Abstract. This paper discusses how growth and aging became interrelated phenomena with the creation of gerontology in the United States. I first show that the relation of growth to senescence, which had hardly attracted scientific attention before the twentieth century, started to be investigated by several experimental scientists around the 1900s. Subsequently, research on the connection between the two phenomena entered a new domain through the birth of gerontology as a scientific field comprised of various disciplines, many of which addressed growth. Due to gerontologists’ efforts, the association between aging and growth became stronger and more multifaceted within the discursive and organizational matrix constituting the new science, leading to a broader definition of senescence with an ambiguous connection to chronological age. Furthermore, as gerontologists borrowed the cultural agendas as well as research methods from studies of growth, aging began to be defined as a phenomenon that could be actively controlled and managed in both social arenas and laboratory environments.

Keywords: Aging, Age, Senescence, Growth, Gerontology, Chronological age

In traditional Western philosophy and medicine, aging and growth were considered distinct phenomena. While both were subjects of academic and medical discourse, few people studied and discussed how they were related. In fact, doctors and naturalists interested in aging could write about senility without knowing much about the process of growth. Although it was obvious that growth and senescence were placed on the continuous passage of time in humans’ and animals’ lifespan, most physicians and philosophers could not imagine that there were certain connections between the two phenomena.

Historically, the lack of attention to the relationship between aging and growth seems to be rooted in the common conception of the human’s life. Few people doubted that humans progressed through several
distinct stages of life, from infancy and childhood to adulthood, middle age, and finally old age. Even today, this way of differentiating the course of life is taken for granted by many people and is used as a means of organizing modern society’s institutions, such as schooling, military conscription, and retirement. In general, these phases can be categorized into two major portions, namely, the period of growing up and the time of growing old. In this scheme, the inexorable passage of time implies that aging comes only after a living organism ceases to grow further.

My paper discusses how early contributors to gerontology modified this view in their scientific thinking and practice. I argue that many American researchers of aging in the early and mid-twentieth century experimentally, discursively, and institutionally established the link between growth and senescence. Initially, several prominent biological and medical scientists in the early twentieth century, such as Charles S. Minot (1852–1914), Alexis Carrel (1873–1944), and Aldred Warthin (1866–1931), began to claim that senescence occurred even in developing organisms, including embryos and fetuses. Inspired by these scientists’ counterintuitive yet highly inspiring argument, later investigators who would create gerontology in the United States, including Edmund Vincent Cowdry (1888–1975), Clive McCay (1898–1967), and Nathan Shock (1906–1989), further studied the association between the two phenomena and made it a mainline research subject within the organizational and intellectual fabric of their new field.

My study of the scientists’ work expands and deepens our understanding of the changing notion of age and aging with the emergence of the science of senescence. As W. Andrew Achenbaum and Stephen Katz have shown, the challenges of aging populations in twentieth century Western society contributed to the establishment of gerontology as a multidisciplinary scientific field which included biology, medicine, psychology, and the social sciences (Achenbaum, 1995; Katz, 1996). Tiago Moreira and Paolo Palladino have also stated that under this multidisciplinary umbrella biogerontology developed as a broad arena dealing with aging as a common underlying factor behind the occurrence of various illnesses, as opposed to biomedicine that became a narrowly delimited discipline organized according to specific disease categories (Moreira and Palladino, 2008). Remarkably, Moreira and Palladino argued, the effort to broaden the scope of gerontology led researchers of aging to doubt the scientific usefulness of chronological age itself, whose relation to degenerative changes in the senile body seemed to them quite ambiguous and contingent. In a similar vein, David Armstrong has claimed that in the twentieth century “the old temporal delimiters of birth