Progress and Pitfalls in Gerontological Theorizing

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"Theoretically speaking, the study of aging may be coming of age" (Passuth & Bengtson in Emergent Theories of Aging 1988, p. 380).

The purpose of this symposium has been to examine the recent history and current status of gerontological theory. The original title of the 1995 GSA symposium at which these articles were first presented was: "Ten Years Later: Progress and Pitfalls in Gerontological Theorizing." The "10 years later" refers to the time since papers were drafted for Emergent Theories of Aging (Birren & Bengtson, 1988), a volume intended "to address the data-rich but theory-poor state of current research on aging" (Birren & Bengtson, 1988, p. ix). Contributors to the volume, which included the four primary authors of the present symposium, reflected the multidisciplinary spectrum of scholarship in aging, and most offered optimistic views about theory-building in gerontology. The overall tone of the volume was one of excitement: most authors indicated that theories of aging were on the rise and that we could expect significant advances in theory-building during the coming decade.

Now, almost 10 years later, Patricia Passuth Lynott and James Birren, the organizers of this symposium, are to be congratulated on the scope of theoretical perspectives they have assembled within four brief articles. These indeed provide a valuable update on the progress of theoretical developments in gerontology since 1988. But what about the "pitfalls?" Is the hopeful assertion that theory-building in gerontology may have "come of age" justified?

Theories and Theory Development in the Recent History of Gerontology

Certainly there has been a resurgence of interest in theoretical issues in gerontology in the past few years. In 1994 The Gerontologist (Vol. 36, No. 4) published four articles on reviewing the context and contributions of disengagement theory (see Achenbaum & Bengtson, 1994). In 1995 the Canadian Journal of Aging (Vol. 14, No. 1) devoted an entire issue under the editorship of James Birren to reviewing theoretical models of aging ranging from molecular biology to social policy, based on papers presented at the 1993 International Congress of Gerontology. In 1996 The Gerontologist (Vol. 36, No. 2) published 17 studies from symposia on theory development organized by Jon Hendricks at the 1994 annual meetings of the American Sociological Association (see Calasanti, 1996; Dannefer, 1996; Pearlin & Skaff, 1996). In the most recent edition of the Handbook of Aging and the Social Sciences, Marshall (1995) provided a cogent review of underlying theoretical themes in social science research on aging.

We must go back four or five decades to find a similar level of concern expressed for theoretical issues in gerontology. In biology during the 1940s there was a flurry of theoretical activity concerning homeostatic mechanisms and aging; in psychology during the 1950s similar activity focused on linkages between early and later phases of human development, especially in cognition; and in social gerontology during the 1960s there were spirited debates about disengagement theory, activity theory, subcultural theory, and role theory. The development of these theoretical concerns has been aptly summarized by Achenbaum (1995) in his landmark history of gerontology's emergence as a science.

It is important to examine the subsequent intellectual history of these theories, since their fate reflects both the "progress" and the "pitfalls" of gerontological theory-building. We feel there are at least four
ways in which the focus of theory-building has shifted since the 1970s, and these reflect some of the problems critics found in the first-generation theories: (1) from earlier bold attempts to develop "grand" theory about aging to an emphasis on midrange theory about specific mechanisms of aging; (2) from an emphasis on testing explicit hypotheses derived from theories to today's fashion of testing "goodness of fit" in statistically-based empirical models; (3) from an almost reflexive employment of the positivistic, traditional science model of justification to a greater use of the interpretive or phenomenological model of discovery; (4) from theorizing about basic processes of aging to more applied research, focusing on quick-term and program-related results of studies. The above dichotomies apply particularly to recent research and theory development in social gerontology (Bengtson, Burgess, & Parrott, in press). Yet it is striking how these issues are reflected in the recent history of biomedical gerontology as well (Adelman, 1995).

At the same time, it would seem that norms of journal publication have changed, at least in social gerontology, toward accepting research articles that are remarkably atheoretical. Our review indicates that less than 20% of empirical articles published in The Gerontologist or the Journal of Gerontology; Social Sciences between 1990–1994 included any reference to theory or theoretical developments in their discussion or interpretation of empirical results (Bengtson et al., in press). This perhaps reflects the tendency of journal reviewers recently to focus on methodological rigor rather than conceptual or theoretical issues; on empirical models (descriptive research) rather than hypothesis testing (explanatory research); and on the logic of justification rather than the logic of exploration in knowledge-building. As a result, gerontological research may be at risk of accumulating "a vast collection of unintegrated pieces of information" (Birren, 1995, p. 1).

But the tide may be shifting. The articles in this symposium, and in the symposia to which The Gerontologist and Canadian Journal of Aging have devoted many pages recently, reflect a renewal of concern for theory across the multidisciplinary spectrum of gerontology. This is a welcome trend, for certainly the progress of any scholarly field depends on cumulative knowledge development, and in this the explicit development of theory plays a crucial role.

What is theory, and why is it so important, particularly in a developing field of inquiry such as gerontology? Theory can be defined briefly as the construction of explicit explanations in accounting for empirical findings (Bengtson et al., in press). In the long history of science, from Aristotelian epistemology through modern sciences' applications in artificial intelligence, scientific theory has proven useful in four important ways:

Integration of Knowledge. — A good theory summarizes the many discrete findings from many empirical studies and incorporates them into a brief statement that summarizes linkages among concepts and empirical results.

Explanation of Knowledge. — A useful theory provides not only description of the ways empirically-observed phenomena are related (this is what "models" reflect), but also how and especially why they are related, in a logically sound account incorporating antecedents and consequences of empirical results.

Predictions About What Is Not Yet Known or Observed. — Research based on theory can lead to subsequent empirical discoveries based on principles proposed by earlier theory. Examples from the history of science include Darwin's theory of natural selection in biology, Mendeyev's theory leading to the periodic table of elements in chemistry, and Einstein's theory of relativity in physics.

Interventions to the Existing Order of Naturalistic Phenomena. — Theory is valuable when we attempt to improve our technological capacities or to ameliorate problems we face. Certainly the utility of scientific theory is evident in the advancement of commercial engineering during the past century, from initial applications of 19th Century physics to the conduction of electrical signals through telegraph, radio, and television communication in the early 20th Century, and thence to the landing of humans on the moon and most recently to the development of instant access from our home computers to anywhere in the internet-based world. A second set of examples comes from biomedical technology applied to the virtual eradication of most infectious diseases. A third list could be made of humanistic interventions that have been attempted through public policy — for example those directed at ameliorating problems of poverty in old age and delaying institutionalization — though these have achieved much less dramatic results to date.

Alternative perspectives on theory have recently emerged as part of the postmodern and interpretive critiques of science (Featherstone, 1989; Giddens, 1996; Lyotard, 1984). In contrast to positivistic science, interpretive and critical models of theorizing focus on process and understanding. Rather than emphasizing prediction and control, interpretive researchers collect data and make observations with the goal of identifying themes of meaning that emerge from the research. Findings are used to guide understanding of phenomena. Critical theorists seek to question the underlying assumptions of gerontology, to expose oppressive, dominant views and to give credence to the meanings and experiences of under-represented, less powerful viewpoints. In this tradition, recent developments such as chaos theory have shifted the focus away from central tendencies and linear patterning (Hendricks, 1996).

It is important to note what these four articles suggest about the development of recent theory in gerontology since 1988. What about "progress," and
what about “pitfalls,” are indicated in these reviews of contemporary gerontological theory?

Has There Been a Paradigmatic Shift in Biogerontological Theories of Aging?

Cristofalo, a past President of the Gerontological Society of America, has been an articulate spokesperson for biological theories of aging during the past decade, and his article provides a valuable and succinct overview of what has been learned recently about some of the most basic biogenetic mechanisms of aging, whether in humans or in the more easily studied fruit flies. His review of theoretical developments since 1988, when he first provided a summary of biological theories of aging (Cristofalo, 1988), seems to suggest something like a paradigm shift in the biology of aging. In his 1988 review he questioned whether the most basic processes of aging operate at the cellular level or at the organismic level: “Accepting as a reasonable working hypothesis that genetic mechanisms do operate in the aging process, one can ask the second question, whether aging is characteristic of individual cells or only of the integrated functioning among cells” (Cristofalo, 1988, p. 124). Now, nine years later, he suggests that the focus on cellular aging has indeed “changed our understanding of the process of aging, and altered the direction and interpretation of aging research.”

As in 1988, Cristofalo notes there are two major distinctions in biological theories of aging: stochastic and developmental-genetic. At the same time he emphasizes the astonishing diversity in aging rates that have been observed recently across species, as well as the heterogeneity in aging rates within species — findings that appear to support either of these major theories. He cites cell-level research from his laboratory (and others) indicating support for the hypothesis of increasing variability in age rates and life spans, indicating the remarkable variability in gene expression with aging. He further argues that other recent research demonstrates that gene expression can no longer be always considered an “orderly flow of events” (p. 7) — that instead, the process is nonlinear. We note that this argument has parallels to sociologist Hendricks’ (1996) recent application of “chaos theory” to social processes of aging.

Cristofalo emphasizes the role that laboratory research plays in supporting or disproving theories (and paradigms?) of biological aging, describing events that occur at the micro-level of cells. However, he stops short of calling the change in perspective that he heralds a “paradigm shift.” Indeed, one premise of his article may be perplexing: While he says that “there is no defining theory of biological aging,” he then proceeds to identify several promising candidates, lending his support to one set of theories (those favoring genetic factors of aging) and concluding that the focus on cellular aging is the most promising arena for future biogerontological theory development. Cristofalo is cautious in his assessment of recent theoretical developments in this field; he warns that it would be premature to attempt explanations of human aging based on cell culture models of aging. He reminds us that gerontological theory and empirical reality have not always gone comfortably forward hand in hand.

Is There a “New Wave” in Psychogerontological Theories of Aging?

Schroots reviews theories of aging that have developed in psychology since World War II. He proposes that the development of theory in this field divided into three periods: (1) “Classical” geropsychological theories, reflecting “developmental tasks” and activity theory, psychosocial theories of personality development, counterpart theory, and cognitive theory of personality and aging; (2) “Modern” theories, including life-span development and aging, theories of reduced processing resources, personality and aging, and behavioral genetics and aging; (3) “New” (or what some would term Postmodern) theories, including Tornstam’s (1992) gerotranscendence theory and his own gerodynamics/branching theory (Schroots, 1995).

There is considerable merit to Schroots’ historical classification of psychological theories of aging. The research literature concerning cognitive and behavioral changes with aging since the 1940s has been vast and monumentally diverse; the theoretical issues reflected in these myriad studies are complex. Schroots summarizes major theoretical trends within each of the historical periods he identifies, and he attempts to clearly define the terms and concepts he uses in describing them.

However, some critics may question how this classification advances our understanding of theory development in the psychology of aging. It is not clear what distinguishes the three “periods” he identifies, other than chronological years or decades; there is no attempt to develop linkages or “generations” between theoretical trends. Some may ask whether the “new” (or “postmodern”) theories he cites represent explanatory trends based on current empirical research, as reflected in journals, or whether these represent philosophical perspectives at yet-untestable levels of abstraction. Schroots cites theories of gerotranscendence and gerodynamics as representing new directions in psychological theorizing, suggesting that these “new” perspectives reflect a larger intellectual and scientific trend toward critical theorizing. It remains to be seen whether empirically-based psychologists in aging will find these proposed theories useful in interpreting and explaining results.

Has There Been a “Second Transformation” in Sociological Theories of Aging?

In their impressive review of developments in social theories of aging from a sociology of knowledge perspective, Lynott and Lynott argue that there have been two major transformations in gerontological thinking. The first occurred in the late 1960s when social researchers in aging developed a “theoretical
consciousness” and began to challenge current assumptions of scientists in the field of aging. They note that disengagement theory (Cumming & Henry, 1960) provided a contrast to operating assumptions about problems of adjustment associated with individual or on the social system in order to best explain social processes of aging and people’s adaptation to them.

Lynott and Lynott place the second transformation with scholars who began to question the field of aging itself and the way knowledge in the field is constructed a decade or so later. This perspective on theory in gerontology turned a critical lens inward, to focus on researchers’ own assumptions, on their production of empirical “facts,” and on phenomenological experience reflected both in the context and expectations in research on aging. The aim of this perspective has been to develop a critical self-consciousness in gerontology and to challenge the dominant ‘conventional’ theories of old age.

The first transformation noted by Lynott and Lynott is convincing, and social gerontologists need to be reminded of it. The second involves what Kuhn (1962) has described as a process wherein two competing scientific worldviews challenge each other, resulting in a “paradigm shift” for the field. Many who do research in social gerontology would dispute that a transformation of this order has occurred. Certainly it is yet to be determined which worldview — the “critical theory” perspective Lynott and Lynott suggest, or the life-course and social stratification perspectives more often cited in current empirical studies — will succeed.

Lynott and Lynott’s focus on critical perspectives supports the direction suggested by Calasanti (1996), Marshall (1995), and Hendricks (1996) that social research and theory should move toward more self-conscious theories which challenge the dominant ideologies and interpretations of age and the aging experience. Their main thesis that theoretical perspectives in the sociology of aging are changing from what they were in the past is accurate, and in our view this is a welcome development. But if they truly believe that there is a paradigm-shift occurring, it is curious that they fail to mention the life-course perspective and its role in this shift, as well as the cross-disciplinary focus that seems to be a part of this paradigm change (see the recent discussion of the life-course perspective by George, 1996, and O’Rand, 1996).

How Can Theory Be Used in Gerontological Practice?

In his 1988 chapter in Emergent Theories in Aging, Uhlenberg developed a conceptual model concerning the intriguing issue of the “social significance” of older age cohorts. In this symposium, he focuses on a specific aspect of social significance — the balance between receiving and giving personal care — and creates a parsimonious theoretical model to explain the phenomenon. While in 1988 he focused on the declining significance (e.g., economic productivity) of cohorts as they aged in general terms, with this article Uhlenberg discusses the decline in productivity of age cohorts with regard to caregiving and care receiving, a most timely topic with obvious public policy importance. He emphasizes that researchers in aging should create theoretical models to help inform public discourse and policymaking on aging issues. The model he proposes clearly recognizes the social mechanisms that impact the aging experience (Uhlenberg, 1988).

Uhlenberg’s argument has merit for several reasons. First, not only does he attempt to identify the conceptual issues of cohort aging and productivity in caregiving, but he also develops a theory identifying relations between concepts. Second, he describes how this mini-theory is useful and can incorporate smaller research efforts within a larger theoretical framework. Third, he attempts to be comprehensive and inclusive concerning the many factors that determine proximate predictors of the caregiving/care receiving balance. Finally, the model he presents (in a diagram) should be fruitful for other researchers to test with their own data — an important standard of good theory development.

Uhlenberg makes several theoretical assumptions that are in direct contrast to what some critical gerontologists and the “new wave” of gerontologists who are focused on diversity may advocate: he focuses on central tendencies and typical patterns (rather than dispersion from the means and differentiation); he predicts a linear direction of change in caregiving/care receiving behavior over time (rather than focusing on nonlinear patterns of change); and he explicitly attempts to link his theory to prediction and control. He notes it provides points of intervention that could be used to control care exchanges and to alter the burden of caregiving caused by future older cohorts. The interpretive framework of critical gerontology discourages intervention as a goal in general, and as an act of researchers in particular, because during interventions, power is seen as being subject to misuse, often to the detriment and continued oppression of underprivileged or vulnerable categories of individuals.

In contrast to Lynott and Lynott, or perhaps even Schroots and Cristofalo, Uhlenberg is not concerned with abstract paradigm shifts in theorizing about differences between age cohorts. He is rather intent upon building and refining a limited-range theory. And therein lies a potential “pitfall” of this kind of theorizing: although Uhlenberg’s model is very explicit and internally consistent, it seems to neglect the contextual components of caregiving and care receiving. By focusing on social-structural components, the model he proposes may overlook the role of the family and, in particular, within-cohort caregivers such as spouses and siblings. In addition, this approach leaves unexamined the meaning of caregiving for each participant. Diamond (1992) has documented, for example, how gender and race impact the meaning of care in his qualitative research on nursing assistants. Despite these concerns, however, Uhlenberg’s model is extremely promising because it places specific empirical issues in one of the
most frequently discussed problems in applied gerontology today within the context of larger theoretical issues.

**Conclusion: Potentials and Pitfalls in Gerontological Theorizing**

These four analyses, taken together and in the context of recent theoretical activity in the field, demonstrate that gerontologists are indeed making progress in developing theories to explain aspects of the aging process, as well as in applying them to immediate problems in human aging. New theories have emerged in the biology of aging and in social gerontology; refinements and additional theory development have occurred in the psychology of aging and in the sociology of aging.

Progress in some subdisciplines of gerontology is slower than others, and these studies indicate that we have run into a few caution signs along this road to change. Cristofalo warns that while biological developments are exciting and offer new insights into theories about why humans age, cell cultures do not reveal the whole picture and are subject to unnatural conditions unlike those that exist for humans in the social environment. Schroots points to the inadequate level of theorizing in the psychology of aging today and does not see much progress in the ability of the subdiscipline to bridge knowledge between different theories of aging. He suggests that thinking, and therefore theorizing, in psychogerontology is still segmentalized.

Lynott and Lynott remind us that the process of theory-building itself, at least in the sociology of aging, reflects what can be called a critical perspective on developments in research. Overcoming the pitfalls in thinking that early social gerontologists demonstrated — for example, too-grand theories, or homogeneous and linear models of aging focused on averages — requires turning a critical lens upon basic assumptions about aging, and actively promoting theories that reflect the diversity of experiences, behaviors, and assumptions about human aging. On the other hand, Uhlenberg shows that what may sometimes be a “pitfall” — focusing on central tendencies and linear flows of thinking — are at other times what guides theory development, and that gerontological theory development can and should ultimately focus on potentials for application and amelioration. In order to build theory, we have to rely on previous explanations of behavior that have been organized and ordered in some way.

So what has been the outcome of this period of enhanced concern for theory development in gerontology since 1988? Has there been a definable paradigmatic shift in research concerning bio-gerontological, psycho-gerontological, or social-gerontological theories of aging during the past decade?

No. At least not yet; and not from the evidence presented by Cristofalo, Schroots, Lynott and Lynott, and Uhlenberg.

What we do see are at least four indications of progress in gerontology theory: (1) some promising new theories have been developed; (2) older, still-relevant theories have been refined; (3) there may be greater interface between theories and intervention attempts in gerontological practice and policy; (4) there is evidence of increasing recognition (if not acceptance) of interpretive and critical or postmodern perspectives in gerontological theory. At the same time, we have reviewed three kinds of pitfalls in recent attempts: (1) inadequate attention to theory can still be seen in many if not most research reports in peer-reviewed journals; (2) few theories have successfully incorporated interdisciplinary linkages; and (3) some recent theorizing appears disconnected from empirical research. We hope that the next 10 years will produce even greater progress in gerontological theory development.

**References**


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