted in a very narrow way. But to interpret the regulation as narrowly as the unions sometimes seemed to argue raised such not unanswerable, but ticklish questions as why the AEC would go to the trouble of writing a regulation whose meaning was so narrow that it really had no more discretion on safety findings that it had without the regulation, or alternatively, if the regulation was to be interpreted slightly less narrowly, but giving the AEC a fair amount of leeway, how the unions' basic premise that the law allowed no leeway could be true.

The Court questioned the union's attorney at length, trying to pin him down on just what he was arguing, but since the confusion resulted from the nature of legal disputation rather than from mere perversity on the part of the union's lawyers, the court showed no special annoyance at the situation. For the unions had merely strived to provide the court with a line of reasoning that could be used to justify any decision the Court might make favorable to the unions, an opinion that would be perfectly coherent once it was divorced from the competing lines of reasoning which had to be presented simultaneously.

News Notes

Conflict of Interest

The President has asked Congress for a wholesale rewriting of the conflict-of-interest laws, a matter of interest to the scientific community since at least a technical case of violation of the current statutes could be made out against most of the more prominent scientists in the country.

The laws, as they stand now, are a collection of seven separate pieces of legislation passed at various times over the last 90 years, five of them dating back to the early post-Civil War days. Most of them were written in response to a particular set of scandals; no two of them use quite the same terminology; and no one is quite sure how they are to be interpreted, since the specific abuses most of them were written to combat are not often the sort of abuses that are matters of concern today.

There is some question whether there was a clear violation of the conflict-of-interest laws in the Welch scandal at the Food and Drug Administration last year, and equally a question of whether nearly every scientist on a government advisory panel is not violating the conflict-of-interest laws, since he normally will be a consultant or staff member of one or more organizations which are receiving research support from the government, usually in the very field in which he is advising the government.

(Welch was simultaneously chief of the FDA antibiotics division and editor of several antibiotics journals. The Kefauver drug investigation turned up information that the "modest honorarium" he told his superiors he was receiving for the editorship was in fact a percentage of the advertising and reprint revenues derived from the antibiotics manufacturers he was supposed to regulate, and came to about $40,000 a year.)

Kennedy has asked Congress to scrap the old laws and substitute a single new statute. This is what has been recommended by a number of committees that have studied the problem in the past 10 years, and the objectives would include both broadening the laws to include clear violations that were not thought of when the earlier laws were written, and writing into the law a clear procedure for granting exemptions in cases, such as those involving most scientists, where the government must necessarily accept some conflict of interest, since the only people qualified to give the advice needed are people who are in a position to benefit, indirectly at least, from what the government does.

As things stand now, the laws are often simply ignored because to comply with them would cut the government off from the very people whose services it most needs.

NASA succeeded last week in another firing which placed the first astronomical satellite in orbit. The 90-pound Explorer XI is a telescope-shaped device intended to gauge the intensity and direction of cosmic gamma radiation. This cannot be done from the earth, for the interstellar gamma rays become mixed with rays created within the atmosphere. The device tumbles over as it orbits. It contains, in addition to gamma ray detectors, earth and sun sensing devices which enable its orientation to be constantly known. This makes it possible to learn the intensity of radiation coming from various directions.

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School segregation, for the first time, is being opposed in a law suit initiated by the federal government. Until now all desegregation suits have been filed by the private citizens affected. A county in Virginia had attempted to circumvent a desegregation order by opening a system of private schools,

supported in part by tuition fees, but mainly by public funds. The Justice Department filed suit claiming this was unconstitutional. This action not only removes any ambiguity about where the Administration stands on the issue, but in effect makes the financial and staff resources of the Justice Department available to share the burden of fighting desegregation cases which, until now, has been borne almost entirely by the National Association for the Advancement of Colored People.

Announcements

Stanford University's Hopkins Marine Station plans to convert the *Pioneer*, a two-masted schooner long owned by philanthropist George Vanderbilt, to a modern sea-going vessel for research in **marine biology**. It will be the largest sailing ship in the world used for scientific purposes. This project is made possible by a grant from the National Science Foundation.

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A translation of a **Soviet lunar atlas**, compiled from the first photographs ever taken of the far side of the moon and including detailed descriptions of the newly revealed areas, as interpreted by Soviet scientists, is available from the Office of Technical Services, Department of Commerce, Washington 25, D.C. $3.

Courses

A course in **general pathology** for graduate students and investigators who do not have a medical background will be offered at the Harvard Medical School this summer (26 June to 15 July) for the first time. The course is supported in part through a training grant from the U.S. Public Health Service. It is primarily organized "for the many investigators working in the biological field who have no formal education in general pathology and who wish to become acquainted with the basic mechanisms of disease at the level of cells and tissues."

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The 1961 Summer Institute in Dynamical Astronomy will be held at the University of Arizona, Tucson, from 10 July to 4 August. This institute, in which college and university teachers of astronomy, physics, and mathematics as well as research workers from government and industry participate, is for scientists who desire an intensive introduction to the field of **celestial mechanics**. In addition to the formal program in astronomy, speakers will discuss current fields of research. (Professor Dirk Brouwer, Yale University Observatory, Box 2023 Yale Station, New Haven, Conn.)

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A series of laboratory **refresher training** courses is to be offered by the Laboratory Branch of the Communicable Disease Center (U.S. Public Health Service), Atlanta, Georgia, from 11 September 1961 to 13 April 1962.

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Two advanced courses in **reactor technology** will be offered again at Oak Ridge National Laboratory, Oak Ridge, Tenn., beginning next fall. The two courses—on reactor operations supervision and reactor hazards evaluation, respectively—are designed principally for students from abroad but are also open to U.S. citizens. The courses start 25 September and run a full year. The tuition for each course is $2000. Deadline for applications is *15 June*.

Grants, Fellowships, and Awards

Epidemiology. Fellowships (full support, tuition, and dependency allowances) are available to M.D.'s and Ph.D.'s in related fields for a 3-year residency in epidemiology, through a grant from the National Institutes of Health. The purpose of the program is "to increase the number of qualified epidemiologists available for public health research, particularly with respect to diseases of non-infectious and unknown cause."

General research. Grants-in-aid, usually ranging between $500 and $1500, are available from funds administered by the American Academy of Arts and Sciences for research in any recognized scientific field. Applications must be received *before 1 September* for grants to be made in October. Applications from individual scientists will be given prior consideration over those from institutions, although this is not an inflexible policy. Projects concerned with exploration of the frontiers of scientific knowledge, whether interdisciplinary or within a single discipline, are preferred. (American Academy of Arts and Sciences, Committees on Research Funds, 280 Newton St., Brookline Station 46, Boston, Mass.)

Heart. Applications from research investigators for support of studies to be conducted during the fiscal year beginning 1 July 1962 are now being accepted by the American Heart Association. The deadline for submitting applications for research fellowships and established investigatorships is *15 September*. The stipends range from $4500 to $9000 per year. Grants-in-aid are also available in support of specified projects. (American Heart Association, 44 E. 23rd St., New York 10)

Meeting Notes

Congenital anomalies. The Japan Association for Study of Congenital Anomalies held its initial meeting at Kyoto University's Faculty of Medicine on 25 February. Approximately 100 scientists in basic and clinical medicine and in related biological sciences attended. The proceedings of this and subsequent meetings will be published in the medical journal *Saishin-Igaku*. The Japan Association welcomes communications from foreign scientists interested in the problem of congenital anomalies. (Dr. Hideo Nishimura, Professor of Anatomy, Faculty of Medicine, Kyoto University, Kyoto, Japan)

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Psychophysiology. The newly formed Society for Psychophysiological Research will hold its first annual meeting in New York on 5 September, in conjunction with the American Psychological Association Convention. The purpose of the society is to foster research on the somatic responses and their psychological relations in a number of different academic disciplines, including psychology, physiology, biology, psychiatry, and instrumentation. (Dr. Albert F. Ax, Secretary-Treasurer, Lafayette Clinic, 951 E. Lafayette, Detroit 7, Mich.)

Scientists in the News

Melvin B. Gottlieb will become director of Princeton University's plasma physics laboratory (formerly Project Matterhorn) on 1 July. He has been associate director of the laboratory and head of the experimental division. He succeeds **Lyman Spitzer, Jr.**, who