The year 1929 marked a milepost for the American Journal of Hygiene. The number of published papers increased from 53 in 1928 to 86 in 1929, making it desirable to publish two volumes per year (volumes 9 and 10 in 1929), a practice that has continued to the present time. Another major change was the increase in the number of women authors. Fourteen papers in 1929 had at least one female author; for 10 of the papers, a woman was the first author.

Papers still tended to be long, with a mean and median length of 16 pages. Five were more than 40 pages in length. The extremes were 3 pages and 115 pages! As in previous years, most papers dealt with infectious diseases.

By far the Journal's best known paper in 1929, one with far-reaching consequences for its author, was "Cancer and Tuberculosis" by Raymond Pearl (1). It was based on meticulous, detailed analyses of the first 816 autopsies conducted at the Johns Hopkins Hospital of persons with malignant tumors, either carcinomas or sarcomas, and 816 autopsies of control individuals without evidence of malignancy. Controls were matched to cases by sex, race, and, to a considerable extent, year of death. Active tuberculosis was found in 6.6 percent of the cases with malignant lesions and in 16.3 percent of the controls—a relative risk of 0.41 (95 percent confidence interval: 0.30, 0.55). Evidence of healed tuberculosis was found in almost equal proportions in the two groups: 28.1 percent among cases and 26.7 percent among controls. On the basis of these findings, Pearl induced one of his clinical colleagues to start a trial of tuberculin therapy for cases of recurrent biopsy-proven cancer. At the time of publication, the cases treated longest had shown the greatest regression, and the general condition of treated patients was encouraging. No further clinical details were given.

In the same year, Carlson and Bell (2) repeated Pearl's study, basing their findings on reports from the Pathology Department of the University of Minnesota. Using controls selected in the same way that Pearl did, they obtained similar results. However, when they compared autopsy findings in a series of patients with heart disease and controls, they found a similar negative association between heart disease and tuberculosis. They concluded that "the only proper control for the association of active tuberculosis and cancer is the incidence of active tuberculosis in some other disease" (2, p. 135). As others pointed out subsequently, a better control group would have been nonmalignant cases from a population representative of that from which the autopsied cancer cases had come (3).

Pearl's mistake was largely responsible for his failure to be appointed head of a new experimental biology unit at Harvard University (4). It is sad that he is remembered largely for this one major "bloopers." We should think of him more as melding biology and statistics, and as being the first to report that mortality was lowest among persons who used alcohol moderately, as well as among persons who did not smoke tobacco (5–7).

Although oral vaccination against typhoid fever had been attempted since the turn of the 20th century, claims of efficacy had been based largely on clinical observations. Rachel Hoffstadt and her colleagues reported on studies designed to see whether there was an experimental foundation for these claims (8–10). Using human volunteers, they found that administration of typhoid vaccine in the liquid form or as dried material in capsules resulted in significant titers of agglutinins, complement fixation reactions, and precipitin reactions. There were no adverse reactions, which was a pleasant change from the after-effects of subcutaneous vaccination. However, the titers were not as high as those following subcutaneous administration of the vaccine.

Frances Russell and Escholtzia Lucia (11) compared life expectancies for persons over the age of 5 years in East Haven, Connecticut, during the period 1773–1822 with life expectancies in modern New Haven, Connecticut (1920), late 18th century...
Carlisle, England (1779–1787), and the Roman provinces of North Africa following the days of Caesar. Above the age of 20 years, East Haven had better life expectancies than New Haven, with the maximum difference of 5 years being seen at age 40. For both towns, the lowest mortality was at the age of 12 years. Life tables were similar for East Haven and Carlisle, England (a town considered to have somewhat better life expectancies than England as a whole), with East Haven faring a little better after the age of 20 years. For East Haven residents between the ages of 15 and 35, the major causes of death were puerperal septicemia, tuberculosis, drowning, and war. Life expectancies were slightly lower than those calculated for the Roman provinces in Africa, except for females during the childbearing years. Quoting MacDonell (12), the authors attributed the favorable experience of the Roman provinces to the better health experienced by most emigrants and "also to the fact that a large proportion of the population must have been engaged in the healthy occupation of agriculture, for we know that Africa rivaled Egypt as a source of supply of grain for the markets of ancient Rome" (11, p. 526).

J. V. Deporte (13), a statistician with the New York State Department of Health, undertook a study to clarify to some extent the association of urban and rural residence with cancer mortality. After making some preliminary remarks about discussions of cancer mortality usually engendering "an atmosphere of fervor and contention reminiscent of medieval theological disputes" and complaining that statisticians were blamed because of the inadequate information given them by clinicians, he produced evidence that urban rates were inflated by the allocation of deaths to the areas where patients went for treatment. With corrections for such occurrences, crude cancer mortality rates were appreciably higher in the rural areas (13). Because age-sex distributions of urban and rural populations were not available at the county level, Deporte was unable to adjust for these factors. Indirect evidence, however, indicated that the higher rural rates were largely due to the preponderance of older persons in rural areas. This paper is a reminder of the primitive state of cancer statistics in the 1920s, even in a state with an above-average vital statistics system.

Still another reminder of the remarkable changes in vital-statistics reporting during the 20th century is found in the paper by A. W. Hedrich (14) on how to deal with incomplete reporting of births. He noted that only six states were eligible for inclusion in the United States Birth Registration Area when it was organized in 1915. Furthermore, the criteria for inclusion in the Registration Area specified that completeness of reporting only had to be 90 percent or better. As a consequence, one had to assume that "there may be a deficiency approaching 10 percent for the years immediately following" admission to the Registration Area. (Only since 1958 has reporting of births been at least 99 percent complete in the 48 conterminous states (15).) Hedrich devised two methods of estimating the true numbers of births, and found completeness of reporting in Maryland to have increased from just under 90 percent in 1915 to 97 percent in 1927 (14).

The "pharmacology and toxicology of tetrachlorethylene," addressed by Lamson et al. (16), was a timely topic in the 1920s, when hookworms and other intestinal worms were still common in much of this country as well as in the less developed parts of the world. The commonly used vermifuges of the day, carbon tetrachloride and oil of chenopodium, were toxic, and safer alternatives were badly needed. Based on experiments with dogs, Lamson et al. concluded, "Tetrachlorethylene causes no symptoms or demonstrable pathological changes in dogs when taken orally in the therapeutic dose, whether alone, with alcohol, or in conditions of high or low calcium balance. [Carbon tetrachloride was particularly dangerous when taken with alcohol or given to persons with abnormal calcium balance.] Our experiments indicate that it could be used in the treatment of hookworm disease with far greater safety than either oil of chenopodium or carbon tetrachloride" (16, p. 442). Although even safer and more effective drugs have since been developed, tetrachlorethylene may still have a place as a vermifuge in places where its more expensive replacements cannot be afforded (17).

Finally, the shortest paper of 1929: Matheson and Hinman (18) reported that the vermilion spotted newt was found to eat mosquito larvae, as many as 46 per newt-day. They concluded that "more detailed studies should be made of this newt in relation to its possible increase in numbers and its utilization in destroying mosquito larvae in woodland and meadow pools, marshy areas, swamps, bayous, margins of dams, etc. It might be possible to discover methods of protecting and encouraging the breeding of this salamander in many parts of the United States and introducing it into foreign countries" (18, p. 191). While the authors' suggestion of exporting these cute creatures might seem to be one of the most benign and beneficial forms of foreign aid ever proposed, it is clear that they did not foresee the serious ecologic consequences ensuing from the introduction of lovable rabbits into Australia or the handsome flowers of water hyacinths into Florida's waters.
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