

INTRODUCTION

“Staying healthy and strong well into our centennial years . . . is becoming an increasingly viable goal,” declared the authors of *The CR Way: Using Secrets of Calorie Restriction for a Longer, Healthier Life* (2008).¹ The “secret,” they noted, is that “when it comes to living a longer, healthier life, less is more.” To the authors, low-calorie diets were a crucial means to achieve not only longevity but also sound health in declining years, as recommended by many gerontologists. This secret was discovered in the 1930s in the laboratory of a prominent gerontologist, Dr. Clive McCay (1898–1967), whose “breakthrough studies showed that calorie restriction greatly expanded the lives of mice.” Thereafter, the authors of *The CR Way* wrote, “thousands of studies have documented the broad range of health and longevity benefits of calorie restriction,” including for humans. These studies suggested that the science of gerontology should be fundamental to a healthier and longer life, and they emerged just as the aging population in the United States was expanding.

This reference to the work of Clive McCay demonstrates the enduring legacy of early gerontologists, whom I define as the creators of the new field of gerontology from the 1930s to the 1950s, a time when the problems of an aging population prompted scientific scrutiny of the phenomenon of growing old (figure I.1). As the proportion of seniors in the United States grew due to improvements in hygiene and nutrition as well as a declining birthrate, topics associated with the older population, such as chronic disease, pensions, industrial efficiency, and age discrimination gained greater social relevance. The creators of gerontology argued that everyone could better prepare for old age when scientific knowledge of the aging process was available.

ORIGINS OF GERONTOLOGY

Today, gerontology is a scientific field institutionalized in American and British academia, although its stability as a science

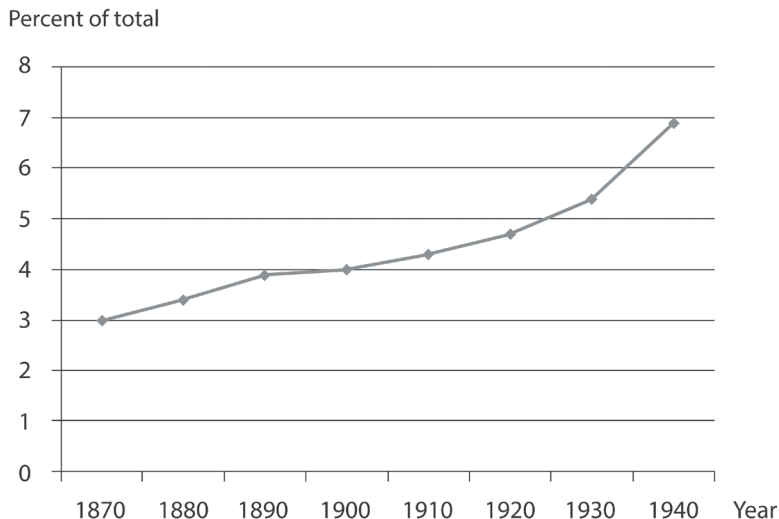


FIGURE 11. The Increasing Percentage of People of Sixty-Five Years of Age and Over in the United States from 1870 to 1940. Social Security Board, *Economic Security in Old Age*, 10; “United States Summary: Population Characteristics by Age, 1940,” <http://www2.census.gov/prod2/decennial/documents/33973538v4p1ch1.pdf> (accessed June 25, 2015).

is still not completely certain. In the United States, this science, represented by the Gerontological Society of America, has developed as a multidisciplinary field reflecting its members’ broad interests in biological, medical, social, and psychological problems. In the United Kingdom, the British Society for Research on Ageing (BSRA) and the British Society of Gerontology are the organizations for biological and social gerontologists, respectively. Financial support for gerontologists is now also quite substantial, especially in the United States. In fact, the National Institute on Aging (NIA) within the National Institutes of Health (NIH) in the United States is currently funding a host of scholars interested in a variety of topics on aging, including the biological nature of senile changes, seniors’ psychological adaptations to workplaces, and the socioeconomic impact of the aging population. The focus of the NIA is biomedicine—a new type of science and medicine that emerged after World War II that involves extensive research on life and disease at the molecular and cellular levels and its systematic application to clinics.² But the NIA also supports social and psychological investigations of aging people. For its continued

support of these research projects, the NIA allocated a total budget of \$1.2 billion for fiscal year 2014.³

How did this science come to be? The Gerontological Society, the first formal gerontology organization, was created in 1945, but its origin can be traced to several decades earlier. In the 1910s and the 1920s, many biological and medical scientists began to propose several new approaches to studying aging processes. As McCay and his team at Cornell University's agricultural college started investigating the relationship between life span and calorie consumption, the prominent French surgeon Alexis Carrel (1873–1944) was studying cellular aging with his new technique of growing cells outside of the body at the Rockefeller Institute for Medical Research. The result of this work led Carrel to argue that aging and natural death were “contingent,” or not inevitable, at the level of the cell. During the 1920s, cytological research by Edmund Vincent Cowdry (1888–1975) and others revealed that aging occurred at distinct rates in different portions of the body, and studies of protozoa by Herbert Spencer Jennings (1868–1947) and others showed that single-celled organisms would not die or age in certain environmental conditions. Furthermore, Charles Manning Child (1869–1959), a biologist at the University of Chicago, discovered that many cells of invertebrates had an ability to reverse their specialized functions; that is, to “dedifferentiate” and become more like embryonic cells again that, consequently, could continue their life without senescence.

During the Great Depression, some of these researchers came to believe that they needed to do more than merely pursue their own research projects. Although age discrimination and poverty among the elderly had been persistent problems in the West since the late nineteenth century, the economic disaster of the 1930s considerably worsened the predicament of the aged and alerted these scientists to the profound social implications of their work. Indeed, the Depression strengthened the age barrier in job markets and demolished the savings and private pension plans of the elderly. The United States government responded by enacting the Social Security Act of 1935, which created a national pension system and other federal provisions. At the same time, scientists like Cowdry embarked on developing the field of gerontology in order to apply their expertise for the benefit of seniors.⁴ In their view, scientific knowledge was a critical tool for tackling the problems of aging in a systematic way.

Under Cowdry's leadership, a number of scholars gathered to create what would become the major gerontology organizations and institutions.⁵ First, American and British scientists formed the Club for Research on Ageing, which evolved into the Gerontological Society of America in 1945 and the British Society for Research on Ageing in 1947. Simultaneously, the *Journal of Gerontology*, the first academic periodical of the new field, was launched, and several American funding agencies, such as the NIH, the Josiah Macy Jr. Foundation, and the Rockefeller Foundation, started awarding research grants to gerontologists on a long-term basis. In particular, the NIH created an intramural research unit on aging, and the Federal Security Agency formed a Committee on Aging and Geriatrics as a national agency. In 1950, Cowdry and other gerontologists also created the International Association of Gerontology in order to promote research on aging across national borders.

This movement to establish aging research was new in the Western world. Aging had long been a subject of scholarly discourse associated with morality, spiritual redemption, and the enigma of life rather than a focal point for organized scientific investigations funded by governments and philanthropies.⁶ The long tradition of studying the aging process, dating from the time of Aristotle and Galen, was scientific and legitimate in its own context, but it was not the same as the activities of twentieth-century gerontologists that emerged from their network of laboratories and professional organizations. Under the banner of *gerontology*, a term coined by the Russian-French scientist Elie Metchnikoff in 1903, these scientists crafted a new way of approaching the phenomena of growing old through their multidisciplinary field, which covered all aspects of aging from biological, medical, psychological, and social scientific perspectives.⁷

BIOSOCIAL VISIONS, WELFARE, AND INDIVIDUALISM

The origin of this multidisciplinary characteristic of gerontology demands an explanation. In fact, most of the key players in early gerontology organizations were biological and medical researchers. When social scientists started to study aging but drew insufficient attention, these life scientists worked to form a multidisciplinary field of gerontology.⁸ Why, then, did they decide to foster their field as a multidisciplinary arena rather than a subdiscipline of