Clifton D. Bryant ❖ Dennis L. Peck *editors*

Encyclopedia of Death & the Human Experience

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Encyclopedia of Death & the Human Experience

edited by

Clifton D. Bryant ❖ Dennis L. Peck
Virginia Tech University *The University of Alabama*

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Reader's Guide

The Reader's Guide for the *Encyclopedia of Death and the Human Experience* is provided to assist readers in locating entries on related topics. It organizes entries into 16 general topical categories: (1) Conceptualization of Death, Dying, and the Human Experience; (2) Arts, Media, and Popular Culture; (3) Causes of Death; (4) Coping With Loss and Grief; (5) Cross-Cultural Perspectives; (6) Developmental and Demographic Perspectives; (7) Disposition of the Deceased; (8) Funerals and Death-Related Activities; (9) Legal Matters; (10) Mass Death; (11) Process of Dying; (12) Religion; (13) Rituals, Ceremonies, and Celebrations; (14) Suicide, Euthanasia, and Homicide; (15) Theories and Concepts; and (16) Unworldly Entities and Events. From conceptualization of death and dying to the effects these phenomena have on those who survive, the more than 300 entries represent a range of insightful interdisciplinary topics crafted by international scholars and practitioners. Each topic is intended to provide the reader with insights into the phenomena that influence the social meanings of death and dying as these are created through the institutions that structure and organize the cultural artifacts, rituals, and ceremonies humans create and the symbols that influence the human experience.

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Death, Clinical Perspectives
Death, Humanistic Perspectives
Death, Philosophical Perspectives
Death, Psychological Perspectives
Death, Sociological Perspectives
Defining and Conceptualizing Death
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Disasters, Natural
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Food Poisoning and Contamination
HIV/AIDS
Karoshi
Medical Malpractice
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Neonatal Deaths
Prison Deaths
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Sudden Infant Death Syndrome (SIDS)
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About the Editors

Clifton D. Bryant is Professor Emeritus of Sociology at Virginia Tech University, where he served from 1972 to 2007. He was Department Head from 1972 to 1982. His teaching and research specialty areas include the sociology of death and dying, deviant behavior, military sociology, and the sociology of work and occupations. During his 47-year career, he enjoyed faculty status at six U.S. colleges and universities and two Southeast Asian universities. He also held Visiting Scientist status at three research institutes. He received his B.A. and M.A. degrees from the University of Mississippi, did advance graduate work at the University of North Carolina (Chapel Hill), and received his Ph.D. degree from Louisiana State University.

He served as President of the Southern Sociological Society (1978–1979). He was the recipient of the Southern Sociological Society's 2003 Distinguished Contributions to Teaching Award, and in 2007 he received its Distinguished Service Award. He was appointed to the Roll of Honor and received that award in 2009. The Roll of Honor Award is the highest award conferred on a member of the Southern Sociological Society and recognizes a career of distinguished intellectual contribution to sociology.

He was also president of the Mid-South Sociological Association (1981–1982). He was recipient of the Mid-South Sociological Association's Distinguished Career Award in 1991 and received its Distinguished Book Award in 2001 and in 2004.

His other reference works include *21st Century Sociology: A Reference Handbook* (coedited with Dennis Peck, 2007), the *Handbook of Death & Dying* (2003), and the *Encyclopedia of Criminology and Deviant Behavior* (2001). Beyond these reference works, he has authored or edited 11 other books and published articles in many professional journals.

Dennis L. Peck is Professor Emeritus of Sociology in the College of Arts and Sciences at The University of Alabama. He has authored and coauthored over 50 articles published in refereed journals and over 40 books, monographs, and book chapters. In addition to contributing to the learned literature throughout his career, during the present decade Dr. Peck has served as lead editor in chief of *21st Century Sociology: A Reference Handbook* (2007) and was instrumental in the creation of the four-volume *Encyclopedia of Criminology and Deviant Behavior* (2001), serving as coeditor of Volume 2 and associate editor for the entire project. In addition, Dr. Peck was a contributor to, and associate editor for, the *Handbook of Death & Dying* (2003), a publication that was recognized by the American Library Association as an outstanding reference of the year.

In addition to his interdisciplinary contributions in the general areas of deviant behavior, criminology, and death and dying, Dr. Peck was editor of *Sociological Inquiry*, the International Honor Society Journal of Alpha Kappa Delta, for 6 years. He has or currently serves on several editorial boards and in numerous professional association positions, including President of the Mid-South Sociological Association and the Alabama-Mississippi Sociological Association. While on leave from The University of Alabama on two occasions, he served in Washington, D.C., as a Senior Analyst with the Department of Housing and Urban Developments and with the Department of Education.

Dr. Peck's teaching and research interests are in the general areas of demography, the sociology of law, and deviant behavior. He has authored and edited several books, chapters, and journal articles in the areas of suicide, public health, psychiatric law, democracy, toxic waste disposal, life

without parole, human sexuality, urban development programming, post-traumatic stress disorder, program evaluation, divorce, social policy, and civility.

He was awarded B.S. and M.S. degrees from, and is recognized as Distinguished Alumnus of, the University of Wisconsin–Milwaukee. Dr. Peck earned a Ph.D. from Washington State University.

About the Editorial Board

Associate Editors

Kelly A. Joyce received her B.A. in anthropology from Brown University and her Ph.D. in sociology from Boston College. She is Associate Professor of Sociology at the College of William & Mary. Dr. Joyce's research focuses on the use of visualization technologies in medical practice. She is the author of *Magnetic Appeal: MRI and the Myth of Transparency*, has published articles on visualization in medicine in the journals *Science as Culture* and *Social Studies of Science*, and has a chapter in the edited volume *Biomedicalization: Technoscience, Health and Illness in the United States* (forthcoming). Dr. Joyce also investigates the intersections between health, aging, science, and technology. She has published articles in this area and is a coeditor of the 16th Sociology of Health and Illness monograph, titled *Technogenarians: Studying Health and Illness Through an Aging, Science, and Technology Lens*. Her current research examines autoimmune disorders, particularly lupus and Crohn's disease. Dr. Joyce is interested in the sociology of medical knowledge. Her research on autoimmune disorders considers medical constructions of the immune system and the gastrointestinal tract.

Vicki L. Lamb is Associate Professor of Sociology at North Carolina Central University and Senior Research Scientist in the Center for Population Health and Aging at Duke University. She received her M.S. in sociology from Virginia Tech, her Ph.D. in sociology from Duke University, and completed a postdoctoral fellowship at the Center for Demographic Studies at Duke University. She does research on the demography of health, disability, and the life course, and studies active life expectancy, successful aging, Medicare costs, elderly disability, and trends in long-term care of the elderly. Dr. Lamb is also interested in statistical methodology. Some of her recent journal publications appear in the *Proceedings of the National Academy of Science USA, Population and Development Review, Social Indicators Research, Journal of Health and Aging, Journal of Ambulatory Care Management,* and *Health Services Research*. She has contributed to numerous books and handbooks, including the *Handbook of Death & Dying* (2003), *Key Indicators of Child and Youth Well-Being,* the *Encyclopedia of Public Health, African American Family Life, Methods and Materials of Demography,* and *Determining Health Expectancies*. Dr. Lamb teaches graduate and undergraduate courses in social gerontology, medical sociology, demography, social statistics, and survey research methods.

Jon K. Reid is Professor of Psychology and Counseling at Southeastern Oklahoma State University, where he served as Chair of the Department of Behavioral Sciences for 6 years. He regularly teaches courses on human development, human sexuality, death and dying, and grief counseling. As a licensed professional counselor (Texas) for over 20 years, Dr. Reid has provided counseling in a variety of settings, including leading grief support groups in hospitals, churches, and schools. For 6 years, he served as a grief consultant for a children's grief camp held annually for 1 week in the summer. A member of the Association for Death Education and Counseling (ADEC) since 1995, Dr. Reid has served on a number of ADEC committees as well as on the ADEC Board of Directors. He has published articles in the journals *Death Studies, Illness, Crisis, and Loss* and the *Journal of Personal and Interpersonal Loss,* and a chapter in the *Handbook of Death & Dying* (2003). In addition, he has earned certification as a Fellow in Thanatology through ADEC.

Hikaru Suzuki is a social anthropologist whose research focuses on death and the funerary industry in Japan. Previously at Singapore Management University, Dr. Suzuki received her Ph.D. from Harvard and her M.B.A. from the University of

Wisconsin–Madison. Her book, *The Price of Death: The Funeral Industry in Contemporary Japan,* was based on her fieldwork with a funeral company in Kita-Kyushu, Japan. During this research placement, she worked as an employee, performing, on average, two wakes and one funeral per day. Dr. Hikaru participated in all elements of the funerary process, from picking up the deceased from the hospital; cleansing, bathing, and dressing the deceased; and sending off the deceased to the crematory, as well as arranging wakes, funerals, and memorial services. Among her other major publications are "McFunerals: The Transition of Japanese Funerary Services" (*Asian Anthropology*) and "Japanese Death Rituals in Transit: From Household Ancestors to Beloved Antecedents" (*Journal of Contemporary Religion*). She was recently a plenary speaker at the 8th International Conference on Death, Dying, and Disposal in Bath, United Kingdom, where she presented her paper "Japanese Funerals in the Global Age." Dr. Hikaru is currently editing *Death and Dying in Contemporary Japan*, which is planned for publication in 2010.

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Andrew Bernstein is Associate Professor in the History Department and East Asian Studies Program at Lewis and Clark College, Portland, Oregon. He received his B.A. from Amherst College in 1990 and his Ph.D. from Columbia University in 1999. His research focuses primarily on modern Japan and is driven by a fundamental question: How do people build and maintain connections to the past in the midst of radical change? In *Modern Passings: Death Rites, Politics, and Social Change in Imperial Japan* (2006), he addresses this abstract question by examining how Japanese cope with a specific but universal question: What do we do with the dead? Dealing with this ever-present problem generally meant relying on ancestral solutions, which took the form of death rites that had developed over the centuries to build continuity in the face of loss. At present Dr. Bernstein is writing *Fuji: A Mountain in the Making*, a comprehensive "biography" of Mt. Fuji that explores the dynamic and contradiction-filled relationship between the volcano as a physical product of nonhuman forces and a cultural icon shaped by all-too-human hopes and desires.

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J. C. Upshaw Downs has been employed as a medical examiner since 1989 and was Alabama's State Forensics Director and Chief Medical Examiner from 1998 to 2002. He has served as consultant to the Federal Bureau of Investigation (FBI) Behavioral Science Unit in Quantico, Virginia, and has authored four chapters in their manual *Managing Death Investigation*. Dr. Downs is the primary author of the FBI's acclaimed *Forensic Investigator's Trauma Atlas*. He has authored several books and chapters in the field of forensic pathology and child abuse. He has testified in state and federal courts, as well as before committees of the U.S. Senate and House of Representatives. He completed two terms on the Board of Directors of the National Association of Medical Examiners. He is on the Board of Advisors for the Law Enforcement Innovation Center at the University of Tennessee and the Board of Directors of the National Forensic Science Technology Center. Dr. Downs graduated from the University of Georgia. He received his M.D. degree and his residency training in anatomic and clinical pathology, and his fellowship in forensic pathology from the Medical University of South Carolina (Charleston). He is board certified in anatomic, clinical, and forensic pathology.

Michael C. Kearl received a B.A. in sociology from Dartmouth College and a Ph.D. in sociology from Stanford University. Dr. Kearl is Professor of Sociology at Trinity University, where he has taught for more than 30 years. In addition to the sociology and anthropology of death and dying, Dr. Kearl's primary areas of teaching and research include social gerontology, social psychology, the sociology of time, and the sociology of knowledge. Author of *Endings: A Sociology of Death & Dying* and webmaster of a website on death studies, his publications investigate such subjects as the political uses of the dead in civil religion, the rise of abortion as a political litmus test, the growing roles of the dead in popular culture, impacts of increasing cremation rates on the American death ethos, growing old in a death-denying culture, the ideological orientations of hospice workers, and American immortalism and its battles against extinction. During the 1980s he

served as a public member of the Texas State Board of Morticians and was involved in passing extensive consumer-oriented legislation. Dr. Kearl is currently writing *The Times of Our Lives,* a collection of essays that range from the prolongation of adolescence and its impacts on other life cycle stages to the implications of cultural golden years.

Michael R. Leming is Professor of Sociology at St. Olaf College in Minnesota. He holds degrees from Westmont College (B.A.), Marquette University (M.A.), and the University of Utah (Ph.D.). He has completed additional graduate study at the University of California, Santa Barbara. He is the founder and former director of the St. Olaf College Social Research Center and is a former member of the Board of Directors of the Minnesota Coalition of Terminal Care. He helped establish two hospice programs and continues to give lectures to hospice programs and caregivers for the dying and the bereaved and is involved in the education of future thanatology workers. He has served as a steering committee member of the Northfield AIDS Response and as a hospice educator, volunteer, and grief counselor. He is the author of numerous articles on thanatology and family issues and has taught courses on death and dying for over 30 years. He is the coauthor of *Understanding Dying, Death, and Bereavement* and *Understanding Families: Diversity, Continuity, and Change*. He is also the coeditor of *The Sociological Perspective: A Value-Committed Introduction*.

John L. McIntosh is Associate Vice Chancellor for Academic Affairs and Professor of Psychology at Indiana University–South Bend. Dr. McIntosh is the author, coauthor, or coeditor of six books on the topic of suicide (including *Elder Suicide* and *Suicide and Its Aftermath*) and has contributed chapters to several books and articles to many professional journals. He serves on the editorial boards of *Suicide & Life-Threatening Behavior* (associate editor); *Gerontology and Geriatrics Education; Crisis: The Journal of Crisis Intervention and Suicide Prevention*; and *Surviving Suicide*. He is a member of the Editorial Advisory Board of *Advancing Suicide Prevention* magazine. Dr. McIntosh is on the national Advisory Council of the Yellow Ribbon Suicide Prevention Program. He is a past president of the American Association of Suicidology, a past member of the American Association of Suicidology Board of Directors, and has served as Secretary of the AAS Board of Directors. His primary research areas are elder suicide, epidemiology of suicide, and survivors of suicide.

Robert A. Neimeyer is Professor and Director of Psychotherapy Research in the Department of Psychology, University of Memphis, where he also maintains an active clinical practice. Since having completed his doctoral training at the University of Nebraska in 1982, he has conducted extensive research on the topics of death, grief, loss, and suicide intervention. Dr. Neimeyer has authored 20 books, including *Meaning Reconstruction and the Experience of Loss; Lessons of Loss: A Guide to Coping;* and *Rainbow in the Stone,* a book of contemporary poetry. The author of over 300 articles and book chapters, he is currently working to advance a more adequate theory of grieving as a meaning-making process. Dr. Neimeyer is the editor of *Death Studies* and the *Journal of Constructivist Psychology,* and he is a past president of the Association for Death Education and Counseling. He was appointed to the American Psychological Association's Task Force on End-of-Life Issues, where he helped implement a research and practice agenda for psychology in this critical area.

John B. Williamson received a B.S. degree from the Massachusetts Institute of Technology and was awarded a Ph.D. in social psychology from Harvard University. Dr. Williamson is currently Professor of Sociology at Boston College, where he has taught a large undergraduate course on death and dying for more than 20 years. He has published 16 books and over 120 journal articles and book chapters. In the area of death studies he has published articles and book chapters on euthanasia, suicide, homicide, hospice, body recycling, death anxiety, symbolic immortality, terrorism, accidental deaths, maternal mortality, child mortality, and infant mortality. Among his coauthored and coedited books are *Death: Current Perspectives*; *The Generational Equity Debate; The Senior Rights Movement; Age, Class Politics and the Welfare State; Old Age Security in Comparative Perspective;* and *The Politics of Aging*. He is currently Chair of the Social Research, Policy, and Practice section and a vice president of the Gerontological Society of America. Dr. Williamson is affiliated with the Center for Retirement Research and with the Center for Work and Aging, both at Boston College. The focus of much of his current research is on retirement and the comparative international study of social security systems.

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Preface

The essence of interdisciplinary thanatological study of death-related behavior is characterized in this two-volume *Encyclopedia of Death and the Human Experience*. Death and dying and death-related behavior involves the causes of death and the nature of the actions and emotions surrounding death among the living. The content of this comprehensive library reference is inclusive of the complex cultural beliefs and traditions and the institutionalized social rituals that surround dying and death as well as the array of emotional responses relating to bereavement, grieving, and mourning.

The *Encyclopedia of Death and the Human Experience* represents the theoretical and the practical. It is a compendium statement of the interdisciplinary, scholarly nature of death and dying research and study, as well as the practical applications of the knowledge generated by professional and lay persons whose career paths have been responsive to and reflective of the human experience. Moreover, the approximately 330 entries represent an array of approaches that portray the natural order of the life cycle as well as the socially constructed cultural artifacts created as humans attempt to deal with life experiences involving the anticipation of death, the process of dying, rituals in which the legacy of the deceased are celebrated, and the meaningful symbolic enhancement of a society through its cultural entities.

The content of this two-volume set is historical, it is contemporary, and it is futuristic. The entry titles result from the combined effort of experienced Sage Publications professionals with contributions by the editors. Based on this effort we are privileged to include in this manuscript the contributions provided by several generations of scholars who are, in turn, responsible for the initial and then extensive subsequent interest in death and dying research. Their efforts were not always appreciated within the previous mainstream of scholarly research, but the commitment of these individuals, many of whom contributed to this encyclopedia, stands as testimony to the creation of new pathways of knowledge. Moreover, their intense interest resulted, ultimately, in the creation of academic courses on death and dying and then the creation of programs that are, in large part, responsible for all the entries presented in this two-volume set.

The international contributors bring important interdisciplinary and cross-cultural perspectives to the encyclopedia. The many fine international scholars and practitioners are from Africa, Asia (China, Hong Kong, and Singapore), and Australia; North and South Americas; and many European countries, including France, Great Britain, Iceland, Ireland, Italy, and Spain. Included among the authors are research scholars, health practitioners, and counselors of many areas of expertise, and members of the arts. These individuals represent, or are engaged in, the practice of anthropology, the clergy, counseling, economics, education, English, evaluation research, family studies, fashion advisors, history, law, medical researchers and clinicians, museum directors, nursing, organization directors, political science, psychiatry, psychology, religious studies, sociology, and social work. This experienced group of talented contributors offers important insight into the process of dying and the phenomenon of death. Along with the special focus on the cultural artifacts and social institutions and practices that constitute the human experience, the combination focus on the human condition and experience makes this an extraordinary reference encyclopedia.

Project Description

Interest in the varied dimensions of death and dying has led to the development of death studies that

move beyond medical research to include behavioral science disciplines and practitioner-oriented fields. As a result of this interdisciplinary interest, the literature in the field of death and the human experience studies has dramatically increased during the past 20 years. Death-related terms and concepts that encompass global beliefs and traditions, death denial, and social movements as well as interdisciplinary and practitioner-oriented perspectives on death now hold important ecological, family, economic, medical, legal, religious, and global social-psychological consequences. Examples include death-related terms and concepts such as angel makers, appropriate death, Chinese death taboos, death anxiety, the postself, body farms, dance of death (*danse macabre*), equivocal death, end-of-life decision making, near-death experiences, cemeteries, ghost photography, halo nurses, memorials, viatical settlements, second burial, suicide, medical mistakes, advance directives, caregiver stress, SIDS, cryonics, cyberfunerals, global religious beliefs and traditions, and death denial. As a result, many terms and phrases are now part of common social discourse and media reporting. But the lexicon relating to dying, death, and the emotions, activities, and policy relating to the human experience is expansive, thus lending itself to the need to establish consistency in vocabulary of death meanings. The *Encyclopedia of Death and the Human Experience* does so, and this two-volume library reference is enriched through important multidisciplinary contributions and perspectives as it arranges, organizes, defines, and clarifies a comprehensive listing of approximately 330 death-related issues, concepts, perspectives, and theories for use by students and scholars, while facilitating a more refined and sensitive understanding of the field for an increasingly interested public.

Development of the Project

The initial list of entries was compiled through a search of learned journals and topic-specific textbooks. Such searches were useful for identifying the classic concepts, theories, and terms, but suggestions that identify emerging concepts and work currently being conducted came from an even more valuable resource, namely the members of the encyclopedia's editorial board and from scholars and practitioners who recommended prospective entries be considered even after a final list of topics had been compiled. Thus, the richness of the total list of entries results from the interest and input of the many individuals who have so freely given to this project.

Authorship of the entries was developed in a similar manner. Recognized contributors to the area of thanatology study were requested to offer their considerable insight and talent by crafting entries. In turn, the authorship list was expanded as networks were identified and specific authors were invited to participate. Ultimately, interest in this project was to take on a life of its own as the project became international in scope.

The Reader's Guide

Developed around 16 categories, the Reader's Guide includes approximately 330 entries, many of which address traditional death- and dying-related topics. But, in addition, a special focus on the human experience enhances the overall substance of this work. This important focus on the human condition blends an interesting array of new topics with traditional entries to create a unique dimension to the study of death and dying.

Conceptualization of Death, Dying, and the Human Experience: This introductory category offers the definition and conceptualization of death and the human experience from the interdisciplinary perspectives that are representative of the *Encyclopedia of Death and the Human Experience*. These areas include the humanities, social sciences, religious perspectives, medical sciences, and legal approaches to understanding the increasingly complex issues involved in death and dying and for those who must continue to function in the aftermath of the death of a loved one. Special focus is accorded the secular scientific approach with topics that include forensic anthropology, forensic science, and the process leading to the medicalization of death and dying.

Arts, Media, and Popular Culture: This category consists of the kinds of entries that lend insightful discussion of the display and depictions of death in art, literature, photography, sculpture, architecture, wax museums, and museums of death. A more contemporary characterization of death is noted in entries that address popular culture movies and video games with a death theme.

Causes of Death: This category consists of entries that address issues of social and historical significance as well as important contemporary policy implications. The leading worldwide causes of death are prominently represented. This section also include entries pertaining to capital punishment and prison deaths, drug use and abuse, man-made and natural disasters, spontaneous combustion, subintentional death, domestic and international terrorism, and tobacco use.

Coping With Loss and Grief: Special attention is cast toward the living as they try to cope with issues attendant to dying and death. Included in this category is historical coverage of grief, bereavement, and mourning, each of which is found in abundance in the contemporary experience. Ranging from entries titled Denial of Death and Death Anxiety to those of Gold Star Mothers, Instrumental Grieving: Gender Differences, the Postself, and Widows and Widowers, this section includes entries that address the individual micro-level and macro-level human experiences and the consequences relating to dying and death.

Cross-Cultural Perspectives: This is a category of exceptional entries that lends credence to the ancient beliefs, traditions, and practices and perspectives toward dying and death, and those among the indigenous tribes of Australia and North America. A compendium statement of the social, cultural, and moral views is found within *The Tibetan Book of Living and Dying* entry. Included also is a cross-cultural perspective of the death care industry, the social functions of death, and Chinese death taboos. Such entries add a special tone to these international orientations.

Developmental and Demographic Perspectives: This category is represented by entries that cover the stages of life and the relational effects of mortality rates when variables such as age, life expectancy, marital status, gender, and social class on death rates are controlled. Other factors include the effects of death on the family composition, theories of population growth and decline, and sexual activity.

Disposition of the Deceased: Representing one of the larger Reader's Guide categories, this section encompasses entries on the historical practice of mummification in ancient Egypt and the more contemporary entries up to the societal need to commemorate its heroic fallen warriors with entries such as Cemeteries and Columbaria, Military and Battlefield and the Tomb of the Unknowns. The recent movement to establish green burial and virtual cemeteries and the personal need to remember family pets through burial in pet cemeteries also have representative entries.

Funerals and Death-Related Activities: This category identifies the importance of death on the body politic through its social cultural rituals. This is aptly demonstrated with entries that cover clothing and fashion, cosmetic restoration, the death notification process, and the funeral industry.

Legal Matters: This category includes topics such as the death certificate, equivocal death, forensic science, the legalities of death, and the psychological autopsy. Topics of more recent social significance include living wills and advance directives and viatical settlements.

Mass Death: This noteworthy category of topics holds historical and contemporary significance it that it covers the conditions that result from war, terrorism, and disease. The additional inclusion of tragic events such as school shootings, genocide, and the Holocaust make this a section that will draw attention to what has been referred to as the inhumanity of the human species toward its own.

Process of Dying: From entries such as The Art of Dying (*Ars Moriendi*) and Quality of Life, Halo Nurses Program, and Life Review to the entry Persistent Vegetative State, this category of the Reader's Guide is designed to keep readers reading one interesting topic after another. It is full of history of the hospice movement and addresses the influence advancing technology has on preserving life as well as maintaining the dignity of the dying.

Religion: The institution of religion has important implications for dying and death and for those who are interested in eschatology. Included are entries that address the major world religious beliefs and traditions as well as the spiritualist beliefs of the more ancient past. The perspective of nonbelievers also is offered.

Rituals, Ceremonies, and Celebrations: Celebrating the past includes honoring the dead. These entries

nicely complement the previous classification of religious oriented entries while also offering a convenient category of topics that describe cross-cultural events such as Day of the Dead, funeral conveyances, Ghost Month, Halloween, Memorial Day, and holidays of the dead. The concept of postself and the funerary custom of sin eating make this a most interesting category of entries.

Suicide, Euthanasia, and Homicide: A set of topics with a sociohistorical and legal legacy, many of the entries in this section suggest the same may be true for the contemporary experience. Suicide was once considered illegal behavior, and the penalty for a failed suicide attempt was, ironically, death. At another point in time, the penalty for a successful suicide was state confiscation of the deceased's property, a clear detriment to survivors. Euthanasia or an easy death is a cause for ethical outcry and for some individuals a moral outrage, while the homicide concept represents a variety of contemporary subcategories that address different interpretations of those acts that result in the taking of the life of another.

Theories and Concepts: The foundation of an area of study lies in its theories and concepts; the same is no less true for thanatology. This section presents topics that conceptualize and portray death and the human experience with an interdisciplinary sociocultural perspective that also includes topics on demography, education, economics, and history.

Unworldly Entities and Events: The final category represents the unusual, but may, for some readers, represent one of the more interesting categories. These well-written entries include Curses and Hexes, *Frankenstein*, Ghost Photography, Ghosts, Witches, and, finally, Zombies, Revenants, Vampires, and Reanimated Corpses.

Visual Aids

The selective use of charts, figures, graphs, tables, and pictures (e.g., the use of a life table for the entry Life Expectancy) is designed to enhance the reader's impression of the topic. Although tables usually contain an array of interesting descriptive and inferential information such as is found in the entry Death, Line of Duty and the entry Life Expectancy, most of the information of this nature has been integrated within the well-developed descriptive narratives crafted by the contributing authors who are so well versed in their topic that visual aids are not necessary. Where these visual aids are utilized, however, the effect is most dramatic. One such example is that of the entry Clothing and Fashion, Death-Related, which has a pictorial display of individuals who have fashioned their burial cloths. Another example is the Funeral Conveyances entry for which many exquisite pictures of hearse wagons and other modes of transportation of the dead are provided.

A Scholarly Library Reference and Resource for the Novice and Other Interested Readers

The *Encyclopedia of Death and the Human Experience* is intended as a resource for the upper division undergraduate student as well as others interested in this intriguing area of study. With such an array of topics that include traditional subjects and important emerging ideas, the encyclopedia will undoubtedly enhance the research efforts of the undergraduate who seeks to develop that challenging class paper. Lay readers also will find much to stimulate their thoughts. For the graduate student and the faculty member who strive to secure a compendium statement for lectures or for establishing a basic research agendum, this encyclopedia will prove to be a most useful resource.

The *Encyclopedia of Death and the Human Experience* is the result of the contributions of many people. The entries were crafted by individuals who are well known and well versed in the complexities of the dying and death arena. Many of the contributors to this encyclopedia have long been recognized as the founders of, and contributors to, this important area of teaching and research study. In addition, a number of in-service practitioners who do not always receive appropriate recognition are well represented; in this instance their entries blend nicely within the overall structure of the encyclopedia. Finally, some very interesting and intriguing entries have been created by rising scholars whose current efforts lend themselves to potential national and international recognition in the near future.

Dennis L. Peck

Introduction

Humans are the only knowledge-accumulating animals. The history of humankind is fundamentally the history of, search for, acquisition of, and accumulation of knowledge. With accumulated knowledge, humans have been able to survive, endure, and prevail. With knowledge, they can adapt to the physical and objective world in which they live, with its changes in climate, terrain, and weather and its wide variety of flora and fauna. Knowledge enables us to adapt to the social and subjective world in which we live, to form meaningful relationships with other people, and to meet the collective need for understanding. Coming to understand the world in which we live enables us to solve problems, overcome challenges, and confront uncertainties and fears. Knowledge expands at an exponential rate, precipitating the development of technology, driving the increasing rate of progress, and enhancing the quality of life and the human condition.

Prehistoric humans existed in a state of ignorance. They lived in a world of mysteries and enigmas. They did not know why the sun rose and set, or why the moon changed shape and brightness. They did not understand rain, or thunder, or lightning. They did not understand seasonal differences in weather and climate. They did not understand why they sometimes became ill. Perhaps the greatest enigma of all was death. Why did their loved ones become sick and die, and why did the bodies of the dead become cold and stiff? The body was still there, but what had happened to the spirit within the body?

Prehistoric burials provide insight into how inhabitants of that era answered these questions by constructing belief systems regarding death, the dead, and existence beyond death. Prehistoric people may well have concluded that their cold, stiff companions were simply in some form of lengthy sleep. They may have conceptualized a bifurcation or separation of body and spirit in which the spirit left the body, as in a dream, and went elsewhere, perhaps to return at some later date. Such an explanation suggested that there must be some type of existence beyond death. The fact that the dead were often buried with stone implements and cooked food reinforces the conclusion that these prehistoric people believed in an existence after death in which their dead comrades would need food and tools.

The decision to bury the dead body, often in caves, was likely motivated by the obnoxious smell of the putrefying body, the concern that the smell might attract predators, and the desire to keep their loved ones close at hand and protected or insulated from the elements and animals, in anticipation of the return of the spirit to the lifeless body. Deceased individuals were sometimes buried in a sleeping position, laid to rest, as it were. Archeological evidence suggests that the buried bodies had sometimes been smeared with red ochre (a type of clay dust), possibly to simulate the appearance of blood, like that on an infant just after birth. Perhaps this practice was intended to magically precipitate or facilitate a rebirth from "mother earth," or even reincarnation or rebirth as a different individual (or as an animal).

Archeological evidence indicates that many prehistoric burials contained grasses, tree boughs, and other soft vegetation, a further indication that prehistoric peoples were concerned about the comfort and well-being of the dead. They may also have believed that the dead would somehow be aware of their efforts to make the grave comfortable. In some burials, the paleo-remains of bright flowers were found, suggesting affection, reverence, and respect for the dead. In some burials, there was archeological evidence of ibex skulls and horns

stuck in the ground in a circular fashion around the body. In others, there were similar, curious but stylistic arrangements of animal remains near the burial site. This indicated that a degree of ritualism attended the burial. Most importantly, the evidence and inferences uncovered in these archeological gravesites demonstrates that these prehistoric humans had well-defined death belief systems.

Over the millennia, death belief systems became more elaborate, convoluted, and more esoteric, being shaped by the cultural contexts in which they were constructed and evolved. These complex death belief systems served to frame death and the dead in a more understandable and controllable fashion and played an important role in the origin of religions. The evolving religious belief systems had at their core conceptualizations of death and the afterlife, and notions of through which mechanisms one could achieve the afterlife.

Totemism is another example of the evolution of death belief systems. Archeologists suggest that the dreams of prehistoric peoples may have included images of certain animals, and conceivably even some type of relationship with the animal. Such dreams may have led prehistoric people to postulate linkages between humans and special types of animals, and such beliefs may have been the origin of totemism. Totemism is the concept that there is a special relationship between a particular type or species of animal (or even plant) and the members of some social groups (especially kinship groups). The linkage often involves a protective reciprocity and a spiritual relationship among humans, animals, and nature. This belief system includes the idea that humans are descended from their totemic animals or that humans and their totemic animals are descended from similar spirits. It is thought that when a human or totemic animal dies, their spirits mingle with each other in some spiritual sacred place. One of these kindred spirits (human or animal) may enter the body of a woman, impregnating her; thus, human or totemic animal spirits may be reborn in either human or animal form. Such beliefs were the progenesis of reincarnation, which became the basis of death belief systems and later evolved into more complex religious systems.

The English philosopher Herbert Spencer posited that religion was the product of the fear of death and the dead. In effect, death belief systems were the origin of religious belief systems, which, in turn, evolved over time into more organized and coherent religions. It was through religion that humans were able to conceptualize, confront, control, and transcend death. Men and women could neutralize and assimilate the prospect of death through adherence to their religion and the death belief systems component to it.

By the time the ancient civilizations of Asia, the Middle East, and Egypt emerged, knowledge about death and scenarios concerning existence after death had expanded and proliferated to the point where it was sometimes aggregated into books or other records. An example of this is the *Papyrus of Ani,* more popularly known as *The Egyptian Book of the Dead,* which was written and compiled somewhere around 1240 B.C.E. The *Papyrus of Ani* is a 78-foot funerary papyrus scroll or roll that contains vividly colored images or vignettes of scenes of existence in the afterlife, accompanied by an extensive text in hieroglyphs. Its purpose was to assist its owner in the next world. This collection of texts based on the religious views of that time includes prayers, incantations, rituals, spiritual visions of the afterlife, and descriptions of the soul's journey in that existence—essentially a kind of encyclopedia of Egyptian eschatology (the study of scenarios of existence beyond death).

Over the centuries, aggregated knowledge of death, dying, and/or the afterlife appeared in many forms. For example, *The Tibetan Book of Living and Dying* contains descriptions of the afterlife, instructions on attending someone who is dying or recently has died, prayers, and a guide for "spiritual liberation." Major religious works such as the Bible, the Qur'an, and the Torah usually included information about death and the afterlife. Compendiums of knowledge about death sometimes appeared in curious venues. For example, *senet*, an ancient Egyptian funery board game, simulated the soul passing through the myriad stations or houses component to the netherworld or hereafter. The players would cast their dice sticks and move their playing pieces across a board decorated with symbols of the various houses of the dead. This game, not unlike the modern game of Monopoly, allowed the players to symbolically act out various scenarios of the death journey. *Senet* was another example of a compendium of ancient Egyptian eschatological knowledge.

Another example of an unusual venue of accumulated knowledge about death is a long tunnel in a cemetery located just outside Taipei, Taiwan, decorated with mural scenes portraying the various stages of life, and also scenes from the afterlife that will be experienced by individuals when they die. Walking through the tunnel simulates the journey of life and death, thereby informing the visitors regarding Chinese eschatology.

During the Middle Ages, devout Christians sought to meet death with equanimity. To aid in accomplishing this, two Latin texts of accumulated knowledge about dying were published and provided instructions, protocols, rituals, and advice on how to prepare to die and achieve the good death. These texts, one long and one in a shorter version, were titled *Ars Moriendi*. The longer version, authored in 1415, was widely read and translated into various European languages, including English. Over time, it was published in approximately 100 editions and became the definitive exposition on the art of dying well.

For centuries, first in Europe and later in North America, Christianity was able to control death, "tame" it, and make it "captive," as it were. For most people, death was not only natural and inevitable but also accepted and anticipated. Through the strength of their religious belief and faith, individuals could confront the prospect of their own mortality, secure in the conviction of salvation and eternal life beyond death. For centuries, the equilibrium of religion, knowledge about death and the afterlife, and personal belief insulated individuals from the fear of death.

By the 20th century, the evolution of science and technology, combined with the dilution of religious belief, had eroded this insulation, and death was no longer "tamed" and "captive." New coping mechanisms were needed. Americans now became "death-denying," pushing death out of sight and out of mind. Death was hidden and transformed into a less fearful and traumatizing entity. Some modern-day thanatologists such as Geoffrey Gorer posited the idea that like sex being a taboo topic (pornograpy, if you will) during the Victorian era, there was a generalized taboo regarding discussions of death and dying during the first half of the 20th century. In effect, the pursuit of death denial rendered death "pornographic." Many changes in customs, protocols, and social behavior helped make death less visible and intrusive. The accumulation of death-related knowledge slowed.

After World War II, in spite of cultural efforts to maintain this façade, death was rediscovered, and the new death awareness movement gathered momentum. By the turn of the century, death had been fully rediscovered and exposed. The knowledge of death was now pervasive and was disseminated in numerous venues—the mass media, trade books, textbooks, and periodicals.

Over the centuries, and particularly in contemporary times, a variety of themes have appeared in death-related knowledge. One of the more central of these themes has been that of confronting and transcending death. Throughout history and across cultures, humans have constructed strategies and mechanisms for assimilating death. Among such strategies are constructing religious eschatological scenarios of an existence after death, denying death, developing philosophical postures to neutralize death, keeping the dead alive via spiritualism or an acceptance of the notion of ghosts, accepting accounts of near-death experiences, fostering a belief in reincarnation, and accommodating a social exchange for death.

Another theme is that of exploring causal modes of death, the variant interpretations of death based on cause and context, and the social construction of death. Although the causes of death in contemporary society are myriad, many deaths are esoteric in cause, or occur with modest frequency. There are, however, major causal modes of death. On a global basis, especially in third world countries, there are massive deaths from natural disasters, infectious and parasitic diseases, localized wars, insurgencies and revolutions, infant starvation and dehydration, and death in childbirth, to mention only some. In the contemporary United States, more than one-half of all deaths result from major cardiovascular diseases and malignancies (cancer). Other leading causes of death include stroke, pulmonary diseases, accidents, pneumonia, and chronic liver diseases. Different causes of death may have disparate social consequences. Certain modes or aspects of death are subject to contention and controversy, such as suicide, euthanasia, abortion, and capital punishment. Information about, and arguments for or against, these issues have added to the accumulation of knowledge in this area. Death is often

more a social process than an event, and significant knowledge has been generated on the anticipation of death, the process of dying, and the institutional context of dying.

Throughout history, perhaps, the most important social ceremonial response to death has been that of funeralization. The significant elements of funeralization are notification, body preparation, the structure and dynamics of funerals, cross-cultural and historical aspects of funeralization, and postfuneralization activities. A considerable body of knowledge of some significance has accrued for incorporation into this theme.

Another death-related theme is that of body disposition. The choice of body disposition is more the product of culture than personal choice. Throughout history, and in most cultures, earth burial and incineration have been the primary modes. There have been, however, exceptions to these norms, such as mummification, and today there are numerous options available, ranging from body recycling in the form of organ donations, to long-range preservation via cryonic suspension. A considerable body of knowledge pertaining to this theme has been generated and accumulated.

A theme of some centrality is that of grief, bereavement, mourning, and survivorhood. Much research, writing, and scholarship has addressed these topics and produced a substantial literature. Although much of this work has been done in recent years, there was also earlier discussion of these issues. For example, toward the end of the 19th century, most books of etiquette devoted almost one half of their contents to bereavement and mourning behavior.

There are multiple themes of death in artistic creations, including paintings, architecture, sculpture, literature, music, and drama, to mention but some. Some thanatological artistic impressions conceptualize death in a variety of forms. Others focus on the confrontation with death or the cause of death. Yet others depict grief, bereavement, and mourning. Obviously these themes have their roots in antiquity, with the result that there is a vast amount of knowledge in this area.

Death is not without its legal parameters, and a substantial amount of thanatological knowledge deals with legal issues. Some death-related legalities are centuries old, such as the matter of testamentary inheritance. Other legal concerns, such as death certificates, cemetery regulation, and the notion of wrongful death, are somewhat more recent. Still other legal matters, such as living wills and the concept of thanatological crime, are quite contemporary.

Humans like to look ahead and seek glimpses of the future. Already futurists and other scholars of prognostic inclination are constructing scenarios of events, processes, products, changing attitudes, and other death-related human social, death-related activities. These endeavors promise a new plethora of knowledge.

Knowledge often proliferates to the point of becoming massive, unwieldy, and unmanageable. To be useful, knowledge must constantly be sorted, arranged, packaged, stored, even pruned, and configured into practical forms and be readily retrievable. Works such as dictionaries, anthologies, bibliographies, compendiums, directories, handbooks, and encyclopedias often facilitate this accomplishment.

The *Encyclopedia of Death and the Human Experience* attempts to make death-related knowledge available, accessible, and readily retrievable. With approximately 330 concise, informative, and authoritative entries authored by a group of eminent scholars from many countries, it covers the field of thanatological knowledge in a comprehensive fashion. The entries reflect all of the death-related themes previously articulated and represent the latest state of knowledge on all of the topics. Hopefully, this reference work will appropriately inform and instruct the reader seeking to better understand the enigma of death and its import for the social enterprise.

Clifton D. Bryant

Acknowledgments

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But there are many individuals to whom a special appreciation is appropriate. Rolf Janke is to be thanked for having conceptualized the notion of developing an encyclopedia on death and dying and for having made the decision to operationalize such an effort. We hope that the product fulfills his vision. The initial interest expressed by Acquisitions Editor James Brace-Thompson was instrumental in moving this project from idea to fact. Along with the input provided by Ms. Diana Axelsen, the assistance of Mr. Brace-Thompson was influential in the creation of the 325-entry headword list upon which this encyclopedia was built. Over the course of several months, some additional topics were suggested by contributing authors, of which five more topics representing emerging areas of analyses were added. The resulting final list of 330 entries makes this encyclopedia extraordinary in its coverage of the field.

From the preliminary stage of preparation and training to become familiar with the Sage Reference Tracking system to the submission of the final manuscript to the production editor, two Sage staff members were to prove invaluable to the completion of the manuscript. The contributions of Development Editor Ms. Sara Tauber and Systems Coordinator Ms. Laura Notton are too numerous to list. Each was responsive to any request for assistance whether from author or editor; each was supportive and encouraging of our overall effort.

Production Editor Tracy Buyan was kind enough to assign copy editors Ms. Amy Freitag and Ms. Colleen Brennan to finalize the process. Professional in presentation and thorough in action, each of these individuals made the final phase of the project a most interesting and easy experience.

And finally to my wife Peggy, I again express my deep appreciation and love for her support, patience, and on occasion her invaluable assistance rendered when the need for such assistance was essential to maintaining a semblance of organization and structure. The commitment to carrying out this project may not always have been understood, but she did not waiver in providing the support essential to completion of the task. Ultimately Peggy came to recognize that for me this project has been a labor of love.

Dennis L. Peck

A considerable measure of gratitude is owed to Heidi Browne, who worked tirelessly on this project, doing library and computer research, solving computer problems, assisting in compiling lists and death-related websites and organizations, generating bibliographies, and tracking down fugitive literature on death and dying. She rendered innumerable other valuable services during trying times. Many thanks to her for being such a stalwart member of the team.

I am deeply appreciative of the efforts of my coresearcher, publishing partner, and wife of 52 years, Patty Bryant, who handled all of my e-mail traffic, maintained e-mail logs, handled myriad administrative and operational details, poured over bibliographies, and searched the web in the process of aiding me in identifying and recruiting a distinguished editorial group. She spent countless hours searching my 30 years of archives of research and lecture notes on death and dying and my extensive library of thanatological books in the search for meaningful entry topics. She provided me with assistance, advice, counsel, and encouragement for all of which I owe her an enormous amount of gratitude, love, and affection.

Clifton D. Bryant

Abortion

Abortion is the termination of pregnancy before the embryo or fetus can develop to the stage at which it can be born alive. Abortion usually is considered as induced abortion. However, in medical terms, it also includes spontaneous abortion (miscarriage), which might be due to natural causes or accidental situations. Researchers have found that unintended pregnancies are the roots of abortion, and most unintended pregnancies result from not using any contraceptive. Recent studies also show that abortion rates around the world are lowest where abortion is legal and widely available, and contraceptive use is high. There are both medical and surgical procedures for induced abortion; choice of procedure depends on the number of weeks of the pregnancy, the laws, local availability, and doctor/patient preferences.

Reasons for seeking an abortion, from a legal view, include saving the mother's life, preserving the mother's physical or mental health, rape or incest, fetal impairment, social or economic reasons, and no reasons. Abortion laws and policies have changed numerous times in various countries around the world. Pro-life and pro-choice groups often seek support from lawmakers and policymakers. However, no study has shown that the level of restrictions in abortion laws significantly affects abortion rates. The abortion debate within society is a notable phenomenon and influences public opinion and attitudes toward induced abortion. There are debates on the issues of pro-life and pro-choice, physical and mental health, minors' consent with parental involvement, and other controversies.

Whether the abortion is induced or spontaneous, the situation may profoundly affect the woman and her partner or family members in various ways, including physical, psychological, spiritual, and social ways. Therefore, abortion counseling or consultation plays an important role in the course of abortion for the woman, starting from the point of being informed about the unintended pregnancy or impaired development of the fetus and ending in a recovery room after the procedure has been performed.

History and Trends of Abortion

Before the 19th century, induced abortion was applied as a way of birth control in many countries. Pregnancies in early months terminated by using herbs, sharp instruments, or other techniques were generally accepted. In 1861, the *Offences Against the Person Act* was passed to outlaw abortion in the United Kingdom, and the Roman Catholic Church also prohibited abortion under all circumstances in 1869. Similar opinions prevailed in other countries thereafter.

Key findings on abortion trends around the world during the period 1995 to 2003, reported by the Guttmacher Institute, include (a) the global abortion rate had declined, (b) abortion rates had declined more in developed countries than in developing countries, (c) the rates had dropped most dramatically in Eastern Europe and Central

Asia, and (d) unsafe abortion rates had increased. Studies have found that the patterns of using contraception can affect abortion levels. This includes contraceptive availability, effectiveness, service quality, and improved technology. There is no evidence showing that the level of restrictions in abortion laws affects abortion rates.

European countries also experienced that a combination of sufficient information on contraception and societal acceptance of adolescent sexual relationships would lower unintended pregnancies among teenagers.

Types of Abortion

Spontaneous Abortion

A spontaneous abortion occurs in early pregnancy before the 20th week of gestation because of abnormal development or environmental factors. If a fetus dies during late gestation after the 20th week in the uterus or during delivery, it is usually regarded as a "stillbirth."

Induced Abortion

Induced abortions include therapeutic abortion and elective abortion. The former is performed for medical reasons, such as saving the life of the mother, preserving the mother's physical or mental health, or resolving other medical problems. Elective abortions take place by personal choice for social or economic reasons, such as having had enough children, wanting to delay the next birth, having relationship difficulties, having difficulties affording a child, or having been raped.

Methods of Abortion

Medical Abortion

With the use of the compound drug mifepristone, medical abortion can be performed within 49 days after a woman has become pregnant. The first use of mifepristone (RU-486) legally was in France in 1988, and it was legalized in the United States in 2000.

The regimen, a combination of different dosages of mifepristone and prostaglandin, became a contemporary abortion procedure in recent years. According to the safe abortion guidance published by the World Health Organization (WHO), mifepristone plus prostaglandin regimens have been proven to be safe and highly effective for the first 9 weeks and over 12 weeks of gestation with different dosage combinations. However, these regimens are currently only available in a few developing countries.

Surgical Abortion

Vacuum aspiration is a common surgical procedure to be used in the first 12 weeks of gestation; dilation and curettage (D&C), a standard gynecological procedure, can also be used during this period. Another common surgical abortion method, used with women who are more than 12 weeks pregnant, is dilation and evacuation (D&E).

Abortion Laws and Policies

According to English common law in the 19th century, induced abortion could be performed legally before quickening (i.e., movements felt by the mother). Both pre- and postquickening abortions were against the law in many countries. The Soviet Union in 1920 and Iceland in 1935 were two of the first countries, with legislation, to allow abortion. The United Kingdom passed the Abortion Act in 1967 to allow abortions to be performed for limited reasons. In the 1973 case of *Roe v. Wade*, the U.S. Supreme Court ruled that state laws banning abortion violated the Constitution on privacy rights.

From a legal perspective, there are seven reasons for allowing induced abortion: (1) saving the life of the mother, (2) preserving the physical health of the mother, (3) preserving the mental health of the mother, (4) pregnancy resulting from rape or incest incidents, (5) unborn child with medical problems or birth defects, (6) social or economic reasons, and (7) no need to give a reason. However, various countries have many different restrictions on abortion law. Most of the countries around the world allow abortion for the reason of saving the mother's life except for some predominantly Catholic countries, such as Chile, El Salvador, Malta, and Nicaragua, and Vatican City in Italy. Whereas under no circumstance is abortion legal in these Catholic countries, 16% of 198 countries in the world allow abortion for any reason, including "no need to give a reason."

Informed Consent

Under English common law, patients have to give their consent prior to a nonemergency medical treatment. In 1982, a panel studying "the ethical and legal implications of the requirements for informed consent" created by the U.S. Congress concluded that informed consent should consist of three important elements: (1) Patients must have the ability to make decisions about their medical care; (2) patients have to participate in the decisions voluntarily; and (3) patients have to be provided adequate, appropriate information on which to base their decisions. On the issue of the decision making, there have been extensive legislative discussions and litigations involving adolescent abortion decisions. Most abortion laws require parental involvement in the termination of adolescent pregnancies. Second, a patient has the right to make her/his own choice, and the decision should not be the result of manipulation by other people. The final element about giving information is also an ethical requirement in the practice of medicine. This information should include the nature, risks, and benefits of the treatment and the availability of, and alternatives to, abortion.

Abortion Controversy

An intentional abortion by human action has become a controversial and debatable issue through history. Induced abortion is a sensitive topic that raises political, religious, legal, ethical, moral, cultural, philosophical, and biological issues.

There are two main groups in the abortion debate: pro-choice and pro-life. These two sides have been seeking legal support and trying to influence public opinion over the course of the history of abortion. Pro-choice advocates that abortion is morally permissible and supports access to abortion, while pro-life is in favor of legal prohibition of abortion and regards it as morally wrong.

Much research and discussions have been conducted on health risks of abortion including future fertility difficulties, breast cancer, and mental health problems. While some of this research strongly asserts that abortion does have an effect on many aspects of women's health, there are also studies that show evidence that abortion is not significantly associated with the stated risks above.

Abortion Counseling or Consultation

Abortion counseling or consultation, which is also considered as pregnancy counseling, plays an important role in the course of an abortion as it is a psychologically supportive conversation session for the woman who is pregnant unintentionally and facing a critical situation to make decisions. It is also important for the woman to obtain adequate information on abortion procedure and contraceptive use afterward. In some countries, a consultation conversation is an information-oriented session, while counseling focuses more on resolving personal conflicts, emotional problems, or disturbance. And other countries use "counseling" for both psychological and informational services.

Abortion counseling can be categorized as four kinds: pregnancy test counseling, pregnancy options counseling, preabortion counseling, and postabortion counseling. All of these kinds of counseling sessions might have similar content; however, the woman may have different emotional and cognitive changes. The counselor often has to focus on her various needs at different stages along the course of abortion.

Pregnancy Test Counseling

At the time the pregnancy test comes out positive, a counselor should help the woman to understand and cope with her feelings. It might be happiness or shock, panic or excitement, or a mixture of different emotional reactions. It is also important to explore her support system and what options she has thought of.

Pregnancy Options Counseling

When facing pregnancy options, a woman needs accurate information on abortion, parenting, and/or adoption. If this is for medical reasons, she may need more medical information about the fetus and herself. The counseling session at this stage is usually seen as a crisis intervention. The client may need someone to listen to and help her calm down, clarify what would best suit her situation, and understand her ability and resources to cope with each option. Her partner or family members may also need similar help at this stage.

Preabortion Counseling

Before a woman has an abortion, she might see a counselor on the day of her procedure. She has usually deliberated on the decision. The counselor will explore how she has reached this point and feels about her decision; the level of psychological support she has received; conflicts she might have with her partner or family, beliefs, religion, or culture; and her concerns and fears about the procedure. The counselor can also empower her ability to handle some issues that might arise after the abortion.

Postabortion Counseling

Women who have abortions seldom seek counseling after the incident, and since this is confidential, neither would abortion providers call patients back to check if they are fine or not. However, there is a short time for counselors or medical staff to observe whether the woman shows any sign of emotional disturbance in the recovery room. She may feel relieved, physically uncomfortable, out of control emotionally because of the medicine she is given for pain relief, guilty, or sad. The topic of birth control is usually discussed at this point, and according to professional experience, most women are highly motivated and eager to receive related information. For those who are distressed by relationship problems, the counselor may consider giving them a local referral list of counseling providers or arrange adequate resources for the clients.

The conclusion is that abortion is a unique experience in human beings not only for women themselves but also for their partners or important family members. This is not just a medical procedure. It also has deep effects in human experiences and development pertaining to social, psychological, religious, political, ethical, and cultural issues. As a result, abortion is not only one of the medical services, but a multidisciplinary service including medical, psychological, legal, spiritual, and social fields.

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See also Ambiguous Loss and Unresolved Grief; Grief and Bereavement Counseling; Infanticide; Informed Consent; Legalities of Death; Miscarriage and Stillbirth

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Accidental Death

To die by accident is to experience a form of mortality that is unexpected, unplanned for, and unintentional. The key component to establishing a death as an accident is the absence of intentionality in its occurrence, namely, that the decedent did not intentionally act to produce a deadly outcome and that the deceased did not want to lose his or her life. Accidental death is one of the leading causes of deaths in the United States and is consistently ranked among the foremost causes of death worldwide.

According to Centers for Disease Control and Prevention (CDC) statistics, accidental mortality is the fifth leading cause of death in the United States, ranking behind heart disease, malignant neoplasms, cerebrovascular diseases, and chronic lower respiratory infections. Moreover, accidental death increasingly receives public safety and epidemiologic interventions directed at reducing its incidence. These efforts have resulted in public policies that require seat belts and airbags in automobiles, stiffer penalties for driving under the influence of alcohol, and the use of smoke detectors in public and private buildings. Because accidental death has consistently ranked in the top 10 leading causes of mortality over the past century, public health efforts at eliminating or reducing its occurrence have also led to the creation of some

noteworthy federal agencies such as the Occupational Safety and Health Administration since 1971, which aims to reduce work-related injuries and death; the Consumer Product Safety Commission since 1972, which strives to ensure the safety of consumer products; and the National Transportation Safety Board since 1967, which investigates transportation-related deaths and injuries and makes recommendations to improve the safety of the traveling public. In addition to these federal agencies, the lobbying efforts of social movements, such as Mothers Against Drunk Driving, which, since 1980, has worked to reduce alcohol-related motor vehicle injuries and fatalities, have played a major role in bringing alcohol-related injuries and deaths to the forefront of discussions on prevention efforts. Yet, despite the work of these organizations, accidental mortality has not risen to the same level of public awareness and concern as the other 15 leading causes of death in the United States, and this relates to the very conception of what an *accident* is.

In the collective consciousness, an accident is defined as something that occurs by chance or the result of fate—an event or an outcome that people have little, or no, control over. And the thanatological assumptions surrounding accidental deaths are entrenched in this line of thinking because nobody intentionally dies by mistake. That accidental deaths are seen as the result of fate, bad luck, unfortunate circumstance, or statistical probability may explain why public health efforts to educate and lower the risk of accidental mortality are not as entrenched in the collective conscience as are other campaigns intended to address the incidences of mortality from the other leading lifestyle-related causes. An accidental death, in the public's consciousness, is too often an unfortunate occurrence that was unforeseen and unanticipated, a mistake-related mortality.

Leading Types of Accidental Deaths

According to the Centers for Disease Control and Prevention (CDC), between the years 2000 and 2004, some of the leading causes of unintentional deaths for all age groups included motor vehicle accidents (214,434 deaths), poisonings (84,663), falls (80,540), unspecified accidents (33,134), suffocation (25,069), fire/burn (16,376), and drowning (16,376). Moreover, the CDC statistics on the occurrence of accidental death show that the risk of succumbing to unintentional mortality changes with different stages in a person's life. The accidental death risk for a toddler will be significantly different from that of a teenager's. Indeed, the leading cause of accidental deaths for children under age 1, according to the CDC, is unintentional suffocation, but between 1 and 3 years of age, it shifts to motor vehicle accidents. For adults over the age of 50, falls are the most prevalent cause of unintentional mortality. Furthermore, there were 108,694 accidental deaths in 2004, a figure that was higher than the 93,592 deaths in the year 2000, a near 14% increase in the number of unintentional deaths for this 5-year period, making unintentional death the leading cause of mortality for the first 40 years of life. However, it is important to remember that the age-adjusted accidental death rate per 100,000 people has actually fallen significantly over the past 4 decades in the United States, with 63.1 recorded accidental deaths per 100,000 individuals for the year 1960, compared to 37.7 deaths per 100,000 people for the year 2004.

Motor Vehicle Fatalities

The sheer number of unintentional traffic fatalities, an average of about 42,000 deaths per year since 2000, deserves special consideration above the other categories because it represents close to 40% of all accidental deaths. About 116 persons will die each day as a result of an automobile accident, a number that would be much higher but for advances in safety such as front and side airbags, seat belt restraints, antilock brakes, and stability control technologies. Indeed, although the contemporary automobile death rate is high, it is still below the historic peak in 1969, a time before the enactment of safety innovations and regulations. Nevertheless, the United States averages one traffic fatality every 12 minutes, and the demographic picture of traffic deaths show that being young and being male are the two most common risk factors that show up in fatality statistics.

Accidental death seems to be a universal corollary of "driving while young." In the year 2004, a total of 4,767 teenagers between the ages of 16 and 19 were killed in motor vehicle accidents, and

another 400,000 received injuries that required hospitalization, according to CDC statistics for 2006. In fact, accidental death in vehicle crashes is more likely to affect this age group than all others, and gender is, once again, a crucial variable in the data on motor vehicle fatalities.

The rate of death for teenage male drivers 16 to 19 years old was 1½ times greater than the death rate for their female cohort according to 2004 CDC statistics. Teenage male drivers are more likely to report risky driving behaviors, such as speeding, driving without seat belt use, and driving while under the influence of alcohol. In fact, the teenage motor vehicle death rate is so alarming that the National Transportation Safety Board now advocates the most austere policies for young drivers, including (a) graduated drivers license statutes, (b) laws restricting the use of communications devices while driving, and (c) laws setting limits on the number of passengers a teenage driver can transport. In addition to advocating for these teen-specific driving regulations, the National Transportation Safety Board would also like to see the adaptation of mandatory adult seat belt restraint and child occupancy laws in all 50 states and the universal adoption of the .08 blood alcohol standard for driving under the influence (DUI) infractions.

What the National Transportation Safety Board stratagem suggests is that most traffic fatalities are not the result of fate or back luck, but poor choices on the part of drivers. While all automobile accidents are the result of road or weather conditions, automobile mechanical failure, and/or problems with the driver, the *overwhelming* amount of traffic fatalities are caused by poor choices on the part of drivers. For example, the National Highway Traffic Safety Administration reports that intoxicated driving and excessive speeding account for close to 70% of all traffic fatalities nationwide. Moreover, of the 42,642 people killed in traffic accidents in 2006, 17,602, or 41%, were alcohol-related deaths. These statistics suggest that human error in decision making, in either driving while intoxicated or with excessive speeds, is the cause of most accidental deaths on U.S. roadways. That society still refers to these fatalities as "automobile accidents" seem to suggest a link between poor decision making and the lack of culpability in outcome. Because of this assumption, some policymakers and accident researchers now suggest the phrase "automobile collision" as a better moniker for what is *really* taking place on American highways.

Accidental Fall Deaths

Depending on the year of reported CDC mortality statistics, unintentional mortality by falling is either ranked as the second or third most common type of accidental death. Between 2000 and 2004, the total number of deaths by unintentional falls was 80,643, making it the third leading cause of unintentional mortality for this time period, behind unintentional poisoning and motor vehicle fatalities. The CDC reports that among adults 50 years and older, unintentional falls is the leading type of accidental death, with about 14,000 deaths per year for this age group. The elderly are acutely affected by this type of unintentional death because of morbidity factors (e.g., neuromuscular and musculoskeletal diseases such as Parkinson's disease and osteoporosis) that increase the likelihood of accidents. According to CDC statistics, the home is the most likely setting for falls, accounting for about 60% of all accidental falling deaths.

Gender and Accidental Deaths

CDC statistics on accidental deaths show a distinct gendered pattern in occurrence rates. Men are more likely to be the victims of accidental mortality in almost every category of accidental death. At younger ages, teenage boys are more likely to be the victims of automobile accidents and drowning—more than 1½ times more likely to be victims of motor vehicle fatalities and more than 3 times more likely to drown than are girls. Among adult unintentional poisoning deaths, men are 2 times more likely than women to be victims. Finally, among unintentional falling deaths between the years 2000 and 2004, males accounted for 53% of those deaths.

Social scientists attribute the disparity in accidental mortality between men and women to differences in the gender socialization boys and men receive into masculinity, where certain risk-taking behaviors and activities are normalized as part of the process of becoming a man. Also, men are more likely to participate in activities that involve greater levels of risk, such as excessive speeding and driving under the influence, and this tendency

accounts for the difference in accidental mortality between boys and girls, and men and women.

The Impact of Accidental Traffic Injuries and Fatalities: Economic and Psychological Costs

Automobile accidents are a ubiquitous and common occurrence that carries significant economic and social costs. In 1990, there were 6.4 million traffic accidents or crashes on U.S. highways, and there were 6.1 million in 2005. The National Highway Traffic Safety Administration estimates for the year 2000 put the total economic cost of all motor vehicle accidents, injuries, and fatalities at $230.6 billion, which includes lost productivity costs of $61 billion, property damage costs of $59 billion, and medical expenses at $32 billion.

The impact of motor vehicle accidental injuries and deaths is not just economic or social. There is a tremendous personal cost to the high rate of accidental death and injury by automobile. For example, in 2005, 101,034 Americans were involved in an automobile accident either as a driver or passenger in which a person was killed. In fact, motor vehicle injuries and fatalities are the leading cause of trauma for American males and the second leading cause of trauma for American females. Moreover, it is the most common cause of post-traumatic stress disorder, which presents itself in a host of postaccident psychiatric morbidities such as phobic avoidance of driving, depression, and increased anxiety. Epidemiological evidence from the American Psychological Association indicates that anywhere from 10% to 40% of Americans involved in a life-threatening or fatal automobile accident will develop post-traumatic stress disorder.

Accidental Death Issues

There are several conceptual problems surrounding the concept "accident" and "accidental death" in particular. An accident is something that is the result of pure chance, an outcome that was unexpected and unintentional. An accidental death is an unfortunate, unanticipated, and surprising event that no one can foresee. But this is a limited use of the concept of accidental death, especially when the vast majority of accidents are not really accidents of chance but rather accidents of folly, negligence, and blatant human misjudgment. One accident researcher cites that as much as 60% to 80% of all accidents might be the result of human errors. The National Highway Traffic Safety Administration reported that 41% of the 42,642 traffic deaths in 2006 were directly related to alcohol consumption and impaired driving. Can we really call these deaths *accidental deaths*? Many accident researchers argue that we cannot.

In one of the most important reports on the accident controversy, written in 1961, Suchman's *A Conceptual Analysis of the Accident Phenomenon*, a reevaluation of the way society conceptualizes life's unexpected events is suggested. By the criteria established at the time, an event must meet three necessary conditions and satisfy four qualifying assessments in order to be considered an accident. These three necessary conditions are (1) intentionality, (2) unavoidability, and (3) expectedness. The first, *intentionality*, is the most commonly used criterion, and one too often applied alone. The questions most frequently asked to ascertain intentionality are "Was it your intention to cause this accident?" and "Did the decedent intend to die?" *Unavoidability* relates to the degree to which the accident victim could have taken reasonable steps to avoid the occurrence. Finally, the degree of *expectedness* relates to the likelihood that the victim might have anticipated the outcome. In the case of aggressive driving and speeding, *expectedness* relates to the probability that one's action might cause an accident. But aside from these three factors, it is important to consider (1) the degree of warning that may have precipitated the event, such as admonitions against the perils of driving under the influence or excessive speeding; (2) the degree of negligence involved in the act that led to the accident; (3) the degree of an individual's misjudgment; and (4) the duration of the occurrence itself.

Finally, there is an unsettled debate in the literature on accidental death and injury concerning the issue of *accident proneness* and whether or not the phenomenon even exists. Studies on accident proneness—that is, the likelihood that personality traits and attitudes toward risk-taking behaviors might be factors in explaining higher rates of accidental deaths or injuries in certain groups or clusters of people—have been inconclusive and highly controversial. While the literature on accident

proneness suggests that there are some personality traits, such as youthful impulsivity and a penchant for sensation-seeking activities, that might explain differences in accidental rates between teenagers and adults and between men and women, there are also structural features that make this person-blame approach to accidents problematic, namely, that low socioeconomic status increases an individual's likelihood of experiencing an accidental death or injury, or that social and environmental factors, such as gender socialization, make it more acceptable for some groups to be risk-prone. Yet, despite debates on the accident proneness phenomenon, there is a psychological assessment commonly used to measure a person's proneness level: the Accident Proneness Test.

Classifying Accidents: Subintentional Behaviors, Equivocal Deaths, and the Psychological Autopsy

Some scholars argue that too often, suicides are classified as accidental deaths when there is no clear evidence to suggest intentionality, especially when the decedent leaves no indicator that might suggest suicide. There is also a class of subintentional actions that are self-destructive or reckless deeds that can hasten death or that can heighten the possibility of dying even if suicide is not the *intent* of these actions. Subintentional behaviors cover a wide range of actions from aggressive driving under the influence of alcohol, to free-wheeling drug abuse and addiction, to high-risk personal behaviors. In a subintentional death, the decedent may not have wanted to die but certainly knew that dying would be the natural outcome of his or her risky behavior. Whether or not subintentional deaths should be classified as accidents in part spurs on the contemporary debate over accidental mortality.

In 1973, Edwin Shneidman reasoned that anywhere from 10% to 15% of casualties were *equivocal deaths,* meaning that they could be classified as either suicides or accidents, but in most cases, they were likely to be classified as accidents. Many researchers believe that suicides are underreported and that many are included in accidental death statistics. To correctly classify unsuccessful parasuicides and deaths from subintentional acts, the psychological autopsy, an ex post facto investigative tool, was employed to investigate equivocal deaths, thereby facilitating the effort to correctly classify the death. The psychological autopsy also considers the degree of lethality involved in subintentional acts and parasuicide to provide an index of whether the intent of the act was suicide, the reasoning being that the greater the lethality of the method used, the more likely that suicide, and not a "cry for help," was the intent that underscored the act.

Finally, the current method of accounting for the prevalence of accidental deaths may be limited by the exclusion of entire categories of accidental mortality, such as iatrogenic and equivocal deaths.

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See also Bereavement, Grief, and Mourning; Economic Evaluation of Life; Life Insurance; Medical Mistakes; Wrongful Death

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Acute and Chronic Diseases

Historically the modal cause of death is disease. Diseases, also referred to as morbidities, are commonly classified into two categories: acute illness and chronic illness. Acute illness is characterized by sudden onset of symptoms and a brief duration. Examples include influenza and chicken pox. Most infectious diseases fall into this category. Acute illness may resolve on its own, may be treated with medications, or, in severe cases, may result in death. By contrast, chronic illness has a gradual onset of symptoms and an extended course. These types of illnesses usually result from degenerative conditions, traumas, lifestyle factors, or exposure to harmful environmental agents. Examples include diabetes, Alzheimer's disease, cancer, and most forms of heart disease. Although chronic illnesses are generally not curable, in many cases the sequelae of chronic conditions can be managed behaviorally or through medical intervention.

In 1900, the major causes of mortality in the United States were infectious diseases. The three leading causes of death were pneumonia and influenza, tuberculosis, and diarrheal diseases, respectively. The life expectancy at birth, in 1900, was 47.3 years; in contrast, a baby born in 2005 has a life expectancy of 77.8 years, an increase of more than 30 years. Much of the increase in life expectancy can be contributed to the changes in the major causes of mortality, with the leading causes of mortality shifting from acute illness to chronic illness.

In the United States and other more developed countries, acute illnesses have historically been important causes of death and have produced dramatic fluctuations in mortality; the Spanish flu epidemic of 1918 is one important example. More recently, however, with the life expectancy at birth reaching approximately 75 years for men and over 80 years for women, the primary source of death has shifted to chronic illness, especially heart disease and cancer. This entry summarizes the most common fatal chronic and acute illnesses in the United States, describes the historical shift from acute to chronic illnesses as the primary causes of death (epidemiological transition), and compares the level of chronic and acute illness in the United States to levels observed in other parts of the world.

Acute and Chronic Illness in the United States

According to a recent report by the National Center for Health Statistics, "Deaths: Final Data for 2005," there were 2,448,017 recorded deaths in the United States in 2005, resulting in a crude death rate of 825.9 deaths per 100,000 population. A more detailed view of recent mortality in the U.S. population can be obtained by examining specific causes of death. The 15 leading causes of death are shown in Table 1. Of the major causes of mortality in the United States, most are chronic in nature. The two major causes of death on this list—heart disease and cancer—accounted for almost half of all deaths (49.4%) in 2005, providing compelling testament to the monolithic role that chronic disease currently plays as a cause of mortality.

Heart Disease and Cancer

Most deaths from heart disease (almost 70%) are classified as ischemic heart disease (oxygen shortage that damages the heart muscle). Even when the effects of heart disease appear suddenly, as may be the case in a myocardial infarction or heart attack, the underlying cause usually involves long-term accumulation of arterial plaque, a hardening of the arterial blood vessels (atherosclerosis), or both. Although the heart is susceptible to infectious disease (as with some types of endocarditis and myocarditis), infectious disease accounts for less than 1% of heart disease deaths.

Although in some cases cancer can kill quickly, most types have an extended course. Advances in the treatment of cancer, using surgery, radiation

Table 1 The 15 Leading Causes of Death in the United States, 2005

Cause of Death	*Rank*	*Number*	*Percentage of Total Deaths*
Diseases of the Heart	1	652,091	26.6
Malignant Neoplasms (Cancer)	2	559,312	22.8
Cerebrovascular Diseases	3	143,579	5.9
Chronic Lower Respiratory Diseases	4	130,933	5.3
Accidents (Unintentional Injuries)	5	117,809	4.8
Diabetes Mellitus	6	75,119	3.1
Alzheimer's Disease	7	71,599	2.9
Influenza and Pneumonia	8	63,001	2.6
Nephritis, Nephrotic Syndrome, and Nephrosis	9	43,901	1.8
Septicemia	10	34,136	1.4
Intentional Self-Harm (Suicide)	11	32,637	1.3
Chronic Liver Disease and Cirrhosis	12	27,530	1.1
Essential (Primary) Hypertension and Hypertensive Renal Disease	13	24,902	1.0
Parkinson's Disease	14	19,544	0.8
Assault (Homicide)	15	18,124	0.7
All Other Causes	—	433,800	17.7

Source: From "Deaths: Final data for 2005," by H. C. Kung, D. L. Hoyert, J. Q. Xu, and S. L. Murphy, 2008, *National Vital Statistics Reports, 56*(10). Hyattsville, MD: National Center for Health Statistics.

therapy, chemotherapy treatment, and other methods, have extended survival time contributing to the chronic nature of this category of disease. The types of cancer that accounted for the most deaths in 2005 were (a) cancer of the trachea, bronchus, and lung; (b) cancer of the lymphoid and hematopoietic systems; (c) cancer of the rectum, colon, and anus; (d) breast cancer; and (e) pancreatic cancer. Together, cancer of these sites accounted for about 61% of all deaths from cancer.

Other chronic illnesses among the 15 leading causes of mortality include cerebrovascular disease, chronic lower respiratory disease, diabetes, Alzheimer's disease, chronic kidney diseases, chronic liver disease (including cirrhosis), hypertension, and Parkinson's disease. Together these illnesses accounted for 18.3% of deaths in the United States in 2005.

Acute Diseases

Even though chronic illnesses are the primary causes of mortality in the United States and in other industrialized countries, acute illnesses account for a significant number of deaths annually. Two infectious diseases appear among the top 15 causes of death. Influenza, along with pneumonia, accounted for 63,001 deaths in 2005, while septicemia (bacterial infection in the blood) accounted for 34,136 deaths that same year. Finally, the human immunodeficiency virus (HIV) claimed 12,543 lives in 2005. Although HIV/AIDS is a communicable illness, advances in medical management of HIV/AIDS have significantly increased the survival time; in many cases, HIV/AIDS resembles a chronic disease rather than an acute infectious illness.

Risk Factors

Age

The risk of chronic illness rises precipitously with age. The vast majority of older adults (65 years of age or older) living in the United States report at least one chronic condition, and roughly half of the older population reported two or more chronic conditions. Based on data from the 2005–2006 National Health Interview Study reported by the National Center for Health Statistics in 2008, the 10 most common chronic conditions suffered by older adults were hypertension (53.3%), arthritis (49.6%), heart disease (31.0%), cancer (21.2%), diabetes (18.1%), sinusitis (13.8%), ulcer (10.8%), asthma (10.6%), stroke (9.3%), and hay fever (7.5%). Although not all of these conditions are fatal, they can result in diminished functional ability and significant erosion of quality of life.

Sex

Examining group differences in chronic illness provides insight into the source of sex, race, and ethnic variation in overall mortality. Age-adjusted mortality for men was approximately 40% more than women's overall mortality. Specifically, men suffered higher mortality from 9 of the 13 diseases as shown in Table 1, namely, heart disease, cancer, chronic lower respiratory disease, diabetes, influenza/pneumonia, kidney disease, septicemia, liver disease, and Parkinson's disease. Women suffer higher mortality from only one of the leading causes of death: Alzheimer's disease. No differences in mortality were observed between males and females for cerebrovascular disease or primary/renal hypertension.

Race and Ethnicity

Age-adjusted mortality for African Americans is approximately 30% greater than that for whites. African Americans had higher mortality for 8 of the 15 leading causes of death, namely, heart disease, cancer, cerebrovascular disease, diabetes, influenza/pneumonia, kidney disease, septicemia, and primary/renal hypertension. For four of these illnesses—diabetes, septicemia, kidney disease, and primary/renal hypertension—the rates for African Americans are more than double that of whites. Whites, however have higher mortality from chronic lower respiratory disease, Alzheimer's disease, liver disease, and Parkinson's disease. Hispanics exhibit considerably lower mortality than non-Hispanic whites, approximately 30% lower among all of the major fatal illnesses except diabetes and liver disease.

The Epidemiological Transition

The shift in mortality and disease patterns (acute to chronic illnesses as the leading cause of death) is known as the epidemiological transition for which three stages have been identified: (1) the age of pestilence and famine; (2) the age of receding pandemics; (3) the age of degenerative and man-made diseases. The epidemiological transition is typified by a gradual replacement of pandemic infectious (acute) diseases by degenerative (chronic) diseases as the main types of morbidity and leading causes of mortality. The age of pestilence and famine is characterized by high rates of infectious disease and mortality and low life-expectancy rates at birth. The age of receding pandemics is distinguished by lower rates of mortality, gains in life expectancy at birth, and sustained population growth. The age of degenerative and man-made disease is exemplified by continued declines in mortality and an increase in life expectancy at birth to over 50 years of age. Along with all other more-developed countries, the United States has experienced an epidemiological transition: There has been a shift from acute illnesses to chronic illnesses as the major causes of mortality, and there have been increases in life expectancy.

Causes and Consequences of the Epidemiological Transition

The primary reasons for the epidemiology transition in the United States include a rise in the overall standard of living, advancements in medical care, and improved public health measures. Throughout the 19th and 20th centuries the United States underwent an overall rise in the standard of living, based in large part on enhanced diet and adequate shelter, which greatly shaped rates of U.S. morbidity and mortality. Following the rise in the standard of living, the United States benefited from further advancements in medical care and

improved public health measures, such as superior water and sewage treatment.

The consequences of the epidemiological transition in the United States are easily demonstrated. Because declines in mortality preceded declines in fertility, the size of the U.S. population has grown dramatically. Falling mortality rates have also increased the average life span, dramatically increasing the number of Americans living to older ages. As the U.S. population ages, there is a greater prevalence of chronic illness and disability. To manage the changing health demands of an aging U.S. population, health care costs have sharply risen over the past several decades.

Although the United States adheres to the classic epidemiological transition model, the Spanish flu pandemic of 1918 illustrates the variability of infectious diseases. During the early 20th century the United States was arguably experiencing the second stage (the age of receding pandemics) of the epidemiological transition, yet the Spanish flu pandemic of 1918 affected nearly a quarter of the U.S. population and had a high mortality rate. Recently, infectious diseases have come to the forefront of media attention, and researchers are discussing a reemergence of infectious diseases such as AIDS and stronger strains of classic diseases such as tuberculosis, pneumonia, and influenza. There is evidence to suggest that infectious diseases will assume increasing importance in the future.

Acute and Chronic Illness in Global Perspective

The major causes of mortality for developed nations differ from those in developing nations. As reported by the World Health Organization, the leading causes of mortality for high-income countries are chronic illnesses such as coronary heart disease, stroke and other cerebrovascular diseases, and lung cancer. However, in low-income countries the leading causes of mortality are a mixture of chronic and acute illnesses. To illustrate, the top three leading causes of death in 2002 for low-income countries were coronary heart disease, lower respiratory, and HIV/AIDS. Such patterns of disease and health vary from nation to nation due to different socioeconomic statuses, cultures, environments, and demographic and technological changes.

In general, developing nations do not fit the classic or Western epidemiological transition as well as has been observed among the developed nations. Because of recurring aberrations the model was refined to explain the variants to the classic epidemiological transition. Thus, two models, building on the classic epidemiological transition model, are (1) the accelerated model and (2) the delayed model. The accelerated model, associated with Japan and Eastern Europe, is characterized by rapid decline in fertility and mortality rates, while the delayed model is typically associated with the poorer nations or developing nations that have maintained high rates of infectious diseases and, in turn, low life expectancy.

The differences observed in the patterns of disease and causes of mortality observed among the developing nation states are quite dramatic. Latin America provides an excellent example of the differences among developing nations in reference to the epidemiological transition. Guatemala is experiencing a delayed transition, with high rates of mortality due to acute illnesses and low rates of mortality due to chronic illnesses; in contrast, Mexico has high rates of mortality due to both acute and chronic illnesses. The differences between Guatemala and Mexico can largely be attributed to the differences in modernization level. Modernization influences the pattern of disease because it affects a nation's standard of living, public health, and medical care. As developing nations continue to see increases in living standard and public health measures, the global burden of chronic illness will also increase.

Chronic Disease in Developing Nations

The global burden of chronic illness in developing nations has been relatively unrecognized because acute illnesses kill at higher rates; however, the contribution of chronic illness, such as cardiovascular disease, from developing nations to the overall global burden of chronic illness is significant. Developing nations, which already must manage acute illnesses, face a "double burden" from the added incidence and prevalence of chronic illness. Some researchers have postulated that the increased rates of chronic illness in developing nations can be partially attributed to the effects of

globalization on lifestyle factors such as tobacco use and dietary changes.

Chronic illness is a global concern for both developed and developing nations, but the reemergence of infectious diseases has garnered international media attention. The recent outbreak of avian flu has raised concerns about a possible avian flu pandemic in the future. Many researchers see the outbreak of avian flu as evidence that a new stage of epidemiological transition may be under way, namely, the age of emerging and reemerging infectious disease. As infectious diseases, such as avian influenza and sudden acute respiratory syndrome (SARS), continue to make their presence known both domestically and internationally, it is not yet clear how these infectious diseases will impact the health of both developed and developing nations.

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See also Causes of Death, Contemporary; Causes of Death, Historical Perspectives; Childhood, Children, and Death; Coroner; Death Certificate; Demographic Transition Model; Medical Examiner

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Adolescence and Death

Developmental tasks and transitions influence how adolescents face mortality, and experiences with mortality very likely influence how adolescents deal with the transitions and tasks that society expects them to complete. An early influence on developmental understandings of adolescence was provided by Peter Blos, whose notions of early, middle, and late adolescence phases of development revolve around identity formation and ego integrity. Although there is no uniformity on the age ranges that encompass early, middle, and late adolescence, it is understood that (a) adolescence involves more than the teenage years, (b) adolescence begins with puberty, and (c) a convenient U.S. marker for early, middle, and late adolescence is schooling: Early adolescents are junior high or middle school students (~10–14 years old), middle adolescents are high school students (~15–18 years old), and late adolescents are traditional-age college students (~19–22 years old).

The developmental push for achieving identity integration focuses, in early adolescence, on separating emotionally from parents; in middle adolescence, on developing a sense of proficiency or mastery; and in late adolescence, on entering into and maintaining intimate interpersonal relationships. Consider, for instance, the complexity facing a 13-year-old early adolescent whose struggle to achieve emotional separation from her parents is embedded in the unexpected death of her father from a heart attack. Some empirical evidence, longitudinal and cross-sectional, suggests that adolescents facing life crises over deaths of family members or friends become more mature than same-aged, nonaffected peers. Cascading effects of bereavement on adolescents can be seen prominently in the

impact on academic pursuits. High school and college students' grades in the first few months of bereavement suffer, and even retention in college can be affected.

There is widespread attention to changes in cognitive development that enable older children and adolescents to attain what is considered a mature understanding of death. People who grasp that death is (a) irreversible, (b) happens to all living organisms, (c) can result from internal or external causes, and (d) produces the end of bodily functions are said to possess a mature understanding of death. Remarks that death leads to a life after death are typically dismissed as indicative of an immature concept of death, despite the fact that the great majority of adults, at least in the United States, hold such a view. There is growing awareness, as well, that many adults struggle with a mature understanding of death when faced with the death of someone loved.

Ambiguity colors individual adolescents' acceptance that mortality applies to them. The source of this ambiguity is a twofold form of adolescent egocentrism, or what has been identified as mistaken inferences about individual uniqueness (a "personal fable") and as narcissistic expectations about others' awareness of one's existence (an "imaginary audience"). This ambiguity about the universality of death is sometimes described as a belief in invulnerability, but recent research into developmental neuroscience raises serious doubt about adolescents' having delusions of invulnerability. It is doubtful that adolescents threatened with imminent death (e.g., realizing the car in which they are driving is going to hit another vehicle head on) dismiss the prospect that death applies to them; further, it is doubtful that adolescents from ethnic or racial groups at significant risk of homicide dismiss the likelihood that death can happen to them.

Adolescent Mortality

Although adolescents die from a variety of causes, the three major reasons are accidents, homicide, and suicide. Life-threatening illnesses do take the lives of adolescents, but deaths from cancers, diabetes, or heart disease, for instance, are considerably more prevalent later in the life span. The World Health Organization has published concerns that rites of passage within adolescent subcultures place adolescents at risk of death: These rites of passage include behaviors such as binge drinking, sexual promiscuity, drunk driving, and violence. Throughout the world, with the obvious exception of death due to pregnancy complications, adolescent males are at much higher risk of mortality than are adolescent females.

Deaths Due to Accidents

Mortality statistics reported by the World Health Organization underscore the fact accidents comprise the largest plurality of deaths during adolescence. Such statistics apply whether the adolescents live in developed or developing countries. For instance, deaths due to accidents comprise approximately 46% of deaths of adolescents in Australia, France, and the United States, and approximately 37% of deaths of adolescents in Mexico, the Ukraine, and Belarus. Vehicular accidents typically are the major cause of adolescents' accidental deaths.

Deaths Due to Murder

According to the World Health Organization, homicide is a leading cause of death for African American adolescents and for adolescents in El Salvador, Brazil, and Russia; homicides account for approximately 35.5% of adolescent deaths in those countries. Among developed countries, only in the United States does homicide form a leading cause of death for adolescents. In the United States, homicides account for approximately 16% of adolescent mortality, whereas in countries such as Australia, Canada, and France, homicides account for approximately 2% of all adolescent deaths.

Deaths Due to Suicide

Suicide is the second leading cause of death for adolescents around the world, and international data indicate the adolescent suicide rate has increased exponentially: The number of completed suicides has increased 60% since the 1950s, and the number of suicides completed daily extends from 5.4 in Japan to 20.8 in Russia. In the United States, there are on average 11 adolescent suicides a day. In approximately one third of all nations, adolescents are the age group most at risk of

taking their own lives. In all countries males complete suicide much more often than do females, a phenomenon attributed to the highly lethal means males typically choose in contrast to the less lethal means typically favored by females (e.g., the use of firearms or hanging versus a drug overdose).

Deaths Due to Life-Threatening Illnesses

Illnesses seemingly endemic to adults do strike some adolescents, and thus there are incidents around the world of adolescent deaths due to malignant neoplasms, leukemia, diabetes, heart disease, and circulatory problems. The mortality rate of such deaths comprises approximately 16% of all adolescent deaths worldwide. Percentages of adolescent deaths due to fatal illnesses in 2000 include Australia (16.7%), Canada (13.9%), Cuba (22.4%), France, (15.8%), Russia, (14.3%), the United Kingdom (20.3%), and the United States (15.6%).

Adolescent Bereavement Due to Deaths

Diverse studies suggest that bereavement is a much more common experience for adolescents than previously believed. Many high school students are bereaved, and up to 20% have witnessed someone's death. Convenience samples on several college campuses indicate that 22% to 30% of students are within the first year of grieving the death of a family member or friend.

Bereavement researchers have concentrated primarily on adolescents' responses to the deaths of parents and to the deaths of siblings. Scant attention has been paid to the adolescents' responses to the deaths of friends, grandparents, or pets.

Adolescent Bereavement Over Parental Death

Two major research programs that examined adolescent bereavement following the death of a parent were conducted at Massachusetts General Hospital by William Worden and Phyllis Silverman and at Arizona State University by Irwin Sandler. These carefully designed longitudinal studies reported that the death of a parent fundamentally challenged the adolescents' reliance on predictability of events, leading them to be more anxious and fearful over time in contrast to adolescents not touched by parental death. Coping with parental death adversely impacted adolescents' interpersonal relations, posing a major obstacle to adolescents' developing a sense of belonging among peers. Adolescents in the Massachusetts study thought of themselves as being more mature than those peers who had not coped with the death of a parent.

The authors of both research projects reported that consistent, effective parenting greatly assisted bereaved adolescents to cope with their bereavement and subsequent negative events. The Arizona State University researchers operationalized positive parenting in terms of parental warmth and consistent discipline, reporting evidence that positive parenting provided a buffer against the onset of mental health difficulties. Girls, in particular, demonstrated positive outcomes to consistent, effective parenting; without such parenting, bereaved girls had notable problems handling negative life events.

Adolescent Bereavement Over Sibling Death

Scholarly research on adolescent bereavement began in the early 1980s, focusing initially on self-concept and emotions. For instance, the Offer Self-Image Questionnaire for Adolescents (OSIQ) was used to assess bereaved adolescents' self-concepts. On most subscales the bereaved adolescents' responses to the OSIQ are no different than the responses of normal teenagers; on the morals subscale, bereaved adolescents' responses were one standard deviation higher than the scores of normal teenagers, suggesting that coping with sibling bereavement had sensitized adolescents to develop a more mature understanding of moral quandaries. These findings led to conclusions that sibling bereavement may not adversely affect adolescents' growth in self-understanding but may actually impel growth in some arenas.

The extent of family communication about matters of significance and extent of emotional closeness to members of the family (termed *family coherency*) significantly differentiate bereaved siblings' recollections of their emotions in the first few months after the death and their current emotions about the death. Adolescents who characterized their families as having "greater coherency" said their emotional reactions in the first few months after the death were filled with confusion, guilt, loneliness, sadness, and fear. Over time open

discussions occurred within their families about their sibling's death; while they currently felt an enduring sadness, they had resolved their other emotional reactions and, in particular, felt no guilt or confusion about the death.

However, adolescents who said "less coherency" described their families said their initial emotional reactions to their siblings' deaths were primarily feelings of anger and guilt; over time their confusion increased, as did their fear and loneliness, and their anger had not lessened. Families with greater coherency provided adolescents a network for working through problems over the death by using the family as a communication and emotional resource. Less coherency left bereaved adolescents and their family members isolated from one another and ruled out the family as a resource for addressing practical issues, such as the reasons the sibling died, and personal issues, such as feelings elicited by the death.

A valid, reliable instrument titled the Hogan Sibling Inventory of Bereavement (HSIB) is useful for gathering data on adolescent sibling bereavement; this instrument provides information about grief and about self-concept. When mothers and fathers were asked to complete the HSIB as they thought their adolescent had completed it and the responses of mothers, fathers, and adolescents were analyzed, it was clear that mothers and fathers had significantly different perceptions of their adolescents: The mothers considered their adolescents' grief to be more problematic than did the fathers, and the mothers believed their adolescents' self-concepts were more mature than did the fathers. The parents' HSIB scores were compared to the scores of the adolescents, and against all expectations found in the literature the fathers' and the adolescents' scores were in substantial agreement, whereas the mothers' scores differed significantly from what the adolescents reported.

Adolescents' HSIB scores of self-concept and of bereavement intensity show an inverse relationship. In short, over time adolescents with low self-concept scores had high bereavement intensity scores, and adolescents with high self-concept scores had low bereavement intensity scores. The inference is that adolescents with low self-concept are at risk of long-term negative consequences. This finding has even greater salience when juxtaposed with the expectation that adolescents will develop a sense of mastery and control, suggesting long-term issues with persistence and confidence as bereaved siblings with low self-concept enter adulthood.

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See also Accidental Death; Gender and Death; Grief and Bereavement Counseling; Homicide; Life Cycle and Death; Make-A-Wish Foundation; Suicide

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Adulthood and Death

Death is an integral part of life throughout adulthood. Psychologist Carl Jung proposed that adult development is characterized by a process whereby one moves from the omnipotence and immortality

of young adulthood to the confrontation of physical aging and loss of loved ones characteristic of middle and late adulthood. The leading causes of death, as well as the most common types of losses experienced, are defining features of each stage of adulthood.

Young Adulthood

Leading Causes of Death During Young Adulthood

Young adults benefit from excellent physical health and low rates of life-threatening illnesses. All combined, accidents such as falls, motor vehicle accidents, and poisonings are the leading cause of death during early adulthood. Homicide and suicide follow accidental death in frequency, with homicide being more common among young adults under age 25. Homicide is also the leading cause of death among young black men living in urban settings. Suicide is the second leading cause of death among 25- to 34-year-olds and the third leading cause of death among 15- to 24-year-olds. Cancer and heart disease are the fourth and fifth most common causes of death in young adults, respectively, and increase in frequency during the later years of young adulthood. Finally, HIV is the leading cause of death among young adults over the age of 25 who live in cities with populations of 100,000, is the fourth leading cause of death among black men, and is the third leading cause of death among young black women.

Common Deaths Grieved by Young Adults

Death of Grandparents

The death of grandparents is often the first significant death that young adults face, and although the loss of a grandparent may be quite painful, grandparent deaths are often anticipated and do not seem out of the natural order of events. Additionally, their deaths do not usually cause upheaval in carrying out the daily routines or normative developmental tasks of most young adults.

Death of a Child

The literature describes the death of a child as the most difficult and painful death to grieve because it violates all assumptions about the natural order of life and death; namely, that parents should not outlive their children. When a child dies, a parent loses not only their child but also their hopes and dreams for the future and often their sense of a just world. Starting a family is one of the primary developmental tasks of young adults, and even though the average age at which women bear children has increased over the past 3 decades in the United States, most babies are born to young adults. Accordingly, most early childhood deaths affect young parents at a time they are most invulnerable and have had little experience coping with death, particularly one judged to be so untimely and unfair.

Prenatal Death

Of the approximately 6 million pregnancies that occur each year in the United States, 2 million end in pregnancy loss as a result of miscarriage, ectopic pregnancies, molar pregnancies, stillbirth, and abortion. Although the medical recovery from the loss of a pregnancy is usually rapid and uneventful, the psychological effects can be traumatic. Unfortunately, the death of a preterm baby is often minimized and not adequately validated as a significant and profound loss.

One third of all abortions occur among women in their early 20s. Despite the voluntary nature of abortion, researchers report many women experience significant, and sometimes lifelong, abortion-related grief.

Death of Friends

Six to 10 million Americans are affected each year by the death of a friend. While all adults experience the death of friends, young adults have had less experience with death overall and their friends are vitally important sources of social support. Delaying marriage until the late 20s to mid-30s has increased reliance on friends while one forges an independent adult life. Perhaps because of their lack of death-related experience and a sense of immortality, young adults are at risk for experiencing complicated grief following the loss of a friend, particularly when the death is unanticipated, violent, or both. Moreover, friends are frequently overlooked as legitimate grievers because society often acknowledges and validates only the grief of families.

Middle Adulthood

Leading Causes of Death During Middle Adulthood

Degenerative diseases account for the majority of deaths during middle age. Heart disease and cancer combined account for roughly 60% of all deaths during middle adulthood. Accidents, chronic obstructive pulmonary diseases, liver disease, and stroke also are common causes of death among middle-aged adults.

Common Deaths Experienced by Middle-Aged Adults

Death of Parents

One of the most defining events of adulthood is the death of parents. Due to increased life spans, most middle-aged children now experience the death of their mothers between the ages of 45 and 64 and the death of their fathers between ages 35 and 54. Death of an elderly parent is viewed by many as normal, to be expected. Yet, even if parental death is predictable, most adult children are not prepared for it and often describe themselves as feeling orphaned. Furthermore, regardless of the historical nature of the parent–child relationship, the death of one's parents removes the buffer that shields them from death. Ultimately, the illusion of personal immortality so common during young adulthood is shattered by parental death, and the midlife developmental task of coming to terms with one's personal mortality commences.

Death of Spouse

Spousal death is less common during middle age than late adulthood, but middle-aged widows and widowers are often at greater risk of physical, social, and emotional problems, as well as higher mortality than their nonwidowed elderly counterparts. This heightened risk of negative outcomes may be attributed to the fact that middle-aged widowers often lack the level of social support experienced by elderly widowers who are likely to know more widows and widowers. And because of increased delays in childbearing in the United States in particular, many middle-aged widowers struggle with childrearing responsibilities, full-time work, singlehood, and often a significant decline in standard of living, all while trying to cope with the death of their life partner.

Late Adulthood

The elderly comprise less than 25% of the U.S. population but account for approximately 75% of all deaths recorded annually. Although fear of death declines with age, deaths of loved ones occur much more frequently in late adulthood, resulting in cumulative grief. Each loss serves as a poignant reminder of one's mortality and the inevitable deaths of more loved ones in the future.

The leading causes of death among the elderly are chronic diseases: heart disease, cancer, stroke, obstructive pulmonary diseases, and dementias as well as acute conditions such as pneumonia and influenza. Suicide is another cause of death among the elderly. In fact, the suicide attempt/completion rate of 4:1 is higher than the attempt/completion rate of 8:1 to 15:1 for younger age groups, resulting in a rate of suicide that is higher for white men over the age of 65 than for any other age group, including teenagers.

Common Deaths Experienced by Elders

Death of Spouse

More than 50% of all women over the age of 55 and at least 70% over the age of 75 are widowed. Although widows outnumber widowers by a 6:1 ratio, most widowers remarry, particularly those under the age of 75; many elderly widows do not. Again, the death of a spouse constitutes the loss of one's primary friend, companion, and lover, as well as secondary losses that include income, social invitations and connections, and assistance with household tasks. However, elderly spouses often provide essential health and physical support for their partners, and when they die, the surviving spouse may not be able to live independently. Finally, although depression and anxiety often increase following the death of a spouse, spousal caregivers may also experience a sense of relief and freedom following the death of their elderly spouse.

Death of an Adult Child

As average life expectancy has increased over the past century, so too has the likelihood of an elder experiencing the death of an adult child. The

death of a child is cause for disruption of the natural order of life. For elders there is the added loss of essential social, emotional, and physical support even as one's own health declines. Many elders expect that their adult children will help care for them in their old age and if the child dies, elders face pain and grief over the loss of their child as well as experiencing fear for their own future care.

Death of Siblings

Siblings are the keepers of one's history. Indeed, siblings have the potential to know and share one's entire life story from birth to old age. Even if one has not been emotionally and/or physically close to a sibling who dies, there is still the loss of a constant with the sibling's death. Such loss is profound and omnipresent and yet often goes unrecognized by others.

Death of Friends

Friendships in old age are related to life satisfaction, quality well-being, and life enhancement; many elders view their friends as their most important confidants. Accordingly, the loss of friends during old age poses a significant challenge to the relational and emotional aspects of elders' lives. The death of friends and family members may result in increased social isolation and lack of needed support. However, unlike the disenfranchising experience that many younger and middle-aged adults face when a friend dies, because some friendships in old age span decades, elder friends are often afforded significant consideration by the deceased friend's family.

Finally, adults must learn to cope with necessary losses. Coping with the death of loved ones, as well as contemplating and learning to live with one's own finitude, remain core developmental adulthood tasks.

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See also Aging, the Elderly, and Death; Friends, Impact of Death of; Life Cycle and Death; Life Review

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Advance Directives

See Living Wills and Advance Directives

African Beliefs and Traditions

Most African people regard death with great reverence and awe. Researchers and practitioners in death care have observed that in the study of cross-cultural differences, considerations of culture/subculture, spirituality/religion, and social class are important factors that influence attitudes, beliefs, and values in death, dying, and funeral rites. Cross-cultural research reports that factors such as social class and spirituality are important in explaining the range and diversity of beliefs, values, and practices observed among African people.

Africa is a vast continent with considerable diversity among its people. A number of distinctive cultural traditions concerning births and deaths have been observed across its various subcultures, societies, and tribes. Many Africans observe and identify with a variety of spiritual beliefs and many of their attitudes, beliefs, and values about life and death are aligned with their spiritual beliefs. For example, although many West Africans subscribe to elaborate funerals, West African Muslims have

characteristic beliefs about death care, postmortems, and preparation of remains, including simple funerals with a dignified burial. In addition, the socioeconomic status is of significant influence in that the wealthy are more likely to embalm and invest in metal caskets while the less affluent are more likely to forgo embalming and use simple wood carved caskets. Such differences exist among many African tribes.

African Views on the Origin of Death

Like most people, Africans have many enduring curiosities and beliefs about the origin of death. One such African myth regards death as a spirit that grants a "gift of escape" from the suffering of the physical world. Another of the oldest and most enduring accounts about the origin of death is referenced in the ancient folklore of the Asante of West Africa. According to folklore, there was a time when people experiencing death petitioned God to stop death. The request was granted, and for the next 3 years no one died and no children were born. The people again petitioned God to have children even if it also meant accepting death. This ancient African folklore illustrates the African worldview that life and death are complementary—a view of life and death as cyclical with death viewed as a part of this cycle.

African death superstitions evolve into practices and customs based on insecurities and fears about death. One African tribe has a custom of removing the dead body through a hole in the wall of the house instead of the door. This is done to make it difficult for the dead person's spirit to remember and find its way back to haunt and disturb the family. Likewise, many enduring intricate African funeral rites are believed to be essential to honor and to place loved ones at rest. According to African beliefs, by executing these funeral rites the survivors minimize the chances of wandering spirits returning to disturb those left behind. Many such funeral customs and practices of death care are based on mythology and superstition about death.

But despite the considerable diversity among African people, some commonalities and distinctive cultural markers can be identified as these are based on shared attitudes toward death, dying, and funeral rites.

Death as a Part of Life

The ancient Asante folklore about the origin of death reflects a belief about death—namely that death is a part of the natural rhythm of life. One enduring belief is that the death of an elder within a family and community is followed with a birth. The cyclical view of life regards death as a natural part of life and that each birth constitutes a renewal of life and community. Consistent with this belief, the ancient ritual of passing babies over the casket of a deceased elder is a way of honoring the elder and also honoring the life and death connection that is so important to family and community.

In many African societies and tribes, the symbol of the circle is a recurring theme in art. Ritualistic symbolism in sacred art and other artifacts represents renewal. Among the Asante the symbol of the Ankh is a large circle with a small cross that symbolizes life, fertility, and the renewal of life. The circle is also common in the design and representation of many other similar artifacts that are associated with life and well-being, referred to as fetishes or ancestor figures. This symbol closely resembles a similar artifact observed to exist in ancient Egyptian culture representing life, fertility, and the renewal of life.

Belief in the Afterlife

In Africa there is a commonly shared belief in a life following death. Accordingly, the individual dies and joins the community of ancestors, thereafter residing in the spirit world and afterlife. Many African cultural artifacts, such as art, music, sayings, superstitions, and traditions, reflect this belief in the numerous references made to joining loved ones who have died and progressed to the afterlife. For many people of African descent, the reference to funerals as "homegoing services" exemplifies more than disposal of the remains; such rites serve as a celebration of the deceased passing on to the spirit world. Africans residing in the Sea Islands, Angola, and Sierra Leone share these beliefs.

Similarly, it is common among many people of African descent to speak of the dying person "making his or her transition" from the material world to the spirit world and afterlife. Thus, religious orientations influence beliefs about heaven and hell

and how one's earthly existence influences the consequences or rewards and punishment in the afterlife and ideas relating to reincarnation. The Nguni of South Africa routinely slaughter an ox as a part of their funeral custom. The Nguni then refer to the ox as "the returning ox," which is believed to play an important role in accompanying the deceased in the journey home in the afterlife.

Funerals as "Primary Rituals"

In the African religious worldview, death represents a transitional stage in life that requires a passage rite. West Africans especially are noted for their thorough execution of funerals. Many West African tribes, such as the Asante, Ga, Fanti, and the Akan, have funeral rites and practices that are traceable back for thousands of years. Many of these African subgroups invest considerable amounts of resources and energy in the execution of funeral rites for the dead. Among the West African Asante, for example, funerals are elaborate and command more investments than most other rites such as weddings. The more esteemed and higher the individual's social status is within the community, the more elaborate and extensive the funeral rites will be.

According to African tradition, the immediate survivors have the primary responsibility and duty to assure that loved ones are given a "correct" funeral, incorporating aspects of the cultural and spiritual traditions to ensure the spirit of the loved one may find its resting place in the afterlife. Many Africans believe that if a funeral is conducted properly the loved one's spirit may wander, thereby causing misery and suffering for the survivors. Increasingly there has evolved an expectation among many West Africans to hold elaborate and often costly funerals leading in turn to social pressure to conform. Therefore, these expectations evolve into customary practices and ultimately traditions in many parts of African societies including African people who migrate. To not respond to this expectation is to experience feelings of shame and be viewed with dishonor.

Communal Grieving

Most African funerals are communal, with considerable value placed on community participation. In addition to family members, other community members often are involved in funeral rites and it is customary for them to express condolences. According to the cultural tradition of the West African Asante, for example, a strong sense of obligation generates condolences and financial contributions to assist in paying for funeral expenses. Indeed, many activities such as the sit-up, wake, and funeral represent social occasions that reaffirm social relations, solidarity, and group identity.

Ground Burials for Final Disposition

Most Africans prefer ground burial over other types of final disposition of human remains, but considerable variation exists in this practice, including the positioning of the grave, the individuals who participate in the preparations for burials, and the cost for burial ceremonies and the grave site. But there is also an increasing acceptance of cremation and other forms of final disposition in response to rising economic costs of traditional funerals. In addition, Muslim Africans believe in the simplicity of funerals and burials, which are primarily handled by males to include a simple grave with the remains simply placed in the ground facing east toward Mecca.

Many regional and ecological differences among African people also are impacting the rates of dying, death, and death care. In regions of East and South Africa, the realities of political instability and ethnic strife fuel ethnic conflict and soaring death rates. In addition, the rates of HIV/AIDS–related deaths are decimating many regions in epidemic proportion; such loss of human life burdens the survivors and the young with untold challenges. It remains to be seen whether the effects of the AIDS epidemic will also impact unique cultural aspects of dying, death, and bereavement in these regions.

Ronald K. Barrett

See also Funerals and Funeralization in Cross-Cultural Perspective; Funerals and Funeralization in Major Religious Traditions; Grief, Bereavement, and Mourning in Cross-Cultural Perspective; Race and Death; Social Functions of Death, Cross-Cultural Perspectives

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After-Death Communication

After-death communication (ADC) is a spontaneous experience among people who have a feeling or sense of contact with a deceased person. ADCs are common and occur across culture, race, age, socioeconomic status, educational level, and religious belief. In the study of death and the human experience, reports of ADCs naturally occur. When they feel safe in doing so, people spontaneously share their ADC experiences when talking about their relationships with their deceased loved ones, their grieving process, or both. The study of ADCs falls under several disciplines: paranormal psychology, grief and bereavement therapy, religion and spirituality, anthropology, sociology, philosophy, and medicine. ADCs are frequently reported as being comforting, pleasant, and life-enhancing. Some people have described their experiences as unpleasant or frightening; however, the unpleasantness is thought to be a result of people having difficulty integrating these experiences into their lives. Despite the common nature of ADCs, they go largely underreported due to percipients' fear of being ridiculed or being thought insane. In the following discussion the topics focus on the history, incidence, characteristics, and types of ADCs.

History

Encounters with the deceased or ADCs have been reported in many cultures. Formal research dates back as early as the 1890s with the Census of Hallucinations conducted by the Society for Psychical Research. Researchers from the Society for Psychical Research found that hallucinations of deceased persons were common among the sane. Researchers in the field of paranormal psychology have typically led the way in the exploration of ADC as a common, normal human experience. At the time of the census study, these experiences were called "hallucinations of the sane" to indicate how encounters with the deceased were common among the general population. Also inherent in the census study was the assumption that these types of experiences are not merely a result of a yearning on the part of a grieving person; the ADC percipient may or may not be grieving. According to reports from the census study, some people actually had an encounter with a deceased person who was not known to them as being deceased. These ADCs are interesting because they debunk the theory that ADCs are just a result of bereaved people imagining they see their loved one out of desperation and intense longing. Since the census study was conducted, people have continued to report experiencing an ADC without knowledge of the deceased person's death.

During the 1960s and 1970s, researchers who studied widows and widowers began noticing the experience of "hallucinations" as a common characteristic of grief. Initially these experiences were thought to be a result of people's intense longing for the deceased and difficulty facing the reality of their loved one's death. However, it became clear that these experiences were beneficial and comforting for many of those grieving and that the people having them were very much in touch with reality. Many researchers and bereavement experts expressed surprise at such an experience occurring to people deemed psychologically stable and fully aware of the deceased's death. Later, as a result of

these spontaneous findings, researchers began inquiring into this phenomenon.

Since the Census of Hallucinations study in the 1890s, encounters with the deceased have been referred to as the following: hallucinations, illusions, apparitions, sense of presence, contact with the dead, postdeath contact, and others. Bill Guggenheim and Judy Guggenheim coined the term *after-death communication* in the 1980s. Over the course of 7 years, they conducted the ADC Project during which time more than 3,300 firsthand accounts of ADCs were collected through interviewing 2,000 people from the United States and Canada.

The 1980s and 1990s marked a transition time between researchers reporting contact with the deceased as a side note to inquiring about its frequency, characteristics, and benefits. In the 1980s, researchers included the question, "Have you ever felt as though you were really in touch with someone who died?" in their Multinational World Value Survey and found the experience common among people from many countries.

Incidence

Researchers from various fields have contributed roughly 35 studies addressing the occurrence of ADCs. Based on these studies, the incidence ranges from 2% to 100% of subjects having an ADC experience. Results from an American survey conducted in the 1980s indicated that 42% of the American adult population reported having contact with the dead, and 67% of the widowed population reported having the experience. In general, the incidence for the widowed population is higher than that of the general population. Researchers reported results from the Multinational World Value Study in which close to 20,000 people were surveyed from the United States, South Korea, and numerous countries in Western Europe. The incidence of ADCs ranged from 9% in Norway and Denmark to 41% in Iceland.

The incidence of ADCs is difficult to report given the variation in types of studies, the specific terms used to describe the experience, the exact question(s) asked, and the measurement of response. Given the synthesis of the studies, a conservative estimate of the incidence of ADCs is 45% of the general population reporting having had this experience. The actual incidence of occurrence could easily be higher than that figure given percipients' reticence to report these experiences, especially to helping professionals.

Characteristics

Many people have described ADCs as a spiritual experience, but ADCs have also occurred among those without strong religious or spiritual beliefs. Even among those who report having strong religious convictions, some report the experience as not fitting in with their religious beliefs. There seems to be an element of surprise in these experiences. Often people have recounted learning of information via the ADC they could not have otherwise known and that was later verified. Many self-proclaimed skeptics have written about their ADC experiences, and they tend to lend a sense of veracity to the phenomenon given their resistance to believing that such an experience can occur.

Those having ADCs typically report having the communication with a deceased friend or loved one. What seems to be the most common message in these experiences is that the deceased person is "okay." Often people report that during the ADC experience, the deceased person seems happy, healthy, and strong. Percipients report feeling relieved and encouraged by the message or interaction. Many have even reported being instructed by the deceased person to move on, forgive, heal current relationships, take care of those who are still alive, and possibly even to not give up. Some people have reported having an ADC experience when in the midst of contemplating suicide and described the experience as deterring them from acting on their suicidal urges. Others have reported having an ADC experience at precisely a time in which they needed safeguarding. In these ADCs for protection, people received warnings that helped protect them or their loved ones from motor vehicle accidents, house fires, undiagnosed health problems, harm from criminals, and other dangers.

Having ADCs are not always about communicating with a friend or loved one. Researchers describe how a group of emergency service workers experienced a sense of communication with fatal injury victims whom they had attended at death. These personnel were deemed to be psychologically sound as well as respected and experienced professionals in their field.

Types of ADCs

ADC experiences can occur as the following types: sensing a presence, hearing a voice, feeling a touch, smelling a fragrance, seeing an appearance, and having a dream ADC. Also common are ADCs of physical phenomena, including incidents such as lights being turned off and on, mechanical objects being activated, pictures and other objects being moved, and other similar events. Symbolic ADCs are another common type of ADC in which percipients report receiving some kind of sign that confirmed for them that their deceased loved one survived physical death. Butterflies are the most commonly reported ADC sign.

Also reported are shared ADCs in which two or more people have a similar experience with the deceased at the same time. Such shared ADCs are noted in numerous studies and most recently in the study on emergency service workers. There were reports of partners who were interviewed separately who recounted similar ADC experiences with the same deceased patient at the same time—neither had discussed the experience with the other.

Crisis ADCs in which percipients had a communication with, or visit from, the deceased when they had no knowledge of the deceased person's death and often no knowledge of the deceased person being ill or in danger also are noteworthy. In these reports, the notification of death after the ADC experience led percipients to believe they had really been in contact with the deceased. In many reports, the percipients noted the time and/or told someone about the experience, and often the time of death coincided with the percipient's time of experiencing the ADC.

Lastly, deathbed visions are common among the terminally ill who are close to death and who report communicating with those already deceased. Researchers who studied this phenomenon stringently controlled for other factors that may have contributed to hallucinatory experiences, such as medication and medical diagnosis or condition. Patients having deathbed visions were deemed to be in contact with reality and typically reported feeling comforted by their ADC experiences. Many people report having multiple experiences, experiencing a combination of types, and experiencing ADCs with more than one deceased person.

Conclusion

Most people report ADC experiences as being positive, healing, comforting, and/or life-changing. For some, the ADC experience actually saved their lives. Rarely people have reported unpleasant ADCs. Many experts believe an unpleasant experience is a result of percipients not knowing that ADCs are common and normal and, therefore, having difficulty integrating these experiences. People consistently have expressed relief when they heard ADCs were normal and common. It is likely that even those with unpleasant experiences could benefit from them if supported by people who understood the phenomenon. ADCs are thought to be underreported, particularly to helping professionals such as the clergy, psychotherapists, and medical personnel because of concerns about the potential reactions from these same professionals.

People who are in contact with reality and are well aware of the deceased person's death experience ADCs. They are aware that their experience may sound like a hallucination—this is a good indication that they are not actually having hallucinations associated with a mental disorder. They may need or want to talk about their experience, and when they do so, they need someone who is supportive and nonjudgmental and who can normalize their experience. Also, it is important to help people find their own meaning in their experiences rather than interpreting them for them. Many who have the experience hope to have one again, and often those who are grieving and learn about ADCs hope to have such an experience.

Jenny Streit-Horn

See also Ambiguous Loss and Unresolved Grief; Bereavement, Grief, and Mourning; Chronic Sorrow; Communicating With the Dead; Coping With the Loss of Loved Ones; Grief and Bereavement Counseling; Widows and Widowers

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Aging, the Elderly, and Death

With the longevity revolution, for the first time in history, death has become a province of the old. During the 20th century, life expectancy increased by two thirds in the developed world. Increasingly its members die upon the conclusion of full, completed lives; in the United States, nearly 8 in 10 deaths occur among those 65 and older. Although this would seem to be the cause for collective celebration, instead old age has become a social problem. Cultural thanatophobia, excessive fear of death, has become thoroughly interwoven with cultural gerontophobia, fear of growing old or fear of the elderly, the latter demonstrated by the multibillion-dollar cosmetic surgery industry to obscure the aging process.

The cultural consequences of this great demographic change are considerable. Sociologist Wilbert E. Moore observed how the increasing longevity of all classes in postindustrial societies has disrupted the centuries-old synchronization between the temporal order of social systems and the temporal order of biological humans. Our contemporary social problem orientation to old age and anxieties about death may exist, in part, because we now outlive the traditional lifespan "recipes" and no longer "know" how to grow old and die. Whereas the traditional liminal state between life and death occurred soon after death, it now precedes mortality; one can now be simultaneously alive biologically and yet be socially dead.

With the old replacing the young as the most death-prone age group, the elderly have become the cultural shock absorbers of death, society's "death lepers" as Arlie Hochschild called them in *The Unexpected Community*. Death was a province of the young in Puritan New England, where parents often sent their children away to the home of relatives or friends ostensibly as a method of discipline but perhaps in actuality as a way to prevent them from becoming too emotionally attached to their offspring. Analogously, similar distancing from the death-prone is evidenced when the old move to age-segregated communities and when families send their aging family members to nursing homes to be cared for by others. This logic is evident in one of the central social gerontology paradigms of the last third of the 20th century, disengagement theory, which portrays a mutual parting of the ways between society and its older population. From the perspective of those aware of their limited life and with diminished ego strength, social withdrawal accompanies self-preoccupations and weakening emotional investments in others. From the perspective of society, the deaths of the disengaged diminish the disruptiveness of their deaths. It has been argued that the retirement phase of the life cycle arose, in part, as a cultural death consolation.

The longevity revolution has also affected the logistics for security that older persons traditionally had to command the loyalty and services of family members during their enfeebled years: inheritance. With land decreasingly being the chief legacy asset of individuals and with the increasing number of years spent in retirement and the dramatic post-1960s inflation of goods and services, particularly in medical care, the majority of older Americans now outlive their savings.

Further, given the age-stratified nature of so many social roles in modern societies, where individuals are more likely to interact and befriend their age mates throughout the life cycle, the longevity revolution has also made the final life stage a period of continuous bereavement as one's peers

die off and funerals comprise a growing part of individuals' social life.

Cultural Meanings of Death

American society is said to be if not a death-denying culture then at least a death-defying one. Social progress is measured in terms of increases in life expectancy rates. The obsession with quantity of life is reflected in the media attention given to the superannuated. For years, Willard Scott of NBC's *Today* show would give happy birthdays to new centenarians. The world's oldest person receives international recognition and a Guinness World Record certificate. In 2002 the honors went to a 115-year-old Japanese woman who slept through her birthday celebrations. Apparently her circadian clock had wound down as she would sleep for 2 days and then would be awake for the following 2 days. Despite such observances, superlongevity does not seem to be the life goal for most. A 2005 ABC News poll found Americans on average would like to live to be 87 years old; only one quarter said that they'd like to live to 100 or older.

Perhaps the cultural emphasis given to the quantity rather than the quality of life is evidence of the weakening influence of religion and philosophy in mitigating death fears. When the status of the dead was revered the authority of the old often was guaranteed. As confidence in an afterlife wanes, so often does the influence of the aged. Further, with dramatic social change, individuals no longer even live with confidence that the values and principles upon which they had predicated their lives will survive them, let alone that they themselves will be remembered. Such emphasis on longevity coupled with the historically diminishing status of the elderly in a society that worships youth has produced a profound cultural contradiction that portends change.

With death so often connected with the elderly, for those not old the prospects of death have (with the exception of those serving in the military) largely been dropped from conscious consideration when planning for the future. For instance, those enlarging their families rarely consider the possibility of the wife dying in pregnancy. The drawing up of wills is postponed. And whereas up until the 19th century one would have been considered a fool if one had not purchased a gravesite and saved for one's funeral expenses by one's late teens and early 20s, nowadays such actions would be considered morbid and pathological.

How the Old Die

Physical anthropologists tell us that like most other mammals, our distant relatives rarely if ever lived beyond their reproductive years. One evolutionary explanation for old age among *Homo sapiens* holds that females who lived longer, but whose fertility was curtailed in later adult life, were more successful at rearing their last-born children and may have contributed to the reproductive success of their earlier children. But because of their diminished biological reserves, the elderly are more susceptible to environmental maladies and have become society's miner's canaries owing to their greater likelihood of dying during climatic extremes and social disorder.

Over the course of the past century the leading causes of death of older Americans have shifted to chronic, degenerative diseases that prolong the dying process. In 1900, their leading causes of death were influenza and pneumonia (the latter referred to as "the old man's friend"), tuberculosis, and diarrhea and enteritis; in 2002 the causes were heart disease, cancer, and stroke, which together accounted for 61% of all deaths. Increasing rates of Alzheimer's disease (a malady experienced by over one half of those 85 and older and, in 2002, the sixth leading cause of death for persons 65 and older) and other memory- and identity-destroying dementias are fundamentally shifting cultural death fears from premature to postmature death. Fewer than 2 in 10 older individuals are fully functional in their last year of life. To die postmaturely is to perish when one's death is not one's own. In addition, there has occurred a concordant shift from cultural fears of postmortem judgment to fears of the dying process, enhancing the cultural authority of medicine at the cost of religion.

The old often must die a series of symbolic minideaths before actually expiring. The life stage is a time of loss: the loss of one's spouse, friends, jobs, health, standard of living, civic roles, driver's license, and of future time. With many living into their 80s and 90s, it is no longer unusual to even outlive one's children in addition to one's peers. For the institutionalized elderly in hospitals or

long-term care facilities, wherein three quarters of deaths in the United States occur, there are the additional losses of independence and dignity. Studies have shown older persons fearing nursing home residency more than death itself.

Such losses produce the common experiences of loneliness, grief, despair, anxiety, helplessness, and rage. Without much future, old age is a time of reflection and reminiscences. This inwardness, coupled with the social and psychological disengagements often made from life, can supposedly diminish such losses as one's attachments to the things of this world are lessened. But not always. Depression is not uncommon, which in conjunction with social isolation heightens suicidal thoughts and actions.

Throughout much of the world, suicide rates are often the greatest within the oldest populations, particularly among males. Such data may well be understated given variability in how coroners classify their deaths and their failure to account for acts of passive suicide, such as refusal to take life-prolonging medications or food. In the United States, for instance, though individuals 65 and older comprise less than 13% of the population, they account for one in five suicides, with 80% of these committed by elderly males. The suicide rate of white males is particularly pronounced: Of those 85 and older, the rate is 6 times that of the general populace—and over 4½ times that of their black counterparts.

Legacy Work

With increasing survivals to an advanced old age, many reach a developmental stage of gero-transcendence, when individuals shift their focus from a materialistic worldview to one more cosmic and transcendental, increasing both life satisfaction and death acceptance. With mentally and physically healthier older years, coupled with decreasing ages at retirement, older individuals have greater time and resources to devote to their legacy work in order to achieve at least some form of symbolic immortality. Former President Jimmy Carter's work with Habitat for Humanity and for his center to promote human rights and alleviate suffering around the world is one example; the Betty Ford Center for the treatment of alcohol abuse is another.

Older persons are learning how to employ the new information technologies to demonstrate the wisdom that the years can bring. Breaking the cultural silence on matters of death fears and grief was the appearance of geriatric1927 on the popular video-sharing website YouTube in 2006, wherein loquacious British pensioner Peter Oakley (aka geriatric1927) shared his autobiography and end-of-life outlooks. Within a week his was the most subscribed user name on YouTube.

Michael Kearl

See also Causes of Death, Contemporary; Causes of Death, Historical Perspectives; Disengagement Theory; Quality of Life; Suicide; Symbolic Immortality

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Alcohol Use and Death

Alcohol is a potent substance, capable of quickly transforming a seemingly respectable and rational individual into a babbling fool. This power can have further consequences, both immediately and over the long term. Rapid drinking of distilled liquor can lead to death in less than 1 hour, sometimes in as little as 30 minutes. Alcohol use has been linked to the genesis of fatal illnesses and irreversible deterioration in nearly every major organ system of the human body. Rarely does a chronic heavy drinker live a full life course and, at best, suffers multiple disabilities. The idea that "alcohol kills" has been a theme in American culture since the early 19th century, surrounded by data that directly confirm this assertion as well as evidence that is deliberately interpreted to support it.

As part of nature, alcohol predates humanity. Ethanol is a natural product of decay of organic material, making its presence known in all human societies and making its total obliteration

impossible. Despite many attempts, Prohibition has proven difficult to impose permanently.

Nonetheless, societal alcohol use, relative to risk of premature death, is often seen as *playing with fire*. Diffusion of information about the potential of damage and death associated with drinking rarely has a significant impact on the targeted drinking behavior. When access to alcohol is forbidden, people go to great lengths to ensure a steady source of supply. Thus, the public policy expert is forced to observe that much pleasure and positive reinforcement accompanies alcohol use. Relief from stress is sought daily by many individuals and groups through the relaxing effects of drink. Social and sexually oriented interactions as well as business transactions among relative strangers flow more easily with the lubrication of alcohol.

Further, in terms of custom and tradition, there are at least two types of events, each sometimes involving death, when groups and communities facilitate disinhibition through alcohol consumption. These are (1) celebration of rites of passage when alcohol may be used to escalate meaning and (2) commemoration of historical events or time passages during which alcohol may be used to invest and deepen the meaning of the occasion.

Public policy rarely showcases alcohol's social benefits or its embeddedness in cultural practices. Indeed, nearly all social policy statements about alcohol are heavily loaded with implications of damage, disease, and death. Beyond well-publicized dangers, the use of beverage alcohol (ethanol) by humans is intimately intertwined with several different types of explanations of death and experiences related to deaths. These relationships are of multiple types and go well beyond common knowledge that it is *risky* to consume alcohol. This entry offers a review of alcohol, death, and social policy; alcohol and fatalities; ecological perspectives on alcohol and death; and death rituals linked to alcohol.

Alcohol, Death, and Social Policy

The roles of alcohol in death are reflected in the ambivalent attitudes held by Americans, most Western societies, and many other cultures toward alcohol consumption. In addition to the well-documented experiences in the United States, many other Western countries have experienced periods of national Prohibition of the manufacture and use of alcohol. When and where it has been enacted, nations' rationales for alcohol Prohibition have almost always carried strong themes that alcohol causes premature death among both users and bystanders who may not be users. These bystanders include children, who may be the targets of violence or the victims of neglect; pedestrian and vehicular passengers who are struck by drunken drivers; or members of the public who are simply in the wrong place at the wrong time when alcohol-fueled violence breaks out. Prohibition has always carried a strong death theme that has been difficult for its opponents to challenge.

National prohibition is the distinct exception rather than the rule. To the extent that Prohibition exists, it is targeted at specific segments of the population (youth), periods of time (prohibited sales on Sundays, certain hours of the night, election days), and locations (sales prohibited in some locations relative to distances from schools and houses of worship). While the Prohibition of drinking among youth has a strong theme of injury and death, this is not true for the time and location norms.

The source of societal ambivalence clearly lies in the cycles of change from societal protection to societal liberation vis-à-vis alcohol. Consider the sharply contrasting policy of protecting the public from use of a powerful and death-linked substance through Prohibition and the policy of permitting, facilitating, and encouraging alcohol use in a manner that the substance is de facto available to anyone at any time. One perspective is relatively dormant but definitely alive during periods when the opposite perspective is dominant. The opposing visions view government as key to protecting public safety and health and reducing premature death while also abhorring government infringement on individual responsibility and freedom of choice.

Alcohol and Fatalities

According to data released in 2006 by the National Institute on Drug Abuse, alcohol can be blamed for 100,000 deaths in the United States each year.

- 5% of all deaths from diseases of the circulatory system are attributed to alcohol.
- 15% of all deaths from diseases of the respiratory system are attributed to alcohol.

- 30% of all deaths from accidents caused by fire and flames are attributed to alcohol.
- 30% of all accidental drownings are attributed to alcohol.
- 40% of all deaths due to accidental falls are attributed to alcohol.
- 45% of all deaths in automobile accidents are attributed to alcohol.
- 60% of all homicides are attributed to alcohol.
- 30% of all suicides are attributed to alcohol.

Categories of Alcohol Use With "Causal Connections" to Death

This inventory reinforces the question of why a society permits its citizens access to this toxic substance. The foregoing list sets the stage for considering a number of problems in asserting causal linkages between alcohol and death.

At the top of the list are included deaths from cirrhosis of the liver, long believed to be a strongly correlated physical consequence of excessive drinking, as well as being a fatal disease. In fact, despite widespread public belief, there are numerous cases of cirrhosis in which decedents had consumed minimal alcohol during their lifetimes, and a much more vast number of cases of high levels of alcohol consumption for which there is little evidence of cirrhosis at the time of death. Respiratory illnesses are highly correlated with smoking behaviors, in turn associated with heavy drinking, but the specific etiological factor is difficult to discern. However, it is important to note that pathology is a well-developed science, and autopsy can often pinpoint specific etiology. The critical issue though is that the vast number of drinkers, who use the substance moderately, pass through their lives without a premature death attributable to alcohol.

The next category of deaths focuses on accidents. These evoke visions of the drunken person awakening and unable to escape due to the flames generated by dropping a burning cigarette, or the drunk stumbling off the end of the dock in the late night hours. Unlike the medical specialty of pathology, there is a paucity of readily available tools or techniques to discern whether the drinking was the cause of death or simply an element that was present at some level when death occurred. Recognizing that there are extensive forensic techniques available to conduct social-psychological autopsies, these are expensive and rarely come into play unless there is some exceptional circumstance present, such as someone with a vested involvement in the death event.

The frequency with which alcohol as a causal agent is accepted without calling for a social-psychological autopsy is a demonstration of the extent to which alcohol's potent agency is embedded into Western culture. Looked at another way, isolated death events seem much more readily understood in terms of risky individual behaviors rather than risky environmental circumstances. In the two hypothetical cases described in the previous paragraph, it is obvious that a multitude of environmental conditions could have been the cause of death, such as the flammability of the sleeping quarters or access to exits. Likewise, poor lighting or the absence of a locked gate on a dock could have explained the drowning death. Given the sustained omnipresence within American culture of the Prohibition-based vision of Demon Alcohol, these are not the preferred explanations in the absence of an investigation.

The drunk driver is the most prominent in generating an institutionalized symbol in American culture of death caused directly by alcohol. Substantial societal energies are directed toward detecting persons who are driving with a specific blood alcohol content (typically .08%) that is defined as a physiological condition that impairs the ability to drive.

Ecological Perspectives on Alcohol and Death

One way to look at the alcohol linkage to death on the highways is an *ecological* perspective. Five ingredients are present when a drinking driver casualty occurs: alcohol in bloodstream + driver + automobile + highway + crash event. Testing for alcohol in the bloodstream and/or other evidence of alcohol consumption is at the forefront of the investigation and is usually the only dimension of the investigation. If alcohol is found to be present at the .08 level or higher, it is typically concluded that it was the *cause* of the event. When the driver is under 21 years of age, any evidence of alcohol consumption may be attributed as the cause of the accident and thus as the cause of the death.

The alcohol-as-cause explanation takes precedence over other possible causal explanations that

may not be considered. Clearly there is a ready cultural niche within which to place the individual: drunk-driver-as-killer. However, it is clear that other conditions affecting the driver could have "caused" the accident, such as lack of sleep, physical exhaustion, anger, emotional preoccupations, or the simple inability to drive a car. Likewise, unless blatantly obvious conditions are observed, defects in the physical functioning of the automobile itself are not considered as a possible cause of the accident. Similarly, although sometimes considered as a contributing factor, highway conditions are rarely, if ever, attributed as a primary cause of an accident when alcohol is found to be present.

This stands as an example of social processes directing the definition of cause and blame; in this case alcohol is the cause and the drinking driver is to be blamed. Each of the alternative explanations challenges social interests. Police and other control agents have simple measurement instruments to assess blood alcohol content, even though there is clear evidence that not all drivers are impaired when their blood alcohol is at the .08% level. There are no measurement devices or accepted standards to indicate inadequate sleep or emotional impairment. While urine testing is a possible indicator of drug use that may have occurred as long ago as 30 days, it has not yet been implemented in testing for impaired driving. Measurement of the ability to drive is determined by written and driving tests, which never involve a testing official supervising a candidate's driving at a speed limit of 70 miles per hour on a freeway in the dark.

To demonstrate how alcohol use has grown in dominance as a necessary and sufficient condition for explaining highway fatalities, the eclipse of mandatory vehicle inspection is worth examining. Whereas inspection of vehicles for their safety is mandatory in some jurisdictions, it has been abandoned in many others. In metropolitan Atlanta, Georgia, for example, mandatory safety inspections of vehicles were abandoned many years ago. To obtain a vehicle license, the condition of tires, steering mechanisms, brakes, and other safety devices that are vital parts of automobiles are not subject to any scrutiny. Ironically, other considerations with a sociopolitical tinge have ascended in priority: today in Atlanta, drivers may be fined and their vehicles impounded for lacking evidence that the vehicles meet carbon emission standards.

Finally, police and other public officials stand as both judge and jury when it comes to evaluating the possible role that road conditions may play in traffic deaths where alcohol is readily available as the causal culprit. Few public officials or their subordinates stand ready to impugn themselves as agents of death by maintaining unsafe highways.

Alcohol and Lethal Violence

Alcohol also is thought to be a powerful agent in many cases involving homicide. Within American history, the linkage between lethal violence and alcohol can be traced to the Temperance movement. Focusing upon the incredible monstrous power of its characterization of "King Alcohol," Temperance literature portrayed drinkers transfigured from calm and reasonable individuals into irrational killers. The ultimate tragedy was the drunken father coming home and assaulting his family, leading to the death of a child or a spouse. The peculiar causal influence of drinking and the murderous behavior were sometimes portrayed in an epilogue where the sobered father is shown in deep grief and remorse over his actions.

The alcohol and violence linkage has at least two forms: first, where it completely alters the nature of individuals and leads them to behaviors totally outside their *character,* or second, where drinking fully unleashes partially contained violent tendencies in other individuals with a history of trouble. There is, however, little debate over the alcohol–violence linkage in the criminological literature, although the methodological problems of establishing causal directions are well recognized.

In the current social climate in which there have been backlashes against the level of imprisonment in America, the prerelease treatment of prisoners with drug and alcohol addictions is projected to have a major impact on their recidivism. This supposed liberal policy embeds the assumption that these persons' alcohol and drug use made a direct and powerful contribution to the crimes that led to their imprisonment, possibly ignoring other remedies that might reduce recidivism.

Challenges to the validity of the alcohol and fatal crime link are similar to that of the alcohol and highway fatality linkage. Other factors that could have precipitated the crime tend to be ignored if alcohol (or other drugs) is visibly present. This pattern of

causal thinking is often strongly encouraged by the perpetrators themselves, and it continues to be supported when prisoners are asked to reflect upon the causes of the fatalities in which they were involved. It should be no surprise that prisoners would concur that their substance consumption rather than their lack of self-control resulted in their crimes. A more sophisticated vision of alcohol's role in criminal fatalities comes from the relatively new conception of crime "hot spots," where violent crime rates are exceptionally high and where alcohol and drug outlets are central to the environment.

Finally, an innovative addition to this area of explanation is consideration of the alcohol or drug use of the victim in the setting of criminal violence. A drunken victim can be posed in several ways: the victim's alcohol-fueled disinhibition leading to behavior that precipitates a violent act; the victim being impaired by alcohol and thus unable to properly engage in safety-seeking behavior; or the victim actually entering the situation with the intention of being the "villain" but failing to achieve this goal due to alcohol-related impairment.

Suicide

A final category of fatal outcomes linked to alcohol is suicide. Given the manner in which chronic excessive drinking can create collateral and progressive physiological and psychological damages, the behavior of untreated alcoholism is often conceptualized as *slow suicide* or as death-seeking behavior. Autopsies commonly reveal the presence of excessive alcohol intake accompanying the use of other substances, suggesting that the alcohol use either generated the *nerve* to take the other poisons or that its use blunted the effects of the other substances. Likewise, those attempting suicide by means other than substance ingestion may use alcohol to create the courage the commit the fatal act.

Despite its dramatic role as a seductive killer of innocents, alcohol often leaves behind mystery when it is present at a suicide. Sometimes it appears that the suicide may have been an accident, with the individual seeking relief of some sort (but not death) through the effect of some other drug, with the accompanying dose of alcohol leading to an unexpected and unintended toxicity. Alcohol's presence at a suicide may also involve incomplete notes, or a telephone off the hook, suggesting that the individual did not adequately anticipate the effects of alcohol in whatever combination with other substances, and ended his or her life as the victim of an accident.

Alcohol, Death Dramas, and Death Rituals

Alcohol has roles to play both before and after death. In many cultural settings, there is a social license to drink offered to the mourners of the deceased. While Irish Americans have perfected these rituals in manners recorded in fiction and drama, such practices are also found among many eastern Europeans. Drinking during the wake may be suspended for a brief period for the funeral and burial, but then is resumed with vigor at the post-funeral luncheon or banquet. Across different cultural settings, these drinking events have a fascinating double-pronged rationalization: Alcohol is to assuage the grief of the mourners, but it is also used to celebrate the entry of the deceased into the life beyond, free from the chains and burdens of earthly existence.

The diversity in the presence of alcohol at death ceremonies and its patterns of use have been explored cross-culturally by anthropologists. Archeologists have revealed the presence of alcohol in many burial grounds and tombs, suggesting that survivors desired that their beloved and/or revered departed would have the opportunity to drink in a new existence. In recent years, a similar ritual reportedly was observed by the children of the famous singer and drinker Frank Sinatra, who added cigarettes and Tennessee whiskey to his casket before it was closed.

Finally, we have those isolated but dramatic events where alcohol plays into a "death drama." Relatively little analysis has been provided of the role of alcohol in the military, and even during World War II, when a literal swarm of behavioral scientists studied their peers in uniform, nothing in these writers' extensive documentation of soldiers' behavior was offered about the role of alcohol. Very early accounts indicate that ancient warriors readily consumed alcohol to augment their bravery and that such behavior transformed Alexander the Great into a distinctively alcohol-dependent individual. The Southeast Asian conflict of the 1960s and 1970s was marked by great excesses of alcohol and drug consumption. While the current war in Iraq is

generating large numbers of veterans with severe alcohol problems and other disorders, the presence of alcohol in the death-threatening circumstances of battle and guerilla terror escapes discussion.

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See also Causes of Death, Contemporary; Drug Use and Abuse; Homicide; Mortality Rates, U.S.; Suicide

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Altruistic Suicide

In modern medicine, suicide is largely understood as an outcome of depression, an act resulting from a trajectory of mental illness spiraling downward into that profound hopelessness from which the victim cannot recover: Killing oneself comes to be seen by the victim as the only way to relieve intense psychic pain, or the only way out of an intolerable situation. The final act of suicide can sometimes be delayed or prevented by the use of psychotherapy, drugs, and/or emergency hospitalization; long-term prevention strategies for repeat episodes of suicidality include treatment of the underlying illness and continuing surveillance for warning signals of self-destruction. This understanding of suicide casts it as largely nonvoluntary and self-referential, a human tragedy frequently stigmatized and always to be prevented. In contrast, the focus in this entry is on altruistic suicide, the taking of one's own life for the interests of others. Altruistic suicide may be undertaken for the sake of family members or loved ones, for cherished institutions, for communities, for ideas and principles, for society in general, to serve divinity, or for a number of other reasons.

Altruistic Suicide

Among the classic specimen cases of altruistic suicide is the jet fighter pilot, who, when his plane fails, crashes it with himself still in it into a field, in order to avoid a crowded schoolyard. He does so knowingly and deliberately, and he does it to avoid killing the children, even at the cost of his own life. It is a clear case of altruism, the sacrifice of one's own interests to promote those of others. Of course, such a death is not normally labeled "suicide" but "self-sacrifice," "heroism," or some other adulatory term. Nevertheless, the pilot did kill himself by refusing to eject from his crashing plane.

Is this a case of altruistic suicide? This first question can be interpreted as a conceptual one: Given the highly negative connotations of the term *suicide* in English but the positive appraisal of altruistic acts, is it coherent to speak of "altruistic suicide" at all?

A second question concerning the possibility of altruistic suicide is a psychological one: Is it possible for an individual to both knowingly and deliberately cause her own death in a way that focuses primarily on the interests of others, rather than on her own situation and consequences to herself? Is genuine altruism possible at all, or are all our acts self-interested? Thus it might be said of figures who give the appearance of altruistic suicide that they act primarily for the rewards of (posthumous) reputation or religious afterlife: Lucretia, who preserves her sexual fidelity and thus her husband's honor even at the expense of her life; the many Stoic Roman generals who fell on their swords rather than risk defeat or, like Cato, to preserve their honor as well as their people; the legendary Buddhist figure Sakyamuni, who allowed his body to be eaten by a starving tigress; or elderly persons in some traditional Inuit and African cultures, who cooperated in social practices such as being dropped through a hole in the ice or buried alive in order to protect their communities from the burden of caring for them. Tradition counts Lucretia, Cato, Sakyamuni, and to some degree the elderly who cooperated with senicide practices as people extraordinarily attuned to the interests of others; however, motivation may be difficult to assess in widely divergent or historical cultures.

Familiar contemporary everyday examples of what might be said to be altruistic suicide include the mother who leaps onto the train tracks in order to push her child to safety, the soldier who falls onto the grenade to protect his buddies, and similar cases. These cases raise a third question concerning the possibility of altruistic suicide: Is the urgency of these cases so great as to make the notion of "knowing and voluntary" action irrelevant, and are these simply spontaneous, immediate reactions without clear thought as to the outcome?

Yet there are other cases in which there is evidence of long-term, deliberate, reflective attention to both the action of killing oneself and producing beneficial effects for others, the essential feature of altruism: the self-immolation of Buddhist monks and nuns as protests during the Vietnam War, the Japanese kamikaze fighter pilots during World War II, and the highly premeditated and trained jihad acts of suicide bombers in Sri Lanka, Iraq, Pakistan, and many other areas of conflict (called martyrs rather than suicide bombers by their defenders). Some may be acting primarily for posthumous reputation or afterlife reward, but there is clear evidence in many such cases, recorded for instance in letters or videos made prior to a kamikaze flight or a jihadi suicide attack, both of premeditation and of action for a cause involving the interests of one's community.

Is Altruistic Suicide Possible?

Is altruistic suicide possible? Motivational skeptics would deny that any truly altruistic act is possible and thus that truly altruistic suicide is not possible; those theorists who accept the possibility of altruism may answer yes, though it is then still necessary to consider whether *suicide* as distinct from other human acts can be altruistic. Sociologist Émile Durkheim argued that some types of suicide are founded in sociological structures such as conformance to societal expectations in a society in which individuals are highly integrated; sociobiologists such as E. O. Wilson see biological patterns favoring kin selection, such as the self-sacrifice of a member of a group to save the others, that enhance the success of one's genes despite the cost of one's life, and hence not really altruistic at all. A typology of altruism might include evolutionary or biological altruism, personal or psychological altruism, reciprocal altruism (one's altruistic activity conditioned on the recipient's behaving altruistically in return), spiritual altruism, social altruism (prosocial behavior), economic altruism (economic models for altruistic economic transactions, mostly within the family), medical altruism (the benefits to one's own health or self-esteem of altruistic behavior toward others), and various other mixed forms. A more specific typology of altruism with relevance to suicide could be constructed not only with reference to these categories but with reference to the degree of intermixture of egoist and altruist motivation in the types mentioned above: Purely altruistic suicide requires acting solely in the interests of another, contrary to one's own interests; moderately altruistic suicide involves acting in the perceived interests of both oneself and another; and weakly altruistic suicide largely serves one's own interests but is also intended in some degree to benefit others.

What Proportion of Cases of Suicide Are Altruistic?

Even assuming that partially or wholly altruistic suicide is possible, conceptual problems make it impossible to ask what proportion of suicides are altruistic as a straightforward empirical question. However, it is possible to consider a range of potential cases in which altruistic motivation might appear to be central.

Consider, for instance, the elderly person of moderate means, now detecting the early symptoms of Alzheimer's disease. A decade or more of progressive deterioration will mean substantial care needs: The patient will gradually lose short-term memory, fail to recognize caregivers and family members, and typically sustain financial costs for custodial care estimated in 2008 at perhaps $100,000 a year. Would a suicide intended to preclude these burdens for others count as altruistic? A part of the motivation in such cases may be to avoid the perceived indignities of late-stage Alzheimer's disease—spoon-feeding, diapering, and constant surveillance—but might some or much of it be altruistic, to avoid the burdens of care that fall on family members or, especially where adequate health insurance is not available, expenses that bankrupt the family and mean no financial legacy can be left for descendants? Inasmuch as suicide is not openly socially accepted on grounds such as protecting one's family from financial burdens, it is difficult to know how many such cases now occur or might occur under other cultural attitudes or social expectations.

Should Altruistic Suicide Be Socially Tolerated and/or Legally Permitted?

Consider the issue of altruistic suicide in terminal illness. Most physician-assisted suicide in jurisdictions where it is legal, particularly Oregon and the Netherlands, is associated with cancer, about 80% in each, forgoing a relatively brief period of life, estimated in the Netherlands as on average about 3.3 weeks. Are such "suicides," or occasions of aid-in-dying, egoist in character, sought by the patient to avoid pain or suffering in the final period of dying; or are some or many at least partly chosen to spare family members or one's community or society the emotional, social, and financial burdens of care?

If the latter, should they be socially tolerated? Legally permitted? This is a deeply complex question, answered differently by different societies, likely to vary as a function of the weight given to individual rights, prevention of harms, societal interests and welfare, and religious traditions. Chief among the concerns of those who argue against it is that what begins as a legal option may become an expectation; those who support it may view it as a right, a right that includes the liberty to sacrifice oneself for the benefit of others one cares about.

Should Altruistic Suicide Be Admired?

Permitting altruistic suicide is one thing; socially condoning it and admiring it is another. For example, Szmul Ziegelbojm, a member of the Polish government in exile in London, killed himself in May 1943 to protest the Allies' indifference to the Holocaust. Perhaps, he said in his suicide note, his death would arouse from lethargy those world leaders who would have to act if the handful of Polish Jews still remaining in the Warsaw Ghetto were to be saved from certain destruction. Ziegelbojm has been widely admired for both his courage and his altruism.

In the highly controversial but provocative view of the English poet and cleric John Donne, even Jesus Christ was a suicide. Donne argues that Jesus allowed himself to be crucified when he could have avoided it; he willingly emitted his last breath for the glory of God. However, Donne argues, Jesus was one of the only licit suicides, as suicide is ethically and religiously acceptable only when done for the glory of God. In Christian theology, no occasion of self-sacrifice is more admired than that of Christ; the question Donne raises for later scrutiny is whether it could be counted as (altruistic) suicide.

Social or legal permission for and admiration of altruistic suicide might be said to have coercive potential as well. Famously, Mary Rose Barrington asked, what if it were considered heedless self-arrogance to live on? And John Hardwig, stirring considerable controversy, insisted that one *ought* to end one's life if continuing it in the kinds of illnesses that could mean substantial burdens for one's family or significant others, an argument that would certainly apply to prolonged deaths by

cancer, organ failure, or advanced frailty and dementia, as the vast majority of deaths in the developed world now are. The question here is whether widespread societal admiration of such "suicide," called by some alternative term free of negative connotations, would come to be expected—the normal, essentially required course of action for anyone in such circumstances. This would of course return to the initial conceptual questions about suicide in general: not just what counts as suicide and whether suicide can be altruistic but whether altruistic suicide, which becomes normal and expected, remains altruistic and indeed whether it would have anything ethically in common with what now counts as suicide. Suicide is currently understood in contemporary medicine as largely nonvoluntary and self-referential, the product of depression or mental illness, something frequently stigmatized and always to be prevented. Widespread acceptance or admiration of altruistic suicide in a range of familiar end-of-life contexts would thoroughly challenge these assumptions. The phenomenon of altruistic suicide is already familiar in contexts such as social protest, jihadic suicide, and self-sacrifice in defense and military situations, but the issue of altruistic suicide as the societies of the developed world gray and age is likely to loom much, much larger as among the most challenging of moral issues at hand.

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See also Causes of Death, Contemporary; Kamikaze Pilots; Suicide; Suicide, Cross-Cultural Perspectives; Symbolic Immortality

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Alzheimer's Disease

Alzheimer's disease (AD) is the leading cause of dementia in seniors. Although the condition also occurs in persons under age 65 (known as early-onset AD), this is extremely rare (approximately 2% of all cases) and involves a drastically accelerated version of the more typical disease course. Individuals with late-onset, or typical, AD can survive for 20 years with the condition, whereas those with early onset live only 3 to 5 years after diagnosis on average. Estimates purport that by 2050 the number of AD cases in developed countries will exceed 36.7 million. Currently, AD is estimated to impact 4 million Americans, or 8% of the U.S. population over age 65, with projections reaching 12 million by 2050.

Historical Background

In 1906, German psychiatrist Alois Alzheimer described the first case of what became known as Alzheimer's disease. Auguste D., a 51-year-old German housewife, presented at an asylum in Frankfurt with jealousy, paranoia, difficulty remembering, and nervous pacing and died after 4 years of progressive decline. Upon autopsy, her brain revealed innumerable concentrations of tiny clusters and dead neurons in the cerebral cortex; these amyloid, or neuritic, plaques and neurofibrillary tangles are now considered hallmarks of the disease. Dr. Alzheimer's second case, Johann F., a 56-year-old man who was forgetful, could not find his way, and was unable to perform

simple tasks was observed from 1907 to 1910. He died within 3 years of presenting symptoms, and countless amyloid plaques were found postmortem. Unlike Auguste D., however, neurofibrillary tangles were not detected.

With the advent of medical dominance in the 20th century, the question of whether or not old age, and thus senility, could be cured became a subject of intense debate. Therefore, Dr. Alzheimer described the cases of Auguste D. and Johann F. amid an existing controversy about the relationship between aging and senility. Because dementia was at the time considered a psychosis rather than an anatomical disorder, these cases were seminal in establishing a biological basis for insanity. In 1910, the eponym *Alzheimer's disease* was first used by Emil Kraepelin, a founder of modern psychiatry, in the eighth edition of his *Handbook of Psychiatry*. This assignment was based on the knowledge of only four documented cases despite the different neuropathology observed and the reticence of Dr. Alzheimer, who felt his cases demonstrated accelerated versions of the condition called "presenile dementia" rather than the discovery of a novel state.

Historians have suggested that Kraepelin may have rushed the definition of AD as a separate disease category unrelated to age to promote his own interests in discovering physical lesions. Accordingly, the ability to distinguish between normal and pathological brains was an important component in the establishment of AD. The term *Alzheimer's disease*, then, originally referred to dementia in patients with presenile onset of symptoms, whereas *senile dementia* was used when symptoms began after 65 years of age and was considered a natural part of aging despite the fact that clinically and pathologically the two conditions were strikingly similar.

Because AD can only be definitively diagnosed upon autopsy, from 1906 until the late 1970s its diagnosis was largely rendered postmortem. During this period, AD remained an extremely rare condition affecting only younger people. As early as 1933, however, the neurofibrillary tangles associated with AD were discovered in the majority of normal senile brains. Allegedly, most seniors experienced a degree of forgetfulness without it necessarily interfering with their daily living.

By the mid-20th century, however, senescence and senility were a unified construct, and an interpretation of senile dementia as pathological quickly overshadowed previous meanings. In 1968, a study reported that the same lesions observed in the brains of Auguste D. and Johann F. also are noted in 62% of autopsies. Throughout the 1970s and early 1980s, most scientists agreed that the distinction based on age of onset alone was arbitrary.

Over the next decade, leading biomedical researchers struggled to dispel the notion that AD was a rare condition. Each year throughout the 1990s, AD was either the fourth or the fifth leading cause of death in the United States. Through the application of the label AD to those over 65 years of age, a previously natural part of aging (senility) was thereby redefined as a national health problem. The scientific basis for unifying the terms *Alzheimer's disease* and *senility*, however, has been met with resistance given the different rates of decline, neuropathologic changes, and actual symptoms, and many argue that motivations to merge these two terms were political. Currently, it is not known whether early-onset and late-onset AD are the same entity, are entirely separate diseases, or exist on a continuum of the aging process, leading some to advocate a "spectrum approach" to dementia.

In concert with the National Institutes of Health, biomedical researchers and families afflicted by dementia banned together in search of accurate diagnoses, treatment options, resources for caregivers, and ultimately a cure. In 1980, the Alzheimer's Disease and Related Disorders Association (ADRDA) was formed. In October 1980, a letter to the newspaper column "Dear Abby" sought advice on caring for a husband with probable AD; the letter writer was referred to the ADRDA, which made the association visible to the public. The following year, Hollywood actress Rita Hayworth was reported to have the disease. Together, these factors brought the scientific studies highlighting the prevalence of AD to the attention of media and lay audiences. Consequently, AD emerged as an illness category and policy issue in the 1980s, more than 70 years after the first case had been documented.

Contemporary Context

Researchers and affected families have been at the forefront of shaping policy and research responses to AD since the 1980s, when the disease model of

dementia gained prominence in Western culture. Awareness of AD in the United States has largely been driven by characterizations of the burdens on families and society. Designations such as the unraveling of self and a slow death of the mind demonize the disease to focus public attention and political support to address the problem. In the United States, advocacy concentrates on increasing funding for biomedical research with the hope of finding effective treatments, and preferably a cure, for this disease. These efforts have predominantly been by proxy, with advocacy coming not from individuals with AD but rather from invested others.

Despite numerous autobiographies depicting the experiences of individuals living with the condition, subjective experiences have historically been marginalized or depicted third-person. Assumptions that it was impossible to ascertain the views of people with AD caused few attempts to be made and inappropriate questions to be asked, rather than exploring what was preserved or what were the (nonbiological) causes of the losses. Contemporary efforts to enhance communication and involvement, however, have demonstrated the enduring ability of forgetful people to meaningfully interact despite the stigma resulting from their inability to navigate the social world in a manner deemed normatively acceptable by others.

The initial exclusion of people with AD from discourse concerning their disease stemmed from the social disenfranchisement of people with forgetfulness that has arisen from at least three sources: (1) *in social arenas,* from the difficulties family members have accepting and understanding the changes in their loved ones; (2) *in political arenas,* by the demonization of the disease as a result of advocacy efforts aimed at increasing awareness of, and research funding for, the condition; and (3) *in scientific arenas,* by its objectification wherein biological and behavioral features of AD are reduced to their component parts in an effort to unlock its complex mysteries. These social forces highlight the role others play in ascribing the status of personhood. Bioethicists have long warned that such marginalization threatens to throw the most deeply forgetful members of society into a social wastebasket.

The loss of self associated with AD has been a dominant trope in America, reflecting a postmodern disorientation and skepticism regarding time-honored conceptions of the coherence and rationality of time, space, and selfhood. Some argue that through deep philosophical roots in modern science, AD and its symptoms came to represent an erasure of selfhood. Since being positioned as a member of a socially undesirable group can cause stigmatization, the resultant focus has become the disease and its manifestations rather than interactional or experiential aspects of *living with* AD.

Noteworthy recent exceptions include narrative accounts of the lived experience of people with AD that question the usage of the word *dementia* and call for a reframing of AD as an obstacle rather than an end; that depict stories of living positively with dementia; and that demand affected individuals be included as full participants in their adventure with AD. These works reconstruct AD by portraying accounts of diagnosed individuals living with what they call a manageable disability. These perspectives strongly challenge the notion that diagnosed individuals become a hollow shell by positioning people with dementia as situated embodied agents; selfhood is not defined by consciousness of thought but rather is a corporeal dimension of human existence. Therefore, dementia is an embodied breakdown, with the most severely impaired living in a world that simply does not appear meaningfully structured. The preservation of human dignity in the face of forgetfulness is critical, because characterizations of AD that serve political or scientific ends cannot sufficiently represent phenomenological aspects of the disease.

Diagnostic advances currently allow for the labeling of AD in the earliest stages and even the potentially preclinical phase called mild cognitive impairment (MCI). The diagnosis of MCI is highly contested due to controversies over the (f)utility of doing so based on a lack of efficacious treatment options and consensus on conversion rates to AD. Studies report conversion rates as small as 9.6% over 22 years and as large as 100% in 4.5 years. Research suggests that MCI cases may be just as likely to convert back to normal as to AD, with as many as 40% reverting to normal. This lack of consensus has led some neurologists and bioethicists to question the legitimacy of the preclinical label itself. Some argue that nosological expansions based on neuroimaging and genetics have made diagnosis even more ambiguous, as the uncertainty remaining, even after postmortem examination, calls its empirical reality into question.

The Future of Memory Loss

One consequence of earlier diagnosis is that we are moving into a period when people with the disease are being incorporated into the advocacy efforts that are part and parcel of AD culture. Although this may not signal the end of advocacy by proxy, it should herald a public face for AD. This may strengthen the potential for reorganizing the social typifications in ways compatible with more compassionate care models. Accentuating the sociomoral necessity to care for people with dementia in ways that recognize and preserve their dignity as human beings could also temper the demonization of the disease.

The contemporary conflation of personhood and sentience is arguably a socially constructed phenomenon within Western thinking, or an artifact of modernity. Related to our societal fears, obsessions, and/or denial of death more broadly, AD—and the social death it represents—is uniquely positioned as the most dreaded of diseases by which those afflicted become a mere fraction of their pre-AD selves. AD conjures repugnant images and engages political-economic debates salient to end-of-life issues, namely the gray zone of persistent vegetative state. Rhetoric of "the never ending funeral" suggests that AD is positioned as the worst of deaths, that is, a *living death*.

The combination of this discourse and the trend toward earlier and earlier diagnoses has potentially devastating ramifications not only personally and within families but also for societies within a world that is rapidly aging. Age remains the only known risk factor for late-onset AD. Allegedly, over half of the population that lives to be 80 will develop AD. In such a context, medical innovations simultaneously expand the medical gaze and hasten the start of the stigmatization associated with processes of social death. Earlier diagnoses extend and arguably intensify the personal and interactional tensions that all too often accompany memory loss. The potential impact of diagnosing someone with an unknown, untreatable condition has yet to be studied; subsequently, social scientists, medical practitioners, and bioethicists alike caution against too readily diagnosing the earliest "stages" of memory loss. The fact that AD can only be "definitely" diagnosed postmortem, if at all, renders this nosological expansion particularly salient in modern Western societies, especially regarding the ontology of human life (and death).

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See also Aging, the Elderly, and Death; Ambiguous Loss and Unresolved Grief; Caregiving; Life Cycle and Death

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Ambiguous Loss and Unresolved Grief

Rarely in human relationships are people totally absent or present. When loved ones disappear without finality of death, symptoms of unresolved grief appear. The cause, however, emanates from an external context of ambiguity that lies beyond the symptom bearer's control. Since the 1970s, this phenomenon has been called ambiguous loss. Unlike the clearer loss of death, ambiguous loss has no official validation of loss and thus fewer supports and rituals to help people begin grieving and coping. Without evidence of death, the incongruence between absence and presence is so distressing it can traumatize and immobilize individuals and families for years.

Types of Ambiguous Loss

There are many kinds of ambiguous losses, but these tend to fall within two types, one physical and the other psychological. In both types, however, a loved one's absence or presence, or status as dead or alive, remains unclear. Both types can occur at the same time.

Type 1 ambiguous loss occurs when a family member is gone but not gone for certain. Such people are physically absent but kept psychologically present because they could return. Catastrophic examples are people who have disappeared, been kidnapped, or are lost without a trace at sea or in wartime. More common examples of the physically missing are those due to divorce, adoption, incarceration, military deployment, and immigration. This first type of ambiguous loss is also called "leaving without good-bye." People are deprived of physical access to someone they care about, so they suffer a double loss: the loss of that missing person's physical presence plus the loss of volition in being able to say farewell. For example, in the case of people gone missing in wartime, children kidnapped, or infants given up for adoption, the physical transformation that marks death is a privilege denied. Without official verification or a body to bury, such families may never be assured of death, so they must live with the pain of no closure.

Type 2 ambiguous loss occurs when a loved one is physically present but psychologically absent. That is, they are here, but not here. The absence of such a loved one may be due to addiction, obsessions, or extreme preoccupation with work. Catastrophic examples result from dementias, brain injury, autism, and chronic mental illnesses. More common examples result from depression and, pertinent to this discussion, the melancholia of unresolved grief. This type of ambiguous loss is also called a "good-bye without leaving."

Brief History of Research and Theory Development

Grounded in stress theory, which focuses on the management of relationship stressors (in this case, ambiguity), the research on ambiguous loss began in the 1970s with families of soldiers missing in action in Vietnam and Southeast Asia. Since then, research has continued with families where there is dementia, military deployment, autism, traumatic brain injury, and family estrangement due to sexual orientation. Ambiguous loss theory has been applied to guide family and community-based interventions to cope with losses due to Alzheimer's disease, the missing after the terrorist acts of September 11, 2001, the kidnapped in Kosovo, the swept away in South Asia after the tsunami, and the displaced after Hurricane Katrina, among others. Whether loved ones are lost in body or mind, their families are likely to experience frozen grief—a sorrow that never ends because the mystery never ends. The therapeutic goal therefore is not closure but rather an increased tolerance for ambiguity. This is not an easy task in a culture that values mastery and certainty.

Ambiguous Loss as a Cause of Unresolved Grief

The idea of insolvability so inherent in ambiguous loss blocks the resolution of grief for several reasons. First, the ambiguity confuses people. Family members with loved ones lost, but not clearly dead or gone, do not respond completely to traditional grief and trauma therapies. Second, the ambiguity makes people feel helpless. In a culture that values answers, an unresolved loss is viewed with impatience and often blame. This further

isolates sufferers, eroding their resiliency and healing. Third, people with ambiguous losses are denied the symbolic rituals and supports that exist when there is a verified death in the family. They are uncertain about what to do. They understandably resist the grief process and feel guilty if they begin. Having no rituals and traditions to grieve with partial loss, many erase the ambiguity arbitrarily—by acting as if the absent person is clearly dead—or as if nothing has changed and that he or she will return as before. Fourth, the ambiguity freezes relationships in limbo. For example, young children presently at home are ignored as parents are obsessed with finding a missing child or being with a terminally ill spouse at the hospital. Fifth, friends, relatives, coworkers, and professionals often become impatient with people experiencing ambiguous loss and may equate the unresolved grief with personal weakness. Blaming the victim and withdrawing will only lessen the resiliency people need to live with the ambiguity.

Finally, because the ambiguity complicates both loss and its resolution, the idea of closure is counterproductive. In normal grieving, according to Sigmund Freud's perspective of mourning and melancholia, the goal of recovery is to relinquish one's ties to the loved object and eventually invest in a new relationship. This is the difficult work of mourning, but it is a process that is meant to end. From this perspective, emotionally healthy people are expected to resolve a loss and move on to new relationships—and do so relatively quickly. While some therapists now encourage living with grief, even from death, closure is assuredly unrealistic when losses are unclear. Once the goal of closure is let go of, individuals can more easily see complicated grief as a normal reaction to abnormal loss—an uncanny disappearance that continues relentlessly without answers. Unlike with death, ambiguous loss does not allow the detachment that is necessary for closure, or even resolution. Another approach is needed.

Increasing Tolerance for Ambiguity

The stress and anxiety people experience with such irresolvable loss is externalized and named: ambiguous loss. Externalizing and labeling the problem allow people to let go of self-blame and begin the coping and grieving processes. Knowing that even the strongest and healthiest people are overcome by ambiguous loss, people more willingly participate in individual therapy or family groups that help them move forward in their lives despite the ambiguity. Relieved that closure is no longer a goal, they more willingly think about what part of their loved one is irretrievably lost and needs grieving versus what part of that person is still present to be enjoyed and celebrated.

With ambiguous loss, the only opportunity for change and moving forward is to learn to hold two opposing ideas in perspective at the same time: "He is here, but he is also gone. She is present, but she is also absent. He is in all probability dead, but maybe not." "Both/and" thinking serves to strengthen people's resiliency in the face of unanswered questions. Said another way, it is useful for family members to be able to accept the paradox of absence and presence. By embracing the contradiction, people are better able to manage the stress of ambiguity and live well despite the lack of closure. Six guidelines for increasing tolerance for ambiguous loss are summarized here.

Finding Meaning

At some point, the goal is to find some positive meaning in the loss and ambiguity. This is done by reconstructing the narrative of what happened into a new story that hopefully eases self-blame, guilt, and the desire for retribution or violence. Positive meaning is best found through voluntary listening and telling stories of pain—and strength—in the company of others who have experienced similar loss.

Tempering Mastery

Research suggests that the more people are accustomed to mastering problems and controlling their lives, the more depressed they become with ambiguous loss. Highly mastery-oriented people have less tolerance for ambiguity and thus feel more helpless when faced with unresolved problems. Tempering mastery means increasing one's tolerance for ambiguity.

Reconstructing Identity

It is confusing to know who we are in the context of a missing family member. People begin to

question their traditional role set if the only role left is to take care of a mate who no longer knows his or her spouse. Gradually, they must reconstruct who they are in relation to the missing loved one. For example, the wife of an Alzheimer's patient said she no longer saw herself as a wife but as a widow-waiting-to-happen.

Normalizing Ambivalence

The ambivalence experienced with ambiguous loss is "sociological ambivalence," meaning it is caused by an external social force, not psychological weakness. While ambiguity understandably feeds ambivalence, conflicted emotions such as love/hate and anger/joy must be managed. Talking with others professionally or in groups helps to bring negative feelings into one's consciousness. Once acknowledged, discussions about how to prevent harm can follow. Wishing loved ones dead when they are missing or in pain is not unusual or wrong. With ambiguous loss, ambivalence is inevitable, so it is essential to talk about this topic with others.

Revising Attachment

The stress related to not knowing whether a person we love is here or gone illustrates an intersection of cognitive and psychodynamic theories. In an environment of ambiguity, confusing attachments and the lack of meaning are linked to blocked decision making and coping processes. In such contexts of doubt, relationships are conflicted. Revising one's attachment to someone who is ambiguously lost requires a new view of absence and presence and a tolerance for paradox and no closure.

Discovering Hope

The father of a boy lost in the mountains tells reporters that his search will not end until he finds him. Understandably, he hangs on to hope that his son is still alive somewhere and will be found. Later, if the boy is not found alive, the father may discover new hope that the boy's remains will be found so that he can bury them. An alternate method is to symbolically honor the child through creating a form of remembrance within family and community. What one hopes for must change as time passes, but this happens best in narrative with others. When loved ones are kidnapped, swept away, buried alive, or vanish in mind or body, family members continue to hope. Rather than seeking closure, the goal is to imagine and discover new hope.

In conclusion, while the unnatural mystery of ambiguous loss can traumatize, most people eventually move forward with their lives. They accomplish this by holding two opposing ideas in their mind at the same time: the person I love is here, but not here; gone, but not gone. Grasping the contradictions in absence and presence provides the resiliency needed to move forward with life, even after experiencing losses that defy resolution. Remembering that the pathology lies outside the individual helps lower blame and stress.

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See also Aging, the Elderly, and Death; Alzheimer's Disease; Bereavement, Grief, and Mourning; Chronic Sorrow; Grief, Types of; Grief and Bereavement Counseling; Hospice, Contemporary; Prolonged Grief Disorder

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American Indian Beliefs and Traditions

American Indian beliefs and traditions include reverence and respect for life. Death is not all that different than life, for everything is sacred. Every part of the dirt, rocks, trees, of all things, is sacred.

The ashes of the dead are resting in sacred ground. Rather than disconnecting with the dead, American Indians continue to have a relationship with the dead. Rather than fearing death, it is a part of the life cycle to be accepted. The deceased continues to be loved and continues to love, care for, and protect the living.

All life is important. The plants and animals that gave up life in providing sustenance on a daily basis are thanked, as is the soil that nourishes the plants and the animals. Mother Earth is thanked for providing sustenance to the living. Everyone, including the least among the community, is thanked for contributing to the people's survival. This is the credo of American Indian beliefs and traditions as these pertain to the death and dying human experience. In the following sections historical and contemporary practices are examined.

Historical Development and Decline of Tradition

Native American burial and bereavement practices have been changed and forgotten over many centuries. The infusion of European religions, the lack of a written history of religious and spiritual practices, and the decline and death of many Native American languages means that many practices and ceremonies have been lost forever. Although some tribal groups cease practicing traditional ways, for all cultural groups death remains a village affair. People wash and prepare the body. Family and friends mourn the loss; some wear mourning clothes. All engage in mourning practices as the deceased is assisted on his or her journey by song, laments, eulogies, gossip, laughter, joking, appeals to spirits, appeals to God, dancing, prayer, and ritual. Some cremate, some bury the deceased.

Impact of Christianity

Like many clans, the Flathead Indians combine Christian and quite often Catholic traditions with their own traditional ways. Some Christian clergy act with respect and try to preserve traditional ways. Many funeral directors also respect and preserve traditional ways. Others attempt to destroy the traditional American Indian beliefs and practices.

Also known as the Salish, Bitterroot Salish, and as the Pend d'Oreille or Kalispel, the Flathead and other Plains Indian groups assimilated many Christian practices. The sign of the cross, "In the name of the Father, the Son, and the Holy Spirit," for example, is translated "L'squest's Le-eu u Sku-se u Sant Spah-pah-paht. Ko-mee e-tse-hyl." Flathead funerals include wakes and feast days are celebrated. Believing that death comes to all, young, old, rich, or poor, the Flathead are always ready for the inevitability of death. Each morning, one gives thanks to God for the day, for life, and for assistance in surviving the day. Prior to sleep, one gives thanks to God for the day and to awaken another day. Death is not feared; rather, death is anticipated as a joyous event. For the Flathead the wake represents a spiritually uplifting experience for all. One greets the deceased and prays with the prayer leader and someone stays with the deceased throughout the 1- to 3-day wake.

Prayers are spoken while the grave is opened and closed, during the procession to the church, during the funeral, during the procession to the cemetery, and during memorial and feast days. Many years ago, feasts and memorial giveaways were planned for a year after the death; today, most plans are made for a memorial dinner and giveaways are scheduled for disbursement immediately after the burial. A contemporary issue is that everything is finished quickly, leaving little to enhance thoughts of the future. This provides the family little opportunity to grieve and to express sorrow. Those who receive keepsakes help take away the sorrow of the bereaved. Material things are not important, but the love that the items represent is essential. Deferring the feast day and memorial dinner allows the family to release their sorrow. But abandoning this practice by adopting Christianity and modern practitioners has served to erode traditional beliefs and traditions.

Burial and Bereavement Practices

Burial and bereavement practices vary among American Indian clans. The Ojibway Indians, for example, believe that it is important to feel good about self and to live life in a manner that reflects appreciation for all living things, to avoid harming or destroying life. Ceremonies begin with a tobacco prayer offering. The pipe's smoke carries the prayer to the creator.

The Ojibway bury their dead in their best clothes along with tools, tobacco, and food to take on the journey to the land of the souls. However, many burial mounds have been sold and developed into housing tracts, roads, and other intrusions. Many other burial sites have been looted, excavated by archaeologists, and bulldozed under building construction. To prevent further violations, the Wisconsin Ojibway have purchased many of these mounds.

The Iroquois Indians also bury objects with their dead. They fast for 10 days, and surviving spouses do not remarry for a year. Some groups blacken the face of the mourners and the dead person. After tattooing the body, the corpse is decorated with feathers and wrapped in furs and then buried either on a scaffold or below ground. The Iroquois believe that the soul does not leave until the Tenth Day Feast. At this feast, the possessions are given away and the favorite foods of the deceased are served to guests.

The Assiniboine Indians of the Great Plains place the corpse on scaffolds with the feet pointed to the west. After the scaffolds rot, the bones are collected and, except for the skull, buried. The skulls are used in a sacred village of the dead ceremony during which time friends and relatives speak to the dead and leave gifts.

The Hopi Indians are noted for having simple ceremonies in honor of the dead. Symbolizing a rain cloud, the face is covered with a mask; a woman is buried in her marriage gown, the man dressed in clothing appropriate to his clan status. The Hopi silently lower the body into the ground with prayer sticks, cover the grave, and leave food for the journey to the spirit world.

The Diné, or Navajo, Indians believe disease and death result from evil doing, witchcraft, spells, and dreams. One counters evil through ceremonies of blessing. Death represents the beginning journey to the next life. Grandparents receive respect from the children as they listen intently as elders speak of life and death and grief.

Throughout the life span, the Navajo passively accept death and the other traumas of life. In the wake of the death of a loved one, withdrawal is a common response to grief and loss. Women are more likely to cry openly. Men cry, but not publicly. Both are likely to have engaged in long periods of nonproductivity while experiencing a loss of interest in life and its pleasures. Although mothers and sisters continue to work, it may be months before the grandfather returns to his craft or sheepherding. Children, on the other hand, quickly return to their usual ways.

The Apache Indians employ strong interpersonal communications, humor, music, art, and social support to deal with illness, injury, and grief. The Apache believe that the spirit of the dead does not immediately depart for the underworld, and thus relatives who touch the body are likely to experience ghost sickness and may themselves require healing.

Apache are dressed in their best clothes, wrapped in a blanket, carried to the hills, and placed into a crevice or a shallow grave. Among the Western Apache, ashes and pollen are sprinkled in a circle around the grave, beginning at the southwest corner, to offer the soul a safe journey to heaven; in addition, water is left by the gravesite.

Crying and wailing occur during the Apache wake. Sometimes the body is left in the wickiup, which is pushed down upon the body. The Chiricahua Apache wives and children cut their hair short, cover their faces with mud and ashes, and dance to avoid ghosts from capturing them after the death of a warrior. Yuma Apache, the only Apache group to cremate their dead, also burn all of the deceased's possessions. In recent years, however, funerals and wakes have become a common practice.

The Apache mourn and wail, cut their hair short, and continue to mourn until their hair length is reestablished. Many Apache or Inde have incorporated nontraditional ways such as memorial dinners, Christian hymns and rituals, and the use of funeral directors.

Among Plains Indians, tribal attitudes and beliefs pertaining to dying and death are varied. The Lakota view the soul as having at least four distinct attributes: Ni un, Sicun, wann'gi, and Ton. Like the breath emitted from the body on a winter day, Ni un (life) leaves the body at the moment of death. But it is this aspect of the soul or spirit that is most feared because of the uncertainty of when the body is free of the spirit.

Sicun (spirit helper) is the second aspect. Like the Kachinas of the Hopi, the dead can assist the living. Like the Catholic concept of guardian angel or guardian spirit, the Plains tribes look to the

dead to help the living. As Catholics look to saints and deceased relatives to intercede for them, Plains tribes look to the Sicun.

The third aspect, wann'gi (spirit shadow), helps others; it can also be angry with the living. The shadow world and spirits are discussed by many tribes. Stories and tales of wandering ghosts or displaced spirits indicate these spirit shadows dare not be offended. Much of the secrecy they maintain surrounding burial and grieving practices is based upon this concept.

The final aspect is Ton, or power that makes something. One should listen to and respect the earth. Because they have power and can teach, the living rocks, earth, plants, feathers, and tobacco, for example, are used to make medicine and in rituals to help the living.

Grieving ceremonies are important to the Plains tribes because it is believed that the living and the dead affect each other. Each life has a purpose, a reason for being; each death takes away a critical, functional component. As the fox, coyote, squirrel, or rabbit has a purpose, so do each of us. If the coyote becomes extinct, its message is lost. Among humans, violent death as well as death attributed to suicide and accidents is cause for mourning. We will all be the less for not learning their message. Each death must be mourned, but those who leave the world go on a spirit trail. When death occurs, the deceased sees all of his or her relatives and waits for his or her descendants to join them.

Cremation

Cremation was the dominant form of body disposal for Yuman-speaking tribes—including the Hualapai (Walapai), Yavapai, Havasupai, Mohave, Cocopah, and Maricopa—the Kumeyaay (also called the Diegueño), and others. The Yuma of the Lower Colorado River and the Shoshone tribes of the Great Basin also employed cremation, as did some northwestern Central and South American tribes. But mission life generally destroyed traditional aspects of cultural life for most tribes. Crowded into small towns, these tribes experienced dramatic changes to their culture, eventually incorporating and adopting new crafts and methods of farming, new foods, new forms of housing, and different religions.

Catholic missionaries encouraged tribes to practice earth burial. With great difficulty, the missionaries convinced the Northwest Coast Indians to adopt the white man's cemetery even though they viewed earth burial with horror. Indians who had less contact with the Spanish and their missionaries were able to keep more of their traditions and way of life intact.

The Mohave Indians resisted the Mission movement. When death occurs among the Mohave, the corpse is quickly laid on a funeral pyre that will be prepared prior to death if death is anticipated, after which cremation follows as soon as possible. After the fire is lit, mourners wail, throw goods, and throw even their own clothes onto the fire. After the fire is complete, the mourners push the ashes and remaining debris into the trench or pit and cover it with sand. Generally, all of the dead person's property, clothes, goods, and even food is burned, and all evidence of the individual ever having lived is destroyed.

Ceremonies continue for 4 days to include abstinence from eating meat, fish, or salt and even from drinking water. Purification rituals are part of the activities of the mourners. The Mohave believe that the soul remains 4 days before departing. Those who prepare the body or touch the dead person or give speeches typically are part of these purification activities. This would involve cutting hair, bathing, and participating in smoke ceremonies and secret rituals. Although most of the old ways, foods, housing, dress, plants, and ways of making a living have disappeared, clan and cremation have remained among those who live in the old way. Although their religion is mostly extinct, the Mohave have not assimilated the Christian beliefs and traditions as did most tribes.

Less affected by the Catholic mission system, the Quechan, or Yuma, are also known for using cremation. The Yuma also were less impacted by the mission system. Near neighbors of the Mohave, their cremation practices are similar. The Yuma built funeral pyres that were house-high masses of logs upon which was placed the dead person. Mourners wail, cry, dance, sing, tear their clothes and throw them into the flames, scratch their faces, throw offerings or even money into the fire, request spirits to take this dead person and those who have died before, burn images of the dead person, and burn their personal items. They mourn for 4 days.

The Shoshone habitat varied, ranging from Death Valley to the Yellowstone Park area. The West Coast Shoshonean include Mono, Serrano, Gabrieleno, Luiseno, and Cahuilla. The Southern California Cahuilla also practiced cremation and burning the houses of the dead; they mourned, and they held mourning ceremonies.

Ancient tribes also practiced cremation. The Hopewell of the Middle Woodlands, perhaps more studied than most Woodland cultures, practiced both burial and cremation.

In conclusion, it is clear that tribal groups provided the dead with ceremonies and dignified disposal. There is much evidence that North American tribes employed all known methods of disposal of the dead, including burial (both ground and air), cremation, and mummification. It is also probable that the cause of death, where the death occurred, the age of the deceased, the sex of the deceased, and the social status of the deceased impacted the mortuary and burial practices of the tribe. However, sufficient information about how such factors influenced burial practices is not conclusive. It is likely that climate, availability of materials to dispose of the body, and religious beliefs were major determinants in how bodies of the dead were disposed.

Native Americans provide social support through the tribe or clan of the individual in the dying and burial process. That same social support system sustains the bereaved after the disposal of the dead. The grief process includes the ceremony of the funeral, the cremation, and the bereavement ceremonies. Extreme emotions are usually managed by these ceremonies. The spiritual nature of the living and the dead permeate the entire process.

No analysis of mortuary and burial practices could provide a complete picture of the attitudes and values of a particular people toward dying and death. One would need to observe hundreds of funerals to uncover subtle practices that might distinguish one funeral from another, even in the same culture. Each funeral will differ because of differences in the age, sex, social position, amount of disposable income, or other factors that characterize either the deceased or the survivors who provide the funeral. Other factors would also include the cause of death, the time of year in which the death occurred, or the personality of the person who died. The attitudes of the survivors or the deceased could impact the type of funeral practices that emerge as well.

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See also Ancestor Veneration, Japanese; Body Disposition; Cremation; Spirituality; Wakes and Visitation

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Ancestor Veneration, Japanese

In attempting to make sense of death and human experience, many societies have drawn on a discourse that emphasizes the sacred nature of family ties. Such a discourse encompasses beliefs, norms, understandings, and practices that foster continuing relationships between the living and the dead, in which the dead retain an active social presence in the lives of the living. These are explored by focusing on *sosen sūhai,* the Japanese form of ancestor veneration, as highly illustrative of the defining nature of discourses of death for the way people make sense of and structure their lives. This entry examines the way Japanese people

relate to their ancestors through beliefs about life and death, family dynamics, political imperatives, and personal expression.

Beliefs About Life and Death

Ancestral ties are deeply embedded in the Japanese psyche to encompass a familial devotion that is spiritual, even mystical in character. Indeed, sosen sūhai represents an indigenous faith that has remained separate from more formal religious traditions, though having absorbed elements of these, particularly Buddhism. As such, the ancestors or *senzo* represent the main source of religious experience for Japanese people, who tend to consider themselves a secular nation. However, belief in an afterlife where one will eventually join the ancestors is widespread.

The mystical nature of family ties has its roots in early indigenous beliefs and customs that predate the influence of Buddhism, from which they have since been distinguished by the name of Shinto. These emphasize the presence and power of the natural world through the concept of kami, or spirits of nature on which the living depend for their existence. The sense of being surrounded and supported by spirits reflects an agrarian lifestyle based on continuity and harmony between the worlds of nature and culture through close-knit, enduring kinship groups whose dead members become kami. As such, they are objects of veneration.

With no distinct line between the living and the dead, or human and divine, the dead remain available to the living for support and protection, while continuing to depend on them for their well-being, requiring earthly nourishment and devotion from surviving kin. Without sufficient care and attention, the dead may use their supernatural powers to cause trouble for the living. Indeed the dead are feared both for their polluting powers through the corpse as well as the potentially dangerous nature of the spirit. The well-being of the living thus depends on administering to their needs through rituals designed to placate, purify, and petition them.

Family Dynamics

The household, or *ie*, has been the main context for such beliefs and the rites that support them since the 16th century, to shape the moral foundation of Japanese society. Reflecting a discourse of continuity, perpetuity, and harmony, the ie came to represent a spiritual community in which both living and dead family members were essential for its existence and responsible for its welfare and continuity. Such values could take precedence over blood ties. Though ideally the perpetual existence of the ie is based on a system of unilateral succession that is patrilineal and primogenitural, in practice it is not synonymous with kinship. Outsiders may be adopted in if they prove more capable of ensuring the ie's continued harmonious existence. These values are reflected in the mutual affection that characterizes Japanese ancestral ties, encompassing gratitude on both sides, the living for the legacy their ancestors have left them, and the dead for the continuing prosperity of their line.

From at least the 8th century, Japanese families have engaged in sosen sūhai in a way that expresses family solidarity and mutual caring and support for both the spirits of the dead and their living relatives. Such mutuality includes the role of the living in ensuring that the spirit of the newly departed, the *shirei*, receives a safe and peaceful passage to the afterlife. Through a series of rituals, lasting 49 days, the shirei is divested of its polluting association with the corpse and attachment to the world of the living and set on the path to becoming an ancestor. This process is also designed to reassure the shirei of the family's continuing devotion and concern for its well-being. Otherwise it may become angry and resentful and cause harm to the living. Thus these rituals encompass a placatory dimension to ensure that potentially unsettled spirits become settled. Indeed, the concern of the living for the fate of the dead may extend to taking in those spirits who have no one to care for them, reflecting the group-oriented nature of Japanese culture in which the greatest fear is of social isolation. Such concern is reflected in *o bon*, the major summer festival, which welcomes the dead back into the community of the living, giving special place to those who have died since the last o bon.

Strictly speaking, therefore, recently deceased family members can be distinguished from the ancestors, though they will eventually gain ancestral status with the passage of time and appropriate rituals. Until then the dead form the focus of very personal relationships for as long as people are alive who remember them as individuals. These

are conducted at the *butsudan*, the domestic Buddha altar, where offerings of food, water, and flowers are regularly placed, incense and candles lit, and prayers said. Conceived as a mini-temple, the butsudan houses the *ihai* or wooden tablet representing the deceased person's spirit and bearing their posthumous Buddha name (*kaimyō*).

Eventually the remembered dead will fade from memory, lose their individuality, and merge with the family ancestral spirit (*tamashī*). In the meantime, through a process of ritual purification culminating in a final memorial service on the 33rd or 55th anniversary of death, they are rendered fully purified and benign. Thus, fully fledged ancestors tend to form a collective to whom ties with the living are no longer personal and vertical but rather collective and horizontal. In reality such a distinction is less clear as personal memories may be passed down the generations and the conceptualization of ancestors is changing to accommodate contemporary urban lifestyles and values.

Political Imperatives

The importance of ancestral ties to a culture based on close-knit, harmonious communities has been subject to political exploitation, early on forming part of the 6th- and 7th-century promotion of Buddhism. Then, more recently, the 17th century stamping out of Christianity by the Tokugawa government required all households to register at Buddhist temples. These then became the locus of ancestral rites with the Buddhist priest as the officiant. Prior to this ancestor veneration was a household-centered affair requiring no relationship with formal religion or the state. For the first time sosen sūhai took the form of a structured ceremony requiring temple and priests for its legitimation.

This political act resulted in a new popular form of Buddhism, which prior to this time was a religion of the upper and educated classes. Buddhism became central to sosen sūhai to which the institution accommodated itself and in so doing ensured its continued existence. This enabled the government to institutionalize devotion and loyalty to the emperor, via such rites, through the extension of people's sense of familial obligation. The ideology of *kokutai* was promoted as a mystical force residing in the Japanese people as a patriarchal nation in which all people are related to one another and to the emperor. The more horizontal dimension of sosen sūhai was thus reinforced.

Then in the Meiji period (1862–1912) such a binding of Buddhism with emperor worship via domestic ancestral rites was rekindled, with the addition of the *kukotu* ideology being disseminated through the education system. Until the end of World War II, children were brought up to believe that they were part of a long unbroken history of close-knit harmonious communities owing loyalty and obedience to their ancestors and ultimately the emperor. However, the Meiji government's attempt to establish Shinto as the national religion eventually failed as a result of the way sosen sūhai had by now, with almost 300 years of being tied to the state, become synonymous with Buddhism. Indeed, this link still remains even though it no longer serves political ends.

Personal Expression

Since World War II, Japan's increasing urbanization has had enormous impact on both the structure and ideology of the ie. Contemporary city-dwelling conjugal families owe no allegiance to their ancestors based on inheritance of property or long-term coresidence. An agrarian lifestyle, kinship ties, and a sense of the presence of the natural world are no longer the norm for many Japanese people. Yet, in spite of the waning household system, interaction between the living and the dead continues, suggesting that it is not dependent on institutional factors. Rather its persistence has to do with the importance of the more personal dimension. For sosen sūhai is not only about kinship solidarity but also about remembering particular individuals, something that is reflected in the increasing personalization of funerals. In the context of the nuclear family the emphasis has shifted from distant ancestors to more immediate kin. Indeed people's conception of ancestors has become more flexible to include family on both sides rather than only the patrilineal line.

Thus, ancestral ties continue to find expression through private rituals in domestic spaces that people continue to construct for them. For many this will still be the traditional butsudan, whereas for others it may be a smaller memorial space where photographs and other personal items are

kept. More compact, contemporary-style butsudan that can be easily accommodated in a small apartment are now available as *temotokayou* (home memorials), reflecting a shift in emphasis from veneration to memorialization. However, the quality of veneration remains in that family ties have come to represent a profound sense of emotional security and belonging for many Japanese people. The sense of gratitude and respect for what the ancestors have left behind has become linked to the sense of owing one's very existence to one's ancestors.

The forms these private rituals may take are highly varied to reflect the nature of the individual to whom they are directed, such as offering their favorite food and flowers and keeping them in touch with those family matters that are likely to be of particular interest to them. The sense of continuity between this world and the next still finds expression in people's concern to provide dead loved ones with those comforts that reflect their particular preferences in life. It finds expression in the continuing belief that the dead depend on the living for their well-being, sosen-sūhai encompassing *sosen-kuyō*, or praying ***for*** as well as ***to*** the ancestors. The sense of responsibility that Japanese people feel for the well-being of their dead informs the funerary and after-rites that assist the spirit's safe and peaceful passage to the afterlife, the emphasis on pollution having shifted to concern for deceased loved ones' individual needs and comfort. Thus for contemporary Japanese people sosen sūhai continues to reflect a social world in which the fate of both the living and the dead are profoundly interdependent.

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See also Animism; Buddhist Beliefs and Traditions; Communicating With the Dead; Holidays of the Dead; Shinto Beliefs and Traditions

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Ancient Egyptian Beliefs and Traditions

The ancient Egyptians created a complex civilization that continues to be studied over 2,000 years after the death of the last pharaoh. An undercurrent of matters in ancient Egypt was their system of beliefs, at the center of which existed the struggle between order (*ma'at*) and chaos (*isfet*). When ma'at reigned, people were happy and prospered. When ma'at was not maintained, isfet occurred, the harvest was unsuccessful, the land was plunged into war, people suffered. Therefore, actions were taken to ensure the preservation of ma'at.

The ancient Egyptian culture was rich and complex. Numerous rituals were a part of their system of belief and were woven into aspects of life, ranging from the mundane tasks of everyday living to abstract concepts. The religion of ancient Egypt garnered respect and wielded influence years after the system of government practices by Egypt's pharaohs. The culture and religion continues to be studied thousands of years later and, in that way, ancient Egypt lives on.

Egypt's Cultural Complex

The ruler of ancient Egypt, the pharaoh, was viewed as the key component in the continual efforts needed to sustain ma'at. In addition to the ruling pharaoh's secular duties to make Egypt prosperous, the nation's monarch was also charged with keeping the numerous deities of

Egypt's religion satisfied so that they would, in turn, bless the nation with blessings ranging from prosperous harvests to military victories and guard against the forces of isfet.

During life, a pharaoh was viewed as the living embodiment of the falcon-headed god Horus; upon death, the ruler was believed to have joined Osiris, the god of the dead (the father of Horus). In later dynasties, the view of the people regarding the divinity of deceased pharaohs was heavily promoted; for example, monuments dedicated to Amenhotep I (r. ca. 1514–1493 B.C.E.) included prayers to gain the deceased pharaoh's blessings and assistance.

As the link between the gods and humans, certain rituals required and could be performed only by a pharaoh; the priests, who occupied the upper echelon of Egypt's social structure, located in the official temples located throughout the nation assisted the pharaoh's efforts to carry out the rites demanded by Egypt's religion and in the continuous attempts in maintaining ma'at.

The many stories that discuss Egypt's complex religion show the attempts of a civilization to explain natural phenomena (similar stories exist in many ancient as well as "traditional" religions), such as the movement of the sun (the god Ra and/or Re). Other gods and goddesses were dedicated to certain events, such as childbirth (the goddess Heket). Deities were also associated with abstract concepts, such as wisdom (the god Imhotep), or would be held as serving multiple roles. Egypt's gods and goddesses took different types of forms (including taking human forms, animals, and a combination of the two); some deities would be associated with a variety of appearances. The god Thoth could be shown as an ibis, a baboon, or a man with the head of an ibis. In addition to these different forms, Thoth was associated with various roles, such as knowledge, the Moon, and of scribes. Names were also critical to the power of a deity; prayers, rituals, and gifts could be made only to a god or goddess that had its own name. Some Egyptian deities, such as Re/Ra, also had secret names. This mystery was critical inasmuch as it served as a source of power.

Significant deities of Egypt's religious pantheon symbolized natural forces such as the Nile's annual inundation upon which the people were dependent. These included the god Hapy, whose appearance was that of a man wearing a headdress of aquatic plants or the events throughout a human's life span, such as birth, childbearing, and death.

Among the best-known Egyptian myths are those involving Osiris and Isis, who are portrayed, respectively, as a mummified man, at times with green, black, or white skin, wearing a crown, and holding a crook and flail and as a woman with a throne headdress; the traditions and rituals surrounding these two deities are mentioned in the writings of other civilizations, such as the Greek author Plutarch in his work *DeIside et Osiride*. Osiris was a part of the mythology that was revered at the ancient site of Heliopolis located at the southeastern delta section of the Nile and is referred to in the Old Testament (as On). Osiris and Isis were two of nine deities known as the *Ennead* (Greek for "group of nine") or by the Egyptian translation *pesedjet*. Born from the union of the goddess of the sky (Nut) and the god of the earth (Geb) were five children: Isis, Osiris, Seth, Nephthys, and Horus the Elder. As the oldest son, Osiris became the king of the earth and took his sister, Isis, as his queen consort. Seth, unhappily married to his other sister, Nephthys, was jealous of Osiris' kingship and took steps to gain the throne for his own.

As the myth goes, Seth invites his older brother to a feast supposedly to worship the gods. At the start of the feast, the attendees were presented with a macabre prize, a coffin-shaped chest, to whoever would be brave enough to test its size. While others tried, all the other party goers failed as Seth had arranged its construction to fit Osiris and no other. As part of the fun, Osiris entered the chest, Seth and his co-conspirators slammed down the lid and sealed the king inside the now very functional coffin and cast it into the Nile. Osiris' drowning introduced death to the world. Grieving over the loss of her husband, Isis undertook to find the body of Osiris and through her efforts, Isis was able to retrieve the body of her murdered husband and through her magical abilities was able to reanimate a child, Horus the Child (typically referred to simply as Horus). But Seth had heard of Isis' efforts, and while she was out with her son, Seth was able to mutilate the corpse of his elder brother, cutting the body into 14 pieces, which he then scattered throughout Egypt. Seth and his evil cohorts also physically damaged Horus, at one point gouging

out his eyes. His mother, Isis, used her magic to heal his wounds; symbols of Horus (including the "Eye of Horus" also known as *udjat* or *wadjet*) came to be held as protective amulets and aided in efforts of healing.

Dejected, Isis once again took up the quest to find all of Osiris' body parts and through her diligence she was able to find all, save one piece, Osiris' penis, which had been eaten by a fish in the Nile River. Some myths attribute the fertility-infused silt of the Nile that gets washed onto the banks of the river during the season of inundation to the infusion of Osiris' male member with Egypt's life source. Finding all but one part of his body, Osiris was bound together with strips of linen. Thus, he was held to be the first to be mummified. The myth of Osiris reflected the belief that in order to pass through to the afterlife, an intact body was needed; the mummification process described in the myth also provides a model for funerary practices and rituals. Additionally, the myth binds life with death (as well as the continuation of life after death) and fertility in humans as well as harvests.

Horus sought to avenge his father. Eventually he was able to defeat his evil uncle, Seth, and gain the throne; the son of Isis and Osiris was held as the god of the sky, kingship (as previous stated living pharaohs were believed to be the living embodiment of Horus), and authority.

Ma'at was held as the goal of Egyptian culture. The goddess Ma'at, represented as a woman wearing a headdress of a single typically white feather, was the guardian of order, justice, and truth. When depicted in Egyptian art, a feather symbolized the concepts protected by Ma'at.

Anubis was another god of importance in the Egyptian religion. The god of embalming and cemeteries, Anubis was commonly pictured as a man with the head of a jackal. People would offer prayers to him to help the deceased. Priests performing burial rituals and ceremonies would oftentimes don jackal masks in order to portray Anubis.

The goddess Hathor was portrayed as a cow or a woman with the ears of a cow. She was held as the goddess of various things and concepts such as love, sexuality, fertility, motherhood, dancing, music, and alcohol. Hathor was also viewed as the divine mother of the pharaoh and is portrayed in some Egyptian works as the consort of Horus. Monuments in her honor feature prayers to Hathor for fertility and safety in childhood.

Re was the Sun god and held to be a creator. As the sun is a critical component to agriculture, Re was held as being a powerful and important deity within Egyptian religion. Various objects, such as portrayals of sun disks and obelisks, came to symbolize Re. At times he was pictured as having a man's body and the head of either a ram or a hawk wearing a headdress featuring a sun disc. During the day, Re was believed to travel by boat across the sky, while at night he was thought to pass through the Underworld. Another version of the passage of Re stated that each night he was swallowed by the sky goddess Nut and passed through her body to be reborn in the morning. At various times throughout Egyptian history, Re was melded with other deities, such as Horus (becoming Re-Horakhty, "Horus of the Two Horizons") as well as Amun, who was at times the head god of the official state religion (to become Amun-Re).

During one portion of the Eighteenth Dynasty (ca. 1539–1292 B.C.E.) of ancient Egypt, a new belief system was introduced as the state religion. Introduced by Akhenaten (r. 1353–1336) the sole deity of this new religion was the Aten, the manifestation of the sun itself. While the Aten was not a new concept, it had not previously been promoted as the only god. The Aten was depicted as the sun disc and typically featured rays that ended in hands. The Aten was thought to give, through the rays of the sun, life to members of the royal family, and only they could directly worship the sun. Others practiced the religion of the Aten by worshipping at shrines featuring the royal family in the presence of the Aten (as a sun disc).

The concept of monotheism was in extreme contrast to the traditional Egyptian religion and did not connect with the past. The priests who traditionally held great power and influence within the nation were threatened and neither they nor the Egyptian public were fans of the religion of the Aten. Shortly after his death, Akhenaten was declared a heretic and the traditional polytheistic Egyptian religion was restored.

Art

Art in ancient Egypt served not only aesthetic purposes but also was held as satisfying other aspects

of life. Pharaohs used idealized portrayals of themselves to propagate the concept of the king being a perfect quasi-deity. Representations of gods and goddesses were believed to actually become that deity. Images, such as art and writing, were critical components in carrying out certain rituals and activities; words, written and spoken, were held to have transformative power. Moreover, objects that could be considered pieces of art, like protective amulets (like the "Eye of Horus" described earlier), were common features in an Egyptian's everyday life. Due to space limitations, only art serving a ritual or religious purpose is discussed here.

Duality was a common theme throughout Egyptian culture: life and death, drought and inundation, arid desert and lush oasis. A central belief within the Egyptian religion was the struggle between order (*ma'at*) and chaos (*isfet*). The primary goal of religious rituals was the maintenance of ma'at. Additionally, in the Egyptian mythology, the world at its creation was perfect and no alteration was needed. As such, Egyptians strove for preservation, not change; rituals helped tradition endure and allowed people to feel a connection to the past.

The pharaoh was at the center of executing the rituals and actions required by Egyptian religion. In addition to the spiritual duties, the pharaoh was also the head of the nation's secular realm. To help the ruler, priests helped to carry out the multitude of religious rituals, rites, and tasks and would act as the pharaoh's agents. The priests occupied a place in the upper ranks of Egypt's society and could wield extreme influence.

As with the case of Akhenaten and his attempts to reinvent the country's religious beliefs, the priests of the traditional belief system used their power to squash the monotheist theology of the Aten and in doing so tried to wipe out the monarch, declared as a heretic after his death, from the annals of history. In this effort, depictions of Akhenaten and other nonconformists such as his wife and fellow worshipper of the Aten, Nefertiti, were defaced. This destruction of a person's image (or visual representation of one's name) served two purposes. First, Egyptian culture held that if one was remembered and one's name was spoken by later generations, one's spirit would survive. Second, it was also believed that a representation could serve as a repository for the being that it depicted. So, by smashing Akhenaten's statues and chiseling out his name from stone carvings, it was thought that the people were annihilating the storehouse for his soul and pulverizing his spirit. Hence, his ability to survive after death was extinguished. It was ultimate form of death.

In the end, however, Akhenaten's opponents were not able to completely destroy all of the pharaoh's visual equals. The king who went against the traditions of Egyptian religion, the professor of the Aten, has been passed down throughout time and is argued by some to be the first monotheist, presenting the precursor to Judeo-Christian theology, and the original revolutionary. Due to the uniqueness of the culture promoted during his reign, Akhenaten is frequently examined within studies concerning ancient Egypt. Ironically, if one applies the belief system of Egypt, the spirit of the pharaoh, declared a heretic and actively pursued in order to eradicate, certainly survives to this day.

One of the most important rituals within the Egyptian religion was the "presentation of Ma'at." This ritual, which is pictured in paintings from various periods of ancient Egypt's history, shows a person, most commonly the pharaoh, offering to the goddess Ma'at a feather.

At the many temples throughout Egypt, offerings were made to the patron god or goddess by presenting goods such as food to the deity's statue, which was believed to embody the sculpture. These rituals were performed three times, at dawn, noon, and sunset, in order to sustain the deity. A common theme in Egyptian artwork is displays of these offerings.

The most famous rituals were those focusing on death and the afterlife. An essential requirement for a person to continue existing after death was the spirit to have a location in which to rest; the ideal place would be the body, but in order to choose the correct location, the spirit would need to be able to recognize its own body. In order to maximize the maintenance of the physical appearance, extreme steps were taken to delay decay.

After death, the body went through a process of mummification, which involved various steps, such as encasing the body in natron. Throughout the mummification process, religious rituals were incorporated. One of the more crucial rituals included a ceremony in order to "open the mouth" so that the dead could speak and partake of food

and drink during the afterlife. Written spells would be included in coffin texts and the Book of the Dead to help the spirit circumnavigate the obstacles in the afterlife. Other objects of daily life, such as clothing, cosmetics, cooking tools, statues depicting servants, and so on, were frequently included within the burial site to aid the deceased.

The complexity of the beliefs and rituals within the culture of ancient Egypt pervaded each stage and every aspect of life, from the moment one was created, and continued after one's death. These traditions and rituals helped create continuity throughout a span of several millennia. Even though the government of the pharaohs has long since faded, the rich culture of ancient Egypt continues to live on.

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See also Deities of Life and Death; Depictions of Death in Art Form; Mythology; Zombies, Revenants, Vampires, and Reanimated Corpses

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Angel Makers

Angel makers are women who agree to care for foster children for a fee but neglect them until the child dies. But historically two types of angel makers can be identified. The first type of angel makers were 19th-century wet nurses who, because of their poor health and lack of child-care education, often neglected the young children placed in their care by local foundling agencies. The second type were the female angel makers of Nagyrev, Hungary, who were responsible for the death of their husbands, other relatives, and children during and after World War I. Both types put the lives of innocents at risk, and these events serve as the basis for this discussion.

Angel Makers of Officially Sanctioned Foundling Homes

Until the 19th century, children were not accorded much social or family status simply because the concept of childhood was not valued as significant. It is in this context that the first type of angel maker is best understood. This angel maker refers to alleged killers of infants. More specifically, angel makers were either women who, for a stipend, took foster children into their homes, or they were indigent women who, having lost their own infants, stayed at foundling homes, which were intended to solve the infant abandonment problem that existed throughout Europe for hundreds of years. In France, the people hired to transport babies from their home village to a distant foundling home became known as *faiseuses d'anges* or *angel makers*. This name, angel maker, was to become a more common label because of the high mortality rate during this transition to the foundling institution. The label *angel maker* also was assigned to many rural, poorly educated wet nurses, under whose charge a high rate of infant mortality was thought to occur.

Whether intentional or owing to a lack of resources, most of the children placed into foundling homes or assigned directly to wet nurses died because of either being undernourished or neglected to the extent that death occurred. Despite this high mortality, such foundling homes represented a social experiment to thwart the total abandonment of infants and laid the foundations for the modern concept of infant and child foster home care. Before the early 19th century, abandonment of children was common practice, whether by unwed mothers or by two-parent families. However, for infants abandoned during the 1830s to 1870s and prior to

the establishment of standardized child-care policies, placement into a foundling home represented a chance for survival. The placement also provided an economic opportunity for poor women who, for a fee, took abandoned infants into their homes for a short period of time. Along with wet nurses who resided in the foundling homes, these women became known as angel makers.

The motives of the individuals involved to address the infant abandonment problem were noble; they were attempting to save the lives of babies. Indeed, an officially sanctioned system for the abandonment of babies was under development in many Catholic countries, including Austria, Belgium, France, Ireland, Italy, Poland, and Portugal. These series of foundling homes were intended to support anonymous infants who had been abandoned by unwed mothers or the children of indigent families, thereby protecting the good name and social standing of the birth parents. Although abandonment had occurred for many centuries, the foundling home for abandoned infants represented a civilized response to a social problem as well as presenting a more acceptable alternative to abortion and infanticide.

An issue among contemporary analysts was whether the infant mortality rate was higher in the foundling homes or while the infants were under the care of wet nurses. In some foundling homes the death rate was more than 99%. Such statistics and the rampant rumors that surrounded the angel-makers concept led to a movement to close the foundling homes and to end policies that promoted anonymous infant abandonment—a public policy previously thought to be critical to the survival of the babies.

Angel Makers of Nagyrev

A second type of angel maker evolved during World War I (WWI), when captured Allied troops were interned in the Hungarian village of Nagyrev. In this particular village, the male prisoners (with their good looks and relative availableness) were to serve the sexual appetites of the local village women. Deprived of young village men, many of the local women entertained the prisoners in lieu of their boyfriends and husbands who were fighting on the front lines. Some of these women took many lovers and became accustomed to having several male lovers available to them at one time. Following the return of their men in the aftermath of WWI, the relationships between couples were not to be the same as before the war, and the women openly expressed their disdain for their husbands and their less-than-desirable lives with one partner. Because of the circumstances surrounding the perpetrators, the victims, and Julia Fazekas, the women's matronly collaborator, the events at Nagyrev had characteristics common to serial killing.

Although serial killers generally operate alone, among those who conspire to commit murder there are a variety of pairings involving multiple-killers. One of the most common involves females, a situation that characterizes the angel makers of Nagyrev. This group of approximately 50 malcontented housewives who, in consort with a midwife, conspired to murder their WWI veteran husbands became known as the angel makers of Nagyrev.

These village angel makers gained considerable notoriety for their murderous activities conducted during WWI and ending in 1929. During this period, the women were allegedly responsible for as many as three hundred deaths. In collaboration with the widowed midwife, these wives were able to secure sufficient amounts of arsenic from fly paper to poison their unsuspecting husbands, who they perceived to be less than desirable, sick, deformed, and domineering. Later the victims were relatives, including parents and even children who were cause for the women's anger. But the primary targets of these bored, post-WWI housewives were the veteran husbands who, because of their physical disabilities or ill temperaments, no longer served as the focal point of their wives' attention.

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See also Abortion; Childhood, Children, and Death; Homicide; Infanticide; Serial Murder

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Angels

Angels feature in people's lives, deaths, and afterlives in the form of guardian angels, angels that meet people after death or dead people who become angels. After a period in which secularization led to an eclipse of angels, recent years have seen a resurgence of interest in angels in relation to death, for instance in popular religiosity.

By and large angels are seen as intermediate beings between the human and the superhuman worlds. Literally the word means "messenger" or "envoy" (Greek ἄγγελος: messenger; Latin *angelus*; Hebrew *mal'ach* מלאך). In a religious sense it often refers to a messenger of God or the divine. In the Abrahamic religions, for instance, angels are depicted as beings intervening between God and humankind. It always concerns mediation between the immanent and the transcendent, the here and now and a dimension beyond. Thus angels embody a key characteristic of religion: mediation between two worlds via a symbol that makes it possible to experience another world. Often this other world is the domain where the dead sojourn after they have passed on, the hereafter.

There are three main interpretations of the position of angels: (1) They are messengers who accomplish God's will. (2) They are protectors and guides to human beings in their relationship with God and the divine, who also make human contact with God possible. (3) The third meaning is a kind of antipode: the fallen angels who turned away from God and led people into temptation. In relation to death, the first meaning indicates that angels execute an instruction from God or the divine when a person dies. It pertains to how they die and live on after death. The second meaning affects the way people live, die, and live on. Angels take part in human life and help people by preparing them for death and the afterlife. After death they guide people to the hereafter. The third meaning entails the danger that in life, death, and the afterlife, people will not have contact with goodness but with evil—with the fallen angel.

Role of Angels

Angels are seen as God's helpers. In Judaism angels assist God in the Final Judgment as accusers, punishers, and angels of death. In Christianity, too, angels carry out God's will when a person dies, as described in John's Apocalypse. In Islam everyone has two angels sitting on his or her shoulder: one who records the good deeds that the person has done, the other the bad deeds. Hence the daily *salat* prayer ends with the Muslim looking to the right and to the left. When a Muslim dies these two angels appear and announce the good and bad deeds of the deceased. On the basis of their report, God passes judgment. If evil deeds predominate, the person goes to hell; if good deeds predominate, the person goes to paradise. There are also angels who guard paradise and keep a keen watch over who enters it.

Angels are helpers of human beings. In the Abrahamic religions angels play the role of protectors of human beings. They take part in their lives, deaths, and afterlives. Guardian angels—individual angels that guide and protect individual persons—date back to Judaism. Angels directly influence life and death and establish a link with God. In the hereafter they remain at people's side and guide them to paradise. The eternal afterlife with God of people who lived righteous lives is one of fellowship with angels. The righteous are waited on by angels and enjoy their company. Ultimately they may even become angels themselves. That means that they rise in the heavenly hierarchy and are closer to God. This image of angels as guides to human beings is perpetuated in Christianity and Islam, so that they form a link between humans and the divine.

In Judeo-Christian tradition there is also the image of fallen angels. Lucifer, one name for the devil, originally connoted such a fallen angel. These are beings who no longer belong to God but to evil. Since the fall of the angels, described in Genesis 6:1–4, humans have feared the evil influence of these angels. They tempt people to live unrighteously and after death to end up in the underworld rather than with God.

Attributions of Angels

The various meanings attached to angels play a major role in people's images of them, especially in the arts. Christian portrayals of angels are to be found in Roman catacombs, the earliest burial places, from the 3rd century onward. In their earliest form angels represent God, who is close to the deceased. Naturally the way angels are depicted depends on the cultural context. In Byzantine Christianity they are always winged, wings representing their association with heaven. Later the *putto* became a popular type of angel: a winged child representing innocence and purity. This latter type was particularly important at the death of children: an innocent child who becomes an angel after death and lives on as an angel. In Roman Catholic tradition the so-called Mass of the Angels is celebrated when a child dies.

Images and portrayals of angels influence the way people cope with death psychologically. The experience of transcending their bodies that dying people have in near-death experiences is often depicted as an encounter with angels. Bidding farewell while not yet fully departed from life can lead to an experience of contact with angels. According to recent research such experiences constitute an intermediate space between life, death, and afterlife, which is pertinent to both deathbed counseling and bereavement psychology. Bereaved people can establish contact with their departed loved ones in the form of angels, who represent everything the deceased had meant to their relatives.

Thomas Quartier

See also Christian Beliefs and Traditions; Heaven; Jewish Beliefs and Traditions; Muslim Beliefs and Traditions; Near-Death Experiences

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Animism

Animism has been used in two distinct theories, both of which involve particular understandings of death. The term derives from Latin *anima,* usually translated "soul" (although this term too bears a wide range of meanings in different cultures and religions). Until recently, animism has meant a belief in the existence of a component that distinguishes living beings from inanimate matter. Most theorists have postulated metaphysical rather than physical factors, but in 1708 Georg Stahl (a German physician and chemist) theorized that a physical element, *anima,* vitalizes living bodies just as another element, *phlogiston,* enables some materials to burn or rust. His theory was soon rejected, but exemplifies a widespread interest in these issues.

In 1871 Edward Tylor (often considered the founder of anthropology) adopted Stahl's term *animism* to label what he saw as the central concerns and character of religion. For Tylor, animism identifies a "primitive" but ubiquitous religious mistake, namely, "the belief in souls or spirits." He argued that *all* religions expressed the beliefs that living beings were animated by souls and that nonphysical beings, spirits of various kinds, could be communicated with. Religious believers imagine the existence of something that will survive the experience of death and, therefore, makes its possessors more than mere matter. Many think that humans alone possess souls but some attribute souls to other beings too. Tylor's "souls and spirits" thus include an expansive grouping of "entities that are beyond empirical study" (e.g., deities, angels, ancestors, ghosts). In other words, Tylor argued that such beliefs are wrong because such components of living beings and such metaphysical entities do not exist. However, he did not think these beliefs were irrational, only that people drew the wrong conclusions from their experiences of dreaming about meeting deceased relatives and from feverish encounters with strange beings. According to Tylor, religion was dying out because

proper scientific knowledge was ousting these mistaken beliefs and providing better understandings of the world. In this first version of animism, the question asked is "How are living beings different from inanimate matter?"

Because this approach focuses on what makes living beings distinctive, it involves the idea that death is a contradiction. Either beings must somehow survive death or they must cease to be anything but inert matter at death. Recent developments in the related theory of panpsychism further problematize this by questioning whether matter is in fact inert and unconscious. If matter is inherently conscious, it becomes more difficult to divide mind from matter, and perception from physicality, for example.

Since the 1990s scholars have revisited the concept of animism and offered a different interpretation. In this, the key question animists ask is "How should we live with other beings?" That is, animists are people who understand the world to be a community of persons, most of whom are not human, but all of whom deserve respect. This new theory of animism is particularly helpful in understanding the worldviews and cultural practices of indigenous people, but it also casts light on important trends in Western culture. Although this theory is not so focused on the difference between life and death, animate beings and inanimate objects, it does raise important questions about the experience of death. If this animism is particularly interested in how people should relate to others, it is necessary to ask what happens to relationships when someone dies. Also, animists who seek to respect all beings might be expected to have a major problem with killing and eating those that they claim are also persons.

Many of those who write about the new animism draw on the works of the early to mid-20th-century American anthropologist Irving Hallowell and what he learned from the Ojibwa of southern central Canada. In the Ojibwa language a grammatical distinction is made between animate persons and inanimate objects. While this is true too of the English language in which, for example, objects are usually called "it" whereas people are either "he" or "she," the Ojibwa language has a more inclusive category of persons. For example, the word for rocks, *asiniig*, carries a plural suffix, *-iig*, that indicates that rocks are in the animate category. Hallowell tried to ascertain whether this grammatical distinction made any difference to the way in which Ojibwa people actually treat stones. After all, the French language marks all tables as grammatically female, but this does not generate any gendered treatment. Hallowell asked an old man, "Are *all* the rocks that we see around us alive?" He notes that after long reflection, the old man answered, "No, but *some* are." Then Hallowell writes about the things he has been told about rocks that explain the answer. Clearly, Hallowell has asked the wrong question. The old man was not interested in a theory about whether rocks might be alive or dead, but in knowing how to relate appropriately with rocks and other beings with whom he lived. Thus, *some* rocks in the area were participants in relationship with some humans. They were perceived to have acted in ways that showed them to be persons. Also, humans had acted toward some rocks in ways that demonstrated relationship. Some of these rocks are recognized by the Ojibwa as "grandfathers," respected elders who might aid younger, less experienced or less knowledgeable persons. They are said to willingly join in sweat lodges, ceremonies in which prayers are offered for the well-being of others. Rocks are not merely aspects of the technology of the lodge, heated up in a fire and then sprinkled with water to produce steam and hence sweat; they too offer prayers and, in some cases, sacrifice their lives for others. In this and other ways, Ojibwa look for indicators of relationship rather than signs of life, whatever that would involve. The old and new approaches to animism are about quite different understandings of the world.

The new animism has been discussed in relation to people from most continents and varies enormously in the range of ways in which people claim to find relationality among particular other-than-human beings. But words for "respect" are commonplace in conversations about animism. All persons (human or otherwise) are expected to seek the well-being of other beings among whom they live. Far from projecting human likeness onto other beings as is sometimes alleged, animists understand that humans are just one kind of person in a wide community dwelling in particular places.

The problem of death is a more personal one than in the old animism: How do people deal with

the death of a relation (human or otherwise)? Many animists believe that death is a process of transformation and that people take on a new form, as ancestors or as other animals perhaps, after death. But animists are also confronted with death when they seek to eat. If all beings are theoretically alive and many are actually related, whatever species they belong to, how is it possible to eat with respect? Many cultures involve ceremonies in which the necessary violence of taking the life of a plant or animal person is recognized and some form of request and/or apology is made. Many transpolar and Siberian communities traditionally employed experts (called *angakkut* in Greenland and *shaman* in parts of Siberia and now more widely) whose job description could include apologizing for any offense caused to the other-than-human persons taken as food. Their mediation could be initiated in intense experiences in which they seemed to experience death and dismemberment by beings with whom they formed life-long relationships, reinforced each time it was necessary to sort out problems in human dealings with other beings. In some communities the shaman's job also included conversations with ancestors, but elsewhere this was a role restricted to elders rather than shamans. Ancestors are not conceived of as "dead people" but as significant people who have been through the process of death and now, although transformed, continue to offer support to their families and communities. Ancestors might manifest themselves in some animist communities by possessing people through whom they can speak and act, or by inhabiting significant cultural objects, carved stools, for example, to which offerings and speeches can be made.

Animism among indigenous peoples and in some new environmentalist religious movements (Eco-Paganism, for example) is a significant way of understanding the nature of the world. It involves not only an alternative epistemology (belief system) but also, more importantly, an alternative ontology (way of being in the world) to that of consumerist Western modernity. Experiences of death illustrate key elements of this ontology by revealing the centrality of relationality as a core component of human and other-than-human personal identity.

Graham Harvey

See also African Beliefs and Traditions; American Indian Beliefs and Traditions; Ancestor Veneration, Japanese; Australian Aboriginal Beliefs and Traditions; Death, Anthropological Perspectives

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Anniversary Reaction Phenomenon

The evolution of the notion of an anniversary phenomenon related to both bereavement and death is interesting from both a definitional as well as a historical perspective. One of the earliest mentions of the anniversary reaction phenomenon can be traced to the late 1950s at which time the concept was defined as the tendency to relive a childhood trauma at a specific time. Usually this is the date of a parent's death. This description emerged out of a study of hospitalized patients who had suffered parental losses. In later studies, however, the same phenomenon was found in a sample of nonhospitalized population.

In 1972, the term *anniversary reaction* was used to describe the emotional response of widows and widowers on the anniversary of a spouse's death. Based on research on the bereavement of 92 widowed persons, 30% had only a minimal reaction to the first anniversary of the spouse's death, 67% described a mild or severe reaction; for 3% of the cases, the response was unknown. Because the mild or severe reaction was significantly associated with the presence of clinical depression, it was proposed that the anniversary reaction phenomenon would be useful to primary care physicians as a simple diagnostic tool to evaluate the patient's distress without resorting to a lengthy psychiatric intake evaluation.

A decade later, the notion of an anniversary reaction phenomenon was established firmly in the bereavement literature and now included any

bereaved person and any anniversary related to the death that "reawakened bereavement or morbidity" in the bereaved. Two decades after the introduction of the concept, anniversary reactions were considered a normal if not essential component of the mourning process.

Also in 1972, this same concept, anniversary reaction, was used to refer to the tendency of some individuals to die on a particular date, such as a birth date or death date that had particular significance. The data used to substantiate this esoteric view have been questioned. In standard death education textbooks, an anniversary reaction refers to an increase in intensity of pain on any date associated with the deceased person.

As interesting as the definitional evolution of this concept may be, the historical context within which this concept evolved is perhaps even more interesting. To understand this context, it is necessary to return to the definition of grief as defined originally by Sigmund Freud. In his work, "Mourning and Melancholia," Freud characterized grief as painful but normal. The return to the emotional state preceding the death, however, requires work on the part of the bereaved and compels the bereaved, that is, the ego, to relinquish all energy directed toward the deceased. This argument suggests a linear process in which the intensity of the pain gradually decreases over time and eventually ceases altogether.

The notion that grief is a natural human response to a bereavement or loss and that some effort on the part of the bereaved person is required is generally accepted in the bereavement literature. The delineation between normal grief and abnormal or pathological grief, however, is probably one of the least resolved issues. Two critical issues refer to the degree of intensity and the longevity of the phenomenon.

The intensity of the emotion may render it inappropriate or abnormal. Distorted grief, for example, refers to a grief characterized by extreme anger and guilt. The timing of the emotion may render it inappropriate. This includes chronic grief, an emotional reaction that is excessive and never comes to a conclusion. On the other hand, delayed grief refers to those who may experience what is thought to be an insufficient amount of grief at the time of the loss.

Although the focus on time, intensity, and pathology continued to be of interest to early thanatologists, mitigating circumstances were gradually added to justify a grief that did not conform to the linear process proposed by Freud. For example, an anticipatory grief may precede the death when the dying process is prolonged. Delayed, continued, and/or pronounced pain may be related to the relationship of the bereaved to the deceased or sudden death as opposed to anticipated death. The anniversary reaction phenomenon, then, is one more example of the effort to normalize an apparent abnormal grief, such as the sudden reappearance of intense pain.

Through the years a number of psychological, social, and cultural factors were added to the list of factors assumed to impact the grieving process. These include circumstances surrounding the loss and suddenness of loss as well as the meaning of the loss to the survivor, prior losses, coping skills, and available resources and support. The term *complicated grief* was an attempt to eliminate the need for pejorative words such as *pathological* or *abnormal* for any grief that does not follow the linear process originally delineated by Freud. The continued use of terms such as *distorted*, *chronic*, and *delayed grief*, however, demonstrate that intensity and time continue to be major factors in delineating uncomplicated from complicated grief.

Sarah Brabant

See also Grief, Bereavement, and Mourning in Cross-Cultural Perspective; Grief, Bereavement, and Mourning in Historical Perspective; Grief, Types of

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Anorexia and Bulimia

An eating disorder can be defined as a severe disturbance in eating behavior characterized by a

lack of appetite (anorexia) and restrictive eating, or an insatiable appetite and overeating (bulimia), or some combination of these behaviors. Eating disorders are one of the contradictions of a society in which eating depends heavily on a fast food industry offering "supersized" meals as good economics and good nutrition. Eating satisfies a basic human need, but it is also subject to individual, social, and cultural influences. In a society such as that of the United States, the "supersized" culture of food intersects with and contradicts the culture of the beautiful svelte body, especially for females. How one eats, what one eats, and the frequency and quantity of food are controlled not only by individual appetite and food availability but also by factors such as family, peer, and cultural norms about food and body size. Restrictive eating behaviors and overeating are widely supported, and both can result in eating disorders that lead to health problems and, in extreme cases, premature death.

Eating disorders involve behavior that negatively affects physical and mental health; examples include excessive dieting, binge eating, and anxiety due to a negative perception of body image. The correlates of eating disorders include gender, race or ethnicity, childhood eating and gastrointestinal problems, elevated shape and weight, negative self-evaluation, sexual abuse, and a variety of individual psychologically based problems. Despite the risks, however, the practice of restricting food intake to control weight and/or body shape is followed by a substantial number of young women. The two most commonly known eating disorders are anorexia nervosa and bulimia nervosa.

The American Psychiatric Association recognizes anorexia nervosa as an abnormally low body weight (15% below normal body weight for age and height), combined with a fear of gaining weight or becoming fat, preoccupation with body weight and shape, and amenorrhea or the absence of three consecutive menses. Although anorexic patients may engage in compulsive exercising, restrictor-type anorexic patients are distinguished by their resolute refusal to eat above a bare minimum. Bulimic-type anorexic patients regularly engage in binge eating and purging. Those who suffer from bulimia nervosa engage in binge eating followed by feelings of guilt, depression, and self-condemnation. The sufferer typically engages in behaviors referred to as "purging" to counter excessive eating; this behavior includes vomiting; fasting; using laxatives, enemas, diuretics, or other medications; and overexercising.

Theoretical Explanations

Early biological-medical theories of eating disorders emphasized individual factors, tracing the origins of eating disorders to chemical and hormonal imbalances that cause metabolic changes in the body, including depression and anxiety. Psychological models similarly recognize the biological origins of eating disorders but emphasize the impact of family and peer dynamics in childhood and adolescent psychosocial development. From this perspective, young women and girls develop disordered eating patterns as a way of coping with changes in their bodies that occur within the context of stressful social interactions and developmental environments involving families, peer groups, and educational and religious organizations.

Sociocultural models trace eating disorders to factors in the wider social environment, including the media and commercial interests that create social, cultural, and economic pressures on women to lose weight in order to conform to what may represent unrealistic standards of beauty and body size. These wider social forces are believed to be at the root of most eating disorders. They are powerful forces in shaping the behaviors of young girls and women precisely because females are rewarded for thinness both socially and economically. There are, for example, well-documented biases against "fat women" in the job market. By linking women's successes, their perceived value, and oftentimes economic survival, to culturally constructed standards of beauty, women are diminished and controlled in society. Within this wider sociocultural system, Hesse-Biber notes that the mind/body dualism in Western thought, as well as capitalist and patriarchal systems, encourage females to focus on the aesthetic value of their bodies and to neglect the development of their minds. Young females with anorexia, bulimia, and binge eating disorders thus become victims of a consumer-oriented culture that emphasizes the maintenance of a weight that lies below standards of good health.

Incidence and Prevalence of Eating Disorders

Estimates of the incidence and prevalence of eating disorders vary, no doubt because those who suffer from these disorders are often reluctant to reveal their condition. Despite the paucity of data, most of those who have researched or treated eating disorders agree that the incidence and prevalence of both anorexia and bulimia have increased markedly during the past 50 years. Some of this increase may be related to more awareness, hence greater identification of disordered eating.

Based on the available data, eating disorders are most common among young, middle- to upper-middle-class white women who live in more affluent countries. Epidemiological studies of anorexia in Western industrialized countries suggest an incidence of between 8 and 13 cases per 100,000 persons per year, but only an estimated 5% to 15% of these anorexic or bulimic individuals and an estimated 35% of those with binge eating disorders are male. Bulimic patients outnumber anorexic patients by at least 2 to 1. The prevalence of partial or restrictive eating disorders is at least twice that of full-syndrome eating disorders. Longitudinal studies suggest a progression from less to more severe eating disturbances, with normal dieters occasionally becoming pathological dieters who occasionally progress to partial or full-syndrome eating disorders. Although eating disorders are most common among young middle-class white females, anorexia is increasingly more common among young black and Hispanic women and girls.

Mortality Rates

The crude mortality rate among anorexics is estimated at 5.6% per year, approximately 12 times higher than the annual death rate for all causes of death among females aged 15 to 24 in the general population. Approximately 10% of people diagnosed with anorexia eventually die due to eating disorder–related factors. As self-starvation is a core feature of anorexia, high mortality rates are expected. However, anorexics are more likely to die from related medical complications, such as heart attack and electrolyte imbalance, than from malnutrition. For those with bulimia nervosa, the most commonly reported causes of death are car accidents and suicide. Among anorexics suicide is the second leading cause of death.

Attempted and Completed Suicide

It is estimated that 20% of patients with anorexia and 25% to 30% of patients with bulimia attempt suicide. The majority of studies find no difference between frequencies of suicide attempts among those diagnosed with anorexia as compared to bulimia. Other researchers do, however, report lower rates of suicide attempts in persons with anorexia than bulimia, with individuals classified within the binging/purging subtype of anorexia more likely to attempt suicide than those placed in the restricting dieter subtype.

Although suicide is common among anorexic sufferers, the number of completed suicides in persons with bulimia is negligible by comparison. The crude suicide mortality rate reported for persons with anorexia ranges from less than 1% to 5.3%. However, actual rates of anorexia-related suicide may be higher. Clinical correlates of suicide include purging behaviors, comorbid disorders such as depression and substance abuse, physical and/or sexual abuse, as well as other individual characteristics. For example, the best predictors of mortality among anorexia and bulimia sufferers is the extent of prescription drug abuse, illegal drug usage, and alcohol abuse.

Treatment Options for Eating Disorders

A range of options are available for treating eating disorders. However, for a number of reasons little research exists from which to document the success of these treatments. Treatment plans include medication, nutritional counseling, and individual, group, and/or family psychotherapy. Some patients also may require hospitalization or treatment in specialized treatment centers designed to address malnutrition, weight loss, and self-esteem issues. But individuals with eating disorders rarely seek treatment; they are often in denial and refuse to accept the serious nature of their eating problems.

Although anorexia nervosa is difficult to treat, some researchers suggest the use of antidepressants, antipsychotics, or mood stabilizers may be effective in alleviating mood and anxiety symptoms. However, others suggest that antidepressants are not an effective treatment for preventing patient

relapse. Most importantly perhaps no medication has been shown to be effective during the critical first phase of restoring a patient to healthy weight. Individual, group, and family-oriented psychotherapy may address some psychological issues while others suggest that family-based therapies are effective in assisting anorexic adolescents in working toward recovery. Others note that medical attention and supportive psychotherapy designed specifically for patients with anorexia is more effective, but whatever the treatment chosen its effectiveness may depend on case-specific criteria. Moreover, female testimony indicates that recovery is a slow process; improving body image and feelings of self-worth is an ongoing struggle. Treatment and prevention techniques that take a cultural approach to eating disorders show promise.

Similar to treatment for anorexia, treatment for bulimia depends on individual need. In an effort to reduce or eliminate binging and purging behavior, bulimic patients may undergo nutritional counseling and cognitive behavioral therapy or be treated for depression and/or anxiety. Medication also may be helpful in reducing binge-eating and purging behavior, reducing the chance of relapse, and improving eating habits. Again, recovery is a slow, ongoing process. Treatment and prevention approaches based on feminist therapies and media-awareness training show some promise.

Finally, the effective treatment of eating disorders requires therapists grounded in knowledge and techniques unique to these disorders. However, even the best therapists and health care givers are treating only the symptoms of culturally produced behaviors. Actions that seek to establish gender equality and altered representations of the ideal body shape, weight, and appearance will ensure a healthier population.

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See also Acute and Chronic Diseases; Adolescence and Death; Gender and Death; Suicide; Suicide, Counseling and Prevention

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Apocalypse

Apocalypse is defined as a prophetic revelation. It is a description of the battle of Armageddon, the battle of good versus evil, as revealed in the book of Revelation of the New Testament of the Bible. In the Christian scriptures, Apocalypse means revealing or uncovering. The Apocalypse can be interpreted as a prophetic disclosure, as a lifting of the veil to reveal the true and living God in the fullness of truth. It can also be interpreted as the return of Christ and the defeat of His apocalyptic enemies.

Apocalypse is an important statement of faith that evolves throughout Hebrew life and in the writings of the early Christians. It is a vivid expression of eschatological teachings about *last things*, it is vindication for all who have trusted in God against the forces of evil and the forcing out of evil

to its final destruction, and it is the fulfillment of the establishment of the Kingdom of God.

The Concept Apocalypse as Sociocultural Symbol

As a cultural theme for literature and the media, apocalypse has been a popular source for many movie plots, movies like *Apocalypse Now, Resident Evil: Apocalypse*, *and Apocalypse II: Revelation*. Created with gimmicks, violence, and the battle between the forces of good and evil, these movies loosely speak of social instability, disasters, anxiety, and expecting God (or the movie star) to rise up and defeat the enemies. For some, such apocalypticism is a form of entertainment; for others it is considered a religious affront. Discussions of Apocalypse have divided religions, denominations, congregations, and families. Yet it remains an essential statement of faith and hope for many, with inclusion in religious creeds.

Apocalyptic Groups

In the contemporary experience, some people turn to the apocalyptic concept after catastrophes. For example, in the aftermath of Hurricane Katrina, some may have asked, "Is this the time?" There also are religious leaders who play on such fears and the despair of others to align potential membership with apocalyptic doctrine as the group leadership and congregation define it. Apocalyptic groups may emerge and then disappear, but they often share the common theme of believing that the future will lead them to a higher level of existence.

Among the more recent and notable of such groups was the Branch Davidian cult, a group from Waco, Texas, led by David Koresh, which came into direct violent conflict with U.S. Federal Bureau of Investigation in 1993. In 1997 members of the Heaven's Gate cult, led by Marshall Applewhite and Bonnie Nettles, committed suicide. Another such group was the People's Temple cult led by Jim Jones; the group migrated from the U.S. state of Indiana to California and then to Guyana in South America, where more than 900 members died, most by suicide. The leadership of each of these and similar apocalyptic groups promote the belief that the world will end on a certain date or at the time of a certain event, such as the appearance of the Comet Hale-Bopp on or about March 26, 1997. Contrary to most biblical teachings, or interpretations, many biblical scholars note that the Bible indicates that only God knows the exact day and time of the apocalypse.

The Biblical Approach to Apocalypse

The concept Apocalypse offers a dimension of hope, justice, and relief to an oppressed people. The Hebrew people faced rejection, war, oppression, and exile, much like the early Christians. For early Christians who worshipped in secret and faced certain death if discovered, the knowledge that Jesus would return soon and defeat all of their enemies was a measure of hope and vitality.

The Bible is rich in apocalyptic writings. Ezekiel, Isaiah, Joel, Zechariah, and Daniel were hotbeds of imagery that guided Judaism and were quickly adopted by the early Christians. There also were numerous writings in the intertestamental period that followed the closing out of the Old Testament and intervened before the start of the Christian story. Daniel spoke of the three who survived the fiery furnace. Joel spoke of a phoenix rising from the ashes. Ezekiel spoke harsh words of judgment to the Israelites in laments, warnings, and woes. In the New Testament, the four Gospels offer apocalyptic sketches, and the last book in the New Testament, the book of Revelation, focuses on the Apocalypse almost exclusively.

The book of Revelation (The Apocalypse of John) represents a pastoral attempt to bring hope and timely intervention (by God) into the violence of religious wars and other destruction. Some interpret this book literally as a specific script, word for word, of what the Apocalypse will be. Others assert that this book was written in a language based on the fear of further persecution.

Despite the many interpretations and divisions within the Christian church, the Apocalypse is often viewed as a doctrine of comfort and an invitation to bring people closer to God. Providing religious meaning to the man-made tragedies and natural disasters of life brings clarity for many to at least live with that which appears unbearable. The implication is that tragedy is an appropriate pathway to drawing closer to God through the

destruction of that which comes between God's love and, ultimately, human need.

Richard B. Gilbert

See also Armageddon; Christian Beliefs and Traditions; Eschatology; Resurrection; Symbolic Immortality

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Appropriate Death

Death is considered an appropriate occurrence of human experience when it is not out of place according to personal and cultural norms. Whether regarding our own death or the death of others, we always refer to a complex aggregate of many ingredients or criteria of appropriateness when we label a death. It is a person's concrete way of dying but also his or her life (one's age, self-fulfillment, and morality) that are concurrently referred to as quintessential conditions of appropriate death. Therefore, almost no death is experienced as fully appropriate.

Concept

The term *appropriate death* was introduced in the 1960s by clinicians. Their aim was to improve the care of the dying in a time when most people were in denial about death and talking about good death, by consequence, would be contradictory. Appropriate death has a more neutral connotation: It is a death that is to be accepted, as in the final stage of dying described by Kübler-Ross. Still, substantial confusion exists in the end-of-life literature on how to use the term *appropriate* and to differentiate it from other terms, including *healthy, peaceful,* or *natural*.

It is essential to recognize that the idea of appropriate death also guides, albeit as an unspoken or implicit label, how we all think, feel, and act in any experience of death and grief. Mainly scholars and practitioners of care for the dying use the concept of appropriate death in explicit terms, often with reference to a phrase of the psychiatrist Avery Weisman: It is "a death that someone might choose for himself had he a choice."

The concept is clearly relational: It is the social context that makes a specific death into an appropriate death and, even within the same time and space, a death can simultaneously be appropriate for some and inappropriate for others. Therefore, it is necessary to establish who defines appropriate death, that is, whether death is considered appropriate by the dying person, his or her family, physician, religious leader, or counselor. Moreover, the idea of appropriateness may refer to one's own death or to the death of another. Finally, it is important to ascertain whether appropriate death is related to the process of dying or to that of grieving.

Dying

In 1961 psychiatrists Avery Weisman and Thomas Hackett described four principal requirements of what they defined as appropriate dying. One who dies should have a reduction of conflicts; as little physical, emotional, and social pain as possible; a continuation of significant relationships; and a fulfillment of prevailing wishes. Weisman noted that although such conditions are almost beyond reach, it is still important to at least aim for a death that is as humane and dignified as possible.

The social perspective of appropriate dying is historically variable. Until a few generations ago, it was considered appropriate to die a saintly or religious death. It was associated with the last rites and with the presence of family and clergy at the deathbed. Such representation is still vivid for those who believe in a hereafter, and it is also popular in movies and other art forms. Yet, from the 18th century on, it was the doctor who became the practical manager of a profane death and who decided at what moment death had taken place. Whereas death in the 19th century was linked to moral judgment, in the 20th century evil was no longer connected to hell and sin, but rather to

illness and physical pain. The task of the hospital doctor was to deliver appropriate death by alleviating pain, rather than purifying one's soul. Finally, since the rise of palliative and hospice care and psychological discourses, natural death without protracted medical intervention is regarded as most appropriate.

Both euthanasia and suicide can be viewed as appropriate death for the person who wants to stop living, but suicide especially is regarded as traumatic and inappropriate. The appropriateness of euthanasia is still a matter of contentious debate. For instance, there is no agreement on whether euthanasia, commonly linked with unbearable physical pains, can also be the release from psychological problems. Further, appropriateness is questioned when the patient's autonomy is unclear, as is the case with children and people with dementia. Conversely, suicide, in some situations, is labeled appropriate death when it involves self-sacrifice or when it is considered a heroic act in time of war or when someone dies in the act of protest or nonviolent resistance. If death, however, is unwanted and occurs in a violent manner, it is typically not viewed as an appropriate death.

Age

Death at old age is typically considered appropriate death, as it is considered the natural and hence acceptable outcome of life. Young people often alleviate their fear of death, albeit unconsciously, by assuming that old people are closer to death than they are. As a result of improved standard of living (including food quality, personal hygiene, medical care, and safety) life expectancy has greatly increased. For that reason, becoming 80 years old is a normal expectation for the present generation. Since life is prolonged, dying is generally pushed forward, distanced, and associated with old age. Appropriate death is universally believed to follow the order of generations. As such, it is regarded as a natural law that parents should not survive their children.

Whereas dying at a young age tends to be less easily accepted and received as an unnatural fact, deaths at old age, in contrast, are typically romanticized through natural metaphors. Sayings like "he died in the fall of his life" and images of falling leaves on obituary cards affirm dichotomous thinking of life and death, spring and fall, youth and old age. Another consequence of linking appropriate death to old age is that staff members of a hospital may not give as much attention to elderly persons with a terminal illness as to children and youngsters who are considered to be heading for an inappropriate death.

Self-Fulfillment

An important principle that directs responses to dying and grieving in modern Western society is the notion of self-fulfillment. If one's life is thought to be complete, the individual is considered to have reached a stage where one is happy with life's accomplishments. In general, a long life of many memories is believed to exemplify the appropriate death while preparing the dying person to pass away. From this perspective, a person who is about to become a parent or has just been promoted to a sought-after position would not die an appropriate death.

It is sometimes argued that when death is seen as the definitive end of life with no prospect of an afterlife, more pressure is put on fulfilling one's life in the here and now. It would then be not so much death as such, but rather death before a full life has been lived that is feared. However, societies do not offer a consensus on what the goal of human life then would be. Life values are more than ever primordially derived from the authority of the self rather than from membership of communities such as the family and the church. Therefore, what makes a fulfilled and happy life for one person may not do so for another. Further, even or especially after a full and happy life, it would be reasonable to want to continue good times. Death after a so-called full life can be experienced as an intrusion for the family and friends of the deceased person, especially where the decedent played an important social role in the lives of relatives while living.

Morality

The label of appropriate death may also be morally inspired. For instance, in Catholic European contexts appropriate death followed a moral life of values such as piety, modesty, and selflessness. Until the 1950s local priests, writing the text for the obituary card to be distributed in their parish,

constructed the death of children and youngsters as a proper death, as they were regarded to follow a "life of devotion, guided by the light of the Holy Spirit, and inspired by the great love of God and fellow humans." Young people were expected to be prepared to die after a Christian life that had given them the key to the Gates of Heaven. From such a moral point of view, death at a young age was thus to be accepted even though the person had still a life ahead.

In particular contexts, death can also be constructed as the appropriate punishment for a life that is not judged moral. In some states and countries, the death penalty is considered appropriate by the law as punishment for certain categories of crime. However, as debates and protests prove in the United States, such moral evaluation of appropriateness is never without resistance. The same is true for the issues of abortion and euthanasia where religious groups oppose those who favor autonomy and decision making by individuals and doctors according to the specific nature of a situation. The idea of autonomy, on the other hand, is also the underlying principle of appropriate death when individuals are found responsible for unwanted death. For instance, a culture that glorifies health and fitness is not indignant about the death of a man who died from lung cancer when he was addicted to cigarettes.

Jan Bleyen

See also Aging, the Elderly, and Death; Awareness of Death in Open and Closed Contexts; Defining and Conceptualizing Death; Denial of Death; Euthanasia; Good Death; Kübler-Ross's Stages of Dying; Life Review

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Ariès's Social History of Death

Social attitudes and cultural responses to death have varied over time. Nowhere is this change more apparent than in the social history of death documented in the work of the French historian Philippe Ariès. Ariès's analysis of the social meaning of death in Western societies reveals that from the 18th to the mid-20th century in particular a cultural shift from collective social rituals of mourning to a less visible individualized appearance of death had taken place. Ariès argued that in the contemporary Western experience, death has become invisible and is not a topic that should be a matter of public discussion. Ariès's social history of death demonstrates that the historical public attitude toward death changed from that of a "tamed death," the view that death is open and should be anticipated and prepared for, to the attitude that death is forbidden, the modern view that death is a nondiscussed topic.

It was this thesis promulgated by Ariès of a forbidden public view of death that led to an increasing interest in the teaching and a proliferation of research in the area of death and dying that began during the early 1970s. Inspired by the meticulously documented work of the French historians Ariès and Michel Vovelle, during the final 3 decades of the 20th century and well into the 21st century, scholars and practitioners alike have addressed this important de-emphasis of death-related mourning rituals and the evolving role of hospitals, nursing homes, hospice organizations, and even funeral homes in the dying and death experience.

The published work of the French historian Ariès provided significant evidence that supported the common belief among intellectuals and scholars

that a profound cultural meaning had been lost in that the physical act of death and the fact of death were disappearing from public view. In Ariès's historical accounts covering 1,500 years, death indeed ended up being "invisible" and "wild," in contrast to its earlier "public" and "tamed" counterpart. Sorting out the chaos of the past, Ariès's vivid and comprehensive narrative of shifting attitudes toward death inspires many researchers to this day. However, since both the discipline of history and the social context of dying and bereavement have changed since his death in 1984, Ariès's history of death has recently also been criticized and supplemented.

History of Mentalities

Being a political reactionary and remaining long without academic position, Ariès remained in the ranks of French historians until the 1960s. Although he called himself a "Sunday historian," he not only gained a broad readership but also stimulated scholars to break new grounds. Touching upon formerly unexplored topics, such as the child, death, or sexuality, and using new approaches to the relationship between private and public life, Ariès indeed came to be respected as a pioneering and provocative figure in historical scholarship. He specifically contributed to a cultural approach within the Annales School, whose practitioners' aim was to lay bare underlying and long-term structures in history. For Ariès, these structures consisted not so much of socioeconomic realities, as stated by many of his contemporaries, but rather of *mentalités*: mental lives and attitudes that tacitly shaped the daily lives of particular groups or whole societies. His attempt was to grasp these fundamental aspects of the human experience that until then were largely considered without a history.

His traditionalist sentiments, on the one hand, and interests in demography, on the other hand, stimulated Ariès to study the private and everyday lives of ordinary people, hence revealing major shifts between premodern and present lifestyles and values. According to Ariès, the current day should serve as a point of reference to look at the past in order to understand the differences between now and then. This was also the case when he wrote his history of death.

The Modern Problem of Death and Grief

From diverse authors and publications in the 1950s, 1960s, and 1970s, Ariès learned how both dying and grieving had become new problems of the human experience. For instance, Ariès cites psychiatrist Elisabeth Kübler-Ross, who caused a shock with her best-selling book *On Death and Dying,* mirroring the "humane" and "natural" death she knew from her childhood to the later controlled and institutionalized dying at the hospital. Other sources of inspiration were psychologist Herman Feifel, sociologists Barney G. Glaser and Anselm L. Strauss, and philosopher Ivan Illich who shook up intelligentsia with their outcry against the alienation of terminally ill patients. Neither was Ariès alone in his concern about the estrangement of grieving survivors. Already in 1955, anthropologist Geoffrey Gorer had stated that the 20th century no longer gave free rein to death, just as the Victorian Age had banished sexuality. Without any ritual scripts at the hour of death, bereaved people were thought to be let down, by consequence, distressed by psychological problems. Likewise, Ariès was impressed by *The American Way of Death*, written by investigative journalist Jessica Mitford, who denounced the insensitive profit seeking of mala fide funeral undertakers.

Among others, Ariès found that the apparent medicalization and commodification, but also the social processes of technologization, secularization, and individualization, considered typical of the modern society he was living in, had pernicious influences on the experience of death, dying, and grief. Once human beings were surrounded by a less natural world, once they could no longer fall back either on a shared system of meaning-making, as formerly offered by the churches, or a sense of security, previously served by a community like a neighborhood or parish, they were just on their own in their encounter with death.

Before he wrote his *Western Attitudes Towards Death,* a small book that brought together a series of lectures from 1974, Ariès was already famous for his history of the child and the family: In his *Centuries of Childhood* he applied visual evidence to claim that only in the 17th century was the concept of "childhood" originated. *L'homme devant la mort* (literally "Man in the Face of Death"), an ambitious book of more than 600 pages published

in 1977 and later translated in English as *The Hour of Our Death*, offered a challenging overview of attitudes toward death from the Middle Ages to the present.

Issues

Ariès organized his monumental book, *The Hour of Our Death,* about changing mentalities around four psychological issues: awareness of the individual, the defense of society against untamed nature, belief in an afterlife, and belief in the existence of evil. Drawing on many different sources, including literary, liturgical, archaeological, and iconographic materials, Ariès thus constructed sequential attitudes toward death: the tame death, the death of the self, remote and imminent death, the death of the other, and the invisible death.

The Tame Death

This first model describes death as a simple, familiar, and taken-for-granted human experience. According to Ariès, in premodern Western societies death was accepted as an inevitable part of life. Mainly building on passages from literature, such as the romance of chivalry, Ariès constructs this attitude as one without a clear history: It describes the human being, basically situated in archaic or so-called primitive societies, who knows death is about to occur and who is surrounded by a community. In the experience of tame death, the dying person controls the act of dying, resignedly accepts the nearing death, and passes away restfully facing heaven.

The Death of the Self

The first violation of this tamed death occurred during the late medieval times when the dying person became increasingly concerned about his own destiny in the hereafter. Especially for the elite, life became an exercise in redemption and the *ars moriendi* (art of dying) under the wings of the Church. Death became "one's own death": The acceptance of a natural order and collective fate of humanity was put under pressure by a growing attention for individuality and one's own salvation. The act of dying hence became the quintessential moment of an emerging self-consciousness.

Remote and Imminent Death

By the end of the 16th century a reversal of death started to appear. This is the real turning point of the long-term history of mentalities, not yet included by Ariès in his *Western Attitudes Towards Death:* Whereas before, death had been immediate, familiar, and tame, during the Enlightenment it gradually developed into a distant, secret, and violent phenomenon. By its remoteness death became fascinating and often even erotic. It might seem a surprise that such "savagery" returned in the Age of Reason. However, it was exactly the faith in progress and its triumph over nature that confused the traditional barriers of life and death, hence evoking the fear of being buried alive.

The Death of the Other

In the 19th century a new feeling came about alongside new conceptions of the family: In the hour of death, the focus was no longer on one's own ending but on the death of the other. Death, on the one hand, was increasingly experienced as a problematic rift between the dead and survivors. Grief, on the other hand, was no longer ritually constrained by the community; it became "hysterical" and "insane." Excessive expressions of emotion pointed at the difficulty of the bereaved to accept the death of intimate ones. The memorializing of the dead endorsed them with a sort of immortality; the grave became the site where the dead were visited as if still alive. No longer associated with evil but with beauty, death became romanticized.

The Invisible Death

Finally, in the beginning of the 20th century, a psychological climate arose in which death was radically distanced from the public area thus becoming "hidden" and "reversed." In the hospital, the dramatic act of dying was segmented in several small steps and, therefore, disappeared. The familiarity with funeral rites diminished; tears became morbid because they disturbed the illusion of happiness—since the Enlightenment the breeding ground of the taboo. Hence, grief expressions were shameful and had

to happen secretly. Mourning attire vanished from street scenes and children were protected from sorrow. With the rise of cremation, the dead could no longer be visited at the gravesite or be memorialized. Because of the loss of traditions, Ariès stated, modern society had trouble in facing mortality.

Relevance and Critiques

Ariès's social history of death has been of great importance to a broad audience of readers, including scholars. Never before had the Western history of death been captured in such a precise way. His history is still challenging and still makes excellent reading for its original interpretations of materials and the iconographic culture of death. Nevertheless, the writings of the "historian of death" have also been questioned.

Although his discussions of especially French and medieval sources are thorough, Ariès has been blamed for generalizing and extrapolating his empirical data. Furthermore, because it downplays both the active role of individuals and the dynamics of social practice, the concept of "mentalities" is no longer in vogue among historians. Also, his hydraulic metaphor of emotions—the underlying model of his long-term history, which takes emotions as natural liquids that are let out and controlled in culturally specific ways—has been superseded.

Still, it was his depiction of modern death and grief ways, in contrast to traditional ones, that has especially been the subject of attention and controversy. Tamed death is now being deconstructed as a romantic and nostalgic imagination of a mythical past and a noble savage. According to recent social studies, death and grief rituals have not disappeared or grown poorer, as stated by many cultural pessimists including Ariès, but rather they have changed and moved to other places. Because present ways of living and cultural contexts are radically different from medieval ones, it is perceived evident that people also die and mourn differently. Indeed, since the publications of Ariès, social settings of dying and bereavement have changed. Diverse new initiatives came into being, including palliative care for the dying and support groups for grievers. The amount of research, education, and information on dying and grieving has expanded. In other words, the loss of one tradition, such as the wearing of mourning attire, does not point at the loss of death culture as such, but rather at its transformation.

Also in premodern social contexts, the death of a loved one could be a troublesome event, and it is also nowadays dealt with in meaningful ways. Hence "good death" and "appropriate grief" cannot be primordially equated with one content, form, and context—such as Ariès's model of tamed death—but are always socially constructed. How a society ritually deals with death and loss, and hence makes sense of them, is historically variable. Before the 1960s, particular types of death and grief could be "disenfranchised." For instance, as long as religion permeated all aspects of life in Western Europe, stillbirth and suicide were dealt with rather secretly: Public expressions of grief were considered improper when death was considered God's will or a violation against it. From such a perspective, death cannot be understood to have had one linear narrative of downfall. It does not have one history, but rather it has multiple histories.

Jan Bleyen

See also Appropriate Death; Defining and Conceptualizing Death; Denial of Death; Disenfranchised Grief; Funeral Director; Funerals; Medicalization of Death and Dying

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Armageddon

In the New Testament, the book of Revelation, chapter 16, verse 16, is a reference point for the concept of the battle at the mountain of Armageddon. Armageddon (*Harmagedon* in Greek) refers to the big war that will take place on the great day of God. Armageddon is the final battle between good and evil, the ultimate triumph of Christ. Defined in the Hebrew as *har* (mountain) and Megiddo (city in ancient Palestine), the concept Armageddon, referred to in the Old Testament as a military stronghold, is based on two verses from Christian scripture that have emerged as a part of Christian eschatological beliefs. In the Bible, mountain is symbolic of a kingdom, and the battle at the mountain of Armageddon will bring about God's kingdom.

For Christians, Armageddon is the final battle among all the armies of the world; it is the ultimate battle between good and evil. For some, Armageddon is dramatic and it is an imminent event that unites Christians. For others, Armageddon is simply part of the biblical history that represents an exaggerated series of statements from another time period that have been stretched beyond reality.

Religion and the Armageddon Concept

Biblical topics have often been cause for debate if not some confusion. Clearly, the Bible was written at a time when the church was in its infancy, the membership was sometimes persecuted, and believers anticipated relief from persecution with the Second Coming of Christ.

This emphasis on war and victory of good over evil, in which good will conquer evil, finds further support in brief references in the Old Testament, namely Judges 5:19 and 2 Kings 23:29. Many biblical scholars adamantly believe the battle at Armageddon will fulfill biblical prophecy.

Many religious thinkers insist that if Armageddon is referred to in the Bible then it is true, thus making this truth imperative for belief, and to question the veracity of the battle of Armageddon is to question other biblical writings. Armageddon also represents a political and religious affront in the Middle East because, it is argued, Western nations tend to offer support to Israel because of the religious symbolism Megiddo holds for Christianity as the site of the final battle. This pro-Israel orientation represents a juxtaposition between religion and political issues. Thus, the chasm is increased between the Christian community, the Middle East, and other religions of the world.

The whole concept of the war of Armageddon moves some individuals away from God because it gives them cause for confusion and despair. On the other hand, there are those Christians who argue that the war of Armageddon is the fulfillment of God's promise to return and claim His believers unto Himself.

Signs of the Coming of Armageddon

The Bible details many signs and wonders that must come to pass prior to the battle at Armageddon. Some religious teachers assert that man-made disasters such as the Holocaust, the terrorist attacks of September 11, 2001, as well as natural disasters such as earthquakes, tsunamis, and hurricanes are prophecies of Armageddon. Fictional writings, such as *The End of Days: Armageddon and Prophecies of the Return* as well as the *Left Behind* series of books that was made into a movie by that same title, promote a similar theme. Many religious and biblical teachers insist these events are prophecies that need to be heeded and fulfilled before the occurrence of the battle at Armageddon, asserting that they are a sign of God's imminent return.

The book of Revelation was said to have been written by John who, because of his Christian faith, was exiled to the Roman penal colony at the Island of Patmos. The book of Revelation is an account of visions revealed to John by God in symbolic and allegorical language borrowed from the Old Testament, especially the books of Ezekiel, Zechariah, and Daniel. The symbolism expressed in Revelation was apparently popular at the time. The book of Revelation was created amid a time of crisis, yet its central message to Christians holds true today: Stand firm in the faith, God will return, and continue to persevere in hope despite a troubled world.

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See also Apocalypse; Christian Beliefs and Traditions; Eschatology in Major Religious Traditions; Last Judgment, The

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Art of Dying, The (*Ars Moriendi*)

Ars moriendi, literally "art of dying," refers to a genre of Christian devotional literature that enjoyed widespread popularity across Europe from the 15th to the 18th centuries. These works had a fundamentally practical orientation, aiming to advise the dying regarding how they might avoid despair at the end of life and thereby avoid the damnation believed to await those who faltered in faith. Over time the genre expanded its focus beyond the deathbed by describing also how one's manner of dying was often decisively affected by the habits of living developed over one's lifetime. Scholars of religion study the ars moriendi tradition because it is one of the great genres of Christian devotional literature, but these writings appeal to a broader audience because they offer glimpses of what the experience of dying was like in Renaissance Europe. The ars moriendi reveal what Europeans from this era saw to be the central existential challenges of dying, and provide detailed accounts of their strategies for meeting those challenges.

Origins of the Tradition

The roots of the ars moriendi tradition can be traced to two anonymously written works: the *Tractatus artis bene moriendi* and a shorter, later work known simply as the *Ars Moriendi,* which combined an abridged version of the *Tractatus* with a series of woodcut illustrations depicting the struggles of the dying against various temptations. Both works enjoyed enormous popularity during the 15th and early 16th centuries. The *Tractatus* was written circa 1415 and later translated into every European language. The influence of these works extended far beyond their direct readership because many preachers drew heavily upon them when offering sermons on preparing for death. For example, Girolamo Savonarola preached *Predica dell'arte del ben morire* to large crowds in 1496. It was later published and circulated among clergy who put it to further use in their own preaching.

Historical Context

The popularity of the ars moriendi can be explained in part by the fact that interest in death was already very high before these works were published. Plague, warfare, and food insecurity had long made clear the constant proximity of death, and reflections on the power of death were common in popular religious practice. It was typical at this time for preachers to exploit their listeners' fear of death in order to move them toward religious conversion. The *Danse Macabre,* in which a personification of death (usually a cadaver) led people of all classes as captives, was a popular example of the times' fascination with death.

Tone, Structure, and Content

In contrast to the often graphic, macabre treatments of death that predominated at the time, the *Tractatus* strikes a consolatory tone. It does not represent death as something natural or unequivocally good, but its focus is not on death's horrors. Instead, the *Tractatus* portrays dying as a final, challenging task that one can do well or poorly. The deathbed provides the setting for a battle between God and Satan for possession of one's soul. The block prints of the shorter *Ars Moriendi* depict this battle vividly. In an emblematic illustration, a man lies upon his deathbed, surrounded by angels and friends on one side and demonic creatures on the other. Thus the dominant image of dying in the *Ars Moriendi* is that of monumental struggle, but a struggle against spiritual and moral weakness rather than against disease or death itself.

The central piece of advice in the *Tractatus* is to endeavor to die gladly and willfully. The text

assumes dying to be a painful, frightening experience, but attempts to soften these facts by putting them into a Christian context. The pain of death is recast as a just punishment for sin sent by God. The reader is asked to ponder how even weeks of suffering on one's deathbed would pale in comparison to the torments of eternal damnation that would result from failing to die gladly. One should surely prefer to accept physical punishment from God in dying rather than experience God's everlasting vengeance beyond the grave.

The *Tractatus* comprises six chapters:

1. General advice and sayings from Christian and classical sources regarding how to die well
2. Advice about how to overcome the temptations of unbelief, despair, impatience, pride, and avarice
3. Interrogations that encourage the dying to acknowledge their sinfulness, promise to repent, and affirm their faith in God's mercy
4. Prayers and instructions that direct the reader to imitate the way in which Jesus died (e.g., by commending one's soul to God, by dying willfully, and so on)
5. Advice to those at the bedside
6. Prayers to be said at the moment of death by those present at the bedside

Throughout these chapters, the discussion of how to face the trials of death is somewhat sterile and mechanical. The reader is not moved to faith or patience or hopefulness so much as told of the importance of those dispositions. The author of the *Tractatus* sees a sophisticated understanding of Christian faith to be unnecessary for salvation; instead, the worth of one's faith was measured by a willingness to affirm the creed and the teachings of the Church.

It can be inferred from the *Ars Moriendi* that dying was a decidedly public affair in 15th-, 16th-, and 17th-century Europe. The *Tractatus* assumes that friends play a vital role in helping a person die well. They help the dying leave this world willingly by assisting them in setting their affairs in order: finalizing a last will and testament, facilitating reconciliation between the dying and estranged relations, and so on. In addition, friends were to nurture the spiritual well-being of the dying. The *Tractatus* instructs those at the bedside to recite the creed in a loud voice whenever the dying falter in faith, recommends holding a cross before the eyes of the dying as a means of encouragement, and prescribes the recitation of many prayers.

Evolution of the Ars Moriendi Tradition

Erasmus: From Ars Moriendi to Ars Vivendi

During the 16th century, some of the brightest theological minds of the time contributed to the growing corpus of the ars moriendi tradition. Desiderius Erasmus was the first eminent theologian to improve upon the *Tractatus*, publishing *De praeparatione ad mortem* (Preparing for Death) in 1533. He dramatically improved upon the often artless prose of the *Tractatus,* and made a major contribution by highlighting the importance of the art of living well (the *ars vivendi*) as a means of preparing to die well. Erasmus's decision to focus heavily on the ars vivendi set a trajectory that would be followed by most subsequent works in the ars moriendi tradition.

Whereas the author of the *Tractatus* was certain that a person's eternal fate was determined by his or her disposition at the moment of death, Erasmus believed that no one should be judged by their manner of dying. Nevertheless, he devoted considerable attention to dealing with the difficulties of the deathbed; however, he did so not to provide a recipe for attaining eternal salvation. Instead, Erasmus's aims were to provide comfort and to lead Christians to see preparation for death as an opportunity for spiritual renewal throughout life. He sought to provide comfort primarily by suggesting that if one could learn to put one's trust entirely in divine mercy and compassion, the fear of death would melt away.

Erasmus offers a clearer portrait of the psychological torments suffered by the dying than can be found in the *Tractatus*. He composed a dialogue in which the devil taunts the dying, playing upon their fear of the unknown and upon the Christian notion of God's justice: How could a just God admit such an imperfect person into paradise when that person certainly deserves punishment? Erasmus suggested that the key to helping the dying meet

the temptations of the deathbed was to find a prudent spiritual counselor (usually a priest, but occasionally a wise friend) who would offer consolation while avoiding false flattery. By finding such a balance, the dying could learn to repent of the mistakes they had made during life without slipping into despair.

Jeremy Taylor's Holy Living and Holy Dying: Pinnacle of the Tradition

As the ars moriendi tradition began to flourish after the time of Erasmus, the Protestant Reformation divided Western European Christianity. The ars moriendi enjoyed enormous popularity among both Catholics and Protestants. Tracts were authored by theologians from across the spectrum of Christian denominations. Among the notable Protestant works were those by Thomas Becon and William Perkins (English Calvinists). Juan Polanco and Robert Bellarmine authored two of the finest and popular Roman Catholic tracts. Scores of other works were written but many who have studied this literature agree that *The Rule and Exercises of Holy Dying* by Jeremy Taylor (an Anglican) stands as the tradition's preeminent work.

Taylor artfully draws upon Christian and classical sources, placing considerable emphasis upon the need to prepare for death throughout life. One must make a lifelong effort to grow in patience (the ability to endure suffering steadfastly) and in faith (which would allow one to trust in God's love and mercy). To endure the pain and loss that comes with death, one must have learned how to endure life's smaller tragedies. To trust in God to preserve oneself through death into eternal life, one must have built up a strong attachment to God throughout life. Thus Taylor had a profound sense of the importance of habituation. One develops habits of patience, faithfulness, and hope so that one can remain patient, faithful, and hopeful in the agony of death. To promote this sort of growth, Taylor offers a sophisticated combination of meditations and concrete practices. His meditations are reminiscent of the approach to contemplation developed by Ignatius of Loyola (16th-century Roman Catholic); they speak to both reason and emotion while drawing deeply upon the use of imagination.

Taylor was an advocate of *momento mori*, or remembering death. This practice cultivated awareness that death could come at any time and entailed evaluating life choices according to whether they furthered or hindered progress toward spiritual growth and the ability to die well. Another key practice for Taylor was attending to the dying. Being present at the deathbed served the dying by offering them vital support, but also provided caregivers with an excellent means of preparing for their own death. This practice served as a form of momento mori and offered the opportunity to learn to die well by imitating the graceful death of friends and family.

Taylor's work was the last great book in this genre. No subsequent author equaled Taylor's artful rendering of the tradition or his masterful use of both classical and Christian sources on dying well. Taylor's work and some tracts that preceded his remained popular for generations until interest in the genre declined in the 19th century.

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See also Christian Beliefs and Traditions; Good Death; Spirituality; Symbols of Death and *Memento Mori*

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Assassination

Assassination is an ambiguous concept when used to describe events or when it is employed in general analyses. Assassination is selective killing; it also refers to the intentional killing of a public figure. These two views of assassination share the element of killing and are similar to the extent that the expressions "a leader" and "a public figure" refer to similar types of people. But they are also different from each other. Notice that according to the second definition, but not the first, assassination is a killing accomplished treacherously; this introduces into the second definition a dimension that is not present in the first one, namely the evaluative dimension. Unlike murdering, the notion of killing is purely descriptive. An act of killing can be evaluated as a morally or legally permissible or even an obligatory act, under certain circumstances of self-defense and necessity, but can also be evaluated as a morally impermissible or even abhorrent act, under circumstances of wicked aggression. The adverb *treacherously* is on a par with murdering rather than killing. To act treacherously is to act in a wrongful way. It is never justifiable. Recall Dante's attitude toward treachery in the Inferno part of his *Divine Comedy.* The circle of treachery is the ninth and final circle of hell. In its innermost zone and within Lucifer's mouths were Brutus and Cassius, eternally suffering for their assassination of Julius Caesar.

Consequently, a deep distinction emerges between a definition of assassination as a selective killing of a leader and a definition of it in terms of what is accomplished treacherously. Whereas the former definition leaves open questions of the justifiability of acts described as assassination, the latter definition leaves no room for any question of justifiability, since an act described as assassination involves treachery, which is always wrong. When the former definition is used, moral issues can and often should be considered. When the latter definition is used, it is pointless to raise such issues. A moral consideration has already been made and a negative evaluation reached. As a result of that deep difference between various definitions of assassination, we have an induced difference between discussions that employ, whether explicitly or between the lines, different definitions of the term.

The important distinction between descriptive and evaluative definitions of assassination is often blurred, when evaluative terms appear in seemingly simple conjunction with descriptive ones. For example, *assassination* is to destroy unexpectedly and treacherously a specific human target. A depiction of an act as performed unexpectedly is purely descriptive, even though it involves expectations, which are possibly subjective. However, a depiction of an act as performed treacherously involves both a description and an evaluation. Similarly, assassination represents a deliberate action that involves extralegal killing that is based on political ideologies. Assuming that an act can be extralegal and morally justified, the question is left open whether a certain act of assassination was morally justified or not, but the normative question of its legal nature has been closed by definition.

Given such a variety of definitions of the notion of assassination, preference must be given to one definition, or one family of similar definitions, in order to discuss assassination by giving examples of such acts, searching their meanings, and evaluating their justification. It has been demonstrated that there is a reason to prefer usage of terms that enables us to draw a distinction between a description of an act, activity, or event and its evaluation from a certain normative point of view, thus making the nature of the evaluation transparent. When descriptive terms are used, the mode of evaluation has to be introduced in a way that enables seeing the grounds of it. If evaluative terms such as *treacherously* are used, the grounds for portraying a certain act or policy as wrong are left unstated and remain unclear. Hence, in the sequel, assassination is going to be understood in a broad sense that leaves open for further discussion issues of moral, ethical, religious, or legal justification.

The difference between definitions of assassination that include a conveyed evaluative element and those that do not is not the only difference one encounters in the usage of the term and in its suggested definitions. Here is a list of features that appear in usage and analysis, some of which are necessary conditions for the occurrence of an act described as an assassination and some of which are not:

1. Killing a person
2. Killing a political leader
3. Killing a noncombatant

4. Doing it selectively
5. Doing it intentionally
6. Doing it in a premeditated manner
7. Doing it for political or religious purposes
8. Doing it unexpectedly
9. Doing it by a person not in uniform
10. Doing it in a secret and clandestine manner
11. Doing it treacherously

Given the background of the previous discussion, number 11 will not be included in the definition, thus leaving the question open whether an act of assassination under consideration is of a treacherous nature or not.

Some of the other 10 suggested definitional elements of assassination are features of common instances of what is called an assassination rather than necessary ingredients of the concept of assassination. For example, because an instance of an expected assassination can be imagined, element 8 of the list should not be an ingredient of an adequate definition. For similar reasons, ingredients 3 (an assassination of a head of state can take place whether or not the person is commander in chief, of a military rank, or in military uniform), 9, and 10 can be discarded as well.

Element 1 is indeed a necessary ingredient of the definition. Element 2 is problematic, as the term *assassination* has been used for describing acts of killing people who did not play any political role of leadership at the time of the killing. Paul Klebnikov wrote a book about corruption among Russian so-called oligarchs. Although he held no political position, whether formal or societal, his killing was later protested as an assassination. On the background of such examples, it is proposed that element 2, "killing a political leader," be replaced by the broader "killing a person of prominence," that could be political but not necessarily so. Element 7, "doing it for political or religious purposes," does not presuppose that the person killed is a political leader. Prominence is sufficient for rendering an act of killing, an act that can be intended and understood as done for political or religious purposes. This leaves elements 1, 2 (modified), 4, 5, and 7. Element 6 has been deleted as it can be included in element 7; what is done for political or religious purpose is necessarily premeditated, in a sense. Element 7 includes not only political reasons but also religious ones, as suggested by the Canadian Forces manual on the Law of Armed Conflict.

Thus, the following working definition of the term *assassination* is proposed for the present purposes: An assassination is an act of killing a prominent person, selectively, intentionally, and for political or religious purposes. This definition leaves open all questions of justification. An act of killing a prominent person, selectively, intentionally, and for political or religious purposes can and should be evaluated from any relevant point of view, be it moral, ethical, legal, or denominational. Notice that some of these points of view may vary in time. For example, the legal point of view of the United States, before the related Executive Order of President Ford, which banned assassination performed on the behalf of the U.S. government, later formulated in Executive Order 12333, is different from the present legal point of view of the U.S. government, assuming it has not been changed.

Examples of Assassination

Greece

King Philip II of Macedon conquered Greece, except for Sparta, in 338 B.C.E. and was about to fight Persia. During a wedding ceremony of his daughter Cleopatra to the King of Epirus in 336 B.C.E., he was killed by Pausanias, one of his bodyguards. According to some historians, it was an assassination in which his wife Olympias was involved. His son was Alexander the Great.

Rome

After successful battles, extended from Italy to Spain, Greece, and Egypt, Julius Caesar became, in 44 B.C.E., a self-declared dictator for life. Numerous Roman senators turned against him and conspired to assassinate him. When he came to a Senate meeting on the Ides of March 44, some senators, including Servilius Casca, Cassius, and Decimus Brutus, stabbed him to death. One result of the assassination was a series of civil wars.

Hellenistic Egypt

Hypatia, daughter of the philosopher and mathematician Theon of Alexandria, was the first

woman to be head of a philosophical school and to be known to have broad mathematical knowledge. Her special personality and her friendship with the Roman prefect Orestes served followers of the Christian Patriarch (later St.) Cyril as grounds for depicting her as responsible for the political rivalry between patriarch and prefect, Church and State. In 415 C.E., a Christian mob, possibly of Nitrian monks, assassinated Hypatia.

Medieval England

King Henry II appointed to the most influential position of chancellor his friend of "one heart and one mind," Thomas Becket. After Archbishop Theobald died in 1161, the king thought Thomas would help him reform the church. In 1162 Thomas was ordained priest and a day later consecrated bishop. However, as the archbishop of Canterbury, Thomas's first loyalty was to the church. In a series of events he was in conflict with the king. In 1170 four knights assassinated him in the cathedral. Two years later he was canonized.

The Netherlands

William I, Prince of Orange ("The Silent"), was governor of Holland under Philip II, King of Spain's occupation of the Netherlands. Later, he led a Dutch revolt against Spain, which led to the Eighty Years War between the two, which in turn led to the 1648 independence of the Netherlands. He was assassinated by a Catholic French supporter of the king of Spain in 1584. The Dutch national anthem, flag, and coat of arms are directly related to the "father of the fatherlands."

Russia

Emperor Paul I, son of Emperor Peter III and Catherine ("The Great"), formed the Second League of Armed Neutrality with Prussia, Denmark, and Sweden but was rigidly conservative in internal affairs. He was assassinated in 1801 by dismissed officers and other officials led by Levine August, Count of Bennigsen, and a general in the service of the emperor. The assassins declared emperor his son, Alexander I (eventually, "The Blessed").

The United States

Abraham Lincoln, the 16th president of the United States, defeated the Confederate States of America in the Civil War. His executive orders, "Emancipation Proclamation," were significant steps toward ending slavery in the United States. On that background, a Confederate agent assassinated Lincoln on April 15, 1865, while coconspirators failed to assassinate Vice President Andrew Johnson and Secretary of State William H. Seward.

World War I

Archduke Franz Ferdinand, heir apparent to the throne of Austria-Hungary, was assassinated in Sarajevo, on June 28, 1914, by a Serbian group interested in the independence of Serbia. Within a few weeks, a war erupted between Austria-Hungary and Germany, on the one hand, and Serbia, Russia, France, and Great Britain, on the other hand, which lasted more than 4 years. Many other states joined the war, among which were the United States and Italy. The number of military deaths is estimated between 9 and 10 million, that of civilians between 8 and 9 million.

India

Mohandas Karamachand ("Mahatma") Gandhi was born in India, educated in England, and experienced discrimination during a long stay in South Africa, where he developed his political position of nonviolent struggle. Upon returning to India, he led the struggle against the United Kingdom, for the independence of India. His insistence on nonviolent methods and his religious tolerance enraged some Hindu fundamentalists, who made five attempts to assassinate Gandhi. On January 30, 1948, he was assassinated, in Delhi, on his way to a prayer meeting.

On October 31, 1984, India's prime minister, Indira Gandhi, was assassinated by a Sikh bodyguard, on the background of a conflict related to Sikh temples. Her son, Ragiv Gandhi, immediately followed her as prime minister. On May 21, 1991, after resigning from office, he was assassinated by a female suicide bomber, a member of a Tamil extremist organization.

Israel

After the Oslo accords were signed by the Government of Israel and the Palestinian Authority, which involved prospects of Israel's withdrawal from belligerently occupied Palestinian territories, Israeli Prime Minister Yitzhak Rabin was assassinated, on November 4, 1995, by an extremist, nationalist-religious Jew. The assassination was followed by changes in the ruling party, government, and policies.

Meaning and Justification

Every case of assassination involves, by its nature, causing the death of a prominent person for political or religious purposes. However, the full meaning of an assassination has an additional element: An assassination can be instrumental or symbolic. In the former case, the death of the assassinated person is a necessary condition for achieving the purpose of the act. The assassination of Julius Caesar is an example as are most of the previously mentioned cases. In the latter case, an interpretation of the assassination is meant to be understood by members of the groups directly related to the political or religious purpose of the act. The assassination of the Archduke of Austria-Hungary, for example, was not a necessary precondition of the independence of Serbia, but it stood for the struggle of some Serbians for their political independence.

Moral evaluation of an act of assassination depends on the full intended meaning of the act. The simpler cases are the extreme ones. On the one hand, if it can be certainly assumed that the assassination will radically change for the better a horrendous state, such as an ongoing genocide, by removing from power, in the only way possible, a person who is responsible for the atrocities, then assassination is permissible. The case of Hitler during World War II is a prime example. On the other hand, assassination meant for symbolic purposes is always morally wrong, because it involves treating a person as merely a means to an end.

Symbolic acts of assassination are never necessary and always have better alternatives.

U.S. Executive Order 12333, which forbids acts of assassination of or on the behalf of the United States, marks a presumption that such acts are usually morally wrong. Reasons for such a stance with respect to intermediate cases have involved a variety of considerations. Because heads of states are often not members of the armed forces, the Principle of Distinction between combatant and noncombatants has been invoked. This is not a compelling argument, as heads of states are often directly involved in crucial warfare decision-making processes. Some analysts argue that persons with whom peace will eventually be negotiated and reached should therefore not be assassinated. When assassination is meant to terrorize people, the arguments against terrorism convincingly apply against it. Usually, assassinations cannot be justified on grounds of necessity and therefore are understood to be symbolic in nature and therefore morally wrong.

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See also Atrocities; Death, Humanistic Perspectives; Hate Crimes and Death Threats; Homicide; Legalities of Death

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Assisted Suicide

The 20th century, with its rapid progress in medical science, has fundamentally changed the nature of the dying process in much of the Western world. Modern advances in medicine and life-sustaining technology have resulted in a dramatic increase in life expectancy and quality of life. However, these changes have also given rise to the concern that the dying process may be unnecessarily lengthened, leading to prolonged suffering and loss of dignity for many terminally ill individuals. This concern has increased public interest in the legalization of a range of end-of-life practices, including assisted suicide.

Terminology

Assisted suicide is defined as a situation in which a person with an incurable, terminal illness requests the help of others in ending his or her life. The person providing assistance typically supplies the terminally ill patient with the means or information necessary to bring about death. When such assistance is provided by a physician, the practice is referred to as physician-assisted suicide (PAS). Assisted suicide and PAS are often confused with another end-of-life practice, euthanasia. Specifically, euthanasia refers to the act of taking another person's life with the aim of alleviating suffering. Assisted suicide and euthanasia are distinctly different practices, because PAS allows patients to be the active agents in controlling the circumstances of their death, whereas in euthanasia, the person who performs the actions leading to death is someone other than the patient. Another practical distinction is that PAS usually involves a physician's prescription of a lethal dose of medication, whereas euthanasia often involves the administration of a lethal injection.

Arguments About Assisted Suicide

The distinction between assisted suicide and euthanasia is significant, given the heated nature of the debate surrounding legalization of assisted suicide. A number of arguments have been voiced in the public discussion surrounding this issue. Proponents of legalization argue that individuals have a fundamental right to personal autonomy and that assisted suicide allows terminally ill patients to maintain dignity and control at the end of life. It is further suggested that PAS can address terminally ill patients' concerns with maintaining autonomy and quality of life, whereas pain control interventions and palliative care may be ineffective in resolving these concerns. In addition, proponents argue that assisted suicide already exists as a hidden practice, so legalization can ensure that appropriate monitoring and safeguards are enforced. Finally, PAS advocates suggest that practices that relieve suffering and respect patients' autonomy are consistent with the physician's role and conform to current ethical and medical principles.

Opponents of legalization, on the other hand, often cite the sanctity of human life and the moral unacceptability of suicide as arguments against assisted suicide. Providing assistance in a patient's suicide is explicitly prohibited by the Hippocratic oath, and some view PAS as inconsistent with the physician's obligation to preserve life. Apart from such moral and ethical objections, opponents often argue that adequate palliative care and pain management can eliminate patients' need to resort to assisted suicide. They also voice a concern that the legalization of PAS may stifle progress in the hospice movement and thwart current developments in end-of-life care. Some fear that the legalization of PAS may put pressure on patients to choose assisted suicide in order to avoid becoming a burden to family and caregivers. Finally, opponents point to the danger of a slippery slope—the concern that, over time, PAS may be applied to those who are not terminally ill, as well as those who are physically disabled or have a mental illness.

The Practice of Assisted Suicide

Given the heated nature of the debate surrounding the legalization of PAS, it is no wonder that this practice is a legal option in only a handful of countries. At the time of this writing, only the Netherlands, Belgium, Switzerland, and the U.S. state of Oregon have implemented legal regulations that explicitly permit PAS. Some important differences exist in the way PAS is practiced in

each of these areas of the world, so a discussion of cross-national variations is warranted.

The Netherlands has a long history of legal tolerance toward PAS and euthanasia, and both practices were eventually legalized in 2001 with a law passed by the Dutch Parliament. Under this statute, physicians can perform either euthanasia or PAS in cases where a patient has made repeated, voluntary, and well-considered requests and perceives his or her suffering as unacceptable. The physician must be convinced that the patient's situation is desperate, although a terminal medical condition is not explicitly required. Furthermore, the attending physician needs to consult with a colleague as well as document and report all actions taken. When parental approval is provided, the Dutch law also permits PAS for patients ages 12 to 18 years old.

A year after the Netherlands law was passed, Belgium followed suit by legalizing euthanasia. The Belgium law does not explicitly mention PAS because of cultural prohibitions against suicide; however, PAS is currently performed and considered an act of euthanasia in this country. The Belgium law is similar to Dutch practices in that it requires a patient's repeated, voluntary, and well-considered request for euthanasia and the presence of intractable suffering. A consultation with a second medical professional and the careful documentation and reporting of all practices are required as well. However, this law also includes more stringent criteria by explicitly requiring that the patient be 18 or older and suffer from an incurable medical condition. Thus, some similarities and differences exist in the way PAS and euthanasia are defined and practiced in Belgium and the Netherlands.

In contrast to the statutes in Belgium and the Netherlands, a unique legal situation exists in Switzerland, where the penal code implicitly authorizes assisted suicide (either by a physician or a lay person), provided that aid-in-dying is not motivated by a desire for personal gains. Although the Swiss penal code opens a possibility for the decriminalization of assisted suicide, it explicitly prohibits euthanasia as a form of murder.

Although international issues surrounding PAS are noteworthy, the legalization of PAS in the state of Oregon is of particular significance in the United States. In 1994, a state referendum supported the legalization of PAS in Oregon, when voters approved a measure to pass Oregon's Death With Dignity Act (DWDA). The DWDA was eventually enacted in 1997, making Oregon the first state to pass a law allowing PAS in the United States. Under this act, a competent, terminally ill, adult resident of Oregon may request a physician's assistance in dying provided that certain regulations are met.

A number of requirements are built into Oregon's DWDA as a safeguard against abuse. In order to make use of the statute, a patient must first make two verbal and one written request for aid-in-dying, separated by at least 15 days. Next, the patient's terminal diagnosis and decision-making capacity need to be confirmed by the attending physician and a consulting colleague, with a referral to a psychologist or psychiatrist in cases where the patient's judgment may be impaired because of a mental health condition. Finally, the patient has to be informed of alternative end-of-life options, and the prescribing physician must suggest (but not require) that the patient inform significant others of his or her end-of-life decisions. Provided that these requirements are met, the attending physician may prescribe a lethal dose of medication, after which a report is filed with the Department of Human Services. Such regulations are designed specifically to protect patients' rights while respecting their personal dignity and autonomy.

The legalization of PAS in Oregon, the Netherlands, Switzerland, and Belgium has spurred a vibrant line of research examining the incidence and characteristics of end-of-life practices in these countries. The reporting practices in the Netherlands and Oregon, in particular, have generated an expanding body of data regarding incidence rates, demographic characteristics, and reasons for patients' requests for PAS. Available data suggest that only a small percentage of patients make use of PAS. Specifically, in 2005, 0.1% of deaths in the Netherlands and 0.12% of deaths in Oregon were the result of PAS. The most common reasons for requesting PAS in Oregon included concerns related to the loss of autonomy, dignity, or personal control, whereas fear of uncontrollable physical pain was a less important factor in patients' desire for assisted suicide. Such research findings enhance the humanistic perspective of this social issue.

In conclusion, assisted suicide and PAS have increasingly become a center of scholarly and public discussion. Informed participation in the assisted suicide debate requires knowledge of terminology and familiarity with the arguments regarding the legalization of this practice. Legalization has become an important aspect of the assisted suicide debate, and a number of countries (i.e., the Netherlands, Belgium, Switzerland, and the U.S. state of Oregon) have implemented statutes that permit PAS under certain conditions. One important outcome of the legal status of PAS in these countries is the proliferation of research on the practice of assisted suicide with the potential of furthering current understanding of end-of-life issues.

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See also End-of-Life Decision Making; Euthanasia; Good Death; Legalities of Death; Quality of **Life; Suicide; Terminal Illness and Imminent Death**

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Atheism and Death

Atheism is the disbelief in the existence of a deity. Although atheism is often associated with agnosticism, it has its own distinct meaning. Whereas agnostics believe that it cannot be known whether there is a god, atheists explicitly reject the existence of such a being. This rejection especially manifests itself in periods of secularization in which the immanent world becomes evermore important at the expense of the metaphysical constellation of god, world, and soul. This does not mean that representations of a transcendent world, such as god, heaven, and afterlife, no longer exist—it means that people in a secularized society may reject these notions as part of their lived reality. Because many people live in a secularized society, atheism is relevant for understanding death from a nonreligious point of view.

Atheism itself gives no meaning to death—it only rejects transcendent interpretations of death. From an atheistic perspective, meaning of death results just from an immanent analysis based upon the profane and worldly interpretation of reality. As a consequence, atheistic meanings of death are defined both by immanent meaning and by the disbelief in a deity. Although immanent meanings of death can go together with a personal belief in god, this is not the case in atheism. In the following, immanent meanings of death are explored by first sketching the main sources for immanent meaning. From there, three immanent meanings of death are presented and future immanent meanings of death are briefly explored.

Immanent Meanings of Death

The main sources for immanent meanings of death are nature and the human being. Nature-centered meanings have roots in the ancient thought of materialism—the doctrine that reality has objective existence that consists of material

particles—and have been further developed in the movement of naturalism from the early Renaissance onward. Generally speaking, these immanent meanings represent the idea that nature provides a strict physical understanding of reality, including the reality of death. Human-centered meanings have roots in the ancient thought of immanent idealism—the doctrine that human ideas make up the reality as we know it—and have been further developed in the Renaissance movement of humanism. Generally speaking, these immanent meanings put humankind and its capacity to give meaning to reality in the center of the universe.

The lines of thought from materialism to naturalism and from immanent idealism to humanism present different meanings of death. Natural-centered meanings of death tend to reduce persons to their complex material bodies. In such a perspective, death does not mean the end of one's existence—persons continue to exist as corpses for a while after they die, whereupon the body recycles into other forms of nature through physical decay. Although this gives meaning to a bodily death, it does not do so for death as a psychological annihilation. Human-centered meanings of death, on the other hand, tend to reduce living persons to their potential for self-realization. For example, many humanists believe that people continue to exist in the contribution they made to create a better world. As such, individual pleasures, ideas, and achievements may transcend death. Although this perspective provides meaning, it regards life rather than death. As a consequence, both nature- and human-centered meanings of death remain limited in their analysis. However, there are exceptions to this limitation. Three of them will be explored in the next sections.

Epicurean Perspective

A first thoroughly elaborated immanent meaning of death is presented by Epicurus (341–270 B.C.E.). Although Epicurus believes in the gods, he sees them as entirely unconcerned about human beings. Epicurus's analysis on death is built on a strict materialism in which the human being has no metaphysical or transcendent meaning. He believes that objects exist only when they can be perceived or imagined as material objects. As a consequence, reality is exactly as it appears to our senses, assuming that our senses function accurately. Everything not material is simply the absence of reality and thus nonexistent.

According to Epicurus, there is no need to fear death. Moreover, he argues that death is not a misfortune for the one who dies. He presents an impressive proof for the irrationality of the misfortune of death. He claims that all good and bad consists in sense-experience. Because death is the privation of sense-experience, it does not exist. As a consequence, death, the most terrifying thing, cannot affect the living. We will never meet death, for when we live, death is not present, and when death is present, we do not live. Because we can never perceive death, death is of no concern to us and there is no reason to fear it—death means nothing to us.

The Epicurean perspective on death may not satisfy those who experience the shock of having to die. However, the therapeutic purpose of Epicurus's argument should not be underestimated. For Epicurus, knowledge is not an end in itself but a remedy for mental disquietude. Through meditating upon his line of argument, one's fear for death may be transformed into equanimity. The strength of this argument depends entirely upon the premise that all knowledge lies in sensation. When death cannot be perceived, its impact upon our emotional life must be illusionary. Thus, by excluding metaphysics, Epicurus nullifies death. Hence, a first immanent meaning of death is the exclusion of death from our experiential world.

Heidegger's Position

A second thoroughly elaborated immanent meaning of death is presented by Heidegger (1889–1976). Heidegger's position is neither theistic nor atheistic. He breaks with metaphysics, which for him is the traditional way of thinking in which the question of being is ignored. Instead, Heidegger wants to do justice to the immanent reality of being as such. He does so by exploring what it means for the human being to be. Metaphysics cannot provide the answer, for Heidegger rejects any metaphysical presupposition concerning the essence of humans. However, because life cannot generate its own meaning, it still has to relate to something outside of life. Heidegger finds this immanent outside in the finitude of one's own being.

According to Heidegger, understanding the structure of being is achieved through understanding the meaning of nonbeing, which, for the human being, is death. However, one cannot understand one's own death from experience, for death by definition lies outside of experience. As a consequence, death can only be understood as a future event, which is the possibility of one's own death: Death is the possibility of the absolute impossibility of being-there. Since this possibility is one's own most, nonrelational, and unrivalled possibility, it is distinctively impending. This means that one's being is structured by one's outlook on death—the human being is a being toward death.

By focusing on people as *finite* beings and on the *influence* death has on life, Heidegger overcomes the problems of both humanism, which focuses on human beings as potential beings, and naturalism, which places death outside of experience. Death can now be explored as a real phenomenon. It is the life-structuring event that guides all of our choices and projects. As such, it is the background against which life is configured. Only when people think of their relationship to death as manifest in each aspect of life can they be genuinely aware of what it means to live authentically—that is, to live as a human, and thus finite, being. Hence, a second immanent meaning of death is that it structures life within our experiential world.

Sartre's Philosophy

A third thoroughly elaborated immanent meaning of death is presented by Sartre (1905–1980). Sartre characterizes his philosophy as an atheistic humanism. He profoundly disagrees with Heidegger's analysis of death and claims that death cannot be considered an outside force that provides immanent meaning to life. Death cannot confer meaning, because meaning comes only from subjectivity. Any meaning of death is thus necessarily human. Death, as such, renders life useless and senseless for it deprives life of all meaning. Human problems remain unsolved and the meaning of these problems remains undetermined. As a consequence, awareness of finitude cannot provide an authentic mode of being.

According to Sartre, the meaninglessness of death prevents death from being a possibility. Instead, death is the end of all possibilities. This claim has important implications for the understanding of what it means to be a human being. When death is the nullification of all one's projects, it escapes one by principle. One cannot discover one's own death, nor wait for it, nor take an attitude toward it. Death reveals itself as indiscoverable for it disarms all expectations. As such, nothing can happen to death from the "inside," as it is completely closed and impenetrable. As a consequence, death does not belong to the ontological structure of the self. Instead, death is the victory of what lies outside the self—for the self, death is an absurdity.

The triumph of the outside over oneself, however, does not imply that one cannot freely give meaning to life. The absurdity of death shows us that one is not constrained by death. Moreover, death reveals our freedom. Although one is not free to die, one is a free mortal. Death thus reveals that one's freedom remains total and infinite. This revelation of infinite freedom suggests that the human condition can be transcended. That is to say, through one's infinite freedom one may overcome situations in which one experiences one's mortal status. Hence, a third immanent meaning of death is that it reveals an infinite freedom toward our experiential world.

Overcoming Death

Future elaborations of immanent meanings of death may result from developments in transhumanism. Transhumanism aims for the enhancement of all limitations of the human condition, including death. Most transhumanists are atheists with a materialistic perspective on life. They rely heavily on the promises of science and technology. For example, by understanding aging as a pure biological process on the level of molecules and cells, transhumanists suppose that insight in these processes may lead to enormous life extension. Aging can already be slowed down for small animals, and some scientists claim that the process of aging may be reversed in the future. Because from a transhumanist perspective death is to be postponed, and in the future even to be overcome, it is to be expected that these developments will have an effect upon the meaning of death.

The postponement and overcoming of death is less futuristic than it may seem. For example, in medical care the hope and belief in technology is

often the last resort for saving lives. When both patients and doctors are unable to come to terms with death, treatment may be pushed extremely far at the end of life. Transhumanism claims that if it becomes possible to overcome death, many people would opt for it. A first step toward immortality has already been made: With the help of cryonic preservation, cardiac dead people can "wait" for new technologies that may cure their life-threatening illnesses. This may lead to new immanent meanings of death in which the materialist doctrine of continued existence after death goes along with the humanistic promise of ultimate self-realization. This may be threatening for most religious perspectives on death; for atheists it just reflects the justified human aspiration to live and not to die.

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See also Cryonics; Death, Philosophical Perspectives; Immortality

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Atrocities

An atrocity is morally wrong behavior that is so horrendous that it reveals a brazen disregard for the humanity of the victims. The aim of an atrocity is not just to harm the victims, but to desecrate them. Not every moral wrong, then, counts as an atrocity. The typical lie or act of shoplifting is hardly an atrocity. Not even murder need be about desecrating the victim. The list of atrocities that human beings have committed throughout history is disconcertingly long. During the 1990s, the killing of hundreds of thousands of Tutsis occurred in Rwanda, where leaflets and posters were distributed by Hutus characterizing Tutsis as snakes and cockroaches. Symbolically, snakes and cockroaches are rivaled only by rats as creatures that are viscerally the antithesis of what it is to be a human being. In Rwanda, it was blacks desecrating blacks. In the Asian world, Asians have desecrated Asians, as with China and Japan. In the Muslim world, Muslims have desecrated one another. Saddam Hussein, for instance, treated Shi'ite Muslims in a way that calls to mind the Nazi treatment of Jews.

The atrocities of the Nazi era represent the most sophisticated and sustained desecration of people to have taken place in the 20th century. And while it is clear that the extermination of the Jews was the central aim of the Nazi regime, it is equally clear that an ineliminable part of that aim was also to kill the Jews in a most dehumanizing manner. From transporting Jews to concentration camps in trains that had no restroom facilities of any form to making them dig their own graves to the brutal ways that they were used in so-called medical experiments, the aim was to peel away the Jews' sense of humanity.

Strikingly, atrocities are often committed by individuals who regard themselves as decent individuals. For instance, the lynching of blacks by whites in the United States in the Old South was typically committed by whites who considered themselves to be God-fearing Christians. The aim of lynching was not merely to punish blacks, but to revel in an utter disregard for the black body. During times of war, it commonly happens that male soldiers who think that rape is reprehensible nonetheless rape women who are identified as being on the side of the enemy. Needless to say, rape is one of the most profound ways in which a body can be desecrated, where the aim is not at all about killing the victim.

Evil Behavior and a Sense of Community

How can psychologically healthy people who take themselves to be decent individuals collectively do the unthinkable to others? Two important considerations present themselves. First, a defining feature of human beings is that they are capable of symbolic representation. A symbolic representation can be ephemeral and of little social significance as with the white glove that was once identified with Michael Jackson. Symbolic representation can also be imbued with enormous meaning and thereby occasion visceral feelings, as has been the case with two pieces of wood whose formation constitutes a religious symbol, namely the cross. People, too, admit of symbolic representation. Owing to upbringing, even psychologically healthy individuals may reach adulthood with a wealth of visceral feelings that are positive toward some individuals and negative toward others. Most of us rarely act on our negative feelings alone.

The second part of the explanation for atrocities is that when a group of people act hostilely in concert with one another, the sense of moral responsibility that members of the group have is, from a psychological point of view, quite diffused. Indeed, it is surely true that no single person is responsible or blameworthy for all that happens. For example, what exactly has one done if one was part of a crowd of individuals who blocked the escape of an innocent person who was subsequently hanged or tortured by those pursing that person? Moreover, not only does a crowd diffuse blame but it also provides individuals with a considerable measure of anonymity. Finally, in this vein, there is the fact that interpersonal comparisons are an ineluctable aspect of our self-assessment. Even if the way in which everyone is behaving is clearly wrong, the fact that everyone is so behaving is easily enough countenanced as an excuse for behaving in that manner. This is because the ubiquity of the wrongful behavior as evidenced suggests that only someone of unusual strength of character could be expected to refrain from the wrongful behavior in question; and while it is certainly nice that a person has such strength of character, no one can be expected to be that strong. In a word, one of the rationalizations for their own moral behavior, which many find most potent, is the simple reality that everyone is behaving in that manner.

Putting these two explanations together, atrocities can be explained as follows: When a group of people have been demonized, then the members of the demonized group have been symbolically represented as a profound danger to the physical and moral well-being of the group of individuals who consider they represent a higher moral order. Hitler, for example, claimed to be doing the work of the Lord in his attempt to exterminate Jews. Typically, the members of a demonized group are characterized as subhuman in some way or morally beyond the pale; accordingly, commonplace human sympathies toward members of the demonized group for the enormous pain inflicted upon such individuals are considered inappropriate, even a sign of weakness. When a group of people has been demonized, then it does not take much more than a social spark to occasion atrocities on the part of the members of the group who consider they represent a higher moral order. A social spark means something like the following: (a) one or more members of the demonized group have acted inappropriately toward a member of the group with the supposed higher calling when the members were, for instance, already weary of one another; or (b) the members of the group with the supposed higher calling question the fidelity of a particular member of their group. The slightest infraction on the part of a member of the demonized group thus presents an opportunity for one whose group loyalty has been questioned to publically affirm his or her disdain for the demonized group, while simultaneously affirming her or his identity with those who claim to have a higher calling.

Of course, atrocities can also be orchestrated. Those in Rwanda and Nazi Germany most certainly were orchestrated, and the systematic dehumanization of the victims was par for the course. What is equally true, however, is that atrocities can occur rather like spontaneous combustion. Lynching in the United States was much more like that than not.

One might think that individuals who have been members of a demonized group would never commit against others the kinds of wrongs that were committed against them. Unfortunately, this is not the case. People who have been demonized seem to be more than capable of demonizing others. The desire for revenge can blind people to their own ignominious behavior, as was the case in

Rwanda with the Hutus against the Tutsis. What is more, egregiously immoral behavior can be adopted as a means of control even by those who have been the primary target of such behavior. Joël Michel reports that lynching had become such a cultural practice in isolated areas of Louisiana that there were occasions when blacks would lynch a black, and there were 12 occasions when blacks joined with whites in lynching a black. Of course, these numbers are utterly insignificant when compared to the thousands of blacks lynched by whites only. However, these numbers underscore in a most poignant way that when it comes to atrocities, people can do the unthinkable. As Mark Rigg has shown, the same poignancy arises with people of Jewish descent willingly serving in Hitler's army.

Human Malleability

Philip Zimbardo's classic work, "A Study of Prisoners and Guards in a Simulated Prison," supports the line of argument presented in the preceding section. Student volunteers were variously assigned the role of guard or prisoner. The stunning surprise was that the "guards" began to take their role so seriously that they started mistreating the "prisoners" rather harshly—so much so that the experiment had to be stopped. Here we have an elite group of students who, beyond all shadow of a doubt, know that all are students who are equally innocent of any wrongdoing. Yet, the simple truth is that it was impossible for the so-called guards to take their role seriously without in some way demonizing the so-called prisoners, with the result being that otherwise decent and highly intelligent individuals willfully harmed individuals whom they knew from the outset were equally innocent and intelligent and from similar social backgrounds. The Zimbardo experiment points to the malleability of human beings. Even in a context that was publicly defined as mere role playing, among people who were equal in all the relevant social respects, the so-called guards began to think of themselves as having a higher moral calling. In turn, they viewed the so-called prisoners as morally inferior and proceeded to treat them quite harshly.

The malleability of human beings is both one of their greatest strengths and greatest weaknesses. Its strength lies in the ability of human beings to adapt ever so successfully to environments that differ radically from what they have previously experienced all of their lives—to achieve what had heretofore seemed impossible, as when Erik Weihenmayer, a blind person, climbed Mt. Everest. The liability is that these same creative powers make it possible for human beings to accord great significance to otherwise inconsequential differences, as Zimbardo's prison experiment astonishingly revealed. Evolutionary biology makes it unmistakably clear that phenotypical differences between human beings that allow for group classifications are utterly inconsequential, in that differences in moral and intellectual powers cannot be attributed to these phenotypical differences. Yet, with ingenuity and uncanny persistence human beings continue to accord great significance to these differences. Even in the 3rd millennium, what is known as scientific racism and the concomitant claim of racial superiority continue to have a serious foothold in human thought. One might ask whether we should take the ubiquity of racism on the part of human beings, with all that this entails in terms of humanity being susceptible to committing atrocities, as an indication of the equality of human beings.

Human Psychology: Justice Versus Evil

In *Republic,* Plato claims that the truly just are those who would live justly though the entire world treated them unjustly. Unfortunately, this is an ideal that would seem to be at odds with our psychological and social reality. This is because psychologically healthy human beings are quintessential social creatures, and this reality plays itself out in fundamental respects. First of all, social approval plays a fundamental role in how we conceive of ourselves. From physical appearances to intellectual prowess, the sense of self is inextricably tied to the assessments that others make of us.

What is more, there is unavoidable truth that there is much that is meaningful in life that cannot be done without the support of a community. The paradigm examples in this regard are friendship and love. Nearly everyone agrees that life without at least one of these is lacking in richness. However, there are many other communal activities that add to the meaning and richness of life, such as team sports or card games or group singing.

In the vast majority of instances, then, being part of a group is far too central to leading a psychologically healthy and flourishing life as a human being for Plato's idea of a just person to have an unshakable hold upon human lives. To recognize this much is to have deep insight into how it can be that psychologically healthy human beings commit atrocities. Contrary to what Plato thought, in order to be the kind of person who would choose justice over fitting in with those who have been a deep source of affirmation, it takes a strength of character (which most people do not have) and a willingness (which most people do not have) to make enormous sacrifices. And while we rightly admire saints and heroes, it is equally clear that we do not think that anyone can be morally required so to behave on behalf of others (with perhaps the case of immediate family members aside).

Fitting in with others is a form of self-preservation. Atrocities, then, tap into the most basic and fundamental of human instincts, namely self-preservation. This is because being a part of an affirming group is also one of the most basic forms of self-preservation. This follows from the fact that human beings are quintessentially social creatures. There is no need to deny that the difference between human beings and other social animals, such as dolphins and chimpanzees, is but a matter of degree. We need only note that small differences in degree can make a monumental difference in kind. The addition of language makes a profound difference. This is because atrocities are tied not just to feelings of hostility but also to the capacity of human beings to give articulation to those feelings and thus to proffer a symbolic representation of those feelings for other members of the community to embrace, avow, and thus for human beings to use as a ceremonious way of affirming their unity while simultaneously reinforcing their conception of the other as unfit. What is more, the corollary to the capacity for the spoken word is the capacity for the written word, which transforms the dissemination of ideas. Owing to these differences between animals and human beings, we do not regard animals as being capable of committing atrocities or, in any case, as capable of being morally responsible for their behavior. So it is even when, for example, we deem it appropriate to kill an animal for having mauled a human being to death.

Perhaps Plato may have the last word after all. He held that individuals could not be truly just unless, from the outset of their lives, they were entirely raised in just the right way. In the same way that defective buildings cannot be expected to survive major storms, people whose character formation is flawed cannot be expected to survive major moral storms. If this is right, then the explanation for why atrocities have been a painfully enduring part of human history is not so much that human beings have not had noble ideals. Rather, it is that in most societies it is profoundly rare that children have been raised with the kind of moral foundations that make it possible for them, once they reach adulthood, to weather major moral crises. In the absence of such a foundation, psychologically healthy people can do the unthinkable, namely be utterly indifferent to the humanity of another. In a word, Plato would say that atrocities exploit the fundamental moral imperfections of our upbringing.

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See also Death Squads; Disasters, Man-Made; Genocide; Holocaust; Lynching and Vigilante Justice; Massacres

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Australian Aboriginal Beliefs and Traditions

The interest in Australian Aboriginal beliefs and traditions increased in the late 19th and early 20th centuries as European scholars tried to understand the origin and evolution not only of the human species but also of its religion and culture. Australian Aborigines were believed to be in the early stages of this development, representing the dawn of humankind, according to the models of cultural evolution at the time. In remote Australia, so-called wild Aborigines, almost untouched by European civilization, would thus enable scholars to gain a better understanding of how their forebears must have lived tens of thousands of years ago. The term *Aborigines* denotes this understanding of a people from the origin (*ab origine*), exemplary for the beginnings or early manifestations of social institutions and cultural forms.

Australian Aborigines were of great importance for social theorizing: Émile Durkheim's work on the elementary forms of religion and Sigmund Freud's idea of the primordial band, for example, were based on contemporary knowledge about indigenous Australians. To this body of literature the books published from 1899 onward by Baldwin Spencer and Frank Gillen made a major contribution. Because Gillen, a postmaster, had become acquainted with Aborigines in Central Australia, he and Spencer, a Melbourne professor, managed to document their traditions and beliefs in great detail. Spencer and Gillen did so on the basis of first-hand information and even direct observation of a totemic ceremony that would become crucial evidence for Durkheim's theory on social cohesion. Bronislaw Malinowski also grappled with Australian materials on the Aboriginal family. And Alfred Radcliffe-Brown documented and analyzed the intricacies of Aboriginal social organization and the variety of systems of kinship in Australia.

Across Australia an estimated 500 distinct indigenous languages were spoken. With also considerable variation in their habitat, Aboriginal groups differed in lifestyle and cultural practices enough for the continent to encompass many indigenous cultures. Although the perspective is complicated because a great many Aborigines are multilingual, almost all Aborigines share adherence to the general outline of a cosmology.

The Dreaming

The central concept in understanding Aboriginal cosmology is the Dreaming, the mythological, formative era during which the enduring shape of the earth was created, patterns of living were established, and laws for human behavior were set down. Spencer and Gillen introduced the term "the Dream time" for the Aboriginal cosmology. It was their translation of the word *alcheringa* from the Aranda (now: Arrente) in Central Australia. Although this translation is somewhat misleading, Aborigines have adopted it in speaking in English about their worldview. Most commonly used by Aborigines today are the terms *The Dreaming* and *Dreaming*. Another expression that has currency is *The Law*.

Dreamtime, the Dreaming, and related terms refer to the creation time. According to Aboriginal creation stories, Ancestral Beings reshaped the world in a long distant past. Thus, in contrast to the creation myths of world religions, this was not a creation out of nothing. The world already existed as an inert, amorphous mass of clay or, covered by water, in fluid condition. The powers of the Dreaming emerged from this mass, came to the surface, took human-like shapes, and wandered over the earth. In the process they had adventures, recounted in the creation stories, that were events that molded the landscape, and created nature and culture. Ancestral Beings transformed into animals and other creatures, vegetation, natural features such as rocks and creeks and waterholes, natural forces such as thunder and rain, and visible elements and formations in the sky. The Ancestral Beings gave Aborigines a blueprint for their way of life. According to the

creation stories, the Ancestral Beings also installed the major religious ceremonies.

Some of the narrated events of the Dreaming are reenacted in those ceremonies. Although the Dreaming refers to the long distant past of the creation time, for Aborigines the Dreaming is omnipresent in space and time—past, present, and future. Generally speaking, Aborigines attribute all acts of creativity to the Ancestral Beings of the Dreaming. So, in principle, there is no difference between patterns or designs found in nature and those made by Aborigines in the context of their ceremonial life. Both kinds of design may be conceived of as traces of the Dreaming, containing spiritual power. Their world is one of meaningful signs, and every sign is a statement of their being in the world.

The Dreaming thus continues to have relevance for the present as well as for the future through the Ancestral Beings that were present and active at the beginning of life and continue to exist and exert their influence. They are incorporated into the social system of clans and kinship, and their interrelationships resemble those between social groupings. Following Kenneth Maddock, a distinction between these Ancestral Beings can be made between so-called transcendental and totemic powers. The difference between both types of power corresponds to differences in the magnitude of their creative acts. Furthermore, the former transcends the specific social divisions connected to clans or particular kinship relations. The latter are associated with certain social groups, such as clans, to the exclusion of others.

Mythological Beliefs

Throughout Australia, a great diversity in mythological beliefs can be discerned. An example may be seen in geographical differences in the perception of transcendental powers. In the southern and eastern parts of Australia, an "All-Father" figure is said to have had decisive influence in shaping the earth, whereas in northern Australia, such formative power is ascribed to an "All-Mother" figure. Respective examples are Ngurunderi from the Lower River Murray area and Murtankala from Bathurst and Melville Islands. The majority of religious myths describe the wanderings and activities of various creative beings. However, in view of the great variation in the natural environment, it is not unsurprising that there exists an equal variety in explanatory myths. Moreover, even within clans and kinship groups, no single version is necessarily accepted as the only correct one. Frequently, the ancestral connections referred to reflect the protagonists' representations of social relations and subsequent relations to the land. Ideologically, Aborigines state they belong to the land rather than that the land belongs to them. Claims to the relevant ancestral connections have to be rooted in the authority of the Dreamtime, a privilege of the initiated, but it is still more of an achievement than a given since new aspects of Dreamtime stories, supposed to have always been there, can be revealed in a dream, a vision, or a newly made design. Whether such revelations, embodying the hidden dynamics of the Dreamtime, catch on and find acceptance or not often depends on the political state of affairs. Interestingly, introduced species, Jesus, cars, and planes, among other things, have been appropriated and incorporated in Aboriginal totemic systems.

How Death Came Into the World

The moon figures prominently in various Australian Aboriginal myths about the origin of death. In these myths, an ancestral being dies and another being, the moon, offers to revive the first dead ever. The offer is refused. Hence, death has come to the world. The myth of the cultural hero Purukupali and his brother Tapara from Bathurst and Melville Islands, northern Australia, is a case in point.

Toward the end of the creation period Purukupali introduced death into Tiwi society. Purukupali fought with his younger maternal brother, Tapara, after the latter had seduced Purukupali's wife and her son had died as a result of neglect. Tapara offered to bring the child back to life, but Purukupali refused the offer and said that because his son had died, all people had to die. In his fight, Tapara injured Purukupali's leg with a forked throwing club. Tapara was hurt above the eye and transformed into the moon. Every month the scar left by the injury above the eye still can be seen on the moon. In one version of the myth, Purukupali's baby, Djinani, dies of starvation; in another, he

dies of thirst due to having been left in the hot sun, while Tapara and Purukupali's wife Bima were having sex in the bushes. Bima was grief-stricken: Her wailing sounds can still be heard, because she turned into Waijai, the curlew. Whereas Tapara might be seen as a symbol of regeneration—think of the waning and waxing of the moon—through his promise to bring Purukupali's dead son (Djinani) back to life within 3 days, Purukupali issued death: as his son had died, he said, all people would have to die. Such myths involving death and the moon, with the refusal of a regeneration to life as their theme, have been recorded across Australia.

Mortuary Rites and Death-Related Taboos

Belief is transformed into action through Aboriginal ritual. Ritual and Dreaming mythology are closely intertwined. Previously, many authors have noted a strict gender division in religious ritual activities, suggesting that male rites were sacred and secret, whereas female rites were profane. This perception is no longer endorsed, for women do play an important part in male rituals; they also have rituals of their own. In addition, much of the sacred ritual and symbolic imagery is of equal significance to men and women, particularly in life cycle rituals, a frame through which to perceive the world.

Nearly everywhere throughout Aboriginal Australia mortuary rites are carried out, and in some places, these rites are elaborate and extensive. Aborigines had no conception of a natural death, but if this belief was once universal, it is no longer adhered to in most cases. Expressions of anger and utterance of physical threats, however, are part and parcel of the ritual repertoire and mourning behavior in a number of places. Suspicions of homicide, including deaths as a result of sorcery, can be dealt with in an inquest, sometimes followed with either the victims' vengeance by physical or metaphysical means or compensation by the perpetrators. Wailing is often accompanied by gestures suggestive of the self-infliction of harm, which have to be stopped by others on the scene.

Customary, the personal name of the deceased becomes taboo for a period of time. The same accounts for recorded voices and images. Other mortuary taboos Aborigines might have to observe relate to food, sexuality, the corpse, personal belongings of the deceased, and places frequented by the dead. Cleansing rites with smoke, water, or both, can release them from these taboos. Sometimes mock fights also occur to this end.

The cycle of mortuary rites often has particular ancestral connections, relating to the deceased and participants, as its theme. They entail a division of labor and the acting out of various roles, commemorating the dead in song, dance, ritual calls, and gestures, as well as restoring the social fabric. Painted designs and sculptures can also figure prominently. Besides bringing forth the transition of the deceased from the world of the living to the world of the dead, the rituals are interwoven with other passages, such as the initiation of youths, whereas initiation and seasonal rites may involve aspects of the mortuary cycle. Rather than having clear-cut beginnings and ends, mortuary rites tend to be part of an ongoing social discourse, expressed in the lyrics of mourning songs.

Forms of Disposal

The various types of mortuary ritual in Aboriginal Australia, including the treatment and disposal of the dead body, reflect the Aboriginal view of death as a transition through which a person moves to another phase of existence. An important concern of mortuary ritual is to drive away the spirit of the deceased from the world of the living to the world of the dead. This may include partial or complete destruction of the deceased's remains and the deceased's material possessions.

There exists a great variety in the ways of disposing of the corpse, including in the intensity and duration of the process. These forms include interment and/or reburial, exposure on a platform or tree, desiccation or mummification, cremation, placing in a hollow tree, and in addition, the exceptional ritual consumption of a tiny bit of the corpse has also been reported. The modes of disposal are not mutually exclusive, and in some places several forms may occur successively. The type and duration of a disposal may depend on the social status of the deceased, the nature of death, and the desires, political aspirations, and organizational power of the survivors. The places where the spirits of the dead dwell continue to be of significance. For example, the living call out to the spirits to assist them in hunting and gathering, the location of the graves has a bearing on territorial

rights, and touching the sand of a grave of a relative is supposed to bring luck in playing cards.

Eric Venbrux and Anke Tonnaer

See also Death, Anthropological Perspectives; Deities of Life and Death; Funerals and Funeralization in Cross-Cultural Perspective; Mythology; Totemism

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Autoerotic Asphyxia

Autoerotic asphyxia (AEA) is the practice of preventing oxygen uptake to arouse sexual desire. Medical professionals are likely to refer to AEA as the inducement of cerebral anoxia—a lack of oxygen in the brain—while attempting to achieve orgasm. Other names include asphyxiophilia, hypoxyphilia, and sexual asphyxia, which focus on sexual desire and would include arousing the sexual desire of one's sexual partner(s) in the act, whereas AEA is limited to practices that are directed to one individual for the satisfaction of his or her own sexual desire. It seems to have caught the attention of the scientific community in the early 20th century when a description appeared in the 1902 volume of the *Annales d'Hygiène publique et de Médecine légale*. As a regular supply of oxygen is necessary for survival, AEA risks causing death and it is largely through such deaths that AEA is known. While AEA seems to attract morbid fascination for its combination of sexual pleasure and the taking of one's life in a single act, that it is known through death is important for considering the epistemology of AEA. Furthermore, death is often represented in the act of AEA, such as with photos or videos of apparently dead people, which means that as AEA is known through death, death is also known through AEA.

Descriptive Knowledge

People who practice AEA rarely discuss this publicly, but because it is a cause of mortality, it has required that those involved in investigating these deaths, particularly the police, coroners, and forensic pathologists, must describe and interpret scenes of fatality where AEA seems to have occurred. The minimum requirements for suggesting that AEA was being practiced are the presence of signs of masturbation and asphyxiation. While asphyxiation is likely to be the cause of death in most autoerotic fatalities, it is possible that signs of masturbation are either absent or missed and therefore that AEA is overlooked. John Quinn and Pauline Twomey report of a man, Mr. J. B., in a psychiatric unit in Ireland who, while appearing to present no suicide risk, had been found with clothing tied around his neck on seven separate occasions. The staff thought these were parasuicidal acts until Mr. J. B. revealed that he found that the asphyxiation enhanced his sexual desire while masturbating. Consequently, AEA may be overlooked for parasuicide or suicide, particularly in psychiatric settings and scenes of fatality.

Methods of asphyxiation include applying pressure to the neck; using ligatures for strangulation; fixing airtight materials, particularly plastic bags, around the head; and using chemicals, such as anesthetic gases and solvents, that remove oxygen. Inducing cerebral anoxia can be relatively simple, but elaborate devices can be constructed with

systems that are intended to halt the asphyxiation before it harms the individual involved.

Although AEA is understood to help excite sexual desire, scenes of autoerotic fatality often contain items that are not necessary for asphyxiation or masturbation but may be involved in the practice. Items include pornography; materials such as plastic and fur, which are used in fetishist practice; devices for stimulating the anus; photographs and movies apparently depicting scenes of death; and mirrors and video cameras that are in a position that would allow the individual concerned to watch him- or herself during AEA. Two elements that become more common as the age of the person involved increases are the presence of physical restraints (in addition to any ligatures for asphyxia) and wearing clothes indicative of the opposite sex, which are termed bondage and tranvestism, respectively. Like AEA, bondage and, in some cases, tranvestism are practices for attaining sexual gratification and such practices can be combined.

Forensic evidence describing AEA has accumulated since the first report in 1902, but there are many other sources that predate scientific interest in AEA. The most infamous literary examples are likely to be from the work of the French aristocrat Marquis de Sade (1790–1840), who was imprisoned for his violent and pornographic writing. An example that is most often used in reference to AEA comes from legal documents from a trail of the murder of František Kočzwara, composer of "The Battle of Prague." Kočzwara was from Prague but spent much of his time in England where he died February 2, 1791, in the company of Susannah Hill, a prostitute he visited in Vime Street, Westminster. Hill was tried for, and acquitted of, murder and reported that Kočzwara fastened one end of a rope to the doorknob and the other around his neck and asked her to let him hang for five minutes, which led to his demise.

A more contemporary example comes from Australia where Michael Hutchence, a member of the band INXS, was found dead in a hotel room in 1997 with a belt that had apparently been used for asphyxiation. The coroners ruled that Hutchence's death was suicide, but in the absence of a suicide note and the naked state in which Hutchence was found, others, particularly close family, have suggested that he died in the practice of AEA.

Epidemiological Knowledge

Estimates suggest that one in a million people practices AEA, but it is extremely difficult to provide accurate figures on the prevalence of AEA. Despite the variety of ways of expressing sexuality across cultures, much sexual activity remains concealed, and this is particularly so for AEA. Even if practitioners were happy to discuss their AEA with others, it is unlikely that they would feel compelled to seek medical help for something that enhances sexual pleasure. One of the most detailed descriptions of AEA in the living is the biography of Nelson Cooper by John Money, Gordon Wainwright, and David Hingsburger; unfortunately, this is only about one person and tells us little about people who practice AEA. Consequently, most of the epidemiological knowledge is from practitioners who die as a consequence of AEA.

There is much agreement that many autoerotic fatalities occur in men under 30 years old, but estimates of the total number vary dramatically. For example, for the United States and Canada figures range between 40 and 2,000 deaths for all age groups every year and it is difficult to decide which figures are most accurate. Many countries keep an annual record of mortality and its causes, but these records rarely contain reports of autoerotic fatalities. Mortality figures do report deaths due to asphyxiation and may even separate these deaths into accidental asphyxiation and suicide, but neither is limited to AEA. Family and friends may remove signs of sexual activity to avoid embarrassment, which could leave the scene looking like suicide. In addition, scenes of death require careful examination and may provide few clues that are easily interpreted.

Friends and family may help investigators build a picture of the deceased and explain the importance of clues found at the scene, but they may be unlikely to help with information of a sexual nature. More specifically, those involved in making reports of death are likely to give some consideration for the family and friends of the deceased and may be wary of raising the prospect that the activity causing death was sexual. However, some analysts of adolescent suicides suggest that almost 1 in 20 suicides and 1 in 3 hangings are related to autoerotic deaths.

Epistemic Considerations

Understanding of the epidemiology of AEA has been built upon analyses of instances of death and its causes. Consequently, knowledge of AEA has largely emerged through the death of practitioners of AEA, and it would seem prudent to attend to the importance of this for the epistemology of AEA. Crucially, there seem to be two, albeit entangled, epistemic considerations: the representation of death in (a) the practice and (b) the study of AEA.

First, death is often represented in the practice of AEA. Practitioners have been found with pictures, photographs, and films depicting people who appear to be dead or dying. In addition, practitioners have been found with devices that allow them to see themselves or parts of themselves in the act of AEA. As AEA is the practice of restricting air supply to arouse sexual desire, the distinctive element would appear to be the physiological response, the dizziness and euphoria that occur as a result of oxygen deprivation. The representation of death is not necessary for such a response to occur. Consequently, because depictions of death are not necessary for asphyxiation, it is probable that they have a more direct role in sexual excitation. Indeed, death from asphyxiation may be more than an unintended consequence as the risk of death or an experience of a greater proximity to death may be implicated in the stimulation of sexual arousal. The point is that representations of death may be part of the practice of AEA that is sexually exciting.

Second, death is represented in the study of AEA. As part of the collection of evidence, investigators take photographs and videos of death scenes. In addition, investigators draw pictures depicting the scenes or aspects of it and may even put together a mock-up of the original scene. In the study of AEA, researchers draw upon pictures, photographs, and stories for illustrative purposes. It would not be uncommon for a journal article or talk about AEA to start with a short story of a mother who discovered her son in a state of undress, surrounded by pornographic materials and bound with a device for causing asphyxiation. Similarly, photographs and pictures depicting autoerotic fatalities may be used throughout an article or talk, and in books, such images may adorn the jacket cover. As the representation of death would seem to be an aspect of AEA, the use of such images (both narrative and pictorial) in the study of AEA is not inconsequential. Lisa Downing and Danny Nobus pose that the source of such images often remains ambiguous. That is, it is not clear if the image is a mock-up, if it is of a scene of an autoerotic fatality, or if it is from such a scene. A story may be of a real death or it may be fictional, a picture may be of a person who has really died as a consequence of asphyxiation or it may be an actor pretending, and a picture may be one the investigators took at the scene or it may be one that was found at the scene. The representations of death used in the study of AEA seem to have a similar epistemic status to those representations used in the practice of AEA. As such, the images constructed, however that may be, in the study of AEA may have the consequence—intended or not—of arousing sexual desire.

It is unlikely that the researchers and investigators will ever dispense with such images of death. What this highlights, however, is that the morbid interest with which AEA is often received is a fascination with representations of death that are in some way sexualized. During the last half of the 20th century there were on average 10 cases of AEA reported in the academic literature every year. As death and sexuality are of concern to so many and yet manifest in such a variety of means, this interest with AEA is likely to continue because it combines both.

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See also Databases; Sex and Death; Subintentional Death; Suicide

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Awareness of Death in Open and Closed Contexts

In 1965, Barney G. Glaser and Anselm L. Strauss's study of the different awareness contexts of dying was the result of an extensive field study of how dying and death were treated in a number of American hospitals in the early 1960s. The four different awareness contexts portrayed by this study were to lay the foundation for an awareness of dying and death that resulted in a new paradigm.

In the first, *closed awareness*, dying patients do not know of or recognize their impending death because this information is withheld from the patients. Five structural conditions contribute to closed awareness: (1) the patients' lacking the experience to recognize signs of death, (2) physicians' not informing the patient that death is imminent, (3) the lack of discussion of death among family members, (4) the medical organization's not providing adequate information to the patient, and (5) the patients' lacking allies who would reveal the truth.

The second awareness is *suspicion awareness*. The patient does not *know* he or she is dying, but *suspects* death is close and also suspects the professionals are withholding information that would confirm this suspicion. Several structural conditions are supposed to account for this suspicion: (a) bodily changes in the patient, (b) changes in or termination of treatment, (c) cues from professionals or next of kin, and (d) the patient's being alarmed by the name of the care unit (i.e., the intensive care unit or oncology department).

The third awareness context is *the ritual drama of mutual pretense*. That is, the patient, professionals, and the next of kin know that the patient is about to die but pretend they do not know and hence act as if this were not the case. The structural conditions of open awareness are present here, but one of the parties expresses a desire to pretend that death is not impending and the other party (or parties) decides to play along in this drama. Two rationales for agreeing to mutual pretense on behalf of the professionals are found: (1) the patient wishes to pretend, and (2) the patient is easier to handle if the matter of death and dying is not openly discussed.

When both patient and professionals know the patient is dying and acknowledge this, there is an open awareness, the fourth context. Here different degrees of openness are found to occur. This includes whether death is expected, when it is expected, and how it will come about.

Further Contexts of Awareness

This fourfold analysis does not fully entail the complexity of awareness contexts, and further research has found elaborated versions of awareness. If a person acquires knowledge about impending death, but this knowledge is effectively blocked out, this results in *suspended awareness*. If the dying person oscillates between periods of open and closed awareness, this results in *conditional awareness,* in which the oscillation is triggered by different external or internal factors. Awareness of dying in the conditional sense can also be contrasted with the awareness of being mortal, an awareness that it is sometimes claimed we should have throughout life, that is, the idea about *memento mori.*

Paradigm Shift

The study by Glaser and Strauss described a situation in which closed awareness and withholding information were the norm for relating to dying patients. At the same time it was emphasized that death and dying were surrounded by a taboo, hindering open discussion and information. Through the efforts of thanatologists and pioneers within the hospice movement of the 1960s, a shift in this paradigm around death and dying started toward a generally more open climate, including calls for open discussion of death and dying and the recognition of the care of dying patients as an essential part of health care. In studies conducted by Elisabeth Kübler-Ross, awareness of dying was a necessary feature of being able to reach the stage of acceptance now deemed essential to providing patients with a good death. In the works of Dame Cicely Saunders, the ability to provide proper care for the dying patient also required openness of the topic of death and dying; closed awareness was no

longer considered effective in contributing to a good death.

The norm supporting open awareness is supported by a shift in the structural conditions of health care and medicine, wherein emphasis on patient autonomy has resulted in an obligation to always provide the patient with adequate information concerning his or her condition, including information about death and dying. However, research shows that the obligation to adequately inform the patient is interpreted as conditional by professionals who, to a large extent, continue to retain control over the disclosure of information. The norm of open awareness is found to be well in line with a modern role of dying, emphasizing the individual person's possibility to fashion one's own death, a factor that requires awareness of approaching death.

Establishing open awareness as normative results also in a shift in expectations for how patients should relate to death and dying. Not only being aware of impending death but also being committed to talk openly about death is labeled *full open awareness*.

This shift in awareness has resulted in discussion and critique of the new paradigm. In other cultural contexts, closed awareness is seen as a way to protect the dying person from distress. It is also found that patients oscillate between open and closed awareness to avoid threats and to handle relationships and thus control the level of awareness in a way that is tolerable to them. Within the context of full open awareness, that which is now interpreted as denial of death has been found to be a lack of interest in discussing death and dying; patients are unwilling to be constantly reminded they are dying. Different studies appear to balance this conflicting view by pointing out that the modern role of dying is still not generally accepted or practiced and is dependent on factors such as culture, class background, and age. Moreover, it is generally associated with specific conditions that affect awareness around dying and death, such as deteriorating mental faculties.

Normative Issues Around Awareness

The normative requirement that the dying should be aware of impending death gives rise to the question of whether that person should have a choice of such awareness of oncoming death. Psychological studies of defense mechanisms suggest that dying persons can regulate their awareness of oncoming death at a tolerable level. Moreover, Glaser and Strauss demonstrated how professionals can regulate the patient's degree of awareness. This raises questions about whether they should support open rather than closed awareness or some other awareness alternative. Whether dying persons should be made aware of death and dying is mainly a matter of norms and values concerning what is beneficial to the dying person and whether the dying person has ethical obligations that should be fulfilled even in the face of death.

Questions pertaining to what is beneficial to the dying person give rise to three types of arguments. First, awareness is instrumentally useful in that it enables the dying person to take advantage of the remaining time left—to prepare for death in different ways, take evasive actions against death, or just focus on the things that will bring value to one's life in the time one has left. Second, awareness will be conducive to self-determination, freedom, and control over the dying person's life. Third, awareness is valuable in itself insofar as it is an essential part of a good life.

The instrumental value of awareness is dependent on the value of what is achieved, whether we can achieve this regardless of being aware and whether the price of awareness is worth the benefits achieved. However, a price is exacted for this awareness of oncoming death in the form of a lower well-being and a lack of motivation. In contrast to this type of argument, it has been suggested that it is possible to take evasive action without being fully aware of oncoming death. It has been argued that the preparations the dying person can do should be made earlier in order to safeguard their benefits, or perhaps these are not important enough to warrant attention. It has also been argued that insights into the limits of time might bring stress and paralysis, hindering the person from using the time left to achieve quality of life.

That awareness, conducive to self-determination, freedom, and control, is important to allow one to plan and realize these life plans. It is also related to the fact that such knowledge allows one the freedom to act within reason but without consequence, and in the face of death, that which may have caused fear now loses its hold. But it has also been

posed that relevant information leads to a loss of initiative.

Moreover, it has been argued that avoidance of the negative experience of awareness is not useful to the extent that one cannot use this knowledge to alter one's own life or that of others for the better.

That the dying person should recognize an ethical obligation to become aware of impending death is associated with the fact that this might be instrumental in benefiting or fulfilling obligations toward other people. If the dying person and next of kin adopt different awareness attitudes toward death and dying, this can result in the lack of open communication, such as not being able to engage in taking an appropriate good-bye. However, it has been emphasized that this is dependent on a certain expressivist view of relationships in which close relationships imply that we share intimate thoughts and feelings. It has also been argued that if the parties adopt a common attitude of closed awareness or denial, this might cause the relationship to continue more smoothly.

In conclusion, the shift in paradigm from a closed to an open awareness context surrounding death and dying has been supported by reference to values and norms relative to how a dying person should be treated medically and otherwise. However, research and discussion of open awareness provide equivocal support for such a paradigm, and in relation to the dying patient the matter of awareness calls for a continued discussion of what is beneficial to the patient and the next of kin.

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See also Appropriate Death; Life Review; Psychological Autopsy; Symbols of Death and *Memento Mori*

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Banshee

The banshee is the Irish supernatural death-messenger par excellence. Regarded as a family messenger of death, this female spirit is said to cry when a member of Irish family is about to die, at home or abroad. Belief in a female supernatural being foreboding death is an ancient cultural inheritance in Ireland. In the literature of early Ireland in the Irish language such beings appear in the context of imminent death, and the motif has persisted through the centuries in Irish poetry and prose.

A supernatural female foreboder of death has also appeared in works in the English language in Ireland for a couple of centuries. In *Castle Rackrent* published in 1800, Maria Edgeworth notes that in the previous century the great Irish families had a Banshee, but their presence was no longer evident. In representing the banshee as an element of past belief on the part of the Anglo-Irish aristocracy, Edgeworth makes no mention of the persistence of belief in such a being among the people at large in her time—something which she was likely to have been aware of in view of her knowledge of the beliefs and customs of the peasantry.

Other writers also make mention of the banshee in the course of the 19th century, but their accounts are general in nature and often strive to provide an antiquarian-type interpretation of the belief. Few of these analysts acknowledged that rich and varied oral traditions of the banshee were current at the time of writing, in both English and Irish languages, which would have added substance to their accounts and provided a clear picture of the complex nature of the belief. Thanks to the efforts of the Irish Folklore Commission and its successor institutions, a large body of such traditions was amassed in the course of the 20th century, and field work continues to complement and corroborate them in the 21st century. It is thus possible to explore the richness of ideas about the banshee prevalent in the oral traditions of the Irish people in the 19th and 20th centuries, and to assess the role that these traditions played in the lives of those who held the belief. Such a substantial and varied body of source material also enables researchers to determine the main components of the banshee belief in Ireland in recent centuries, to assess regional variation in the traditions concerning her, and to explore her manifestations and roles in earlier centuries.

The names attached to supernatural beings are usually important indicators of the main traits associated with them in the oral traditions of the people. The names can also point to regional variation in traditions about such supernatural beings, and they can be of assistance in trying to determine the age, origin, and functions of the belief concerning them.

Irish Tradition and the Banshee

The Irish supernatural death-messenger is known by a variety of names in different parts of the country. The most common term, found throughout Ireland, is *bean sí* (anglicized "banshee"), meaning "woman of the otherworld," clearly

indicating that she is considered to be of female gender and of supernatural origin. In view of the wide distribution of this appellation for the supernatural death-messenger and because it is found in areas where other local terms are prominent, it can be assumed that it has been the most common and most widespread name for this supernatural being for many centuries.

In parts of southeastern Ireland the banshee is also known by various dialect forms of the word *badhbh,* the name of a goddess, usually a goddess of war, appearing in medieval Irish literature, while in the South Midlands she is called *badhb chaointe* "keening or lamenting *badhb,*" an appellation reflecting her origin and role behavior. The distribution pattern and various dialect forms of the word *badhbh* indicate that these terms are of appreciable use in the areas where they have been recorded.

The remaining traditional name for the banshee is *bean chaointe,* "keening woman," a term that is heard in parts of counties Tipperary, Limerick, and Mayo and may once have been more widespread. This name refers specifically to supernatural being's role behavior—lamenting—and may have been influenced by a similar designation for a human woman who lamented the dead. It may also have given rise to the idea found occasionally in the oral tradition that the banshee was, in origin, a former human keening woman who was obliged to continue keening after death because of some misdemeanor in this life. This explanation is not very prominent, however, and despite the appellation *bean sí*/banshee, neither is the idea that she is one of the fairy folk. Tradition-bearers clearly distinguished between the banshee, who is depicted as a solitary being and a messenger of death for certain families, and the fairies, who are regarded as social beings with a range of activities and relationships that does not include the foreboding of death, and they are also not particularly attached to families, or indeed, human beings in general.

Actually the question of the origin of the banshee has only occasionally been raised by tradition-bearers. Yet, the idea that she is connected in a special way to particular families—as an ancestral figure—is a central aspect of the traditions concerning her.

The banshee is said to follow certain families; that is, her connection with them extends from generation to generation. These were particular noble Irish families, and she was said to follow their chieftains or heads. She is also connected to land, patrimony, and identity, thus echoing the poetic evocation of the s*í-bhean* or *bean sí* with noble Gaelic, or Hiberno-Norman families in the 17th century when confiscations and plantations by the English government led to fundamental changes in land ownership in Ireland and in the ethnic, religious, and linguistic profile of much of the country in that century.

Thus traces of an ancestral female figure, with vestiges of the role of a patron goddess, would appear to be discernible in the oral traditions of the death-messenger. Such traces are, of course, older than the 17th century, and analogies can be suggested with other foreboding or lamenting female figures in medieval Irish literature who were concerned for the fortunes of specific noble families or individuals. In the 8th-century prose tale *Táin Bó Fraích*, the impending death of the hero Fraoch mac Idath is announced by the cries of otherworld women, while the goddess Mór Mumhan laments over the grave of her mystical spouse Cathal mac Fionghuine. In later texts his own death is foretold to Brian Ború, High King of Ireland, at the battle of Clontarf 1014, by Aoibheall of Craig Liath, patroness of the Dal gCais sept (clan), County Clare.

Other traits of the death-messenger of modern folk tradition also support this analogy with female sovereignty figures of medieval literature: her appearance both as an old woman and, to some extent also as a tall, vigorous, beautiful young woman, and her washing activity. The latter trait is found in the folklore of parts of western Ireland, particularly in 20th-century oral tradition of County Galway, where the death-messenger is portrayed as a washerwoman beetling clothes in a stream on the eve of the Battle of Aughrim 1691—an activity attributed to the war goddess *badhbh*, said to forebode violent death in battle by washing the blood-stained garments of those fated to die.

It is probable, therefore, that the death-messenger of modern folk tradition originated from the idea of a patron goddess with a variety of contrasting attributes and functions, including the foreboding and announcement of death. It is the former trait, that of death-foreboder, which is emphasized in the death-messenger tradition, and throughout

Ireland she is popularly said to perform that function by crying and lamenting.

The most outstanding characteristic of the banshee in her role as herald of death is her sound. This is usually described in the oral tradition as a female-type inarticulate cry full of sorrow and grief for the person about to die. The banshee is thus thought to be well disposed to the dying person, and her behavior is generally considered to be nonviolent and human-like. So strong was the belief in the death-messenger-as a foreboder of death, it was generally accepted that if a seriously ill person was "followed" by the banshee that he was fated to die once she had cried; in fact, some people held that such a person could not die until the manifestation of the supernatural death-messenger had occurred.

Contemporary View of the Banshee

The dominant popular image of the banshee is as a female figure who always appears alone. She is imagined to be a small old woman, dressed in a long white cloak, with long white hair, which she is almost invariably combing. This image of an old woman probably springs from her connection with death, her perceived ancestral connection with the family she follows, and her role as an outdoor or nature being. The combing motif, which has given rise to an oral legend about how the banshee lost and recovered her comb, also links the banshee with otherworld women similarly depicted in connection with death in medieval Irish literature.

The betwixt and between times—midnight, dawn, and dusk—are the times particularly associated with the manifestation of the death-messenger. These dark and gray hours are especially associated with supernatural beings connected with death, and they are also times when light and sound conditions favor supernatural interpretations of phenomena to which natural interpretations would be given if they occurred in the daytime. Thus, if someone were known to be seriously ill, the supernatural death-messenger would easily spring to mind if an unexplained plaintive cry was experienced at these times.

Most manifestations of the banshee are said to occur in Ireland, usually near the home of the dying person. The cry might also be located near unusual nature formations, like hills or rocky eminences, which appear to have stirred people's imagination and would have been prominent landmarks in the locality.

The death-messenger is often heard near water, such as at wells, lakes, and rivers. The latter formations were also often prominent landmarks in localities or formed boundaries between farms, parishes, or even counties. Because sound travels along water, once it has been associated with the death-messenger it is easy to imagine that the supernatural being who was imagined to emit the sound was also located near to water.

The banshee usually appears in Ireland, but some accounts also refer to the announcement in Ireland of the deaths of Irish people overseas, thus acknowledging deep family roots in the old country. This is especially the case in relation to death in the United States, a country to which Irish people emigrated in large numbers in the 19th and 20th centuries.

It is those concerned with a death, at family and community levels, who usually hear the banshee, rather than the dying person. This is in accordance with the general belief that the dying person does not experience the death-messenger. It also reflects prevailing attitudes toward death and dying in traditional Irish society, in which the care and attention of the dying person and the arrangement of the obsequies were the responsibility of the family and the community.

Despite the almost inevitable weakening impact of changing attitudes toward death in Ireland, on beliefs and customs traditionally associated with the final crisis in life, belief in the banshee as a foreboder of death in certain families seems to have retained a fairly tenacious hold on people's imagination. Such a deep-rooted and obviously significant belief is likely to remain part of the Irish cultural inheritance for ages yet to come.

Patricia Lysaght

See also Deities of Life and Death; Hospice, Contemporary; Popular Culture and Images of Death; Symbols of Death and *Memento Mori*

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Baptism for the Dead

A single verse in the Bible speaks of baptism for the dead: Chapter 15 verse 29 of Paul's First Letter to the Corinthians, itself the longest focused textual reflection on death in the New Testament. This entry explores this much ignored verse, the imagery of death in ordinary Christian baptism, and how vicarious baptism became foundational within Mormonism and fostered its program of genealogy.

Textual Conundrum

This Corinthians passage has often been included in funeral services because it highlights the centrality of resurrection within Christianity. Written to oppose arguments against resurrection, it links Jesus's resurrection with the future resurrection of believers, convinced that Christianity devoid of resurrection is vacuous. Just when concluding his depiction of a future when sin and death are conquered and God is supreme, he cites the practice of those who are "baptized for the dead," emphasizing that such a rite would be pointless without the ultimate resurrection of the dead. For Paul, that rite demonstrated belief in resurrection; otherwise, the practice would deny its underlying motivation. Whatever its original meaning, this text's existence within scripture allowed subsequent commentators either to ignore it as inappropriate to need, as has often been the case, or to breathe new life into it as occasion demands.

John Calvin (1509–1564), the Protestant reformer, was but one who pondered vicarious baptism, well aware that the early Church Fathers Ambrose (339–397) and Chrysostom (347–407) and others had assumed the text referred to the custom, albeit rather superstitious and corrupt, of baptizing a living person at the graveside of some unbaptized Christian who had suffered an unexpectedly sudden death prior to baptism. Calvin not only alludes to various interpretations but also tells how he changed his mind over this text. He could not believe that Paul would ever allude to something with which he personally disagreed simply to have an example to prove a point. Calvin's early view had been that the text was a general indication that baptism was an important aspect of the Christian life as far as eternity was concerned. All that baptism embraced would be realized in the afterlife world of the dead: In that sense baptism was "for the dead." But then Calvin changed his mind, accepting the text as referring to Christians who, while still learning about the faith as catechumens were not fully prepared for baptism, discovered that they were soon to die, perhaps of a terminal illness. Now, despairing of life, with baptism of no use to them in this world, they saw themselves as "dead people." In being baptized for the dead, they were being baptized as and for themselves as people as good as dead. This would be a comfort to them and an example to their healthier fellows on the value of baptism.

Baptism at Large

It is certainly true that baptism was profoundly important as a mark of full identity within early Christianity as within its subsequent history. Integral to its theological meaning has been an interplay of the ideas of life and death portrayed in the image of the resurrection. To be baptized was to be associated with the death and resurrection of

Jesus. The water of baptism was, among other things, like the grave. One entered it, "died," and emerged as though from the grave. While baptism mirrored what had already happened to Jesus, it foreshowed what would happen to believers at the future day of resurrection. Baptism was also a form of rebirth.

Other symbolic associations included the theological idea that human beings lived a life "in the flesh" and as sinful creatures until such time as they were revivified by the power of God's Holy Spirit so as to live "in the spirit." Paul invoked the motif of the first Adam who disobeyed God, died, and brought death upon all humankind while Christ, as the second Adam, was obedient to the point of his own death but, through his resurrection, now brought life through a future resurrection for humanity (Romans 5:12–21). These and other motifs of deliverance invested the act of baptism with powerful notions of salvation. So, when Paul spoke of some as being "baptized for the dead," he touched a vibrant topic. In much contemporary Christianity, however, whose rites have developed from traditional and long-established baptismal liturgies and include many allusions to death to sin, association with Christ, deliverance from slavery, and spiritual rebirth, the motif of "baptism for the dead" finds no place, except for one major case, that of Mormonism.

Latter-day Saints

Joseph Smith (1805–1844), founder of the movement that came to be called The Church of Jesus Christ of Latter-day Saints, popularly known as Mormonism, believed God had revealed to him the fact that living individuals could be baptized for the dead, in the sense of being baptized on their behalf. This vicarious baptism, in which a living person stands proxy for a deceased individual, became framed by a much wider theology of life, death, and afterlife and directly answered the question of the destiny of millions who died before hearing the Christian message or being able to respond to it.

From its inception in 1830 until Joseph's death in 1844, Mormonism was transformed from an essential Protestant Adventism, awaiting the imminent Second Coming of Christ and preparing a kingdom for his arrival in America, to a people possessing a growing interest in ritual performances conducted in sacred secrecy that endowed worthy members with a status guaranteeing them an identity as kings and gods in worlds they would inhabit after their death and resurrection. Joseph saw the universe as operating by well-defined principles, one of which ensured that revealed rituals performed in designated sacred places under the conditions of "time" and earthly mortality would have a direct effect within the afterlife domains of eternity. These included baptism, ordination, and a form of sacred marriage and sealing together of partners for eternity; marriage was not only until death. One key ritual was that of Endowment. This taught basic truths of creation, the fall, and the redemptive atonement effected by Jesus within a wonderful Plan of Salvation devised before the earth was actually organized into its habitable form. Endowment was a form of death-conquest that gave to those who worthily maintained their covenantal vows taken out with God power to survive death and flourish in the eternal postmortem worlds of eternity. Both the principle of earth-based ritual that might secure a heavenly destiny and the recent origin of the church fostered a degree of urgency concerning those who had died before this church restored to the earth truths and rites that had been removed by God shortly after Christ's death and resurrection. Joseph's revelations covered these problems, as documented in *The Doctrine and Covenants* ([DC] 124:33), a book of divine directives that included instructions to build special temples as locations for baptisms for the dead. This idea of vicarious baptism excited early Mormons who rapidly practiced it in rivers. Further revelation, however, soon brought clear directives restricting it to enclosed sacred places.

Vicarious Baptism for the Dead

Joseph had addressed himself to the idea of baptism for the dead during a funeral sermon in 1840. This teaching touched the hearts of many Latter-day Saints because it enabled them to do something of religious importance for the dead in general and for their own relatives in particular. An initial and relatively indiscriminate baptism for dead people soon passed into a more disciplined endeavor focused on one's family. This involved formal gathering and keeping genealogical

records of the dead as basic information for use in the vicarious baptism. Records were and are taken of all that took place. It was established that men should be baptized for male kin and women for female family members. Baptism for the dead now became the rationale for the now famous project of genealogical research compiling immense amounts of information on the dead gathered from church and civic records the world over. It also reinforced the Mormon ideal of extended family life, with the extension embracing ancestors as well as descendants.

With time and resources the Latter-day Saints built their initial large-scale temples, such as the one in Salt Lake City, installing a baptismal font at the basement level of each edifice. This circular bath-like container facilitates baptism by total immersion and stands on the backs of 12 metal oxen representing the Twelve Tribes of Israel. Many countries of the world now possess one or more such temples, buildings quite distinct from the thousands of meeting houses of Mormons that provide the basic organization for weekly worship and that contain rather ordinary fonts for the baptism of the living.

Many non-Mormons often misunderstand vicarious baptism, thinking that it somehow forces the dead to become Mormon. Nothing could be further from the truth, as Latter-day Saints place an absolute value on freedom of choice or personal agency. What vicarious baptism does is demonstrate the love and concern of the living for their dead as they provide them with the opportunity to appropriate in eternity the earth-based baptism conducted on their behalf. A great deal of time and effort is expended both in obtaining kinship records for as long ago as is feasible and in visiting a temple to engage in this "work" on behalf of the dead. Once the baptism has been performed, it becomes possible to conduct other rites for the dead so that they need not lack any advantage available to the living. In many respects this extensive vicarious work is summarized in the initial baptism for the dead and highlights the fact that the Church of Jesus Christ of Latter-day Saints is, essentially, a church grounded in issues of death and its transcendence. Here Mormonism takes traditional Christianity's interest in death and resurrection a step further, personalizing it in a grand theory of the individual family and its eternal bonding in a destiny to become kings and gods ruling over eternal worlds.

This large-scale institutional genealogical research and vicarious ritual practice should not, historically, be totally removed from Joseph Smith's profound grief following his elder brother, Alvin's, sudden death, when the officiating Protestant minister raised doubts over Alvin's heavenly destiny. This was when Joseph was about age 18 and some 7 years before he founded his church in 1830. He later spoke of his youthful heart as swollen and almost bursting with pangs of sorrow at Alvin's death. In 1836, when the new temple at Kirtland, Ohio, was being consecrated, Joseph has a vision in which he sees Alvin in heaven alongside divine figures (DC 137:5). This seeming paradox of Alvin's heavenly location despite his having died before the church was founded and without having been baptized is likely to have influenced ideas on baptism for the dead. This case shows how issues of death and changing cultural contexts could revitalize a biblical text that had laid relatively dormant for nearly 2 millennia.

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See also After-Death Communication; Apocalypse; Christian Beliefs and Traditions; Eschatology; Resurrection

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Bereavement, Grief, and Mourning

The word *bereavement* is the noun form derived from the verb *bereave,* an Old English word that first appeared in 888 C.E. in King Alfred's translation of *The Consolations of Philosophy*. Since around the year 1650 the term *bereft* has referred to loss of immaterial possessions such as life and hope, whereas *bereaved* denotes a loss of a significant other such as a relative through death. The term *bereavement* is used to denote a condition of being bereaved or deprived.

Grief has multiple meanings, all of which deal with the subject of hardship, suffering, injury, discomfort, mental pain, and sorrow. The earliest citation for grief as some form of hardship or suffering is found in Middle English used in the year 1225; grief in the sense of sorrow as a result of loss or personal tragedy first appeared in Middle English in 1350.

The word *mourning,* derived from the verb *mourn,* first appeared in the same Old English manuscript in which *bereave* was used. To mourn is to express one's grief, to lament someone's death, to experience sorrow, grief, or regret.

Dimensions of Bereavement

Bereavement has a holistic or multidimensional impact. Scholars from philosophy, psychology, sociology, and psychiatry point out that bereavement manifests itself physically, emotionally, behaviorally, cognitively, interpersonally, and spiritually. The following examples serve to illustrate:

- *Physically* a bereaved person may experience fatigue, chills, and diarrhea.
- *Emotionally* a bereaved person may feel guilt, anxiety, loneliness, and fear.
- *Behaviorally* a bereaved person may experience bouts of crying and may have trouble sleeping and eating.
- *Cognitively* a bereaved person may have difficulty concentrating and remembering and may be flooded with intrusive images and thoughts.
- *Interpersonally* a bereaved person may remain isolated from others, may find others uncomfortable in his or her presence, and may lash out unpredictably at others.
- *Spiritually* a bereaved person may question the meaning of existence, lose hope, and feel adrift in the world.

The contributions of two scholars, namely Sigmund Freud and John Bowlby, dominate Western cultural thinking about bereavement, grief, and mourning. Since the mid-20th century most writing on bereavement, grief, and mourning emerges from responses to Freud, Bowlby, or both. Freud's seminal paper, translated as "Mourning and Melancholia," involved his efforts to delineate more carefully what today is referred to as clinical depression. Freud compared and contrasted the normal responses to irreparable loss that are found in grief to the pathological responses found in clinical depression. For Freud, when we have a deep emotional investment in another person and that person dies, we engage in denial, not accepting that loss, and fight against relinquishing our emotional investment. Bereavement resolution involves intense, gradual work to demonstrate that the loss occurred and to free one from the emotional attachment placed in the deceased person.

Freud posed that bereavement recovery requires three arduous tasks. First, it is essential to encounter all reminders of the deceased so that eventually they don't produce emotional pangs. Second, it is imperative that one detach emotionally from the person who has died. Third, it is important to construct an emotionally neutral mental representation of the deceased that makes possible remembering the person without suffering the distress of bereavement. Freud's depiction of dealing with bereavement has become known as "grief work."

Dimension of Grief

Freud emphasized that grief is a normal response to the death of a loved one, and he said were it not for personal acquaintance with the effects of bereavement, it would strike him that the intense distress of the griever is pathological. What normal bereavement requires is time and hard work, not professional intervention. Bereavement is a

human misfortune, rather than a pathological condition, and Freud emphasized that a griever does not need referral for professional help.

Erich Lindemann, an American psychiatrist, attempted to build on Freud's idea of grief work when he worked with over 100 persons, most who were bereaved following a massive fire at a Boston restaurant in the early 1940s. Based on this effort, Lindemann's research paper became influential among grief counseling practitioners and for scholars writing about bereavement. Lindemann noted that grieving patients would begin to recover from acute grief once they (a) allowed themselves to feel the distress associated with their bereavement and (b) openly talked about their grief. Ignoring Freud's assertion that grief work required time, not professional intervention, Lindemann made Freud's notion of grief work the standard for understanding what grieving entails.

Lindemann's identification of an acute grief syndrome, a set of seven associated symptoms, has become a landmark contribution. The seven symptoms are the following:

1. Somatic distress occurring in regular waves and lasting from 20 to 60 minutes and manifest in such ways as shortness of breath, trouble eating, utter exhaustion, and sighing
2. A sense of unreality since the death
3. Increased emotional distance from others
4. Intense preoccupation with images and thoughts of the deceased
5. Feelings of guilt
6. Irritability and unprovoked outbursts of hostility
7. Loss of patterns of conduct manifest in such ways as restlessness, difficulty making decisions, aimlessness, and difficulty staying focused

Lindemann also invented the concept "anticipatory grief reactions," which has influenced scholars' speculations, though not without controversy. The concept described the reactions of some women whose expectations their husbands would die in combat in World War II led the women to grieve the men's deaths and emotionally detach even though their husbands had not lost their lives. A contemporary focus of this concept is on grief reactions to learning a loved one is terminally ill.

John Bowlby was a British psychiatrist whose influential thinking about bereavement, grief, and mourning was stimulated by the British government's solution to protect children from being killed at the height of the Nazi bombing of England's cities. The British government separated children from their parents, sequestering these children in the interior of the country. Bowlby was asked to examine the effects separation from parents had on the children, and from this examination his view of bereavement emerged. Whereas Freud referred to psychic processes to explain responses to irreparable loss, Bowlby turned to ethology and to Darwin's thinking on evolution. Maintaining that the survival of mammals depends on close bonds established between infants and caregivers, Bowlby believed that attachment bonds are biologically hardwired, so to speak, into the human species, and the types of attachment a youngster develops with caregivers influence the kinds of relationships that individual will form over his or her life span. The three basic types of attachment bonds identified include secure bonds and two types of insecure bonds: (1) anxious/avoidant bonds and (2) anxious/resistant bonds. A child's responses upon being reunited with parents are influenced by the type of bonds between the parent and the child: Secure children show great pleasure at being reunited, avoidant children seem distant, and resistant children show hostility.

Bowlby used the construct of attachment bonds as his primary theoretical explanandum. Bereavement, grief, and mourning represent naturally occurring responses when attachment bonds are sundered. Thus, bereavement has a fundamental social basis in Bowlby's thinking.

Kenneth Doka's concept of "disenfranchised grief" extends this social context for bereavement thinking. Specifically, two social judgments are noted: (1) Some losses are considered marginal, illicit, or immoral, and (2) grief over such losses is proscribed. Examples include grief over miscarriage, the death of a pet, death of a mistress, and death of a homosexual partner.

Empirical data demonstrating various types of attachment bonds influence contemporary thinking about bereavement. Secure attachments have

been found to characterize normal bereavement responses. Types of attachment concomitant with different styles of coping with stress produce different responses to loss. Bereaved persons whose bond to the deceased had been secure are flexible in their response to loss; persons with insecure attachments exhibit constrained thinking and action. In particular, insecure attachments are thought to produce bereavement complications, such as the difficulty experienced in socially constructing the meaning of the loss. Meaning reconstruction in the face of bereavement is at the heart of the thinking of several influential scholars. What is at stake is relearning one's relationship with other persons, with the world at large, and with oneself. This relearning may require developing completely new frameworks or schema for understanding existence, and in other cases may only require making a loss fit a current conceptual framework.

A Process Model of Grieving

Bowlby described the grieving process in terms of phases:

1. *Numbing phase*. In this first phase, the bereaved person seems incapable of comprehending the loss. A person will say such things as, "I can't believe this has happened."
2. *Yearning or searching phase*. In the second phase, the bereaved person seems preoccupied with thoughts and feelings about the deceased and by a desire to recover what has been lost.
3. *Disorganization and despair phase*. This third phase emerges as the bereaved person realizes the dead person cannot be recovered. Apathy may set in as the person struggles to find ways to cope with an irreparable loss. The challenge is to discard familiar patterns of thinking, feeling, and acting.
4. *Reorganization phase*. The final phase of Bowlby's model denotes a time when a person begins redefining his or her identity and place in the world. Such reorganization not uncommonly requires learning new roles, as when a middle-aged widow returns to the workforce after a 20-year absence or a widower learns how to cook and do laundry.

J. William Worden, an American clinical psychologist, developed an influential model that explains coping with bereavement in terms of four tasks:

1. Accept the reality of the loss.
2. Work through the pain of grief.
3. Adjust to an environment in which the deceased is missing.
4. Withdraw emotional energy and reinvest it in another relationship.

Empirical research challenged the original conceptualization of the bereavement resolution process, principally from advocates who argue that continuing bonds was a common bereavement outcome, thus causing Worden to revise task 4, that is, to emotionally relocate the deceased and move on with life. The rephrasing, while still very close to Freud's overall idea of letting go, suggests the possibility of maintaining a continuing attachment to the deceased.

Some scholars challenge the notion that emotional detachment from the deceased is necessary for bereavement resolution. Thus, it is proposed that a correction called "continuing bonds" is required. It is not uncommon for bereaved persons to constructively face the loss of a significant other while remaining attached to the person who died. This latter emphasis on continuing bonds has captured the attention of many scholars and clinical practitioners, leading in turn to the following irony: Whereas traditional views portrayed ongoing attachment as pathological, some experts argue that a lack of ongoing attachment bonds is an indicator of pathology.

The Dual Process Model of Coping

The dual process model of coping with loss has been proposed as a refinement to the notion of grief work. Clinical work with bereaved persons indicates two distinct processes, not merely a confrontation with distress but also enabling bereaved persons to adapt to their loss. Grief work is accepted as being important to enable one to focus on the distress of one's loss. However, it is also important to attend to other aspects of life. The dual process model asserts that a part of

bereavement requires us to experience a loss orientation (the grief work notion) and also to establish a restoration orientation in which life goes on. Bereaved persons oscillate between these orientations as they deal with their bereavement. Such oscillation is normal; it is what people do naturally. Thus, any bereavement care program that emphasizes only grief work would be incomplete.

More recently, scholars who advocate the dual process model have sought to refine the model by further evaluating types of attachment bonds. Whereas empirical data indicate that secure attachments prior to a death can lead to bereavement resolution with ongoing attachment after the death, in cases of insecure attachment bonds prior to the death, a letting go or detachment is in the best interest of the griever. In short, not all deaths produce bereavements with ongoing attachments, nor should they.

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See also Cemeteries, Pet; Death, Psychological Perspectives; Death, Sociological Perspectives; Denial of Death; Grief, Types of

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Bioethics, History of

The history of bioethics relating to death and dying is, like any philosophical endeavor, about questions and answers. The fundamental challenge to developing a cohesive and consistent approach to such a complex history is that the questions are raised in a pluralistic context in which participants enter the discussion with a variety of religious, ideological, philosophical, educational, and vocational backgrounds. These differences can serve to open new perspectives on a problem, and the history of bioethics is, in part, one of grappling with diverse approaches to moral issues that yield equally diverse responses. These differences can lead to significant impasses, as frequently the end point of a discussion is not an agreement to continue the discussion but rather is a concrete action, one that perhaps must be undertaken with some urgency and may be irrevocable—examples of such include withdrawal of a ventilator, stopping hydration or nutrition, enrolling a dying patient in a research trial with a significant burden of involvement with medical institutions, or actively participating in the death of a person. Such a practical conclusion to a discussion with such high stakes—human death is often at the center of the struggle—lends great significance to this history, and a number of attempts have been made to distill principles that are broadly applicable and comprehensive.

Significant Historical Events

Of the historical events shaping this effort, several have been seminal in the development of contemporary understanding of bioethics as it relates to death and dying, as well as to the structure of research involving human subjects facing potentially lethal diseases. In the United States, one of the earliest influences in the history of ethics—affecting the evolution of ethical codes

that offer guidance in medical decision making—was Dr. Benjamin Rush from Philadelphia who had great interest in moral issues around the time of the American Revolution, issues he addressed in lectures to medical students at the University of Pennsylvania. His work led to the Second National Medical Convention in the mid-1800s in which a committee was charged with drafting a code of medical ethics. Though the code of ethics of the American Medical Association that resulted from this effort had its critics, it was largely praised by the medical community. As new technologies (such as anesthesia and advances in surgical techniques) carrying both benefit and risk were developed, ethical issues arose centering around both the transformation of medicine into a scientific discipline and the idea of physician competence as the basis for ethical evaluation. During the 20th century, authority over patients shifted from the locus of physician duty to that of patient rights, a fact that affected subsequent work significantly. The American Medical Association Code of Ethics underwent several revisions, changing in concert with the evolution of the medical profession, which had achieved a firm position in society. This code, which has deeply affected debates over such issues as abortion, withdrawal of medical support, and euthanasia, is considered central to the medical establishment's vision of itself.

There have been a number of important challenges to the assumption of ubiquitous professional virtues and the moral reputation of the medical establishment. Some of the most important have occurred in the context of research; others in the context of caring for patients who have lost functions considered basic to meaningful life or patients who are suffering human moral abuses—such as those uncovered in the Nuremberg trials, the Tuskegee Syphilis Study, and the Advisory Committee on Human Radiation Experiments—have led to important questions about this assumption. The practical yield has been the production of highly influential documents such as the Belmont Report, the Declaration of Helsinki in its several versions, guidelines produced for the international arena by the Council for International Organizations of Medical Sciences, and, most recently, the adoption of the Universal Declaration of Bioethics and Human Rights in October 2005 by the United Nations Educational, Scientific and Cultural Organization. Common to these efforts are principles such as respect for persons, beneficence, and justice, which apply in both clinical medicine and medical research.

Principle-based deliberation and debate has helped to clarify the issues at stake and to attempt to provide common ground for discussion across pluralistic boundaries. It has also been criticized as being inadequate for addressing issues of such complexity and nuance. For example, casuistry, or case-based ethics, asserts that the principles always follow upon cases, instances, and concrete particulars. Bioethics properly proceeds from cases to categorical principles, not the other way around. Casuists argue (after Aristotle) that ethics is not and cannot be a science. It is rather a field of practical wisdom, a field that grows out of experience that in turn yields a recognition of significant particulars and informed prudence. A second important source of criticism of principlism, communitarianism, also derives from Aristotle. This approach argues that apart from agreement upon certain goods and goals, there is no rational way to reach moral agreement. For example, within one community, individual autonomy might be an important good, while another community deriving from a different cultural background might identify goods such as family obligation or religious authority as more weighty than that of autonomy. This weighing of goods might yield very different approaches to ethical decision making. From inside of a community, such a weighing of goods makes sense and might function as a basis for decision making. However, communitarians argue that there is no "view from nowhere" outside of a particular community that allows one to demonstrate the superiority of one community's view over another's.

Thus the history of bioethics draws from long religious and philosophical histories, from deliberative responses to events (as with the U.S. congressional response to the Tuskegee Syphilis Study), from law, and from the adaptation of past ethical responses to new situations, which are usually analogous in some respects, but which—often because of new technologies—have novel elements that present dilemmas.

Bioethics and Its Relationship to Death and Dying

Several important events have shaped bioethics as it relates to death and dying. One of the most fundamental ethical issues is the very definition of death. Two centuries ago, because of fears about premature burial, laws were passed requiring delay in burial. According to frightening tales, exhumed coffins revealed evidence that people had been buried alive. When is a person dead? We now know that death occurs in stages, a fact that underscores the importance of the philosophical dimension mentioned earlier: Is death when the person ceases to be, when the heart stops beating, or when all cellular activity comes to a halt? These three questions yield three different "times of death." The time of death is a moment of immense emotional, spiritual, and pragmatic significance. We do not take organs from the nondead, so it matters whether organs may be taken from one without brain activity versus one with no cellular activity, because the former is an organ donor who might save a life, whereas the latter might, at most, be able to donate corneas. Kansas in 1970 and Maryland in 1971 first adopted the brain-based definitions of death based upon the recommendations made a few years earlier by the Harvard Ad Hoc Committee on the Definition of Death. Because of the important effects pronouncement of death has, the decade after Kansas and Maryland embraced this criterion was filled with philosophical debate, for the question of when to treat a person as dead was not amenable to scientific methods for resolution. In 1980 the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research took up the question and published its report in 1981, endorsing what is known as the "whole-brain-oriented" definition of brain death. This definition has been adopted throughout the United States as well as in most countries around the world.

Much more controversial has been the debate surrounding the ethical issues related to how we approach people who do not meet the 1968 Harvard brain death criteria, for example, patients with brainstem reflexes but no higher brain function, described as being in a persistent vegetative state. Karen Ann Quinlan was at the center of the most famous case, which was tested in the New Jersey Supreme Court in 1976. This 21-year-old woman experienced respiratory arrest after consuming an overdose of tranquilizers and alcohol. Though she would never regain consciousness, she was stabilized on a ventilator. Her father wanted to act as guardian and remove the ventilator, knowing that this would result in her death. Quinlan's physician disagreed, and a lower court sided with the physician. The New Jersey Supreme Court said that the father could choose which physician he wanted for his daughter, allowing him therefore to choose a physician who would be willing to withdraw the ventilator. It was in this case that the court asked for input from an ethics committee. The Quinlan case thus brought about two important events: (1) rejection of the medical profession as having the authority to decide issues such as this, and (2) an advance in the development of hospital ethics committees charged with guiding decisions when medical staff and families are not in agreement.

The presidential commission that addressed the definition of death turned—in part because of cases like Karen Quinlan's—to questions about foregoing life-sustaining treatment. The report that emerged in 1983 emphasized the importance of voluntary choice of the patient to refuse life-sustaining treatment. The commission embraced the idea that when people are not competent to make such decisions, or else are competent but do not make their wishes known before losing competence, surrogate decision makers, generally from the patient's family, could decide such issues in the best interest of the patient. They supported the role of ethics committees in these decisions, though only a court can override the decision of a surrogate.

A number of other legal cases—such as that of Nancy Beth Cruzan in 1990, in which nutrition and hydration delivered via gastrostomy was removed after long legal controversy ultimately involving the U.S. Supreme Court—established the right to refuse ventilators, nutrition delivered via feeding tube, and other life-sustaining therapies that, in many cases, are identified not as extending meaningful life but rather as extending either the dying process or suffering.

Physician-Assisted Suicide

Perhaps the most difficult recent ethical controversy concerns physician-assisted suicide (PAS).

The issue was made prominent by media response to the efforts of Jack Kevorkian, a pathologist who openly participated in PAS. But he often did so without having any personal relationship with the patient—a fact that many found troubling. In contrast to this approach Timothy Quill assisted his patient Diane, who desired some independence and control and had a form of cancer that was 75% fatal, in the context of a long-standing relationship. In the United States, Oregon passed the Death with Dignity Act in 1997 allowing PAS. The past decade has not seen widespread embrace of Oregon's approach, and the issue continues to be debated. PAS generally involves making the means of death available to a patient—whether this means the use of the devices Dr. Kevorkian used or giving a prescription for lethal doses of medication as Dr. Quill did. A further distinction is drawn between making the means of death available and being an active agent in the death of a patient, an event in which a medical caregiver administers the lethal dose of medication, for example. Whereas in the United States precedent was set for PAS in Oregon, in the international arena precedent has been set for active involvement of physicians in euthanasia. In the past 20 years the Netherlands has opened the way for active voluntary euthanasia. The debate about such involvement of physicians often returns to the codes of medical ethics: How can a physician who is charged with care of the patient also kill the patient, no matter what the circumstance? And if active euthanasia is allowed in one circumstance, what is to stop it in other circumstances? If active euthanasia is allowed for intractable physical pain, what about intractable psychic pain? And does the disease process causing the pain have to be incurable? What if there is a 10% chance that the process can be cured in the next year? What about 5%? And what if we have to wait 3 years to find out the ultimate result? This debate is grounded in the history of bioethics and will form a significant part of its future.

Whether we are talking of medical interventions with the aim of cure, comfort, or control of one's destiny, there are two questions that must always be asked: What can be done next? and What should be done next? The means for answering the first question is scientific. The means for answering the second question is often more philosophical, drawing on many sources of wisdom and insight that are not intrinsically scientific in their approach. History has taught us that scientific advances without ethical considerations can become horrific. Likewise, wisdom without scientific advances cannot further the effort to cure the sick. Medical science committed to ethical research offers the best possibility for continuing the advancement of cures for human disease accompanied by humane and ethical responses to the realities of human suffering and death.

Raymond Barfield

See also Brain Death; Death, Philosophical Perspectives; Defining and Conceptualizing Death; Euthanasia; Kübler-Ross's Stages of Dying

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Body Disposition

Body disposition is the act of dealing with a human body after death. Worldwide, people have found various ways to dispose of human corpses. Death confronts people with a corpse that unavoidably needs to be subjected to some sort of treatment. Humanity has treated dead bodies in accordance to culture, religion, family needs of the deceased, and the deceased's wishes. It seems to be impossible to accomplish the disposal of a corpse without ritual.

The emotions aroused by death are frequently used to explain the subsequent body disposition. One of these emotions is people's fear of a corpse. Throughout the world, attitudes to the decomposition of corpses vary greatly. Hertz gives three explanations for this variation in attitudes. The

first he mentions is the fear for bodily decay and the hygienic consequences. Some people think that corpses have to be disposed of as soon as possible to minimize health risk. In fact, most dead bodies do not form a real health hazard with the exception of cases of infectious diseases, like plague. The second reason for the variation of attitudes is the social status of the deceased. The intensity of emotions differs depending on the life a person has led and his or her social status. The third explanation is the connection of the dead body to the soul. Hertz explains that people fear the soul, because it is considered to remain with the living until the bodily decay is completed.

Despite the variety in body disposition, two universal ways to dispose of a human corpse are burial and cremation. Within burial and cremation practices, there is also a great diversity. For example, there is burial under ground, burial at sea, the exposure of a body to the open air, cremation on a pyre, and cremation through extreme heat. Whatever choice of body disposition, the process is dynamic. The chosen method of disposition does not need to be a final act. Someone can be exhumed after burial, and the remains can then be cremated. Furthermore, the ashes can be used in different ways too.

Besides cremation and burial, there are several alternative ways of body disposition, such as preservation of a body by embalming and mummification, the donation of a body to science, plastination (a preservation technique used for the exposition of human corpses), cryonics (the preservation of a body by deep freezing), and, very seldom, mortuary cannibalization.

Burial

The disposition of a human body by putting it into the ground, called inhumation, dates back to the dawn of human history. It is still the most practiced form of body disposition. Archaeological evidence from prehistoric times points to this oldest form of burial by covering the body with soil and stones, or by placing the body in a cave. In the first decade of the 21st century, inhumation is still a common way to dispose of the dead. People can use a coffin (a box to bury the dead in) and place a stone on the grave as a marker, a point of identification and memorial. Other people, like Muslims, use clean, white cloths in which to wrap the deceased before burial.

Depending on the religion of the deceased and his or her family, choices were made about the posture and location of the body. For example, ancient Egyptians were positioned facing toward the West; many Christians buried their dead close to sacred places and laid them on their back with the hands in a praying gesture; and Muslims laid their dead with their right side facing Mecca.

Throughout the world, in times of disaster and war, people have used mass graves to dispose of a large number of corpses—for example, after a natural disaster such as an earthquake and during the genocides of World War II, Bosnia, and Rwanda. As most of the bodies in a mass grave are unidentified, it is difficult to locate missing people or give a confirmation of their death to the family. Major stress can be caused by the fact that the bereaved have not had the opportunity to dispose of the body of the deceased according to their own notions and rituals.

An alternative way of burial is the disposition of a body at sea. Occasionally, this method is chosen for a practical reason, such as when someone dies on board of a ship at sea. The body is deposited into the so-called watery grave. Contrary to this unforeseen way of disposition at sea, burial in water can also be a chosen action. Vikings placed the corpses of their deceased in longships and set them adrift. Among islanders in the South Pacific, the dead were placed in a canoe and sent off at sea.

Another way of body disposition is the exposure of a corpse to weather conditions or scavenging animals. The Zoroastrians, adherents of the religion Zoroastrianism, who live mainly in India and Iran, used this kind of burial. They place the body of the dead on hills where they are left exposed to the climate and scavenging birds and animals. In Tibet this method is called "sky burial"; a corpse is cut into pieces before it is exposed to scavenging birds. Another example of exposure comes from the Solomon Islands where the body was placed on rocks to be scavenged by sharks at the time of rising tide.

Another way of body disposition is tree burial, the exposure of bodies in trees and platforms, which can be found among Native Americans, the Sioux. They dressed the dead in their best clothes, sewed them in a deerskin, and exposed them on a

platform in a tree. After a period of time the body was brought back and given a burial in soil. In the examples given, exposure was understood as a sign of respect and honor. However, throughout time, exposure of people, for example, by leaving them hanging on the gallows, developed a connotation of humiliation rather than a sign of respect and honor. It becomes clear that it depends on the social, cultural, and religious aspects what meanings are ascribed to the chosen way of human disposition.

Cremation

Cremation is the disposition of a body by burning the body down to ashes and bone fragments. As early as 1000 B.C.E., the Greek were using this method during war. The corpses of soldiers were incinerated on the battlefield, and the ashes were sent home. The Romans also used cremation as a way of human disposition. After cremation, they put the ashes in an urn and placed it in a columbarium, a special wall with niches. After Europe converted to Christianity, use of cremation decreased. Cremation and the Christian idea of the resurrection of the body were regarded as incompatible because a physical resurrection would not be possible after cremation. Cremation was used only to dispose of a large number of corpses in times of disasters or outbreaks of contagious diseases. In 1886, the Vatican prohibited Catholics to use cremation as a way of body disposition; the ban lasted until 1963. Cremation was revived in Europe in the 19th century but saw little use. Popularity of cremation in Europe rose at the end of the 20th century. Most current Christian denominations allow cremation. However, doctrines of Orthodox Judaism and Islam forbid the practice of cremation.

In contrast to the situation in Western countries, cremation has always been practiced in India, by both Hindus and Buddhists. Hindus believe that human disposition by cremation is the right way to release the soul from the body. According to Hindus, the best location to cross from this world to a new world is on the sacred river Ganges. The holy pilgrimage city Varanasi, sited on the banks of the Ganges, is considered particularly appropriate for cremation. On a daily basis, cremation takes place in this holy city at pyres on the banks of the river. Hindus also use the Ganges for the immersion of ashes that were cremated elsewhere.

In North America and Europe, instead of an open fire, a cremation retort is used, a chamber where the body is transformed into bone fragments and ashes through extreme heat. Sometimes, the remains are put into a mill, which grinds the remains into white ashes. In many countries, it is illegal to burn more than one body at a time in the cremation retort. Each country has its own regulations for the scattering of ashes. Countries like the Netherlands and the United Kingdom return the ashes to the bereaved. They can decide the final destination of the ashes, whether they are scattered at sea, in the woods, or in a garden; or whether they are stored in an urn, buried at a cemetery, placed in a columbarium, or processed in mourning jewelry. The options are manifold.

Alternative Ways of Body Disposition

Besides burial and cremation, people can choose other methods of body disposition. In this section, the following alternative options are discussed: (a) embalming and mummification, (b) body donation to science, (c) plastination, (d) cryonics, and (e) mortuary cannibalism.

Embalming is a technique used to preserve a body by postponing the decomposition process. While modern embalming postpones the decomposition process only for a few weeks, mummification is intended to be permanent. A body can either be permanently preserved through mummification due to natural conditions, such as being trapped in clay or ice, or it can be preserved through human intervention. One of the earliest forms of mummification by human intervention is found among the Chinchorro of Chile. Archaeological findings of their mummies date back to 5000 B.C.E. Well known are the mummies of the ancient Egyptians and the pyramids built to protect them. Essential parts of the mummification process were the removal of the brain and the internal organs and the covering of the body in natron, a mineral used to dehydrate the body. Finally, the body was rapped in bandages and placed in a special body container, a sarcophagus. Even in the 20th century, people were mummified. The mummy of Lenin is still on public display in an elaborate tomb in Moscow.

Embalming is a more contemporary practice than mummification. Modern embalming is not

intended as permanent preservation. It aims particularly on sanitation, preservation, and presentation. It is a common practice in the United States, which became popular during the American Civil War when the need emerged to bring soldiers who died on the battlefield home. Modern embalming involves the injection of chemicals directly into the body and the appliance of cosmetics to the body. In the United States, embalming is used mostly for the viewing or visitation of the body before the final body disposition, to improve the visual appearance of the deceased, and to stop the bodily decay temporarily.

Body donation to science is an alternative way of body disposition that entails the donation of a body to an anatomical center. The donation of a body to science is a strictly voluntary act today, but in the past this was different. Cadavers of executed criminals, or bodies robbed from graves, were used frequently. The Dutch artist Rembrandt van Rijn painted *The Anatomical Lesson From Dr. Nicolaas Tulp* (1632) picturing an anatomy lesson in Amsterdam where the body of an executed criminal was used. It was regarded an additional punishment for the criminal to be dissected in public. A special type of public theater was built, called *Theatrum Anatomicum,* for public demonstration of dissections. Dissection takes place in an anatomical center that uses dead bodies for scientific research and education of human anatomy. If people decide to donate their bodies, they have to arrange this before they die. It is only by personal approval, written down in a signed contract between an anatomical center and potential donors, that people can donate their bodies. Throughout the world, each center has its own rules and formal procedures. Anatomical centers apply different preservation methods to preserve the tissue. This is done by inserting a cocktail of chemicals in the body or by freezing the corpse. Both methods stop the process of decay. Embalmed bodies are used mostly for education of students and frozen bodies for the training of surgeons. Defrosted bodies approximate living bodies better than embalmed bodies do and, therefore, are often used for the training of surgeons. When the bodies or the body parts are of no further use to the anatomical center, they are disposed of, either by cremation or burial.

Another way to dispose of a body is the donation of a body for plastination. Plastination is a preservation technique invented by Gunther von Hagen in 1977 in Heidelberg, Germany. This technique consists of replacing the natural body fluids with a plastic to preserve the tissue, which makes it possible to display the body in any desired position. In contrast to embalmed bodies, which are wet, plastinated bodies are dry and odorless, which makes them suitable for exhibition. The technique preserves the body for an indefinite period of time. The first exhibition with plastinated bodies was *Body Worlds* from von Hagen in Japan in 1995. Body Worlds has been traveling through the world ever since. It is comparable to the exhibition from Roy Glover called *Bodies*, which opened in Florida in 2005. Both have attracted millions of visitors, and both have created controversy. Questions focused on whether the body donors gave their consent and whether the display of the bodies was ethically sound.

Cryonics is the preservation of a human body by cooling the body down to stop physical decay. Cryonic supporters hope that in the future, advanced technology will be able to revive their bodies after death. They believe that the human identity is stored in the brain and, therefore, by conserving the brain structure people should be able to conserve their identity.

The idea to deep-freeze people was developed by the physics teacher Robert Ettinger, who founded the first cryonic organization, the Cryonics Institute, in 1976. The first person to be frozen was Dr. James Bedford, who is still stored today. This is not the case with all the bodies that have been preserved in the early days of cryonics. Due to financial problems of certain organizations, some bodies thawed. There are still two organizations for cryonics, both located in the United States. As of October 2008 the Alcor Life Extension Foundation in Arizona is storing 84 bodies, and the Cryonics Institute in Michigan, as of December 2008, is storing 91 bodies.

There are several methods to deep-freeze a body. The first method is to cool the body down to –196 °C in liquid nitrogen. However, this freezing process will damage the body severely; this damage is irreversible. A newer technique that has been developed to prevent the damage caused by the freezing process is called vitrification. The damage of the freezing is reduced by replacing water in the body with protective chemicals. This

technique can be used only for single organs and is, therefore, only used for the preservation of heads, called neuropreservation. In the Alcor Institute, people can opt to store their head only from which the brains are treated with the superior technique of vitrification, or they can choose to store their whole body with the more expensive but inferior method of deep freezing.

Cannibalism, also called anthropophagi, is the consumption of human body (parts) and can be considered, in a way, as a means of body disposition. In most cases, mortuary cannibalism concerns only the consumption of small body parts. The Berewan of Borneo prepared rice wine with the body liquids from the process of bodily decay, and the Amahuaco Indians of Peru drank a mix of cremated body remains with corn. In other cases, the mortuary ritual consisted of the consumption of the whole body. An example is the former mortuary rite of the Wari in Brazil. They practiced both the consumption of people outside their group, exocannibalism, as well as the consumption of their own people, endocannibalism. In the first case the focus of the rite was on humiliation and disrespect, whereas in the second case the focus was on respect and honor for the deceased. The occurrence of another form of mortuary cannibalism emerged in times of disaster, during war, or in exceptional cases of an airplane crash. In these cases, mortuary cannibalism was used as a last resort.

Sophie Bolt

See also Burial at Sea; Burial Laws; Cannibalism; Columbarium; Cremation; Cryonics; Embalming; Mummies of Ancient Egypt; Mummification, Contemporary

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Body Farms

A body farm is a research center where scientists study the human decomposition process. These facilities provide an environment whereby death and decay can be scientifically examined by replicating various settings. Body farms are an important component to better understanding the human decay process and how particular environments may affect the deceased's body. For example, scientists may reenact a murder victim left in a body of water for days prior to discovery or a victim burned posthumously. By studying the process by which bodies decompose when left to the elements, it is possible to accurately determine the postmortem interval in real time and recover any evidence of foul play. Thus, the data collected at body farms provide crime scene investigation teams and forensic anthropologists with important information regarding decomposition and proper techniques for collecting evidence from a victim's remains and the surrounding crime scene area. Because bringing a perpetrator to justice often requires that investigators place the criminal at the scene, the body farm staff are primarily interested in accurately determining the time of death based upon the state of the body upon discovery.

The first body farm was established in 1981 by Dr. William Bass, a forensic anthropologist at the University of Tennessee, Knoxville. Located on a 2.5-acre plot of land behind the University of Tennessee's Medical Center, "the Body Farm," as it is known around the world, is a fenced-in wooded site where Bass, now retired, and his graduate students place dozens of bodies and carefully record the rate of decomposition and the bacteria and insect activity for each of the death

scenarios. Once it becomes skeletonized, the staff then removes the remains and stores the bones for further research. Each body is systematically labeled with a set of numbers that corresponds with the deceased's arrival at the laboratory. For example, the fifth body donated in 1990 would thereafter be referred to as "5–90," even after skeletonization has occurred, in an effort to protect the identity of the donors. Bodies used for study at the University of Tennessee's body farm come from two sources. Staff members either take possession of unclaimed bodies left at the state medical examiner's office or, alternatively, people make arrangements prior to their death to donate their bodies. Each year between 30 and 50 people apply to donate their remains to Tennessee's body farm.

The body farm founder was a forensic anthropologist. Along with his role in founding the University of Kentucky's Forensic Anthropology Center in 1971, Dr. Bass served as a technical expert for many local and federal investigations. Body farms have now become an important tool for criminal investigators and lawyers because, prior to 1971, no one could determine with any certainty if a decomposed body was indeed a crime victim if there wasn't a bullet hole or other obvious evidence of struggle. Bass and his research staff have collected hundreds of remains, most of which have been left to skeletonize naturally after being exposed to the elements. This database of information is available to law enforcement and has allowed investigation teams to systematically compare their case to remains found in similar situations. The body farm's ability to re-create the decomposition process in a controlled environment has aided many criminal investigations and helped scientifically determine whether or not a body was indeed a victim.

Along with his scientific and academic contributions, Bass coauthored a number of books with journalist Jon Jefferson. Writing under the name Jefferson Bass, the two men have published two nonfiction books about the body farm, *Death's Acre* (2003) and *Beyond the Body Farm* (2007), as well as a fictional series about the body farm, including the titles *Carved in Bone* (2006) and *The Devil's Bones* (2008). The scientific work conducted at the body farm was also the inspiration for crime novelist Patricia Cornwell's 1994 best-selling book *The Body Farm*.

Along with the University of Tennessee's body farm, there are currently two other facilities in the United States. The second to open, Western Carolina University's body farm is affiliated with the Western Carolina University's forensic anthropology lab. This farm has the capability to hold six bodies in a facility approximately the size of a single car garage. This lab was opened in 2007 to better examine how the mountainous terrain of western North Carolina impacts human decomposition. The third and largest U.S. body farm opened for operation in 2008 at the University of Texas–San Marcos. This lab is nearly double the size of the Knoxville, Tennessee, farm.

Caitlin E. Slodden

See also Burial Laws; Decomposition; Forensic Science; Medical Examiner; Putrefaction Research

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Brain Death

It is commonly accepted within the medical profession that a person is dead when his or her brain is dead, an understanding that has largely supplanted earlier cardiopulmonary criteria for death. This definition evolved in the context of common use of mechanical ventilation, which allowed the artificial maintenance of cardiac and pulmonary integrity even after the patient's brain no longer functioned. The fact that patients without consciousness, brain-stem reflexes, or measurable electrical activity in their brains can be sustained for long periods of time with mechanical ventilation led a committee at Harvard Medical School

to address the issue of brain death in 1968. This committee defined brain death as a lack of responsiveness, movement, breathing, and brain-stem reflexes in the context of coma for which a cause has been identified, a state known as whole brain death (WBD). In the wake of the Karen Ann Quinlan controversy in 1976, many states worked to formally establish brain death as an acceptable criterion for death. Formal guidelines were published in 1981 by the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. These recommendations included the use of confirmatory tests to reduce the length of required observation, ruling out shock before diagnosing brain death, and allowing a 24-hour observation period in cases of anoxic brain damage. After the guidelines were published, a number of individual states developed specific requirements, such as the need for two physicians to confirm brain death, permission for registered nurses to declare death with subsequent confirmation by a physician, and in some cases requirements that specific religious objections be honored.

In order to offer evidence-based practice parameters that might allow a more consistent approach to diagnosing brain death, the American Academy of Neurology published a report describing various clinical tools that might be used to establish brain death, including a description of apnea testing. Such guidelines are important because though the ideal might be for an experienced neurologist or neurosurgeon to evaluate patients, many smaller communities might not have access to such a medical professional. Several elements are required for the diagnosis. The absence of brain-stem reflexes must be documented. Brain-stem reflexes include response of pupils to light, the corneal reflex, the gag reflex, coughing with suctioning, sucking/rooting reflexes, and eye movement in the direction of the tympanic membrane stimulated with cold water after the head has been tilted 30 degrees (cold caloric stimulation). Likewise apnea must be documented.

Apnea is documented by disconnecting a patient from a ventilator and watching for breathing efforts as arterial carbon dioxide is monitored. It is defined as no respiratory effort at a partial pressure of carbon dioxide of 60 mm Hg or 20 mm Hg higher than the normal baseline. During apnea testing, the patient continues to be oxygenated. Coma is documented by absence of motor responses to painful stimuli, such as pressing on the nail bed of a finger or the supraorbital nerve above the eye socket. Computed tomographic scanning is important for determining the cause of brain death, though it does not replace careful examination. Similar guidelines were published in Canada in 2000 by the Canadian Neurocritical Care Group.

Confirmatory tests are available; these include transcranial Doppler ultrasonography, electroencephalography, cerebral angiography, and cerebral scintigraphy. These are most often used with child patients. For babies that are 2 months old or younger, two confirmatory tests are recommended, and for children between 2 months and 1 year old, one confirmatory test is recommended. For people over the age of 1 year, confirmatory tests are optional. In 1987 the American Academy of Pediatrics Task Force for the Determination of Brain Death in Children offered guidelines for brain death in children. Like the broader guidelines, these include coma, apnea, absence of brain-stem function, absence of movement, and no confounding circumstances such as hypothermia. However, they add that the clinical criteria are not useful in cases of infants under the age of 7 days, though they are useful with confirmatory testing in older babies. The application of strict criteria to young patients has not been uniformly accepted because of the lack of data about the ability of very young children to survive severe brain insults (e.g., through prebirth hypoxia), and the ethical concern that if such guidelines become standard despite the absence of data, pressure for such things as organ donation might unduly influence the recommendations of pediatricians attending to patients and families at the bedside.

Variations and Challenges

Though most countries have practice guidelines for brain death, there are variations internationally. For example, confirmatory tests are optional in many Central and South American countries while they are required in many European countries. Though practice guidelines have been developed in some African countries, including South Africa, many African countries do not have such guidelines. Some countries, such as Iran, Indonesia,

and Bangladesh, require that three people confirm the diagnosis of brain death. Other countries require two physicians but exclude the treating physician from the assessment.

In addition to international variations there are sometimes religious objections to the use of brain death as a criterion for death, though most religious denominations accept the criterion of brain death. For example, in the orthodox Jewish tradition, if the heart is functioning and the blood is circulating, even if the brain is not functioning, death has not occurred, though this does not necessarily mean that life must be prolonged artificially. Though in the Council of Islamic Jurisprudence held in Amman, Jordan, in 1986 brain death was accepted, and in the Third International Conference of Islamic Jurists brain death was equated with death, there has still been debate among Islamic scholars. But the issue of organ transplantation continues to spark debate about brain death, and most Islamic scholars now accept brain death as a religiously permissible definition of death. In Catholicism Pope Pius XII said that "it is for the doctor to give a clear and precise definition of death and of the moment of death," which many have taken as sufficient justification for the medical community's embracing of the brain death criterion. However, there continues to be debate as in a 2005 meeting at the Pontifical Academy of Sciences, where a subgroup concluded that diagnosis of death by neurological criteria alone is theory, not scientific fact, and is not sufficient to overcome the presumption of life.

The WBD criterion has come under critical scrutiny from other quarters as well. Some have argued that the clinical tests used to diagnose WBD are insufficient to prove that all critical brain functions have ceased. Parts of brain function are not tested—hypothalamic function, for example, which is critical for neurohormonal regulation and is an important part of the integrative function of the brain. Furthermore, there are some important functions of an organism that are not controlled by the brain or not controlled by the portions of the brain tested in an examination to determine WBD (such as energy balance, wound healing, immune responses to infection, and gestation of a fetus) that are uncharacteristic of the dead. From this perspective, WBD is not seen as death but rather as a severe disablement that frequently predicts death (understood as a loss of biologically integrated activity). Often such critics advocate a new definition of death that is not centered on biologically integrated functions of an organism, thus avoiding the alleged incoherence in equating WBD with death.

Brain Death and Organ Donation

One of the most important corollary issues related to brain death is the issue of organ donation. The number of cadaveric donors of organs fails to keep pace with the number of patients awaiting organs for transplant. Among the several important steps that allow a potential donor to become an actual donor, rapid and accurate determination of brain death is central. Physiological deterioration is common after brain death. Inefficient determination can lead to loss of valuable organs through delays that allow profound hemodynamic (hypotension following from low fluid volume, blood loss, or diabetes insipidus) and metabolic abnormalities to occur, damaging the organs. It is estimated that because of such events, which occur while waiting for a formal declaration of brain death, 15% to 25% of potential donors are lost. These are the sorts of cases in which use of a confirmatory test such as a nuclear brain flow scan can confirm brain death quickly after the initial clinical examination. In this way the time to declaration of brain death can be reduced and the likelihood that a potential donor can become an actual donor is increased. In addition to speeding the time to diagnosis, more organs might be salvaged by continuing to aggressively treat patients with severe brain injury in order to minimize adverse physiological changes prior to determination of brain death. These issues continue to be addressed through education and policy development.

Brain Death and False Positives

Inaccurate determination of brain death can lead to ethically inappropriate donation. There are a number of conditions that can mimic brain death. Hypothermia and drug intoxication are two that are addressed in the criteria for diagnosing brain death. In potentially reversible severe hypothermia in which the core temperature drops below 28°C, even brain-stem reflexes disappear. Excessive ingestion of drugs such as barbiturates can lead to

loss of some brain-stem reflexes. Many drugs can be detected by toxicology screen. Unfortunately some metabolites of drugs such as the opioid Fentanyl cannot be detected by routine screening tests and may require special tests. When there is suspicion of an undetected sedating substance, in the absence of a clear confirmatory test longer observation is generally necessary.

Another entity that can mimic brain death is "locked-in syndrome." This syndrome is often caused by an embolus to the basilar artery and leads to an inability to move the limbs, grimace, or swallow. Likewise the reversible Guillain-Barre syndrome (which is an ascending paralysis involving all peripheral and cranial nerves evolving over several days) can be mistaken for brain death, and in such cases the history is crucial for avoiding the mistake. Other substances such as diethyl organophosphorus insecticides can cause syndromes mimicking brain death, and because these organophosphates are absorbed into fat, their release can be delayed so that the signs mistaken for brain death do not show up until days after the ingestion.

In all of these cases, good physical examination must be coupled with good history taking to avoid making serious mistakes. Here too, use of confirmatory tests such as multimodality evoked potentials cannot only help to avoid delay in diagnosis of brain death but can also avoid errors in diagnosing brain death that might lead to unfortunate consequences.

Raymond Barfield

See also Defining and Conceptualizing Death; Life Support Systems and Life-Extending Technologies; Medicalization of Death and Dying; Organ and Tissue Donation and Transplantation

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Buddhist Beliefs and Traditions

A dead body was one of the four sights that a young prince named Siddhartha saw when he ventured outside the palace walls. Encountering sickness, old age, and death for the first time forced the prince to confront the sufferings and impermanence of life. The fourth encounter, the sight of a serene mendicant, pointed up an alternative path to untangle the mysteries of life and death. These experiences caused the young prince to abandon a life of comfort and luxury and to embark on a journey to seek the meaning of life. As legend has it, 6 years later he achieved a great awakening. He discovered that all sentient beings are afflicted by *dukkha* (suffering and dissatisfaction), that the causes of *dukkha* are discernible, that an end to *dukkha* is possible, and that there is a path to attain liberation from *dukkha*. Having awakened to these "four noble truths," Siddhartha became a Buddha, an awakened one. Known as Buddha Sakyamuni, he is said to have given teachings for 45 years all over northern India to guide people out of suffering. At the age of 82, he died, starkly demonstrating the impermanence of the body. The physical death of the Awakened One was his final teaching: that all living beings are subject to disintegration.

Impermanence, Old Age, and Death

During the many years that he taught, the Buddha often returned to the themes of impermanence, old age, and death. He recommended contemplation at charnel grounds as a way to gain realization of these realities of life. Seeing the corpses of the dead leads to insight and renunciation. Bodies that were once lovely and vibrant are now bloated and grotesque. Everything that comes into being eventually disintegrates, be it molecules or entire world systems. Contemplation on the inevitability of death is a reminder of the fleeting nature of life and the limited time we each have left for achieving liberation from perpetual cycles of death and rebirth. It serves as an incentive to renounce frivolous worldly activities and strive to cultivate wholesome actions of body, speech, and mind. Reflecting on the reality that death is inescapable

impels us to pay close attention to things "as they really are" and not get lulled into destructive, escapist, or meaningless activities. Coupled with an understanding of *karma* ("actions," the law of cause and effect) and rebirth, reflection on death engenders insight into the illusory, transient nature of sense pleasures. Recollecting that death is certain but the time of death is uncertain became a central theme of Buddhist meditation.

The Buddha's teachings on death and impermanence are reminders of the brevity of the human life span and the value of living a meaningful life to create the conditions for liberation. No matter how rich, famous, or accomplished a person may be, death is the inevitable conclusion of life. A realization that death is unavoidable is especially significant within the framework of rebirth, a widespread South Asian belief. In this framework, sentient beings do not live just once, but take rebirth in a variety of life forms, in accordance with their own actions (*karma*). Throughout many lifetimes—as a god, demi-god, human being, animal, hungry ghost, and hell being—they experience numerous sufferings and dissatisfactions in seemingly endless cycles of birth and death (*samsara*). Rebirth in the human realm is regarded as a precious opportunity. In contrast to other states of existence, human beings experience both pleasure and pain and have the intelligence to understand that these experiences are the consequences of actions they created in previous lifetimes. Human beings are uniquely capable of understanding the transience of their lives and the benefit of using life wisely for mental cultivation. A realization of the nature of death and impermanence is therefore critical for inspiring the impulse and determination to freeing oneself from repeated suffering and rebirth. The goal of the Buddhist path and the purpose of life is to become free from the cycle of birth, death, and rebirth and achieve the state of liberation (*nirvana*), or "deathlessness."

The Nature and Process of Dying

Although death comes to plant life and all compounded phenomena, Buddhists focus their attention on sentient beings, that is, beings with consciousness. Consciousness is distinguished from matter and is also subject to the law of cause and effect. Consciousness is impermanent by nature, arising and perishing from moment to moment. Each sentient being possesses an individuated stream of consciousness that continues from beginningless time until the moment of awakening. Through meditation and various methods of mental cultivation, it is believed that sentient beings are able to purify their mindstreams of afflictive emotions (*klesa*s) such as greed, hatred, and ignorance. The root afflictions spawn a host of other mental defilements and conflicting emotions, such as pride, jealousy, fear, and attachment, which give rise to unskillful actions. By extinguishing the mental afflictions, the root causes of unwholesome actions, such as killing, stealing, lying, and sexual misconduct, are eliminated and a state of mental clarity or awakening is achieved. When one is able to purify the mind of mental afflictions, there is no longer any impulse to create unwholesome actions and, by not adding more fuel to the flames, it becomes possible to free oneself from the tedious cycle of rebirth.

Philosophically, Buddhists do not understand death as simply the end point of one lifetime. Death also connotes the disintegration of electrons and constructs and world systems. All compounded phenomena are characterized by impermanence (*anitya*), arising and perishing from moment to moment. Even things that appear to be solid are, upon closer examination, composed of ever-changing particles. Human life is fleeting in the sense that all human beings will eventually die, but also in the sense that the cells of their bodies are in a constant state of change, with their constituent elements continuously coming into being and disintegrating. It can be argued that human beings begin dying from the moment they are born, with the cells of their bodies and the thoughts in their minds undergoing a series of emergences and small deaths all along the way. From this perspective, the human organism is subject to continual evolution and disintegration from the start of a lifetime and continues to decompose until the end. Insight into the workings of this process acts as an incentive to achieve liberation and thereby fulfill the purpose of human life.

The disintegration of the body into its natural elements is just one aspect of the experience of dying, however. Buddhists also seek to understand death from a psychological perspective. For example, fear, denial, and many other anxieties are said

to be aroused by the thought of one's own demise or disappearance. Based on the misconception that there exists some inherent or enduring essence to our self, we cling to our possessions, loved ones, identities, and life itself. The stronger our attachment to this misconception, the more stress and misery we experience when things fall apart. The mistake is in impossibly assuming that things will stay the same. This is not a moral flaw, but simply ignorance. The wisdom that recognizes the impermanence of all things not only accords with our own experience but also serves as a coping mechanism, enabling us to deal with disappointment and loss, including the ultimate loss that occurs at death. By developing the wisdom that understands impermanence, the mind becomes free of clinging to illusions of permanence and clinging to the self. For most Buddhists, ensuring the quality of countless future lives is valued over the pleasures of this single, brief life.

Preparing for the Experience of Dying

Because there is no predicting the time of death, Buddhists believe that it is crucial to prepare for the experience of dying beforehand and not leave things to chance. Living a kind and ethical life and developing insight into death and impermanence are essential for ensuring that a person dies peacefully without regrets. Mental cultivation is prerequisite, because even living a good life and understanding the reality of death intellectually does not ensure that a person will be able to handle the experience of dying well. During a life review, unpleasant memories may surface that arouse intense emotions and distress that may act as obstacles to a smooth transition. Because the last moment of death gives rise to the moment thereafter, it is vitally important for a person to remain calm and mindful during the dying process. At this critical juncture, no distractions or disturbances by loved ones or medical staff should be allowed to hinder the person's passage to the next life. At that point, a highly trained practitioner may even be able to achieve liberation from cyclic existence (*samsara*), but the majority of Buddhists are concerned simply to avoid taking rebirth in an unfortunate state. Buddhist practice is regarded as the best means to ensure a positive outcome.

From a Buddhist perspective, the moment of death is arguably the most important moment of an ordinary person's lifetime. Because the final moment of consciousness in this life serves as the proximate cause of the next moment of consciousness after the death of the body, turbulent emotions such as fear, regret, and anger and negative mental impulses are thought to propel a being to an unpleasant state of rebirth. By contrast, the ability to maintain a calm and peaceful state of mind, free from ill will, desire, or other disturbing emotions, will help ensure a pleasant state of rebirth. The moment of death is therefore of critical importance. By practicing mindfulness in everyday living and cultivating wisdom and compassion throughout one's life, one becomes more adept at the skills needed to prepare for a peaceful transition. Through the process of mental cultivation, one awakens to a new, unencumbered state of consciousness or direct awareness. As an ancient adage puts it, Buddhist practice helps one sleep well and die without regrets.

All Buddhist schools agree that the elements of the physical body disintegrate at death, but interpretations of the transition of consciousness from one lifetime to another may differ. There is no belief in a soul or permanent self that migrates from life to life, so Buddhists need to provide some other explanation for the mechanics of rebirth. Given that the process of rebirth is intangible, it is typically explained by way of an analogy: One candle flame lights a second candle, yet nothing substantial passes between them. For this reason, Buddhists prefer to speak of "rebirth" or "reexistence" rather than "reincarnation." Some texts describe the momentary nature of consciousness and how each moment of consciousness gives rise to the next, from moment to moment, and from one lifetime or state of existence to the next.

Differences of opinion exist among Buddhists concerning the nature and duration of the process of rebirth. Some Buddhists, such as followers of the Theravada and Zen traditions, typically accept that rebirth (or, properly speaking, reconception) occurs immediately after death. Others, such as followers of the Tibetan tradition, believe that there may be an interval between the moment of death in one lifetime and the first moment of life in the next. In the case of a sudden accident, Tibetans believe that rebirth may occur immediately.

Ordinarily, however, there is an intermediate state between the moment of death in one lifetime and the moment of conception in the next life. Tibetan texts present detailed descriptions of this intermediate state, which is known as the *bardo*. According to such texts as the so-called *Tibetan Book of the Dead,* the incipient being (*gandharva*) has an opportunity to assume a new form every 7 days. By the end of a 49-day period, it necessarily "descends" into a new state of existence. The influence of this tradition is reflected in funeral rituals throughout East Asia and Vietnam, where meritorious activities are held every 7 days on behalf of the deceased, with a final service held on the 49th day.

All Buddhist practices are useful for cultivating the mind, but certain practices focus specifically on death. The practice of meditating in cemeteries and cremation grounds is recommended for helping cut through attachment to the body. The practice of meditating on one's own death helps cultivate a sense of urgency for one's practice. In many Thai Buddhist monasteries, a skeleton hung at the entrance serves as a reminder. Another practice is to contemplate that death is certain, but the time of death is uncertain, and at the time of death only one's spiritual practice will be of any benefit. Contemplating the inevitability of death engenders an awareness that no living being escapes the ultimate sentence. Contemplating that the time of death is uncertain awakens the realization that death can come at any time, whether a person is young or old. Contemplating the importance of spiritual practice at the time of death means recognizing that wealth, power, and worldly achievements are utterly useless at this critical juncture. Family and friends, although they ordinarily may be sources of comfort, may even be distractions or attachments that impede a smooth transition to the next life. Another useful practice is Tibetan meditation that leads one through the stages of the dying process and beyond.

Ultimately, all forms of Buddhist practice are regarded as beneficial ways to prepare for dying. Meditation practices such as single-pointed concentration (*samadhi*), calm abiding (*samatha*), and insight (*vipasyana*) are especially useful for maintaining mindfulness at the time of death. Meditations to develop patience act as antidotes to anger and frustration that may arise at the time of death and lead to an unfortunate rebirth. Meditations on loving kindness and compassion help ward off feelings of ill will or resentment and nurture a calm and peaceful state of mind. The practice of generosity—giving away all of one's earthly possessions—is likewise meritorious and helps reduce attachments that might bind one to this world. The recitation of *sutra*s, *mantra*s, and prayers is thought to accumulate merit that will be beneficial for maintaining equanimity and achieving an advantageous rebirth.

Dying in Buddhist Cultures

Buddhists in various cultures have developed a variety of practices that not only help them prepare for death and facilitate the dying process, but also help survivors cope with grief at the loss of a loved one. At funerals in Theravada Buddhist societies, for example, a verse from the *Aniccagatha* is recited to remind mourners that all conditioned things are subject to change, that their nature is to arise and perish, and that everything that arises will eventually cease, resulting in peace. In Burma and Bangladesh, a subsequent verse is a reminder that all beings of the past, present, and future are subject to death, including oneself. Another well-known verse is used to contemplate that nobody knows how long their life will be, what diseases they will contract, where they will die ("whether on land or at sea"), when they will die ("whether during the day or at night"), or where they will be born after death. Buddhists in the Tibetan cultural sphere recite Mahayana texts such as the *Heart of Wisdom Sutra* and perform rituals derived from the tantric tradition.

Funerary practices and attitudes toward death in Buddhist societies may reflect pre-Buddhist cultural influences. In the *bhasi* blessing ritual in Southeast Asian Buddhist countries, for example, strings are tied to mourners' wrists to help keep their multiple souls together, despite the Buddhist teaching on no-soul (*anatman*). In East Asian Buddhist societies, prayers are directed to Buddha Amitabha, who is believed to transport sincere devotees to his Sukhavati Pure Land, where enlightenment can be effortlessly achieved. This practice helps dying patients approach the end of life in a peaceful state of mind and also helps caregivers deal with the stresses of patient care and bereavement. Groups of Amitabha devotees visit the homes and hospital rooms of terminally ill patients

and chant the name of Amitabha around the clock. Devotees find meaning in reciting the name of Amitabha repeatedly during their lifetimes, but it is widely acknowledged that the real benefits of the practice accrue at death. In East Asia, Buddhist understandings of death and practices for commemorating the dead often incorporate other cultural influences, such as the Confucian practice of ancestor veneration. Buddhist temples in China, Korea, Taiwan, and Vietnam usually set aside a shrine room for memorial tablets where prayers are offered and the merit dedicated to the memory of deceased relations.

Tibetan Buddhists have preserved several unique practices related to death. The first is meditation upon one's own death, with specific contemplations at each stage of the dying process. The practitioner first reflects on the dissolution of the five elements (earth, water, fire, air, and ether) and five constituents of the person (body, feelings, recognitions, karmic formations, and consciousness) in sequence, then concentrates on the successively more subtle stages of the dissolution of consciousness. After dispassionately observing these stages of dissolution, one becomes aware of the "clear light of death." If one is able to realize the emptiness of this intensely bright light as being identical to the empty nature of one's own mind, it is possible to achieve perfect enlightenment at that moment. In another meditation practice called *phowa,* one directs the 72,000 winds of the body into the central psychic channel and consciously ejects them through the crown *chakra* to effect rebirth in the Pure Land of Amitabha. Once death occurs and a religious specialist ascertains that the consciousness of the deceased has left the body, the physical remains of the discarded corpse may be offered to birds and wild animals as a final virtuous act of generosity that is known as "sky burial."

Death as Opportunity

In the Buddhist worldview, death is not only inevitable, it is also a great opportunity. A dying person may achieve many realizations—of suffering (*dukkha*), impermanence (*anitya*), and the absence of an enduring self (*anatman*). Awareness of the sufferings of death may engender genuine compassion for the sufferings of others. Reflection on the ephemeral nature of living beings may stimulate the development of wisdom into the true, self-less nature of phenomena. Reflection on the kindness of others may engender feelings of loving kindness for all sentient beings. In these ways, instead of unpleasant feelings of regret, resentment, or helplessness, a person may transform the process of dying from a deeply painful and disturbing experience into a profoundly meaningful opportunity.

Buddhists also regard death as a meaningful opportunity for medical professionals, hospice personnel, and caregivers to gain a deeper understanding of the human condition by mindfully and respectfully caring for the dying. Not only can they develop insight into suffering, impermanence, and no-self, but they also have the opportunity to practice patience and loving kindness. Buddhists generally view palliative care favorably and the premature termination of life unfavorably. It is desirable to ease the suffering of terminally ill patients through all appropriate means, including medication for pain management, as long as these methods do not endanger the life of the patient. Developing the skills to skillfully alleviate physical, psychological, and spiritual pain is viewed as a rare opportunity to practice wisdom and compassion.

Buddhism and Bioethical Decision Making

Given the diversity of attitudes and cultural practices among the world's hundreds of millions of Buddhists, it is impossible to make definitive statements on bioethical issues. The Buddha had no access to modern medical technologies, and there are no universally recognized institutions to deliver position papers on the complex issues these technologies have spawned. The touchstone of Buddhist ethical reflection is to refrain from taking the life of any sentient being, especially a human being, and to refrain from harming that being in any way. Ethical decision making at the end of life is guided by these fundamental principles, based on *karma* and compassion (the wish to free all beings from suffering). For these reasons, although no rules are inviolable and decision making is ultimately the responsibility of individuals, it is believed that abortion, suicide, euthanasia, and assisted suicide are best avoided. In writing a living will or advance health care directive, there is no moral fault in refusing artificial

life support and dying a natural death. Taking someone off life support once it has begun is a more complicated issue. The merits of advanced technologies will be weighed differently by Buddhists throughout the world, whether in Japan, Mongolia, Laos, or Los Angeles, but decision making will be guided by a core of common ethical principles and similar understandings of life and death.

Karma Lekshe Tsomo

See also Ancestor Veneration, Japanese; Bereavement, Grief, and Mourning; Funerals and Funeralization in Cross-Cultural Perspective; Life Support Systems and Life-Extending Technologies; Palliative Care

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Burial, Paleolithic

The limited nature of the evidence from the Paleolithic, or Old Stone Age, a period beginning over 2.5 million years ago, poses a challenge to archaeologists. Funerary deposits seem to have been limited to cave sites; however, this may indicate more about how artifacts and ancient deposits survive than it does about the limits of cultural practice. During this period there were a number of destructive geoclimatic events, including ice ages, which may account for the absence of evidence since individual hominid species and early human populations may have numbered in the tens of thousands, not tens of millions. Cave sites may have survived continental ice sheets as they were sheltered, just as deeply buried deposits may have survived but are difficult to identify and more difficult still to excavate. Despite the limited and fragmentary nature of the archaeological record, it is evident that it is the Paleolithic that demonstrates first the emergence of human culture and a growing awareness, or at least representation, of human mortality.

Archaeologists have divided the Paleolithic into three phases: the Lower, Middle, and Upper Paleolithic. The Lower Paleolithic is the period from around 2.5 million to about 100,000 years ago and is characterized by the emergence of the *Homo* genus and the development of stone tools. The Middle Paleolithic is roughly the period 300,000 to 30,000 years ago, although there are regional variations in this dating. This middle period is characterized by the emergence of modern man, *Homo sapiens,* between 130,000 and 200,000 years ago. *Homo neanderthalensis* occupied most of Europe during the Middle Paleolithic, and there is debate about the nature of the interaction between these two species. The Upper Paleolithic is often considered to start around 40,000 to 30,000 and have lasted to about 10,000 years ago. It is a period characterized by the survival of more significant numbers of cultural artifacts and art, such as cave painting, campsites, and Venus figurines, as well as advances in the technology of flint tools seen in the utilization of blades rather than choppers or flakes, which may have had a specific function. Bone and antler artifacts such as harpoons also survive.

Lower Paleolithic

There is no evidence for a burial tradition in the Lower Paleolithic, but it is important to understand the development of humans as part of the development of a cultural or social awareness. The early hominids of this period had a more sophisticated social structure than chimpanzees, had larger brains, and made more elaborate stone tools. They seem to have developed a society

based on hunting and gathering and used stone tool technology based on flint choppers made from large pebbles. Little evidence from this period survives and that which does often consists of small collections of bones, collection of flint, or, very rarely, kill sites where stone tools and animal bones coexist in the same space.

Two possibly anthropomorphic figures may be associated with the Lower Paleolithic. The Venus of *Tan-Tan,* found in Morocco, is a small quartz object that might have represented a genderless figure and may have been painted in red ochre. The Venus of *Berekhat Ram,* Golan Heights, is a red stone object that, like the Venus of *Tan Tan*, seems to have been manipulated to resemble a human form. Much controversy surrounds both objects and the intentionality of their crude anthropomorphic shapes; however, they do seem to be altered by hominid hands and both date to over 250,000 years ago.

Although no constructed funerary deposits have been identified, artifact manipulation beyond simple tool manufacture and possibly bodily or spiritual representation start to emerge at the end of the Lower Paleolithic. However, a question remains about the exact nature of funerary treatment. A high proportion of later Lower Paleolithic skeletal remains exhibit signs of cut marks. Around 80 fossils from the cave of Gran Dolina, Atapuerca, had cut marks, and long bones had been split like the other animals. Both the sites of Bilzingsleben, Germany, and Bodo, Ethiopia, revealed *Homo* genus skeletal remains with cut marks across bones and the skull. If this is evidence of cannibalism, it is important to consider if this is a ritual treatment or prey-related cannibalism—food or funeral. Either way, it is a form of recognizable postmortem bodily treatment.

Middle Paleolithic

Greater amounts of material culture survive from the Middle Paleolithic, and there is indisputable evidence for intentional artistic behavior. Stone tools become smaller and may have been fit for specific purposes carried in kits or combinations. Both *Homo sapiens* and *Homo neanderthalensis* seem to exhibit evidence of postmortem bodily treatment. Like archaic *Homo sapiens, Homo neanderthalensis* seems to have been capable of basic verbal communication and used complex flint, bone, and other tools as part of kits. However, when it comes to funerary treatment, there seems to be some question about whether this hominid could have practiced its own form of burial ritual, thus demonstrating what has been regarded as a very human awareness of personal morality or whether it was simply copying early human behavior. Two of the most famous sites are those of La Chapelle-aux-Saints and Le Moustier, both in France. Moustier revealed a fully articulated skeleton buried crouched "as if asleep," and at La Chapelle-aux Saints, a similarly interred individual with articulated cow bones placed above the corpse was found. Perhaps the most striking inhumation is that of the Iraqi, Shanidar 4, grave. An adult male Neanderthal age between 30 and 40 had been placed in a fetal position. From on top of the skeleton, soil samples revealed evidence of ancient pollen. Yarrow, cornflower, bachelor's button, St. Barnaby's thistle, ragwort, grape hyacinth, joint pine, and hollyhock were identified—all plants with some medicinal properties. In the minimalistic interpretations of the late 1980s, scholars argued that all of the cases of Neanderthal burial could be put down to accident survival, simply crawling into a confined space to die. However, this failed to account for the intentionally cut graves and the deliberately medicinal nature of the floral assemblage found at Shanidar, one unlikely to have formed simply though the action of animals or the wind.

Modern human burial in the Middle Paleolithic is not dissimilar to that of the Neanderthals, and the inhumations at the cave site of Mugharet es-Skhul, Israel, contained the remains of four individuals purposefully arranged with flexed limbs. Inhumation 5 was interred with the jaw of a wild boar; inhumation 11 included the skull of a cow. Burials at Qafzeh, Israel, contain the remains of a fallow deer. It is the position of the burials that most clearly indicates human intervention. The Middle Paleolithic yields the placement of supine, crouched, and prone burials. However, the question is not just about bodily placement but also alteration, and there are a number of examples where the body was purposefully taken apart: at the spine as at Roc de Marsal, France, or buried with skull and body separated as at La Ferrassie, France. Despite the evidence of individual graves,

it is the whole assemblage that is most convincing when considering the intentional nature of burial in this ancient period. Both Neanderthals and anatomically modern humans demonstrate significant regional-, age-, and sex-related differentiation in their burial practice. Grave goods are fewer than in the Upper Paleolithic and consist of animal bones, flint points and scrapers, and occasionally shells or other stone objects.

Upper Paleolithic

With the burials from the last 30,000 years of this 2.5-million-year period, there can be no doubt that the humans of the Paleolithic recognized and responded to death. Upper Paleolithic burials were not only deliberate, they were accompanied by sophisticated material and culturally important remains. Perhaps the best preserved of these burials is from the site of Sunghir, near Moscow, where the burial of an adult male was identified along with thousands of ivory beads. Also at Sunghir was a double burial of two juveniles (one male, one female) who were buried with more than 10,000 ivory beads, mammoth ivory pins, discs and pendants, a belt of fox teeth, antler batons, a polished human femur containing red ochre, and a large ivory lance made from a straightened mammoth tusk. In another extraordinary burial site at Dolní Věstonice, Czech Republic, a woman was placed between two males; they all had red ochre on their heads and her groin. They were accompanied by tooth pendants, ivory beads, and shells. Another typical burial from this period is the red lady of Paviland Cave, Wales, where a skeleton (later identified as a man) discovered in a shallow grave showed extensive red ochre staining on the body and surrounding surface, along with pieces of jewelry made from mammoth ivory, sea shells, and a mammoth skull, which has been lost since the first excavation.

Burials from the Upper Paleolithic are more common than earlier ones, and some 50 remains exist from Italy alone. These burials have been identified as coming from two distinct phases of activity. During the first phase, most of the remains are of adult or juvenile males, some ochre was always found, and stones were often part of the structure of the grave. Bone and stone objects were usually present in the burial and were always positioned along the axis of the cave. In the second phase, ochre was found much less frequently as were grave goods; stones were not utilized in the structure of the cut; burials were found in a transverse position to the cave; and women and children were also identified. Upper Paleolithic burial practice shows elements of similarity across the Old World, but this should not be seen as a uniform tradition. Regional variations, as well as chronological transformations, were part of this burial practice just as they are in the material remains of an emerging cultural identity; indeed, by the end of the Paleolithic it is even possible that ethnically distinct groups had emerged.

Conclusion

In summary Paleolithic burial practice is evident, especially from the later part of the period. There is evidence of postmortem treatment in the Lower Paleolithic, but it is not clear if this was truly the beginnings of a funeral tradition. Modern Western attitudes may have difficulty seeing cannibalism on its own as an indication of an awareness of personal mortality. However, animals such as elephants are aware of each other's deaths, so possibly researchers are simply approaching the problems of mortuary awareness in the wrong way. The first evidence of a recognizable cultural expression of mortality appears in the Middle Paleolithic, and both anatomically modern man and Neanderthals were found in graves and caves and show a distinct amount of variation across gender and age. This suggests that these are deliberate, structured deposits even though it is not until the Upper Paleolithic that a large amount of recognizable material culture is identified in graves and regional, cultural, and possibly personal identities are evident in the burial tradition. Humans may have been aware of their own mortality for a million years but it is only in the last 50,000 to 100,000 years that they have chosen to express it in a culturally distinct form that survives in the archaeological record. The later burial assemblages are sometimes found accompanied by fragments of human remains, sometimes adopted or altered for specific uses. These objects might suggest that a tradition of disturbing the dead and incorporating the remains of the

deceased into the lives of the living may have been a more widespread tradition than burial practice and wider than can be witnessed in archaeological deposits.

Duncan Sayer

See also Death, Anthropological Perspectives; Funerals and Funeralization in Cross-Cultural Perspectives; Immortality; Mortuary Rites

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Burial at Sea

The broad definition of burial at sea encompasses deposition of the corpse in all bodies of water, including not only the sea but also rivers, lakes, and even small ponds. Water burial has been employed by numerous cultures over time, sometimes as a deliberate choice for the disposal of the dead and other times purely out of necessity. Although the rituals employed in burying a body in the water often mimic those on land, there are important differences due to the nature of the aquatic environment. This entry examines the need for proper burial rites at sea, discusses the wide divergence in cross-cultural attitudes toward water inhumation, explores the burial at sea service as a ritual of separation, and notes modern trends in disposing of bodies at sea.

The Need for Proper Burial

Despite the fact that many societies have employed water burial throughout history, cross-cultural comparison indicates that humans are wary of burial at sea unless the proper rites can be performed. Among the Tikopia of the South Pacific, for example, Firth recorded the belief that those who were lost at sea—and thus did not receive a proper funeral—would return to haunt their families, causing sickness or even death. In Tikopia society, religious specialists had the crucial job of contacting lost spirits to find out what had happened to them and where their bodies rested. Armed with this knowledge, the family could then perform a funeral and lay the spirit to rest. This belief is strikingly similar to Western mariners from the Age of Sail, whose stories and songs are replete with the spirits of those who died at sea. Although these ghosts, unlike those of the Tikopia, sometimes aided vessels instead of causing harm, mariners always feared them. The spirits of those buried in the water, like those who die unnatural or untimely deaths on land, are widely held to return unless proper burial rites are performed.

Attitudes Toward Water Burial

Cross-culturally, attitudes toward water inhumation vary from acceptable to undesirable. Some cultures view water as the proper place for the dead, whereas others see it only as a place of last resort or as the place to dispose of criminals or other social outcasts. The former attitude is probably best exemplified by the Hindu belief that the river Ganges is a sacred place that will take the dead to heaven. At the other end of the spectrum lies the idea of water as a convenient place for the elimination of unwanted items. Throughout history, humans have viewed water as a place to dispose of things that are no longer wanted or needed, including corpses. Lindenlauf's research, for example, highlights the similarity between the attitude of the ancient Greeks and modern garbage disposal practices. In both cases, water is seen as a "place of no return" in which unwanted things could be safely discarded.

In keeping with the idea of water as a place for the disposal of refuse, many societies have viewed the sea as the proper place to deposit the bodies of

those who are tainted in some way. The Andaman Islanders, for example, were known to throw the bodies of strangers or enemies into the sea with no burial rites whatsoever. Krause observed that the Tlingit peoples of Alaska did the same with slaves. In both of these cases, disposing of humans in this manner was not thought to generate restless spirits in the way described earlier. This seems to be because strangers, enemies, and slaves were not accorded status as members of the group. They were, in essence, not human. The "bog bodies," of prehistoric northern Europe, which exhibit signs of trauma and were often bound, may also be the bodies of criminals, enemies, or slaves disposed of in the water in a manner comparable to that practiced by the Andaman Islanders and Tlingit.

A similar practice held sway among the Chuuk culture of Truk, who consigned the corpses of infants who died in childbirth to the sea without funeral rites. To the Chuuk, this was acceptable because the infants had not yet become people. The Chuuk did the same thing to members of families who did not own land. When such people died, their bodies were simply thrown into the sea as well. In all of these cases, the key point is that the individuals concerned were not considered to be actual human beings. Thus, it was seen as appropriate to dispose of their corpses in water with no funeral ceremonies.

A similar idea occurs in some cultures that practice secondary burial. In some cases, the body is buried in the ground long enough for it to begin decomposing, then exhumed and the remaining flesh removed from the bones. The bones are cleaned and either given another funeral or retained for various ritual purposes. The decomposing flesh, however, is typically discarded without ceremony. Among cultures that practice water burial, such flesh is often simply cast into the sea. Like the bodies of enemies and slaves, the sea is seen as a proper place to deposit these parts that are not considered important and are no longer wanted.

During the Age of Sail, western seafarers held both positive and negative views toward burial at sea. On the one hand, the sea was seen as the proper resting place for sailors, because it was home to them in the same way that the land was home to farmers. This attitude may, however, have been a reaction to the necessity of sea burial rather than a full acceptance of it. Before the advent of embalming or refrigeration in the 19th century, it was not possible to keep cadavers aboard ship for long, and therefore most of those who died at sea were forced to be buried in it out of necessity. Although sailors came to view this as accepted practice, they were never entirely comfortable with it. This is shown by the fact that bodies were buried ashore if at all possible. When far out to sea, however, land burial was not an option, so sailors devised a burial rite to ensure the dead of a proper funeral.

Burial at Sea as a Ritual of Separation

Like all burial rites, deposition in water takes the form of a ritual of separation in which the deceased is symbolically removed from the world of the living and placed in the realm of the dead. It is important that rituals such as funerals be performed correctly; otherwise they will not have the desired effect. In the case of funerals, improper performance of the ritual means that the dead will not rest. Instead, they will return to haunt the living as ghosts, vampires, or other revenants. On land, funeral rites follow set patterns, and any deviation from accepted practice is seen as dangerous because it may lead to the return of the dead. During the Age of Sail, American and European seafarers adapted the funeral service used on land to shipboard.

However, one of the major problems with burying bodies at sea was that it was not possible to perform the ritual in the same way as was done on land. In particular, two critical elements were missing at sea. First, land funerals began with a procession from the deceased's house to the cemetery. This was more than just a formality. The journey, which was often done by a meandering route and involved numerous stops for prayer and songs, was meant to keep the dead spirit from being able to return and haunt its former home. Aboard ship, no funeral procession could be performed, so the spirit could not be separated far from the living.

The second major problem at sea involved sealing the dead inside the grave. On land, the earth shoveled into the grave provided both a symbolic and a real barrier between the living and the dead. In addition to providing a medium in which the corpse would be contained and deteriorate, earth shoveled onto the coffin also provided a symbolic barrier against the return of the deceased's spirit. Water, on the other hand, is fluid and thus provides

no secure barrier. Weights were employed to ensure that bodies dropped overboard would sink, but sailors had no way of knowing exactly where the corpse had come to rest. Moreover, a corpse resting on the seabed was not as trapped by a layer of earth as was one buried in a grave. Sailors were familiar with the way that the sea cast objects up on shore that had been deposited in its depths and knew that this could happen to the bodies of those buried at sea as well. Because of this, they seem never to have trusted the sea to keep the bodies of the dead that were buried in it. Instead, maritime literature from the Age of Sail reveals that sailors were always uneasy about those who had been buried at sea. Such dead frequently appear as ghosts in seafaring stories and songs. While many of these are no doubt fictional rather than factual, they reveal the uncertainty concerning water burial that existed in the minds of those who composed them.

Modern Burial at Sea

Modern burial at sea has changed much from the traditional model of a land-style funeral service transplanted aboard ship. Instead of burial at sea being almost exclusively a province of sailors, increasing numbers of people now view it as an attractive alternative to crowded cemeteries on land. In Western nations such as the United Kingdom and the United States, cremation is a popular alternative to burial, and the deceased's ashes are often scattered in a place that had meaning to the deceased or his or her family. Those with a connection to the sea often choose the water as the fitting place to scatter their loved one's ashes. Others who may not necessarily have had a connection to the sea during life are coming to view it as an ecologically friendly burial alternative. At least one company now offers a service whereby the ashes are incorporated into artificial reefs. This, like other forms of "green burial," reflects a modern ideal to be environmentally conscious and uses the burial as a way to help the environment.

Conclusions

Burial at sea has been practiced for thousands of years, in forms as diverse as the cultures that have used it. Several prominent trends emerge from a study of burial at sea. First, some cultures view burial in the water as undesirable and often restrict its use to those who are seen as outsiders or undesirables, such as enemies or slaves. Among seafarers, burial at sea came into use out of necessity: Sailors had to have some means to dispose of those who died aboard ship. Their solution was to adapt land-based funeral rites to the aquatic environment, but such attempts were never entirely satisfactory. In recent years, burial at sea has gone from being something done out of necessity to being seen as a desirable practice to promote responsible environmentalism. No doubt forms of burial at sea will continue to change over time to reflect changing views of humanity's relationship with the sea.

David J. Stewart

See also Accidental Death; Body Disposition; Funerals; Green Burials; Zombies, Revenants, Vampires, and Reanimated Corpses

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Burial Insurance

Burial insurance is a whole life insurance policy with a cash death benefit that can be used to pay

for expenses. Such expenses include burial plot, casket or urn, cremation, embalming, digging the grave, hearse, and grave marker. In the past, insurance premiums as low as 25 to 50 cents were popular among working-class American blue-collar workers and blacks, who held small amounts of disability and burial insurance and paid the premiums weekly or monthly through a funeral home or directly to an insurance agent (debit man) who collected premiums from policyholders at their place of employment or their home. In this area, many black Americans in the past were similar to the contemporary French and British, who tend to purchase small amounts of insurance for burial purposes. Low-cost burial insurance at $2 or $3 a week continues to be a significant investment for many low-income families and, more recently, the elderly.

Burial insurance is the final expense insurance, an expense that many people desire not to burden others with. Thus, burial insurance is a highly desired commodity in that it offers what some refer to as "peace of mind insurance," especially among older individuals. In the southern portion of the United States, older blacks held burial insurance in high esteem, with a sense of security and pride, because to have this form of insurance was to ensure the financial costs incurred at the time of death would not be passed on to others.

Burial insurance costs range from as low as $250 to more than $10,000. Of the five types of life insurance available, burial or funeral insurance is perhaps the most important, especially for low-income families. Burial insurance also is referred to as "pre-need insurance," but these two forms of insurance should not be considered to be the same. Burial insurance is whole life insurance with a death benefit in varying amounts. Pre-need insurance, on the other hand, is a prepayment of funeral arrangements in which all aspects of the process are predetermined and paid for in advance.

The History of Insurance

In 1759, the first American life insurance company was founded, and it was joined in 1770 by its first competitor. By 1800, the number of life insurance companies doubled in size to equal four. Thereafter, the growth of the industry was dynamic, inhibited only during extended periods of economic depression that was cause for the collapse of financial markets.

Burial or industrial insurance was first sold to British factory workers. In 1875, with the founding of the Prudential Friendly Society, burial insurance was introduced into the United States and soon became popular among black families in the Southeast. The American life insurance industry thrived, with sales of life insurance policies to middle-income and labor-intensive lower-income families. From 1927 onward, an industry movement toward professional development held important implications for the door-to-door insurance agent (debit man) who sold small burial policies to low-income families. This was especially true for that majority of agents who, it is stated, held a humanistic orientation toward clients in that they believed the lifeblood of life insurance industry was catering to the needs of families with more modest incomes. Burial insurance represented one of these needs.

Burial Insurance and the Debit Man

A debit is the sum of premiums payable within a stipulated time period (usually a week or month) by policyholders in an agent's geographic area. The term *debit* was frequently used to describe the geographic area and the premiums to be collected from the area's insurance policyholders.

Debit men actively pursued payment of a weekly or monthly debit premium charge for burial insurance and industrial accident insurance. Individual insurance policy debit accounts were carried on the books by insurance companies because many of their clients were low-income workers who often struggled to make these monthly debit payments; the debit man made house calls to encourage payment compliance.

The later entrance of blacks into the insurance arena as owners was prompted by a number of factors. The weekly visits of white agents to the homes of blacks to collect premiums (debits) were generally tolerated until the organization and entry of Negro companies into this field. The insults, abuses, and violations of the privacy of the homes of black policyholders by white agents, especially in the American South, are thought to have facilitated the creation of black-owned industrial life insurance companies.

Growth of a Minority Industry

Black life insurance companies grew out of the church relief societies of the 1787 to 1890 period and the Negro fraternal benevolent burial associations that flourished in the United States from 1865 to 1915. Consistent with the fact that blacks were primarily involved in an industrial labor-intensive marketplace, most of the insurance sold first through benevolent societies and later through black-owned insurance companies covered the areas of health and accident. In reality, this form of industrial insurance was intended to provide modest benefits for the disabled and a decent burial for the deceased.

By 1940 there were 46 Negro life insurance organizations located in 24 states and the District of Columbia. The rapid growth of industrial life and disability insurance among members of the black community can be attributed, in part, to the sensitivity of the black insurer in promptly making payments to claimants.

The importance of some amount of life or burial insurance, no matter how small the policy is worth, has held an attractive lure to almost all segments of the U.S. population. Indeed, it was through the determined efforts of individuals such as the lower-status "debit man," who serviced the needs of these low- to middle-income families, that this substantial portion of a vast industry was created and nurtured. Since 1983 yearly life insurance purchases have exceeded $1 trillion. With more than 21 million burial policies and $16 billion in force at the turn of the 21st century, burial insurance represents an important component of the insurance market.

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See also Burial Laws; Economic Evaluation of Life; Inheritance; Life Insurance; Viatical Settlements

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Burial Laws

Unlike laws regulating the insurance industry, the legal profession, or matters of inheritance, burial laws found in the United States do not possess a common theme or thread of statutory logic. Each is different, and many are silent where others are detailed.

The burial laws first adopted in the United States reflect English common law and/or church rules and regulations governing church cemeteries in Great Britain and those for other European societies. Following such common law doctrine and based on practical experience, these early laws adopted by the various states addressed what needs may have been perceived. As burial laws evolved, state legislatures were, in most cases, reacting to specific and unique issues surrounding municipal, religious, and fraternal cemeteries found within the state. Model statutes to consider during the previous century were nearly nonexistent; thus hybrid legislation resulted.

Today, burial law can be as brief as a passing mention within several sections of state code or as highly detailed as to fill entire chapters of law in which state agencies (e.g., state cemetery boards) are created to regulate such laws. The pattern appears to be no pattern. Other than national cemeteries (veterans' cemeteries) and specific protections offered to Native American and historical burial grounds, very little exists in federal statute regulating cemeteries and burial practices.

The U.S. Geological Survey estimates there could be as many as 200,000 burial grounds in the United States; statistically, there are at least 100,000. The U.S. Geological Survey's estimate includes any and all burial grounds (sites), even those where just one or two burials may exist, for example, a sealed mine shaft with known accident victims who were never removed. Today's burial laws govern cemeteries of record, both active and inactive.

There are four major subjects found within today's burial laws: (1) cemetery land and issues related to such, (2) individual and family burial

rights and the nature thereof, (3) business regulation and exemption from such (i.e., religious organizations), and (4) jurisdictional authorities (i.e., coroners, taxing districts, etc.). With the evolution of the so-called modern cemetery and that of "before need (pre-need)" sales practices, new laws have been developed to protect trust funds and the rights of both the modern cemetery and its consumers.

Cemetery Land Law

Most burial law today recognizes the unique nature of cemetery land as it relates to land use and property taxes. Burial land often is exempt from property taxes and various types of regulatory fees. "Dedication" of cemetery lands for cemetery purposes only protects the continued use of cemetery land from generation to generation. Dedication in most cases is filed with a county or borough recording authority, and to remove such dedication requires extraordinary actions. In many cases, courts of competent jurisdiction are required to concur with dedication removals. Burial laws appear to recognize that changing societal values and needs must be balanced with the established values expressed at the time of dedication. Dedication in many cases can represent promises to consumers that might take a century to fulfill. For example, 100 acres of land is dedicated in 1890 for cemetery purposes. The cemetery in this case is cared for with proceeds from an endowment care fund that derives its capital from deposits made as individual graves are sold. To "fully fund" such an endowment, the fund expects all available space within the dedication to be eventually sold. But later, the operators of the cemetery see greater revenue opportunities in selling unsold grave space for a housing development, a prospect never envisioned 118 years earlier. Burial law that protects dedicated cemetery land addresses the fact that the unfilled sales volume will undercut fulfillment of the care fund, thus damaging society's promises made decades ago to now deceased individuals. Enter the courts or a state agency for competent jurisdiction pursuant to dedication removal procedures.

Burial laws today attempt to, in many cases, address the four different approaches found in the continued maintenance of cemeteries. Given the oversight needed and the nature of the maintaining organization, cemetery burial law can be simple or detailed. Some cemeteries are maintained by volunteer organizations that put together community days during which all interested parties are asked to pitch in with maintenance help. Burial law may address protection of the Good Samaritans helping out from the legal efforts of those who argue their family grave was desecrated by such volunteerism. Church and fraternal orders own and operate many cemeteries, maintaining the property through cemetery sales and the "collection plate" of their organizations. Burial laws often exempt such organizations from taxes and oversight as religious freedom. It is not uncommon to find specific exemptions for religious cemeteries within burial law. Counties, cities, and taxing districts operate cemeteries and do so by authority of specific burial laws. Taxing districts become mini-governments unto themselves, including the creation of cemetery districts, district director elections, and taxing authorities. State burial laws will specifically authorize cities and counties to enter into active cemetery ownership and/or management agreements and, in some cases, to collect property taxes within a defined cemetery district. Most modern cemeteries rely on endowment or perpetual care funds to provide for maintenance. Specific burial laws may exist in the various states regulating how such funds will be invested, managed, used, and accounted for. Burial laws have created state agencies for the single purpose of oversight and audit of such funds. Criminal statutes exist for violation of such burial laws.

Protection for cemeteries from local condemnation and right-of-way actions can be found in various state burial laws. Highways, both state and local, can represent a major threat to the continued characteristics of a cemetery. Burial laws in many states make it most difficult to condemn potential burial space or existing burials for public right of way. It is not uncommon to find, when flying over cemeteries, most unusual detours taken by major highway systems to avoid a cemetery. Burial laws have protected the rights of the dead over society's need to travel in a straight line.

Local land-use ordinances and zoning may vary over a hundred-year period of time, yet the cemetery remains untouched because of the protection that burial laws provide. Unlike most all other entities,

cemeteries are free to plan land use within their dedicated acreage. Under many burial laws, the laying out and removal of cemetery roadways are allowed without local approval of such actions. Such freedom varies considerably from state to state. Burial laws may require municipal or county approval in one state while another state specifically exempts cemeteries from any such local controls.

Environmental, Building, and Construction Codes

Environmental issues and burial law have collided in many communities. Wetlands, waterway setbacks, endangered species, and other contemporary environmental issues have greatly challenged the long-standing practice of exemptions enjoyed by cemeteries under state burial laws. Much remains to be resolved in this venue.

Building and construction codes are still another area wherein local ordinances and zoning regulations have authority to reach beyond state burial law. Whether construction is for burial purposes (e.g., mausoleums and columbaria, or funeral home and maintenance shops), public health and safety law, in most cases, trumps state burial law. Burial laws have been used to exempt cemeteries from payment of sales tax and certain fees to local government for mausoleum and columbarium development costs. It is argued that such is for cemetery burial purposes only and thus exempt.

Burial laws in many states allow for cemeteries to write and enforce their own rules and regulations, including speed limits, right of assembly, memorial design and content, hours of operation, and decorations allowed within the cemetery. Some burial laws even allow the "cemetery authority" to have what equates to police authority in and around the cemetery for the purpose of protecting the cemetery and enforcing its rules and regulations.

Cemetery Abandonment Law

The abandonment of cemeteries is addressed in some state burial laws. An abandoned cemetery located at the corner of a large tract of land may be protected should subdivision or land development proposals aim to eliminate the cemetery. Burial law in some states will allow for an extensive court review regarding a court-supervised relocation of a small cemetery should development threaten. Federal bankruptcy courts have had some success in overcoming state burial laws with relationship to liquidating land. Such actions viewed the rights of existing burials as a first position "creditor" when considering distributions of assets to cover relocation costs. Burial laws have been created to declare abandoned cemeteries as historical sites, thus affording legal protection. Burial laws can protect abandoned graves by establishing a "buffer" of 5 or 10 feet around such graves and by declaring these sites as dedicated cemetery lands.

Burial Law on Individual and Family Rights

Burial law in the United States often will address family and personal rights of burial within cemeteries. Considered by many to be a "right of sepulcher," control of burial space is maintained by families under burial laws even during foreclosures and seizure attempts. Burial law may forbid listing of such burial rights as an asset or using the same for collateral in the areas of finance. Graves under many state burial laws are exempt from seizure in legal disputes involving financial awards. Common within burial law, but not common in method and approach, are provisions for descent of title to unoccupied graves. In some burial laws, even title to occupied graves descends to a varying list of heirs.

The right to control a grave's use can be found in some burial laws. When family disputes arise regarding who might be using one or more graves owned by a now-deceased occupant, burial law will come into play. Cemetery rules and regulations may be the "law of last resort" in such disputes. Divorce, remarriage, and blended families present major issues that burial law may remain silent over.

Title conveyance and resale by families are covered under some burial laws. The questions of what title is and what title consists of often are addressed under burial law. Burial laws may address the issue of quit claim and warranty deeds for cemetery graves and/or burial rights. Burial law often refers to the cemetery as being the recording agency in such transfers of ownership rather than agencies of public record, such as the county courthouse. Generally, lot owners do not hold a fee simple interest in the real estate, but have a type of

easement permitting their use of assigned spaces for the interment of human remains, subject to the regulations of the cemetery.

Disinterment and Desecration Regulations

Burial law and/or public health law address disinterment issues within many states. Just who has standing to order a disinterment and who has the right to object? Burial law often will conflict from state to state on such authority. Must all living children of a deceased parent agree to disinter? What if the disinterment request would result in separating the spouse and/or children of the deceased? What if disinterment is requested for cremation purposes? Burial law can be most specific in such cases or simply refer to the cemetery's rules and regulations.

Society seems to hold great disdain for the desecrator of graves. Burial law in some states imposes severe penalties upon the convicted desecrator of graves, even including prison time. State legislatures have acted with record dispatch to plug loopholes found during cases of grave desecration.

Burial Law on Business Operation

Contemporary burial law may address the "business of cemetery." Some states forbid for-profit organizations from operating within a cemetery, whereas other state burial laws may forbid funeral homes from being built upon the cemetery or from being owned by a cemetery business. Burial law has been so detailed as to restrict the sale of certain types of monuments by cemetery businesses and has restricted certain types of ownership of these businesses. Special exemptions from business regulation may be found in burial law, most commonly with businesses operated by religious organizations. Licensing of cemetery businesses can be addressed specifically in some burial law. During the past half-century burial law in some states has addressed, in detail, funding requirements for businesses that sell, in advance of need, cemetery goods and services. Known as preneed trust laws, such laws can be found under identified burial law codes. Records generated by cemeteries regarding burial locations and detail of arrangements made at the time of burial are protected under some burial laws.

Special Jurisdictional Authorities

Burial law may establish special jurisdictional authority to coroners, prosecutors, and special oversight agencies. Coroners are referenced in burial law as having a specific right to operate and control a cemetery. Still other burial laws will authorize a state agency to seize control of a cemetery for the purposes of protecting existing records and business activities.

Burial laws do vary considerably from state to state. Industry groups such as the International Cemetery, Cremation and Funeral Association have produced model legislation for consideration by states seeking such. The evolution of burial law in the United States has been slow, yet burial laws of the 19th century are notably different from those of the 21st century.

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See also Cemeteries; Cemeteries, Pet; Cemeteries, Unmarked Graves and Potter's Field; Cemeteries, Virtual; Funeral Industry; Funeral Industry, Unethical Practices; Green Burials

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Buried Alive

Burial alive has been used as a form of torture to induce panic and physiological breakdown, and state endorsed and illegal cases have been documented from India, Russia, China, the United States, and Europe. This entry focuses on a much more extraordinary form of live burial: that which occurs as a part of social and cultural practice. Being buried alive is not simply a form of physical disposal; it also serves an important function in facilitating immortality or special deaths. It can be used to immortalize kingship, allowing the surviving family to maintain a special status through kinship bonds with an immortal ancestor. It can also be used to dispose of unwanted children, allowing the parents or relatives to effectively miss the point of death. In cases of sacrifice and regicide, kings, women, and children can transcend death either to avoid repercussions or to achieve immortality. Being buried alive is also feared, and in the 19th century, this fear affected coffin design and the material used to dispose of the dead.

Regicide and Live Burial: The Anthropological Evidence

Among the northern tribes of the Dinka of southern Sudan, there is the memory of regicide. It has been decades or more since a leader has been buried alive; however, when it did take place, it was an important means for the continual legitimization of power by the ruling family. The act of being buried took several days. A large hole was excavated at the highest point within an ancient cattle-campsite. Two wooden platforms were constructed, and for 2 days songs were sung to honor the bulls. Afterwards, and with the family gathered, the bulls were slaughtered, and a bed was made from their hides. While the bed was being constructed, the ritual entered a liminal stage involving feasting and sexual promiscuity. After the bed was completed, war shields were placed on it, the king was interred, and a chamber was constructed within the hole. The chamber was covered with cow dung, but a small hole was left in the surface so the men of the tribe could ask the incumbent for divination until he stopped replying and had finally been taken into the earth. When the chamber collapsed, a shrine was constructed on the site marking the completion of the process of the king passing into the afterlife. This transition was unique to his role as chief, which allowed him not just a special death but to become associated with Dinka ideas of immortality and divinity.

The anthropologists who reported the burial act described in the previous paragraph did not actually witness the act of regicide, and the practice seems to have been outlawed with the advent of British imperial colonization. This has led to controversy surrounding this topic and, as with the study of sacrifice, anthropologists have suggested that the practice of regicidal live burial is symbolic and never actually took place. However, scholars of this topic must be careful not to sanitize alien societies by forcing them to fit with Western attitudes and ideals.

Infanticide, Savage Society, and the 19th-Century Attitude

Before the birth of academic anthropology, colonial administrators and military officers reported on the people in the British Empire. In 1881, the deputy commissioner of Hoshyārpur in the Punjab reported that hundreds of female children were killed annually, buried in a *gharras* or water pots at the end of a ritual designed to bring male children. According to similar sources, if a mother from the Irulas or Nilgiris was driven to hunger, she could bury her child alive in anticipation of its final misery, believing this to be a merciful means of death. Such reports of infanticide were published in London and may have been among the social justifications for colonizing and converting the "savages." It is perhaps notable that many of these cases were never actually witnessed by the colonial officials, generating problems similar to those surrounding cases of regicide. However, that there is a significant favor for male children is witnessed today through the Indian government's need to outlaw ultrasound scans for fears of widespread selective female abortion. It is also worthy of note that in 2007, the Indian media reported the survival of a 2-year-old girl buried alive by her relatives in the Mahbubnagar district. Female infanticide may have been practiced, but probably not on the scale suggested by the colonial officials, who reported whole villages with no female children.

Buried Alive and Human Sacrifice: Archaeological Evidence

Contrary to the view of colonial officials, live burial is a feature of complex societies, and evidence has been found of live burial in some of the earliest city-states. The bodies of slaves, or workers, were left walled up in Egyptian pyramids, buried alive to accompany the dead king into the afterlife. Possibly the most striking case known is from the ancient Mesopotamian city of Ur, located in modern Iraq. Within the cemetery in the middle of this city were the tombs of several members of the royal family identified from the accompanying cylinder seals. The 16 royal tombs consisted of a vault containing the body and treasures; outside of the vault was a ramp providing access to the chamber and a number of antechambers with dozens of retainers buried in full costume and the paraphernalia of their role. There is some debate surrounding how these retainers died, and a small cup found near each skeleton suggests they were poisoned, but these cups may have contained sedatives, drugs, or alcohol. Poison may not have been needed and if a sedative was used, the retainers would have simply died in their sleep, buried alive—such a death could transcend mortality. It is just as likely that these individuals were buried alive within their chambers. This case highlights an interesting problem: It is almost impossible to identify having been buried alive as the cause of death in ancient corpses, and researchers can only speculate how the retainers at Ur actually died.

The most convincing cases come from unique graves. One of these is the burial of a 6th-century Anglo-Saxon woman found within a contemporary cemetery in Sewerby, United Kingdom. In this inhumation, she was found laying face down with arms and legs out and in the appearance of flaying about. At least visually the body of this woman gives the impression of having been buried alive, against her will. A similar case exists from the Iron Age hill fort at Danebury, United Kingdom, where bodies, placed in grain storage pits, seem to have been weighed down by large stones. One of these bodies, like the Sewerby woman, had its arms outstretched and seems to have been buried alive under the stones. These two cases have been interpreted in different ways. The Sewerby woman is regarded as having been murdered, a deviant burial in an otherwise typical cemetery and an indication of some type of special execution, perhaps for witchcraft. In contrast, the Danebury burials have been interpreted as ritual sacrifices linked to a cycle of fertility and rebirth. However, in both of these cases the underlying motivation for the action was not, as it had been in Mesopotamia or among the Dinka, to create an impression of immortality by hiding death. Instead the purpose of live burial has been interpreted as a means to dispel or destroy evil, a bad harvest or hostile magic, or a curse or bad luck.

Fear, Superstition, and Material Culture in the 19th Century

In the cases discussed in this entry, it has been difficult if not impossible to prove that live burial actually took place, and each of these examples are hotly debated. However, the fear of being buried alive does manifest itself within coffin and grave design. In the 19th century this fear was particularly acute, and a large number of safety coffins were designed, particularly during the cholera epidemics. Over 30 different designs were patented in Germany. The first recorded example is that of the Duke Ferdinand of Brunswick's design in 1792; it had a window, a tube for air, and a lock instead of a nailed-down lid. Other designs included ladders, cords, bells, flags, and breathing or feeding tubes. Although there is little evidence to suggest that people actually used these features, glass-paneled coffin lids have been found in England. Two coffins with 6-inch square windows over the head end were discovered from Redearth, a private burial ground in Darwen, Lancashire, United Kingdom. Presumably these widows were too small to allow the incumbent to break the glass and escape, but they were large enough to allow people at the funeral to look into the coffin and determine the condition of the body—live or dead.

The fear of being buried alive was inspired not just by the increased mortality rates of the cholera epidemic but by stories of people who awoke just before burial. Indeed, painters and poets enjoyed the topic, and Edgar Allan Poe wrote *The Premature Burial* in 1844 and returned to the theme repeatedly during his writing career. Such urban legends are still about today, partly inspired by TV culture

and the Internet. As recently as 1995, an Italian manufacturer invented a safety coffin that included an emergency alarm, two-way microphone/speaker, a torch, oxygen tank, and a heartbeat sensor/stimulator. However, as most corpses are drained and embalmed, these seem to be redundant additions to modern coffins.

Torture and Execution

In late medieval France and Germany, women guilty of murder and occasionally those believed to be witches were burned or buried alive. In Germany this burial often involved the inclusion of thorns or being staked to the ground, and it was thought that being buried alive would be much less likely to result in the return of a vengeful revenant than would hanging, which was the usual treatment for men. Indeed, live burial was a punishment in ancient Rome, and vestal virgins transgressing their vow of chastity were reported to have been buried alive. This is a tradition that started before Imperial Rome but survived throughout. Kings instituted the punishment of live burial, but classicists report only a small number of recorded cases occurring when Rome was in political crisis, so these might be better understood as sacrifices. Indeed Pliny the Elder gives accounts of pairs of Gauls and Greeks being buried alive in Rome as human sacrifices at times of great stress.

Conclusion

In summary, live burial can take on an important role in society, but as these examples indicate, this is likely to be specific to certain members of society, such as kings, women, and female children. The act of live burial masks the process of dying and the onset of death. It can be used as a means to transcend death and to create immortal ancestors. A process like this can be important for the surviving family and helps legitimate their roles as an elite regent group. Similarly, ancient society probably practiced live burials, and it is documented in ancient Mesopotamia, ancient Egypt, and Rome. However, anthropological and archaeological debates demonstrate that it is a controversial topic and is unfortunately an area that can be subjected to modern Western sensibilities. Being buried alive has also been feared. In the 19th century, coffin designs were produced that were intended to prevent loved ones from being buried alive, and although these never entered mainstream material culture, glass-fronted coffins have been found in the crypts of the middle classes.

Duncan Sayer

See also Death, Anthropological Perspectives; Immortality; Infanticide; Transcending Death; Witches

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Cancer and Oncology

The American Cancer Society projects that in the United States alone, 1,437,180 people will be diagnosed with cancer and 565,650 will die from the disease in 2008. Accordingly, understanding what cancer is, what factors may contribute to its development, what cancer screenings and treatments are available, and most importantly, how to prevent cancer, are all important topics for consideration.

What Is Cancer?

Cancer is a group of more than 100 different diseases, all characterized by cellular growth and division gone awry. Normally, when the body produces cells, younger cells divide to form the new cells that will replace the old ones as they die off. However, if cells continue to divide, even when new cells are not needed, an extra mass of cells called a tumor can form.

There are two main types of tumors: benign and malignant. Benign tumors are not cancerous and generally do not spread to other body locations. Malignant tumors, on the other hand, are cancerous and may spread from the tumor to other body parts by traveling through the bloodstream or lymphatic system. Cancer that has spread to other body organs is said to have metastasized. Not all forms of cancer develop into malignant tumors, though. Some, like leukemias for example, develop in blood cells.

Malignant tumors and cancers are classified into four major types, the majority of which are carcinomas. Carcinomas are cancers that develop in epithelial cells, which line the surfaces or cover internal organs. Sarcomas develop in bone, cartilage, fat, connective tissue, and muscle; leukemias develop in the blood cells and bone marrow; and lymphomas are cancers that originate in the lymphatic system.

Cancer Incidence and Mortality

Cancer is the second leading cause of death in the United States, accounting for one in four deaths. Among men, the five most commonly diagnosed cancers, excluding skin cancers, are prostate, lung, colon, bladder, and non-Hodgkin's lymphoma. Among women, the five most commonly diagnosed cancers are breast, lung, colorectal, uterine, and non-Hodgkin's lymphoma, in descending order of frequency. The five cancers with the highest mortality rates among men are lung, prostate, colon, pancreatic, and leukemia, respectively. For women, the cancers with the highest mortality rates are lung, breast, colon, pancreatic, and ovarian. Childhood cancers, over half of which are leukemia and brain and nervous system cancers, are the second leading cause of death in children.

Cancer Risk Factors

Over the years, researchers have struggled to answer the question, "What causes cancer?" The two main categories of risk factors that have been

identified are heredity, which is uncontrollable; and environment, or factors that people are exposed to that are often modifiable and controllable. Heredity, or inherited gene mutations, increases one's risk of developing cancer compared to the general population, but it accounts for only about 5% to 10% of cancers. Because environmental risk factors are estimated to account for 75% to 80% of cancer cases and deaths in the United States alone, many studies have focused on identifying risk factors that may increase one's chances of developing cancer.

Tobacco

In 2007, smoking alone was expected to cause 168,000 cancer deaths, and tobacco ranks as the single greatest preventable cause of death in the United States. Smoking and tobacco use increase the risk for at least 15 different types of cancer and are primarily responsible for over 30% of all cancer deaths and roughly 80% to 90% of lung cancer deaths. Additionally, approximately 3,000 nonsmokers die annually from the effects of secondhand smoke.

Obesity

Approximately two thirds of Americans are overweight or obese, and after tobacco, being overweight or obese is the most preventable risk factor for cancer. Unfortunately, the relationship between obesity and cancer is not well known despite the fact that approximately one third of cancer deaths are attributed to poor nutrition, physical inactivity, overweight, and obesity.

Obesity and physical inactivity are associated with colon, liver, pancreatic, esophageal, kidney, gallbladder, endometrial, prostate, and postmenopausal breast cancer. Further, the American Cancer Society reported that being overweight is a risk factor for the development of some lymphomas and leukemias. The risk for developing cancer does not apply simply to those who are clinically obese. One's cancer risk increases steadily as weight increases from normal weight, to overweight, to obese.

Overweight and obesity may to contribute to cancer in several ways. For example, being overweight triggers high estrogen levels, which are associated with both postmenopausal breast and endometrial cancer. High insulin levels, which are affected by obesity, may also play a role in the development of both of those cancers. Gastric reflux, exacerbated by overweight and obesity, is a leading risk factor for the development of esophageal cancer, and colon cancer may, in part, be related to high insulin levels. Finally, obesity can trigger inflammation, which may possibly be associated with several forms of cancer.

Alcohol

Alcohol is an established risk factor for cancer of the mouth, throat, larynx, liver, esophagus, and breast. Although moderate alcohol consumption reduces one's risk for cardiac disease, such is not the case for cancer. In fact, even one alcoholic drink per day can significantly increase breast cancer risk, and colon cancer risk increases with two drinks per day. Mouth, throat, and liver cancer risk increases with over two drinks per day, and the risk is significantly greater among those who both smoke and drink.

Infectious Agents

Infectious agents, including viruses and bacteria, are responsible for 15% of cancers worldwide. The human papillomavirus (HPV) is the primary cause of cervical cancer and is related to some cases of penile and anal cancer; hepatitis B and hepatitis C are major causes of liver cancer. Infection with *Helicobacter pylori*, a bacterium that causes stomach ulcers, increases the risk for stomach cancer and for lymphoma of the stomach lining. Human immunodeficiency virus (HIV) is associated with increased risk for lymphoma and Kaposi's sarcoma, and the Epstein-Barr virus, a common virus that causes mononucleosis, has been linked with Burkitt and immunoblastic lymphomas, as well as nasopharyngeal carcinoma. Human T-cell lymphocytotropic virus is associated with a specific form of T-cell lymphoma.

Environmental Risks

Other known risk factors for cancer include ultraviolet sunlight; cancer-causing chemicals in the workplace; and air, water, and soil pollution, including radon. About 1 in 20 homes has elevated

levels of radon, a naturally occurring radioactive gas, and about 20,000 lung cancer deaths annually are caused by radon exposure in homes.

Another potentially serious risk factor for developing cancer is radiation exposure. Ionizing radiation is invisible, high-frequency radiation that can damage DNA or genes. Everyone is exposed to small doses of ionizing radiation from the earth's atmosphere via cosmic rays, sunlight, soil and rocks in the ground, and other sources, but these levels of radiation only account for a very small percentage of one's total cancer risk. However, some people are exposed to much greater levels of ionizing radiation during certain diagnostic and treatment-oriented medical procedures.

Patients who receive radiation to treat cancer or other conditions may be at increased risk for developing cancer in the future, and X-rays used to diagnose or screen for disease also expose people to ionizing radiation. The dose of radiation from diagnostic and screening procedures is much lower than the dose used to treat a disease, but some diagnostic procedures pose greater risks than others. For example, the radiation dose of a chest X-ray exposes a person to the equivalent effective dose of 2.4 days of naturally occurring background radiation. A computerized axial tomographic (CAT or CT) scan of the abdomen exposes one to the amount of radiation equivalent to 500 chest X-rays and 3.3 years of naturally occurring background radiation. A cardiac CT scan for a woman produces the radiation equivalent of 1,070 chest X-rays and 7.1 years of natural background radiation.

Oncology

Oncology is the branch of medicine that concentrates on the prevention, development, diagnosis, and treatment of cancer; doctors who treat cancer are called oncologists. Medical oncologists treat cancer with chemotherapy; surgical oncologists biopsy, stage, and perform surgery to remove cancerous tumors; and radiation oncologists use radiotherapy, or therapeutic radiation, to treat cancer or to shrink tumors to reduce pain and suffering of patients. Oncologists often first become involved with patient care at the time of cancer diagnosis.

Diagnosis

Correct diagnosis is critical to determining the most effective therapeutic options and patient prognosis. Cancers are diagnosed at different stages of development and these stages are based on the size and location of the tumor or cancer, and whether or not the cancer has spread. One of the two most common methods of staging cancer is the TNM system. "T" relates to the extent of the primary tumor, "N" to regional lymph node involvement, and "M" to distant metastases. Those three factors determine whether the cancer will be diagnosed as Stage I, II, III, or IV. Generally, Stage I cancers are localized and often curable, whereas Stage IV cancers have spread or metastasized to distant locations throughout the body. The prognosis for Stage IV cancers is generally poor.

Treatment

Most cancers can be treated and some can even be cured. The specific treatment protocol utilized will depend on the cancer type and stage, as well as the general condition of the patient and his or her ability to withstand treatment.

Surgery

Surgery is often the first line of defense in cancer treatment and sometimes can successfully remove the entire tumor, particularly in the early stages of disease. Sometimes tumors cannot be completely removed because they are embedded in or attached to an organ, and removal would endanger the patient's life. In that case, surgery may be used to debulk, or remove some of the tumor mass to improve one's quality or length of life. New surgical techniques such as cryosurgery, which freezes tumor cells, and radio frequency ablation, which heats tumor cells and requires only small incisions to insert surgical instruments, result in easier recovery and fewer complications.

Chemotherapy

Chemotherapy is the use of medication to destroy cancer cells and/or shrink tumors. Chemotherapy is used when cancer is located in an area that makes surgery impossible or too risky or when the cancer is not a solid tumor that can be surgically removed,

as in leukemias. Chemotherapy may also be used when surgery has been unable to fully remove all tumor cells or when cancer has metastasized to distant body regions. Finally, chemotherapy may be utilized when surgery appears to have removed all observable cancer, but there is a risk of cell migration; in this case, chemotherapy is used as adjuvant therapy. Chemotherapy is often less noxious than it used to be as a result of drugs that better manage the negative side effects, such as nausea and low white blood cell counts that can cause life-threatening infections and other problems.

Radiation Therapy

Radiation therapy uses high-dosage radiation from X-rays, gamma rays, and other sources of radiation to either destroy cancer cells or shrink tumors. Radiation is often administered by machines that emit external-beam radiation. However, radiation can also be given internally, either by inserting a radioactive source into the body near tumors or cancer cells or by infusing radioactive substances into the body via the bloodstream to target cancerous tissues in the body.

Hospice and Palliative Care

When it becomes clear that treatments are ineffective at slowing the progression of cancer and it has become terminal, treatment may include hospice and palliative care. Hospice care is a multidisciplinary, holistic approach to patient care, usually home-based in the United States, and is provided for persons suffering from terminal illnesses, including incurable cancers. Hospice patients receive palliative care, which is aimed at managing symptoms and providing comfort but not curing one's cancer.

The field of oncology continues to develop more advanced cancer treatments through the process of testing new surgical, chemotherapy, and radiation treatments in clinical trials. A clinical trial is one of the final stages of an extensive research process that tests new treatments that have shown success in laboratory tests. Several promising cancer treatments that are currently being tested in clinical trials, or have recently been approved, include cancer vaccines to treat cancer, gene therapy that tailors treatment to a specific tumor's genes, and targeted therapies that kill cancer cells while preserving healthy cells. The development of these and other cutting-edge cancer treatments is promising, but regardless of how successful cancer treatments become in the future, it is always preferable to prevent the development of cancer in the first place.

Cancer Prevention and Screening

Cancer Prevention

The risk of developing cancer can be significantly reduced by making moderate lifestyle changes. The American Cancer Society as well as the panel that published the 2007 report *Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective* have established guidelines on nutrition, physical activity, and other preventive measures. Diet and physical activity guidelines include maintaining a healthy, lean weight; adopting a physically active lifestyle with a minimum of 30 minutes of daily exercise and limited sedentary habits; consuming a plant-based diet, low in red and processed meats, salt, calorie-dense foods, and sugary drinks; and limiting alcohol consumption to one drink per day for women and two per day for men. Vitamins and supplements are not generally recommended for cancer prevention.

Additional recommendations include protecting oneself from excessive sunlight, especially during peak radiation hours; as well as avoiding tanning beds for the prevention of skin cancer. Immunizations for hepatitis B and HPV are recommended, as is avoiding risky sexual behaviors that can contribute to HPV, HIV, and hepatitis B and C, all diseases associated with the development of cancer. Finally, the American Cancer Society recommends regular screening and self-examinations for certain types of cancer.

Screening and Early Detection

People who are diagnosed with cancer at a late stage are at significantly greater risk of dying from their cancer, but recommended screening tests can improve survival by detecting cancer at an early stage when treatment is more effective. Screening may even prevent the development of

some cancers by finding and removing premalignant abnormalities, as in the case of some skin and colon cancers.

Both the American Cancer Society and the Centers for Disease Control and Prevention have presented nationwide objectives and initiatives for early detection of some cancers. Mouth and skin cancers can be identified at early stages by dental and medical examination, respectively, and early detection screening measures such as mammography, colorectal screening, and pap tests have been found to reduce mortality from breast, colon, rectum, and cervical cancers. In many cases, colorectal cancer can actually be prevented because most colorectal cancers develop from precancerous polyps, which can be removed during a colonoscopy screening procedure. It is estimated that half of all deaths from colorectal cancer could be prevented by colorectal screening, yet only two in five Americans over the age of 50 have had colorectal screening.

Although many believe the prostate-specific antigen test and digital rectal exam screening measures have contributed to declining prostate cancer deaths, currently, the American Cancer Society and the Centers for Disease Control and Prevention have not set any formal guidelines for prostate cancer screening. Both groups report that there is currently insufficient evidence to make specific recommendations either for or against prostate cancer screening.

In addition to screening, people should be alert for changes in their body that may indicate cancer. Cancer may cause a wide variety of symptoms, such as unexplained lumps in the body; changes in warts or moles; sores that do not heal; nagging coughs or hoarseness; changes in bowel or bladder habits; unusual vaginal, urinary, or rectal bleeding or discharge; indigestion or difficulty swallowing; unexplained changes in weight; overwhelming fatigue; unexplained anemia; night sweats; and enlarged lymph nodes. This list is fairly extensive and the symptoms often not caused by cancer, but if these or other physical changes persist, medical consultation is recommended. Additionally, because some cancers have no obvious symptoms, routine physical exams are recommended by some authorities.

Controlling risk factors to help prevent the development of cancer can possibly reduce the number of newly diagnosed cancer cases by at least half. And when prevention is not successful, oncology's continued development of new and improved therapies can also contribute to decreased mortality, increased quality of life, or both, for those diagnosed with cancer.

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See also Acute and Chronic Diseases; Palliative Care; Terminal Care; Terminal Illness and Imminent Death

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Cannibalism

Cannibalism, also called anthropophagy, is the human act of eating parts of the human body, including, but not limited to, flesh, muscles, and blood. The origins of the word are a result of a conversational misunderstanding between Christopher Columbus and a guide referring to a group of barbaric people in the West Indies who ate human flesh. While the natives referred to them as Caribs, Columbus called them Canibales by mistake. This idea of savage cannibalism became more popular with the voyages of Captain James Cook in the Pacific Ocean and his ship's many dialogues and encounters with the Māoris, Polynesians, and Tahitians. Reports of cannibalism exist throughout the world, with the first records dating back 500,000 years. These reports have usually focused on groups of people whom the people of the Western world have considered to be barbarians, savages, or others.

Falsified literary reports issued by various governments to spread the rumor of cannibalism in countries such as Russia, Poland, and Ireland in times of crises and war as a means of propaganda have been documented. This is not to say, however, that cannibalism is a complete falsification. Social scientists view societies that practice cannibalism and incidents involving cannibalism in one of three separate ways: psychogenic cannibalism, a means of satisfying mythic and overarching psychosexual fantasies and desires; utilitarian/adaptive cannibalism, an adaptation of hunger or other material deficiency; or hypothetico-deductive cannibalism, part of the overall universal order and a normative function in society.

Within these analytical frameworks of understanding cannibalism, there are also five different categories for various acts of cannibalism. Exocannibalism is the cannibalism of war and the eating of the "other" who is not a member of one's tribe, whereas endocannibalism is the cannibalism of those who are either in, or related to, one's tribe. Survival or emergency cannibalism is the consumption of a human for purposes of nourishment and protein deficiency, and chaotic cannibalism is associated with a power or force that is believed must be eaten to be destroyed. The last type, lunatic-fringe cannibalism, is often dramatically reported; its most important benefit is the reinforcement of the stereotype of cannibalism.

The cannibal ritual of the literal eating of the flesh and blood of a fellow human has been hard to definitely establish because the majority of early accounts with supposed cannibals were based off an ethnocentric colonial point of view. The sparsely populated country of Papua New Guinea has long been spoken of as having an interior populated by cannibals. Tribal groups such as the Fore, the Huli, the Kutubu, the Strickland-Bosavi, the Duna, and the Mianman have allegedly practiced cannibalism. However, the sources for these acts of cannibalism tend to be unreliable as they usually arise as one tribe's commentary on their neighboring, and often enemy, tribe.

There are, however, two strands of evidence that legitimatize cannibalism more so than unreliable neighboring accounts. The outbreak of Kuru, which is a disease of the nervous system studied by Nobel Prize recipient Daniel Gajdusek in the Fore people, tied the degeneration of the cells of the brain to being passed from person to person by cannibalism. Another source that accounts for an accurate depiction of cannibalism is a detailed description of the Miamman raid on the Owininga people of Papua New Guinea, where cases of cannibalism occurred. The police account of the report, which was backed up by witnesses and defendants, cited that the bodies of the victims were cut up and later eaten with a side of taro.

Cannibalism also exists in cultures in the form of mythology. In European and American cultures, creatures such as werewolves, witches, and vampires often consumed human flesh or blood for power and various nefarious purposes. In the Bimin-Kuskusmin culture of Papua New Guinea, there are many tales of witches, sorcerers, and female tricksters (known as *kamdaak waneng*), all whom eat various parts of humans in order to gain power.

Groups of people who have been accused of practicing cannibalism have a number of similar traits. First, they come from societies that are politically homogeneous, and where the local government is the supreme form of power. Second, these people associate themselves with societies that have a history and culture of maternal dependency, a subdued taboo against sexual intercourse, and suppressed male aggression against both males and females. Finally, they come from societies

where there is a significant level of food stress, especially when it includes protein. It is important to note that just because one of these groups possesses these characteristics, does not mean that they will engage in cannibalism (there is no documented link between hunger and desire to resort to cannibalistic practices, for instance).

Emergency cannibalism is highlighted in depth in this entry, as it is the most prevalent type in both historical and contemporary literature, and it continues to be the main form of cannibalism reported in the industrial Western world. Because acts of emergency cannibalism often occur in sparsely populated places, and the practices often belong to a dying, war-like group who is more intent on survival than cultural preservation, there is very little evidence of specific tribes actually practicing this type of cannibalism.

Societies or time periods during which such emergency cannibalism is thought to have existed include the Anasazi Indians of Chaco Canyon in the American Southwest; in Ireland during the Irish potato famine; in China during the Three Kingdom period, the Tang period, and the Han period; during the siege of Leningrad in the early 1940s; and in the Jewish ghettos during World War II. These reports are based on personal accounts and archaeological findings.

There are a number of more prominent incidents in the past 2 centuries that indicate the existence of emergency cannibalism. The first is the infamous case of the Donner Party. In 1846, the Donner Party, organized by George Donner, set off across the Rocky Mountains toward the Sacramento Valley. After disregarding the advice of the group's guide, they were trapped in a series of snowstorms for well over a month. After all the food, including their oxen, horses, and dogs, was diminished, the group contemplated eating the members of their party who had already died. After 5 days of hesitation, they began eating the remains of Patrick Dolan. At the end of their ordeal, approximately 45 people survived, many of whom resorted to emergency cannibalism.

Another well-documented example of emergency cannibalism occurred when an F-227 airplane crashed in the Andes Mountains of Argentina in 1972, carrying members of the Uruguayan rugby team called "The Old Christians." In brief, after using up all of their rations after the crash, the survivors began to consume the bodies of those who had already died; they ate everything from their buttocks, to their hands, to their brains. Just like the Donner Party, there was fear of the social taboo of cannibalism and especially the commentary that their devout Catholic upbringings had for respect of the body. In the end, all of the survivors eventually resorted to cannibalism. After a more than 2-month ordeal, the remaining 16 survivors were rescued and quickly became national heroes. As the Roman Catholic Church justified it, if they had refused to eat the bodies, they then would have been committing suicide, which is a greater offense than cannibalism.

One of the most recent reports of cannibalism occurred on a Vietnamese refugee boat in 1988. After leaving the port of Truc Dang, the motor on the ship faltered and the junk became stranded, as it did not have a sail or a replaceable motor. After running out of food and being ignored by both Japanese and American vessels, Phung Quang Minh, the self-appointed captain of the ship, suggested that the group begin using the bodies of the dead for the living. Unlike becoming the heroes of the Donner Party or Uruguayan air flight 571, Phung and nine others were incarcerated after the junk arrived on the island of Luzon in the Philippines; about half of the original crew survived.

Although still uncommon, contemporary events of cannibalism are found in popular culture, emphasizing the modern world's portrayal of cannibalism as a social taboo and an act of "the other" and "the savage." A contemporary story of cannibalism involves Armin Miewes, who posted an advertisement for a person who was willing to be eaten; Bernd-Jürgen Brandes answered the article and was later killed and eaten. Miewes, who stored parts of Brandes's body for over 6 months, was placed on trial and was later convicted.

Another modern cannibalistic event occurred when Chilean shock artist Marco Evaristti fed dinner guests meatballs that were made out of his own body fat removed by liposuction. Although deemed cannibalistic by the public, the police and government took no action. Other examples are presented in movies such as Fruit Chan's *Dumplings,* Bartel's *Eating Raoul,* and Demme's *The Silence of the Lambs*.

Andrea Malkin Brenner

See also Body Disposition; Christian Beliefs and Traditions; Death, Anthropological Perspectives; Legalities of Death; Popular Culture and Images of Death

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Capital Punishment

Since at least the beginning of written history societies have put people to death, both as a redress to social harms and as a means to control deviant and criminal behaviors. Widespread opposition to capital punishment, however, is a more recent phenomenon, first emerging during the European Enlightenment, as new political philosophies began to take root in the body politic and changing social attitudes toward death and dying emerged. This entry explores the general shift in the cultural orientation toward capital punishment in Europe and the United States, recent changes in its use globally, and contemporary issues regarding the death penalty in the United States.

Capital Punishment in Western Europe and the United States

In 1764, the Italian criminologist Cesare Beccaria voiced the first widely read opposition in Europe to capital punishment. His arguments against capital punishment were part of a shift toward emphasizing individual rights within emerging political and social philosophies. Such philosophies were related, at least in part, to the emergence of new views of life and death in the late 17th and 18th centuries, views increasingly informed by rationalism and science and decreasingly by religion and the traditions of the *ancien régime* that had dominated much of European society and culture for hundreds of years.

Attitudes toward death had been slowly changing since the end of the Middle Ages, including attitudes toward capital punishment. For centuries prior, social life had been governed by rigid forms of tradition, and death was itself common and communal. People died often and early, and the movement from life to death was still a public event and still governed by an adherence to ritual and an assumption of communal salvation. In the case of capital punishment, prior to the Enlightenment, there was little opposition to the idea that some people deserved to be put to death. Executions were generally grisly, public affairs, often accompanied by torture and prolonged suffering, designed to deter other would-be offenders. Bodies of the condemned were frequently left to rot, burned, or scattered; denying one a proper Christian burial ensured damnation in the next world as well.

By the 12th century, images of individual judgment began to replace those of communal salvation. Where this represented a shift in emphasis toward what the French social historian Philippe Ariès called "one's own death," rituals of condemnation and execution nevertheless changed little throughout the Middle Ages, except in one important sense: where capital punishment was increasingly viewed as a means of suffering by which one could repent and be saved. This is evident, for example, in the well-known *Malleus maleficarum* (Hammer Against Witches), written in 1486, which detailed numerous ways in which those accused and found guilty of witchcraft were able to save themselves through confession, repentance, and punishment. In practice, however, tens or even

hundreds of thousands were put to death throughout the late Middle Ages, the Renaissance, and the Reformation, and aside from crimes of heresy or witchcraft, people were put to death for political crimes, crimes against the king, and common crimes. Some parts of Renaissance Europe (e.g., Venice) restricted the use of capital punishment, and thinkers such as Thomas Moore and Erasmus debated its merits, but by and large there was little opposition to, and many opportunities that favored, its use, including wars between states, various inquisitions, the Reformation and Counter-Reformation, and peasant revolts.

While Beccaria is credited with publishing, in 1764, the first widely read opposition to the use of capital punishment, by this time its use was already declining throughout much of Europe. This decline coincides with changing views of death itself in Western Europe that were a result of both social and scientific changes. The emerging bourgeoisie were living longer lives due to advancements in medicine and hygiene. Religious views of death as a transition to the afterlife were being replaced by biological definitions of death as the cessation of organic function, as well as secular doubts regarding the existence of any afterlife at all. New political philosophies argued in favor of an inherent right to life as central to the concept of the social contract.

Taken together, these social, scientific, and political changes undergirded Beccaria's opposition to capital punishment, which he published as part of his 1764 treatise *On Crimes and Punishments*. In this work, Beccaria put forth what is referred to today as the "classical" approach to crime control—an approach that is rooted in a utilitarian view of punishment as a means by which to promulgate adherence to the law and deterrence from criminal activities. In the case of capital punishment, Beccaria drew heavily from the work of John Locke and other political thinkers of the time by arguing that life itself was a right that could not be justly deprived by the state. Beccaria further argued that capital punishment was not only unjust but also ineffective; he proffered that prolonged depravation of liberty, and not death, was more effective in deterring people from criminal acts.

Beccaria's work reflects the beginning of the shift in early modern Europe away from the spectacle of public torture and humiliation as a means of social control. This era witnessed the beginning of the use of prisons in western Europe and the northern United States as a means of "correcting" socially deviant and criminal behaviors. Many forms of public punishment were replaced with the "private" depravation of liberty behind the walls of the penitentiary. Yet public executions remained common in Europe and the United States up through most of the 19th and even the early 20th century. What changed during this time with regard to the use of capital punishment was not its public display, but rather the emergence of the idea of "merciful" or even "humane" death. The French use of the guillotine was seen as a progressive step away from the barbaric practices of execution used in the ancien régime, as was the early use of the electric chair in the United States, which was thought to be a humane alternative to hanging or the firing squad.

By the first decades of the 20th century, death itself was becoming increasingly masked behind the closed doors of the hospital and dressed up in the parlors of the mortician. Within a span of only 50 years or so in the United States, a shift occurred in that a majority who had once died at home now died in institutions; similar shifts occurred throughout western European countries. Sociologists and social historians call this the emergence of "hidden" or "invisible" death, and in the case of capital punishment, executions soon followed suit. Public executions were ceased in Britain in 1868, in the United States in 1936, and in France in 1939.

Executions did not become private affairs due to lack of public interest, however; the last execution in the United States drew a crowd of 20,000 and the last beheading in France was a similar public spectacle. Rather, in western Europe and the United States, capital punishment became increasingly hidden from public view in large part *because* of the controversy and spectacle surrounding public executions. The last execution in France was, by many accounts, a drunken and jeering affair, and the last execution in the United States—of Rainey Bethea in 1936—received substantial negative press coverage. By the mid-20th century, executions in western Europe and the United States were conducted under the auspices of technicians and administrators, and the rancorous crowds that accompanied the last public executions in France and the United States were replaced by executions conducted behind closed doors.

Today, executions are almost nonexistent in Europe and are carried out only in front of victims, family members, and prison staff in the United States. Cultural controversy and fascinations surrounding capital punishment remain, however, and while the public spectacle of the gallows or guillotine have all but disappeared, the popularity of executions on the Internet and on video suggests that attempts to politically and culturally repress the spectacle of executions have not necessarily curbed public interest. Geoffrey Gorer argued in 1955 that death itself had become pornographic in the 20th century, in a manner not dissimilar from that of sex itself under the Victorians a century prior, and the rapid growth of multimedia depictions of executions suggests that a new type of "virtual gallows" has emerged, perhaps no less popular than those a century ago.

Global Patterns in Capital Punishment

Within the 20th century, capital punishment became an increasingly controversial practice not only in terms of its instrumental value as a mechanism of social control, but also as a representation of culture itself. In the past 30 years, all Western industrialized nations, with the exception of the United States, ceased the use of capital punishment. Some European and South American states had in fact ended capital punishment much earlier, and it is often overlooked that states such as Venezuela (in 1863) and Uruguay (in 1907) were among the first to abolish its use. Today the majority of South and Central American states have discontinued its use, although a majority of Caribbean states still retain capital punishment.

Western Europe represents the most regionally concentrated shift away from the use of capital punishment in the 20th and early 21st centuries, but this shift has been occurring globally as well. Following the breakup of the U.S.S.R., a majority of eastern European states discontinued its use, Belarus excepted. Russia and Latvia still allow its use for a small number of crimes, but within the past decade there has been only one known execution in Russia. The democratization of Central and South American states, following years of repressive governments, has likewise seen a decrease in the use of capital punishment.

Globally, as late as 1965, only 12 countries had banned capital punishment, and another 12 had informally discontinued its use. By 2008, about 90 countries had abolished capital punishment and another 30 had not executed anyone for at least a decade. The effect is that the majority of the world's executions are increasingly concentrated in a smaller number of states. According to Amnesty International, 90% of all known executions in 2006 were carried out by six nations: China, Iran, Pakistan, Iraq, Sudan, and the United States.

This small distribution represents the widespread use of capital punishment in both Islamic as well as in authoritarian states. Within Islamic states, only Turkey, Turkmenistan, and Azerbaijan do not use the death penalty. While religion may play a part in the use of capital punishment, the strongest predictor of the use of the death penalty is authoritarian and/or repressive governments. This includes Islamic states such as Iran, Iraq, and Saudi Arabia; communist states such as China, Vietnam, North Korea, Cuba, and Laos; and other despotic or authoritarian governments such as Burma, Zimbabwe, Belarus, and Singapore. Of these states, China by far executes the most people—approximately 1,000 people in 2006—although official figures from China are much lower than most other scholarly estimates.

Capital Punishment in the Contemporary United States

The debate surrounding capital punishment within the United States includes questions regarding the efficacy in deterring or reducing serious violent crime; racial and social class biases present in the use of capital punishment; the potential execution of wrongly convicted persons; the political, social, and ethical desirability of using capital punishment; and the financial costs of capital cases.

Those who support capital punishment tend to believe it reduces or prevents violent crime. Such a position falls within the purview of capital punishment *as* social control, where its primary function is considered one of crime deterrence and prevention. Research is divided on this question. Several studies have found positive correlations between its use and decreasing or potentially prevented homicides, whereas other studies have found no

correlation, or even negative correlations. To date, there is no scholarly consensus on the relationship between capital punishment and deterrence or prevention of homicide specifically or violent crime in general.

Since 1980, however, public support for capital punishment has increasingly taken the form of retribution, not deterrence. Public opinion polls suggest that retribution has become a more popular reason than deterrence for support of the death penalty, reflecting public support for capital punishment *as* social equity. Stated otherwise, more people today believe that capital punishment is justified, even when they do not necessarily believe it functions to deter crime. This change corresponds more generally as well to a rise of overall public support of capital punishment, which was below 50% in the 1960s and rose to a high of around 75% in the 1980s. As of 2007, 62% of Americans were supportive of capital punishment, although this support varies demographically—men more than women, whites more than blacks, Republicans more than Democrats, the middle class more than the poor, and suburbanites more than urbanites or rural populations.

Public opinion polls do not explain, however, why the United States remains the only Western industrialized nation to retain capital punishment. Recent literature on the question offers several competing, and in some case overlapping, explanations. These theories include several recent works that situate American exceptionalism in longer histories of explicit forms of social control and oppression such as slavery, racism, and class conflict; in the tradition of "vigilante values" that first emerged in southern states in the form of lynching and is still present today, where since 1976 about 80% of all executions have taken place in southern states; and in the diverging paths between the United States and countries such as Germany and France during the 18th century, when the latter extended high-status punishments to larger segments of the population, and the former increasingly adopted punitive low-status punishments.

Other scholars have argued, however, that the roots of American exceptionalism are more recent. These arguments have centered on late 20th-century changes in American culture, including the rise in violent crime rates in the late 1980s and early 1990s, growing public fear of crime, the growth of the prison industrial complex and corresponding increases in punitive sentences, changes in media coverage related to violent crime, and the political success of conservative and evangelical movements since 1980. These scholars also point to research that suggests that the use of the death penalty since 1976 is more frequent in minority and poor populations, particularly in African American populations, which are overrepresented both in terms of their overall population in the United States, as well as in terms of capital offenses that have resulted in a sentence of death.

Regardless of the roots of this exceptionalism, it appears unlikely that the legality of capital punishment in the United States will change anytime soon. In 2008, the Supreme Court upheld the use of lethal injection in *Baze v. Rees,* signifying its reluctance to stray far from its 1976 decision in *Gregg v. Georgia,* which reinstated the constitutionality of capital punishment. Four years prior, the Court had overturned capital punishment in *Furman v. Georgia* on Eighth and Fourteenth Amendment grounds, finding that its use was "arbitrary and capricious." Since its reinstatement, however, the Court has heard cases regarding only specific applications of capital punishment, including notably *Roper v. Simmons* (2005), which overturned the practice of executing those who had committed crimes as minors; *Atkins v. Virginia* (2002), in which the Court overturned the use of capital punishment for mentally retarded offenders; and *McCleskey v. Kemp* (1987), in which the Court upheld the execution of McCleskey, who had appealed his conviction by presenting statistical evidence asserting that the use of capital punishment in Georgia was racially biased.

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Cardiovascular Disease

The abnormal conditions that affect the heart and blood vessels (arteries and veins) are considered under the umbrella of cardiovascular disease (CVD). The major types of CVD include coronary (or ischemic) heart disease, acute myocardial infarction (heart attack), cerebrovascular disease (stroke), arrhythmias, valvular heart disease, hypertension (high blood pressure), and congestive heart failure. Heart attack and stroke are responsible for most CVD deaths. According to the Centers for Disease Control and Prevention (CDC), CVD has been the leading cause of death in the United States for more than a century (except during the 1918 flu pandemic) and claims more American lives than does cancer each year. Although the death rate in the 21st century (2003) as compared to the mid-20th century (1950) has declined, CVD is still the cause of 37% of all deaths in the United States. Current statistics can be obtained from the American Heart Association.

Cardiovascular disease is also the leading cause of death in many developing and underdeveloped countries. It was responsible for 16.7 million (29.2%) of total global deaths in 2003. In industrialized countries, incident of CVD rises with age, whereas in the developing and underdeveloped countries, the trend is opposite: In those countries, more people of a younger age experience CVD. According to the CDC, the decline in CVD death rates in the United States is mainly due to improved medical care and changes in lifestyle. The average age of having a first heart attack is 65.8 for men and 70.4 for women.

Common Types of CVD

Atherosclerosis (a buildup of plaque inside the artery wall) is the primary malefactor in most of the CVDs. Atherosclerosis in the coronary arteries causes the most common type of CVD, coronary artery disease. The plaque buildup reduces blood flow in the arteries resulting in ischemia (oxygen deprivation to the heart muscle). This causes coronary heart disease leading to chest pain (angina) or a heart attack (myocardial infarction). Coronary bypass surgery is a common treatment for blocked arteries. A blood vessel is taken from a leg or the chest and grafted onto the blocked artery to bypass the blockage. Another procedure to improve blood circulation in the heart is angioplasty. This involves cardiac catheterization and flattening atherosclerotic deposits or inserting a stent to open a blocked artery. Two newer techniques are laser angioplasty and atherectomy. These are often followed by a stent procedure.

The second most common type of CVD is stroke resulting from atherosclerosis and arteriosclerosis (loss of elasticity of the arteries or hardening of the arteries), which affect the arteries that deliver blood to the brain. An artery rupture or blockage of the blood supply to the brain or to part of the brain may result in oxygen deprivation. Due to lack of oxygen, nerve cells die within minutes, affecting the part of body they control. Four types of stroke are cerebral thrombosis and cerebral embolism, caused by clots or plaque blockage of an artery, and cerebral and subarachnoid hemorrhages, caused by ruptured blood vessels. A transient ischemic attack (TIA) is a "warning stroke" or "mini-stroke" that produces milder and short-lived stroke-like symptoms. About 15% of all strokes are preceded by a TIA and 25% of these patients die within a year after a TIA.

Assessment and Symptoms

Blood pressure is the most common and easiest way to assess the status of a person's cardiovascular system. A systolic blood pressure between 120 and 139 mm Hg or a diastolic pressure between 80 and 89 mm Hg is considered "prehypertension," while blood pressure reading of 140 over 90 or higher is considered hypertension. This may occur without symptoms, which is why high blood pressure is called a silent killer. Another commonly used method is electrocardiogram, which measures the heart's electrical activity during rest or exercise. Imaging techniques used to diagnose heart disease include magnetic resonance angiography (also called cardiac magnetic resonance imaging), cardiac catheterization, and angiography. Angiography requires inserting a catheter into the blood vessel and injecting a dye into the heart, which helps reveal the condition of the coronary arteries with X-rays. This technique requires hospitalization.

More men than women have heart attacks; however, heart disease is the leading cause of deaths for American women. Women tend to have less-typical symptoms than men, for example, classic chest discomfort. Their symptoms are more subtle, such as weakness, unusual fatigue, cold sweats, dizziness, and anxiety. Many begin experiencing symptoms long before heart attack (some for a month) actually strikes. Other symptoms that may be experienced by both sexes are shortness of breath, pain in chest/shoulder/jaw/elbow, sweating, and indigestion that is not relieved by antacids.

After patients have been diagnosed with CVD, they are usually advised to change their lifestyle so that they can avoid further complications. These changes include dietary changes, exercise, weight reduction, smoking cessation, and stress management. However, when a person is having a heart attack, emergency care is needed. Risk of death can be reduced by half if one gets medical treatment within the first hour of an attack. Heart attack survivors undergo cardiac rehabilitation after they stabilize. Cardiac rehabilitation is designed to help patients improve their cardiovascular fitness and quality of life. However, only 15% to 35% of patients comply with such programs.

Risk Factors

The precursor of heart disease, atherosclerosis begins early in life, taking many years to develop depending on a person's risk factors. The risk factors for CVD are classified nonmodifiable, modifiable, and contributing factors. A longitudinal study, the Framingham Heart Study, and the 1964 report of the Surgeon General identified many risk factors. The Framingham Heart Study began in 1948 and is now following the third generations of Framingham residents. Although risk factors indicate conditions that are related to CVD and not the causation, risk reduction measures should be undertaken early in life in order to prevent CVD in middle age.

Nonmodifiable risk factors are uncontrollable genetic or physical conditions that cannot be changed through modification of lifestyle. They include gender, advancing age, family history of CVD, and race. Although men have a higher rate of CVD than women, it is also the number one health problem for women in industrialized countries. Before age 60, rate of heart disease is significantly higher in men than women; however, after menopause, the risk for women approaches that of men. Also, their outcomes are significantly less favorable than for men. Advancing age is also a major risk factor for CVD. For every 10-year increase in age, the risk of dying of CVD doubles for both sexes; four out of five people who die of heart attacks are over 65.

Family history is another uncontrollable risk factor. Having one first-degree relative with heart attack doubles the risk, and the risk triples with two or more first-degree relatives with heart attack. Furthermore, the risk is stronger when heart attacks in these relatives occur before the age of 55. Moreover, research into the genetic or racial influence on cardiovascular diseases clearly demonstrates that race is highly associated with socioeconomic, cultural, behavioral, and medical conditions, any of which could explain the differences in the incidence of cardiac arrest and associated deaths. Compared to European Americans, heart disease risks are higher among minority people, including African Americans, Mexican Americans, American Indian or Alaska Native people, and more recently, Native Americans. African Americans have nearly a twofold risk for

CVD compared to European Americans, partly due to higher rates of obesity, diabetes, and hypertension. A recent longitudinal study, the Jackson Heart Study is an effort to help the African Americans reduce the risk factors associated with CDV.

Hypertension, hypercholesterolemia, smoking, obesity, diabetes mellitus, and sedentary lifestyle are modifiable risk factors. Hypertension is the most common disease in industrialized nations that leads to increased risk of stroke, heart attack, heart failure, and kidney failure. Regardless of age or gender, hypertension is the best predictor of CVD. Hypercholesterolemia is another modifiable but serious risk factor for CVD. Cholesterol circulates in the blood in several different forms of lipoprotein; high-density lipoprotein (HDL) is protective and low-density lipoprotein (LDL) is damaging. Total cholesterol equals HDL + LDL + 20% of triglycerides.

Smoking and diet are the two most modifiable factors that relate to CVD. Smoking accounts for about 35% of the heart disease around the world. Compared to nonsmokers, smokers are more than twice as likely to develop heart disease and have a stroke. Diets high in saturated fat are a strong risk factor for CVD, whereas diets high in fruits and vegetables protect against CVD. Consumption of fish, antioxidants, lycopene, selenium, and riboflavin are found to be protective against CVD. Excessive alcohol drinking, sedentary lifestyle, and obesity are also modifiable risk factors for CVD. People who have diabetes are more likely to die of heart disease than those whose sugar metabolism is normal, because high glucose levels are damaging to arteries. Currently attention is being paid to a prediabetic condition of being insulin resistant. It is a silent condition that increases the chances of developing diabetes and heart disease. The 1995 Bogalusa Heart Study was the first study to show insulin resistance beginning in childhood to be a significant predictor of CVD. Insulin resistance is a risk factor for developing CVD over time even when the children are not obese. All modifiable risks can be controlled with lifestyle changes and should be considered early on during one's childhood.

Social, psychological, and environmental factors contribute to CVD as well. Low educational and income levels are both positively related to heart disease. Social support and marriage are also important factors, because spouses or friends help patients by encouraging them to seek medical attention, follow the medical advice, and make healthy changes. Being single and having little social support increases the risk of CVD. Those with previous heart attack who lack social support tend to have greater risk for a second heart attack. Although marriage decreases the risk for CVD, it is the quality of the relationship that has a positive effect on one's health. Stress, anxiety, depression, and cynical hostility/anger are positively related to the development and progression of CVD. However, because these variables are related to each other, it is difficult to assess the effect of each variable. Other contributing factors are sleep deprivation, exposure to high levels of environmental noise and pollution, and periodontal disease.

Prevention

The best way to prevent CVD is to control modifiable risk factors and be aware of nonmodifiable risk factors. Most interventions to prevent heart disease focus on reducing hypertension, lowering serum cholesterol and glucose levels, and making healthy lifestyle changes that include smoking cessation, regular exercise, weight management, good nutrition, and stress management. Psychological programs such as anger management, relaxation techniques, and meditation also show beneficial effects. Health practitioners agree on the following strategies for CVD prevention and management:

- Removing saturated and trans fats from the diet and substituting monounsaturated and polyunsaturated fats
- Eating a diet high in fruits, vegetables, nuts, and whole grains, and low in refined grains
- Consuming omega-3 fatty acids from fish oil or plant sources
- Avoiding excessive salt and sugar intake
- Keeping blood pressure below 140/90 mm Hg (ideally less than 120/80 mm Hg)
- Keeping low cholesterol and triglyceride levels
- Exercising for at least 30 minutes (moderate intensity) on most days of the week
- Achieving and maintaining a healthy weight
- Not smoking; drinking in moderation

Sangeeta Singg

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Caregiver Stress

Every day millions of Americans serve as caregivers, providing unpaid assistance to family members or friends who are in some way incapacitated and need help with the activities of daily life. Caregiving can have many rewards, but it can also be a significant source of stress for the many caregivers who provide care, often at great personal sacrifice to their own physical, emotional, social, and financial well-being.

Caregiver stress has been studied extensively and negative consequences of caregiving have been clearly documented; nevertheless, researchers find significant variability in how caregivers adapt over time to the demands of caregiving. This variability can be attributed to numerous factors. The relationship history between caregivers and care recipients can be grounded in respect and love, or anger and resentment, each resulting in different emotional reactions by the caregiver to the demands of caregiving. Additionally, disability and disease characteristics vary significantly from one care recipient to another, placing unique demands on caregivers. Caring for elders with dementia, for example, is found to be generally more physically, emotionally, and socially stressful than caring for elders who are simply physically frail. Those living with the care recipient often report greater stress than those who don't, and the intensity and duration of care provided also are important determinants of stress. Those who provide care the longest and with the greatest number of responsibilities generally report feeling the most stressed. Finally, the meaning that caregivers assign to the demands of caregiving and their perception of how well they can cope with those demands play a critical role in influencing stress levels. The actual demands of caregiving may be less important than the caregiver's reaction to them and the coping resources, both internal and external, that the caregiver believes he or she has available.

Just as the demands of caregiving are multifaceted, so too are the stress-related consequences of providing care. Many caregivers report that over time, the demands of caregiving take their toll physically, emotionally, socially, and financially.

Physical Consequences of Caregiving

Numerous researchers have found caregivers to be at an increased risk of physical illness and premature death compared to noncaregivers. One study found that elderly spousal caregivers who reported experiencing high levels of stress were 63% more likely to die earlier than control subjects. Researchers have also established that in general, stress affects one's health by increasing blood pressure, suppressing the immune system, delaying wound healing, increasing cardiovascular risk, increasing levels of stress hormones, and prematurely aging cells.

Specific to caregiver stress, Ohio State University researchers found levels of interleukin-6 (IL-6), a substance that plays a role in immune system regulation, to be four times higher among Alzheimer's caregivers than noncaregivers. Not only were IL-6 levels significantly elevated, but the levels remained elevated for years, even after caregiving responsibilities had ended. These findings are important, because excess IL-6 is related to various health threats, including, for example, increased levels of

C-reactive protein (CRP), a risk factor for cardiovascular disease. Additionally, elevated levels of both CRP and IL-6 are related to arthritis, diabetes, congestive heart failure, and osteoporosis, diseases that significantly reduce one's quality of life and can increase the risk of early mortality.

In a seminal study exploring the relationship between stress and cellular aging, researchers at the University of California, San Francisco, found that stress prematurely ages cells by shortening the telomeres that cap the ends of chromosomes. Stress was also found to increase oxidative stress and lower levels of telomerase, a cellular enzyme that protects telomeres from breakdown and normally protects cells from premature aging.

The researchers compared mothers who cared for chronically ill children to mothers of healthy children and found that mothers in both groups who reported high perceived stress showed cellular signs of premature aging. Among the caregiver group specifically, the longer the mothers provided care and the more stressful they perceived their caregiving, the higher their oxidative stress, the lower their levels of telomerase, and most importantly, the shorter their telomeres. Additionally, the chromosomes in the white blood cells belonging to mothers who viewed their caregiving responsibilities as most stressful had aged the equivalent of 9 to 17 years more than the mothers who viewed caregiving as less stressful. Finally, the women who provided care the longest, regardless of their perceived stress, had the shortest telomeres of all. The implications of this research are significant because telomere shortening is strongly associated with reduced life span.

In summary, chronic stress related to caregiving can result in a reduced life span, premature cellular aging, or serious physical health consequences that can last for years after the caregiving responsibilities end. At greatest risk may be those caregivers who perceive their caregiving role as most stressful and who provide care the longest, such as spousal caregivers of Alzheimer's victims and special-needs children, many of whom provide care in excess of 100 hours per week for many years. Additionally, among elderly and/or physically vulnerable caregivers, the strain of caregiving can exhaust their already limited physical resources and exacerbate existing medical conditions. Finally, in addition to the physical risks associated with caregiver stress, some caregivers suffer even greater physical consequences because they develop negative coping behaviors such as unhealthy eating habits, not exercising, getting too little sleep, smoking, and abusing alcohol.

Emotional Consequences of Caregiving

In addition to the potential for harmful physical consequences when providing care, caregiving may also take a significant toll on the emotional health of caregivers. A substantial body of research shows that family caregivers are significantly more vulnerable to depression and anxiety than noncaregivers. In fact, depression is often cited as the most pressing concern for caregivers. Many studies of Alzheimer's caregivers have found rates of depression between 43% and 46%, with spousal and female caregivers reporting the greatest depression and one third of adult children showing signs of clinical depression after 1 year of caregiving. These high rates of caregiver depression are disturbing because depression can permanently alter the body's immune system.

Some researchers report emotional stress ratings that range from 4 to 5 (on a 5-point scale, with 5 representing the highest possible emotional stress) among those who provide care for 40 hours per week or more. Anxiety is also a concern for at least one third of caregivers. Irritability, anger, loss of self-esteem, guilt, despair over watching a loved one suffer, grief, and complete emotional exhaustion are also commonly reported emotional responses to caregiver stress.

Social Consequences of Caregiving

Studies have long shown a positive relationship between a strong social support network and reduced levels of stress, and access to a good social support network can buffer many of the physical and emotional consequences of caregiving. Unfortunately, over half of all caregivers report having less time for family and friends since assuming their caregiving responsibilities. Caregivers often report feeling socially isolated because, as they become less physically and emotionally available for others, their social lives become increasingly

constricted. Friends and family may not fully appreciate the sometimes all-consuming nature of the demands placed on the caregiver and may feel that the caregiver simply doesn't want to make time for them. This is often the case when caregivers provide assistance for a loved one with dementia. Those who have never encountered dementia firsthand may assume that since the care recipient looks healthy, he or she cannot possibly require extensive care. Others may drift away and stop visiting out of disinterest with the challenges the caregiver faces, or because of embarrassment about not knowing what to say to the caregiver or how to act around the care recipient.

Some caregivers may also push potential offers of support away because they feel that nobody else can provide adequate care for their loved one, or they believe they should be able to do everything themselves. Asking for and accepting help is seen as an imposition, weakness, or failure. Because of this strong sense of responsibility for meeting all of the care recipient's needs, the caregiver sacrifices both a personal life and a social life. The caregiver's interactions become increasingly confined primarily to the dependent relative, often when they most need the support of their friends and family. At that point, the social cost of caregiving may take an exhaustive toll on the caregiver.

Financial and Occupational Consequences of Caregiving

The financial and occupational consequences of caregiving can also be significant. Employed caregivers may suffer losses in career advancement, salary, and retirement income as a result of the demands of caregiving. Several nationwide studies have found caregivers in the United States earn less than the national median income and most provide at least $200 of financial assistance monthly to meet the needs of the care recipient.

Additionally, many caregivers struggle to manage the often competing demands of their caregiving and occupational roles. Sixty percent of caregivers work full-time or part-time while providing care for their loved one, and many feel that caregiving responsibilities negatively affect their work. Several large studies have found that nearly 60% of caregivers report going into work late, leaving early, or taking time off to provide care. Additionally, about 17% of caregivers take a leave of absence, 10% shift from full-time to part-time work, 4% turn down promotions, and 3% retire early. It has been reported that nearly half of parents caring for children with mental health disorders must leave the workforce at some time due to the demands of caregiving, and 27% are fired because of caregiving demands. Overall, roughly 6% of all family caregivers quit working because of the conflicting demands of their jobs and caregiving.

Finally, some experts estimate that American caregivers can lose up to $651,000 in wages, pensions, social security, and other benefits over their lifetime. Clearly, the financial and occupational hardships that caregivers face pose a significant source of stress.

Coping With Caregiver Stress

Coping with caregiver stress is an ongoing process, and at various points in time different features of the care recipient's condition will precipitate new challenges and adjustments. Thus, coping methods will necessarily change as the care recipient's needs change. Further, just as the demands and consequences of caregiving are multifaceted, so too are caregiver coping skills. Caregivers report relying on prayer, talking with or seeking advice from family and friends, reading about caregiving, exercising, seeking information on the Internet, talking with a professional or spiritual counselor, or taking medication when appropriate, as in the case of the caregiver who develops severe depression or anxiety.

Seeking out support, learning about and utilizing community resources, and engaging in personal self-nurturing are essential to managing caregiver stress. Ultimately, coping with caregiver stress can be reduced to one basic underlying challenge: the juggling act of balancing the caregiver's needs with those of the care recipient. Even high levels of caregiver stress can be buffered by adequate self-care and support.

Brenda Moretta Guerrero

See also Acute and Chronic Diseases; Aging, the Elderly, and Death; Alzheimer's Disease; Caregiving; Terminal Care

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Caregiving

In its most general meaning, caregiving is the providing of what is needed. *Caregiving* is used both as a noun and as a verb. As a noun, it refers to the organization of health care. As a verb, caregiving refers to both "taking care of," which means that one's specific needs are met, and "taking care for," which means that needs are met with feeling, motivation, and engagement. Caregiving is relevant for the issue of dying because it helps people to die in peace and with dignity. Since engagement is believed to be the heart of caregiving, care for the dying is particularly characterized by the care for the emotional impact that imminent death has on the one who dies. Various ideals of care for the emotional impact of death have affected the practices of care for the dying. To explore the ideals of care for the emotional impact of death, a sketch of its ideological development is presented. From there, three main issues in contemporary care for the emotional impact of death are explored.

Ideals of Care for the Emotional Impact of Death

Consolation for Mortality

In ancient Greece, the ideal of care for the emotional impact of death is particularly reflected in the consolation literature. The main aim of this literature is to achieve inner-world happiness in spite of one's mortality. Consolation is provided through a reflected meditation on the place of death in the cosmic order, the immortality of the soul, and the intangibleness of death itself. For example, arguments are presented about the limited meaning of death, about the fact that we all share in our mortal human condition, and about the pointlessness of grieving, for it doesn't help us any further. Care for the emotional impact of death is thus mainly directed at a consolation for human mortality.

The consolation ideal of care for the emotional impact of death is mainly found in Stoicism and (neo)-Platonism. Both movements believed that a virtuous directedness of the soul, in combination with a renunciation of one's attachment to life, console for one's mortality. Although many texts in Greek philosophy provide consolation, Krantor of Solio (ca. 330–268 B.C.E.), Cicero (106–43 B.C.E.), Seneca (4 BC–65 C.E.), and Plutarch (ca. 46–120 C.E.) are the most important representatives of this genre. At the basis of the consolation literature lies the conviction that feelings should be guided by reason. The ideal of this care for the emotional impact of death is to diminish and control one's grief rather than to suppress one's emotions.

Preparation for Afterlife

During the Middle Ages, the consolation ideal for the emotional impact of death is complemented by the Christian value of suffering. Through the resurrection of Christ, death is no longer the end of everything but becomes the step to a transcendent reality. Suffering is no longer accepted just because of its place in the order of things, but also for its purifying effect on humans' sinfulness. Besides heaven and hell as possible places for the afterlife, interest is increasingly paid to purgatory where the soul awaits its final judgment. The church teaches the remission of sins through praying, penance, and indulgences. The ideal of care for the emotional impact of death thus becomes directed at the preparation for the afterlife before God's final judgment.

The preparation ideal of care for the emotional impact of death did not conflict with the consolation ideal of the Greeks. Minucius Felix (2nd century), Tertullian (d. after 220 C.E.), and Lactantius (d. ca. 330 C.E.) elaborated upon stoic thoughts. Boethius (480–524 C.E.) famously integrated the care as a consolation for mortality with the care as a preparation for the afterlife. Christian consolation texts are written by St. Paul (d. 67 C.E.), St. Cyprianus (d. 258 C.E.), St. Basil (329–379), St. Gregory (332–400), and St. Ambrose (ca. 337–397). A late medieval and popular work on care for the emotional impact of dying is the *Ars moriendi*. This work consoles the dying, warns the terminally ill about wrong mental attitudes, and shows how one should pray and communicate with the dying in order to prepare them for the afterlife.

Humanization of Death

From the Renaissance onward, the preparation ideal for the emotional impact of death becomes criticized. Reformation thinkers, such as Luther (1483–1546), reject the church dogma on the existence of a purgatory and thus the possibility of repentance after death. For them, one's faith in the moment of death becomes crucial. This led to a focus on the death scene in which the last words of the dying were thought to be indicative of the quality of the transition to the afterlife. Humanists, such as Erasmus (1466–1536), claim that Christ, and not the church, is the mediator between man and God. For them, man has his own responsibility in defining death. The ideal of care for the emotional impact of death thus becomes humanized, for it addresses the human capacity to assign meaning to death.

The humanization of death appears in the texts of various influential authors. For example, Hume (1711–1776) justifies suicide in the case when life becomes unbearable due to sickness, misfortune, and old age. Schleiermacher (1768–1834) adds to the orthodox and mechanistic otherworldly consolations the human urge to love each other for we always live in the face of death, and James (1842–1910) opens new perspectives on personal spirituality and immortality. The growing diversity of the meanings of death thus differentiated the ideal of care for the emotional impact of death various sub-ideals—varying from providing consolation, stimulating penance, bringing about faith, and exciting the experience of the sublime in nature.

Autonomy in Dying

From the late modernity onward, the growth of scientific understanding resulted in better hygiene, higher standards of living, and a longer average life span. Technological developments, such as artificial respiration, dialysis, and penicillin, opened the way to increasing control and postponement of death. The ideal of a care for the emotional impact of death became both disregarded and depersonalized. Terminal care often remained unorganized, and the imminence of death was generally not communicated to the dying. In reaction to these developments, doubt arose about the appropriateness of endless treatments, and new settings for dying—such as hospice and palliative care—arose. Focusing on the individual needs of the dying person, the ideal of care for the emotional impact of death becomes directed at the autonomy in dying.

The primacy of autonomy—together with technological progress, secularization, and inner ways of spirituality—forms the context in which present-day caregivers take care for the emotional impact of death. Although the concept of autonomy only becomes relevant from the 1960s onward, its meaning has been developed since the 18th century. For example, for Kant (1742–1804) autonomy

means to act out of free will in accordance with the objective moral law; Mill (1806–1873) sees autonomy as the subjective freedom of choice between options; and Sartre (1905–1980) defines autonomy as an identification and engagement with oneself. These differences have significant implications for the current ideal of care for the emotional impact of death. Three of these implications are discussed in the following section.

Implications of the Primacy of Autonomy

Finding the Right Moment to Die

Due to the primacy of autonomy, the suffering inherent to dying is increasingly understood as meaningless suffering. Living in a society where chronic illness is the main cause of death, the elderly are increasingly subjected to physical and psychic limitations. Many of them face a slow but certain loss of autonomy, control, and independence. Due to the fragmentation and weakening of religious meanings of death, this loss of autonomy in the dying process is increasingly defined as unbearable, hopeless, and degrading. As a consequence, old people increasingly prepare for a death without suffering.

The number of old people who commit suicide is increasing, as is the number of people who arrange advance directives in which they settle abstention or termination of treatment in the event they should be unable to give informed consent. Termination of treatment in the case of irreversible coma or persistent vegetative state is heavily debated on the basis of what the patient would have decided. Although few countries have legalized voluntary euthanasia and physician-assisted suicide, many countries face problems in dealing with these issues. These developments show that individual control of when and how one wants to die has become part of the Western context of dying. The ideal of care for the emotional impact of death thus increasingly implies care for what is considered to be the right moment to die.

Finding Meaning in Dying

The primacy of autonomy changes the relationship between caregiver and the dying person. The dying expresses the need for help of others, decides what personal or spiritual path is to be taken, and gives meaning to death. The caregiver is sensitive to the wishes and emotional processes of the dying person and aims for adequate response. As long as this response is connected to the autonomy of the dying, adequate care is provided. However, the primacy of autonomy falls short when the dying is overwhelmed by the emotional impact of death. One-sided care based on autonomy then risks losing sight of its most important goal: to care for the emotional impact of dying in which one's autonomy is lost.

Care for the emotional impact of death is often a compromise between paternalism and respect for autonomy. Too much initiative may result in misplaced conversations about God and the afterlife or to premature advice. Too much respect for autonomy may result in letting a person die without adequate care for the emotional impact of death. Although various care ethicists have purported to resolve the dilemma by stressing the mutual relationship between caregiver and the dying person, the problem of autonomy in dying remains paramount. The ideal of care for the emotional impact of death thus increasingly implies care for the annihilation of one's autonomy.

Finding Engagement With Dying

The primacy of autonomy rejects rather than engages with the phenomenon of dying. The media mostly presents death without connecting to normal experiences of dying; in both public and private it is taboo to speak about death; and the societal focus on youthfulness and ambition disregards the vulnerability and finiteness of life. In health care, the focus on treatment leaves little space for the issue of dying; professionals are supposed not to overidentify with the dying; and when dying finally occurs it is mostly in hospitals and nursing homes, which support the dying and their families only to a limited extent. Care for the emotional impact of dying is thus embedded in a disappearing face of dying of Western culture.

Generally, engagement largely depends on identifiable mutuality of experiences—people feel closer or more sympathetic to others when they recognize their experiences. Because dying normally lacks such mutuality, it is extremely difficult for caregivers to understand what the emotional impact of

death is about. In order to know "when to do what" it is often suggested that caregivers themselves confront the notions of death and dying. Since society increasingly fails to provide the opportunity for such personal confrontations, caregivers lack general experiences with death and dying. Therefore, the ideal of care for the emotional impact of dying increasingly implies care for finding engagement with dying as such.

Eric J. Ettema

See also Art of Dying, The (*Ars Moriendi*); Caregiver Stress; Death Awareness Movement; Informed Consent; Right-to-Die Movement; Terminal Care

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Caskets and the Casket Industry

The term *casket*, sometimes denoted as *coffin*, refers to the container in which the dead are placed for burial. In the earliest times of humankind, simply wrapping the deceased and placing in a cave or burying in a shallow grave was considered sufficient. But as cultural rituals became more prominent, it became common to produce burial enclosures out of woven reeds, pieces of wood, pottery, or stone. The status of the family was important, as the costs and handling increased with the more elaborate designs and materials. Even simple burial vessels could be augmented with personal belongings of the deceased wrapped in cloth or put into small pottery; these belongings were considered a necessity for the soul of the deceased to carry to the spiritual world. As the use of wood and pottery became common, designs of faces, flowers, and earthly material holdings became a part of the ceremony prior to burial. Over time, improved technologies enhanced the craftsmanship involved in casket building and these provide the backdrop for the discussion in this entry.

The Art of Casket Making

The stone coffins were the most difficult and required stone masons/carvers to cut and decorate as desired. Moving and setting stone enclosures required teams of people and equipment to set in the burial site. Many early customs required that the body be "free to the sky" so the spirit could travel to its next destination. Even funeral pyres and cremation platforms included some kind of ceremonial wrap of the deceased and accompanying artifacts of the person's life.

Burial vessels were crafted and manufactured by hand until the 1900s when assembly lines began to be utilized by the larger manufacturers of caskets. Even the early lead, steel, and hardwood caskets were handmade products that could easily be custom fitted with colors, materials, and décor chosen by the family. The earliest wooden coffins were usually simple, and the church would provide various covers for them prior to burial for a more elaborate ceremony of the loved one's life. These mortuary cloths could provide religious symbols, colors, and habits of the deceased for the celebration, then be removed upon placing the coffin into the grave.

The early wood coffins were larger at the top to accommodate the shoulders and small at the bottom foot end. Some had windows above the head, so the deceased was viewable during the ritual showing prior to burial. At the beginning of the 19th century, this design became rectangular, which was easier to manufacture, as mass production became common. As the eight-sided coffins became less common and the six-sided caskets were in demand, the assembly line mass production process became more common.

It was in the mid-1800s that the first casketed steel casket was offered, but materials of the time made it difficult to use. Later, sealing materials and fasteners made the gasketed caskets more common. The seal on the casket was offered to stop elements of earth and moisture from entering the interior of the casket, while allowing the gases of decomposition to escape. As with the early pottery or stone enclosures, when metals became common in the manufacture of caskets, the status of the deceased could dictate the type of metal utilized, from copper and bronze with gold trim to the reduced costs of simple 20-gauge units with single colors. Social status has been tied to burial containers since the beginning of their use.

Modern assembly lines consist of conveyer belts and large metal or wood working machines that can process 100 to 1,000 caskets daily. Seam welders, power drivers, and powder paint booths make it possible to manufacture large numbers and higher-quality caskets than ever before. These modern assembly lines also provide the market with quick delivery, which is required due to the time element between death and burial. Instead of being limited to the units on display at any given funeral home, the family can now pick the casket material, color, fabric, and custom touches and expect delivery within days. The reason that burial rituals have become so elaborate and versatile may be, in part, because so many choices are available.

Casket use has become quite complicated when compared to its earliest beginning. One of the aspects of the various customs of contemporary societies is that the original simplistic wooden box continues to be used in a large part of the world. Many areas still prefer that the body of the deceased start the decomposition process as soon as possible and return to the earth quickly. Even today, many customs are to simply wrap or enclose the remains and bury soon after death. The custom of embalming was an option to allow transfer of remains back to their home of origin and to allow time for relatives to gather for the ceremony.

One of the critical periods of growth for embalming was the Civil War, during which so many soldiers died and were returned to their home areas for family ceremony and burial. This ritual was hand administered until 1920 when the first electric embalming machine was perfected and allowed quicker preparation of the body along with refrigeration to keep the condition acceptable for ceremonial showing and services. This process, along with the gasketed containers, provides an environment that can keep the remains intact for many years. This is very important due to modern transient society and the distances normally required when bringing the deceased and family back to a common area.

Laws Affecting the Industry

All funeral homes that handle and prepare the deceased are under state of location laws that require licensing for the funeral home employees who work with the families and deceased. Funeral home personnel must also adhere to strict continuing education requirements each year that keep them abreast of new equipment, chemicals, and handling and procedures for burial. Some states require that caskets be sold only by licensed funeral directors. Safety procedures for the embalming room and procedure are also constantly under scrutiny and must be renewed regularly. Cemetery and crematory regulations are also an important aspect of continuing education. State regulators make frequent visits to these facilities and inspect all operational aspects to confirm compliance. The stretchers, lifts, operating tables, tools, vehicles, and display platforms also require certain specifications so that every item is safe for use with various sizes of the deceased.

Contemporary Caskets

There are many choices of construction and materials available for caskets and each has inherent characteristics, advantages, and price points that are necessary to meet the needs of the customer interested in selection. The predominate manufacturing materials are steel, wood, composites, and cloth. The interiors include a multitude of fabrics available, including velvet, silk, crepe, satin, twill, cotton, and polyester. How we choose to honor our dead with their final vessel of viewing, transport, and burial thus follows.

Steel

This includes bronze, copper, stainless steel, 18-gauge steel gasketed, 16-gauge steel gasketed, 20-gauge steel gasketed, and 20-gauge steel

nongasketed. Bronze and copper are the top end materials used for caskets due to their precious metal status and ability to be brushed and finished with high appearance paints and lacquers. All of these units are furnished with gaskets that help protect the casket contents from the elements present after interment. They also have advanced closing mechanisms that assure as tight a seal as available utilizing the gaskets provided. The interiors are normally comprised of either silk or velvet. These caskets would fall into the highest cost category.

Stainless steel is the next level of protective material available, providing long-lasting life and normally gasketed to keep out elements after burial. Interiors are normally velvet or crepe. Finishes are smooth or brushed with natural stainless steel finish or high-quality paint finishes.

Prices are high to lower end high. The most popular casket in volume is the 18-gauge steel casket, due to its medium-level pricing. This casket is gasketed to provide protection from the elements after burial. Many finishes and colors are available as well as a multitude of interiors, including velvet, crepe, and velour. All of these caskets are supplied with support beds on which to place the deceased; most have adjustable height mechanisms to accommodate various size bodies. Matching interior fabrics, pillows, and decorative head panels in the casket lid come with the units. Depending on the needs of the area served, most caskets also are available in either "split lid," where the head-panel lid is opened only to display the deceased from waist to head, or "full couch," in which the entire lid of the casket is one piece to allow entire body display. When closed and ready for transport, the units are supplied with either swing bar handles that fold flat for display and are hinged for lifting the casket or fixed bar handles that are stationary. These caskets are also supplied with memorial tubes inserted in the end of the body of the casket or identification card kits inside so the deceased can be properly identified in case of identification upon disinterment or a tragic misplacement of the casket/body at a later date. Twenty-gauge caskets are the most affordable steel units and come in both gasketed and nongasketed constructions. The gasketed units have a larger choice of color finishes and interiors while the nongasket models have simple interiors and few options, thus providing lower costs when needed. The metal on the 20-gauge casket is thinner and weaker than the

Twenty-gauge metal casket with blue tremaine crepe interior and pleated head panel with capability of themed insert. Swing bar lifts for ceremonial transfer with decorative hardware and gasketed closure. Includes memorial tube for possible disinterment and available in multiple color combinations and for personalization.

Source: Aurora Casket.

other steels listed in this entry and are not recommended for heavier contents. Average-size bodies will fit and carry sufficiently. The nongasketed models will not keep elements from entering the casket body and hastening decomposition.

Wood

The finest hardwoods available are used to manufacture the mahogany and walnut caskets. These units are available in various shaped corners and finishes and are usually outfitted with velvet interiors. The wood grain is left visible, then stained and polished for exquisite presentation of the deceased. All are supplied with pillows and throw blankets to cover the bottom end of the body displayed. Cherry, oak, and maple are the next level price range, which is in the mid-expensive range. Velvet and crepe interiors are used with matching head panels, pillows, and throws. Swing bar handles are provided for ease of transport. All of the these hardwoods are quite heavy when occupied and require sufficient strength to carry. Gloss and semi-gloss finishes are available on most.

Pecan and hickory round out the hardwood caskets available and are stained with various color stains that bring out the significant grain in their appearance. Poplar, cedar, pine, and ash are also available and rate in the expensive to mid-expensive range of cost. Velvet, crepe, and satin interiors are used. Light pine, composite, and veneer units are also available for lower pricing levels and, though having a nice appearance, may not hold up as well after interment.

Cloth

The least expensive caskets are made of composite wood products or strengthened fiberboard and covered in decorative cloth finish. These units are designed for the lowest budget needs and should not be used for oversized or heavy bodies.

Cremation

Soft woods, pressed composite board, or cardboard are used in simple vessels to accommodate the deceased to the crematory.

Oversize

When larger bodies are prepared, it is sometimes necessary to utilize caskets with additional width to accommodate the deceased. These are available in oak, cherry, poplar, 18- and 20-gauge steel, and in numerous colors and finishes. The offering assortment grows annually with need. Prices are slightly higher than the normal-size caskets mentioned earlier in similar materials and finishes.

Unfinished basic pine casket with white satin interior and head panel also meets the needs of orthodox burial.

Source: Aurora Casket.

The casket industry is presently supplied by three major U.S. manufacturers, namely Batesville, Aurora, and York/Milso, as well as a multitude of smaller suppliers across the country. Caskets are starting to be supplied from Mexico and China and are impacting the overall price and quality expectations of funeral homes across the country. Cremation is also impacting the industry and growing yearly. This has opened a large market for cremation caskets and urns of various applications and cost. As society changes its customs and requirements, the industry will continue to support the various needs of families honoring their deceased.

Herbert Glaser

See also Body Disposition; Burial Laws; Cemeteries; Funeral Home; Funeral Industry

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Causes of Death, Contemporary

The cause of death is a short statement that informs a reader as to the reason for an individual's death. Strictly speaking, it should be divided into the medical cause of death, or a short statement of an illness or medical condition that was responsible for the death of the individual, and the manner of death, which is a legal conclusion on the circumstances of an individual's death. While this appears to be straightforward, for many physicians, lawyers, and ethicists, this can be the most difficult issue with which they must deal.

Historical Developments

Death was defined historically and by "common law" to be the condition whereby the circulation (heartbeat) as well as the breathing of an organism had stopped. This was easily understood by all and required no medical training. Even so, medical doctors were frequently asked to attend a death and confirm that these physiological events had occurred.

This determination of death became more complex and controversial when the World Medical Association, at its assembly in Sydney in 1968, introduced and adopted the concept of brain death. This concept can be further divided into that of brainstem death, as adopted in the United Kingdom, and that of whole brain death, as adopted in the United States in 1980 with the Uniform Determination of Death Act.

The medical cause of death can be as variable or colorful as the individual doctor writing the statement. François Bossier de Lacroix is credited as the first person to propose a systematic classification of disease in the treatise *Nosologica methodica*. The statistical study of diseases for practical purposes had a century earlier been exemplified by the work of John Gaunt on the London Bills of Mortality. William Farr, a medical statistician with the General Register Office of England and Wales, along with Marc d'Espine, is credited with developing the first internationally applicable and uniform classification of the causes of death. This led to the Bertillon Classification of Causes of Death in 1893, a classification that was later developed into the International List of Causes of Death. Successive revisions and lists were introduced.

In 1948, the World Health Organization prepared the two-volume *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*. In 1955 and then in 1965 the seventh and eighth editions, respectively, were published. The ninth edition followed in 1975, and the tenth edition was first introduced in 1989. Modifications to the classifications continue, and several new versions of the tenth edition have been promoted.

Determination of the Cause of Death

Under ideal situations, the following would be the background for the determination of a cause of death statement. A trained, qualified physician will attend the death of an individual wherever this may be. This doctor will make determinations to establish the fact of death and will then decide on the medical cause of death. In doing this, available medical records and charts are reviewed to determine if a disease or disease condition caused the death. If this was possible, some form of document containing the name of the deceased

individual, the place of death, the time of death, and the medical cause of death can be issued, and this information can then be registered with a legal authority such as the registrar of death. Upon such registration, action can be taken to initiate funeral arrangements, death duties, and inheritance procedures.

However, many reasons exist for why a medical cause of death cannot be determined. The death may have occurred suddenly and unexpectedly, for example, and, in such a situation, there is no prior information of disease or poor health that may suggest a disease process. This is particularly true when a death occurs outside a hospital. Even when death occurs in a hospital, the death of the patient may happen so quickly that blood tests and X-rays have yet to be performed. Hence the clinician is without objective information to suggest a medical cause of death. In some circumstances where the medical cause of death is clear, the death will still have to be reported because the death was due to unnatural causes such as poisoning or traumatic injuries. When the death is due to unnatural causes, the death will then be reported to a medico-legal death investigative authority such as a coroner, a medical examiner, an investigating magistrate, or judge. This death will then be investigated through detailed examination of medical history, medical illness, circumstances of death, and postmortem tests, including postmortem examination of the body. Only after such a review can the medical cause of death and the manner of death be determined.

A postmortem examination may be required to establish the cause of death. However, research has found that the autopsy rate in the United States falls below 10% (to nearly 5%) when unnatural deaths such as accidents, homicides, and suicides are excluded. Moreover, the autopsy rates for the elderly and for certain diseases, such as cerebrovascular diseases, are particularly low. Despite the efforts of the College of American Pathologists, which strongly advocate autopsies, the decline in the autopsy rate in the United States continues.

This phenomenon is not unique to the United States. In many countries around the world, the number of autopsies performed is decreasing to such an extent that they are no longer a part of the experience for medical students. Indeed, in Australia and Hong Kong, trainee hospital pathologists are finding it difficult to gain adequate experience in performing the number of autopsies required to demonstrate their clinical competence.

In Switzerland, postmortem examinations are now being replaced by postmortem full body CT (computer tomography) and MRI (magnetic resonance imaging) scans. In autopsy rooms, CT scanners are being installed and less-conventional autopsies performed. This declining trend for conventional autopsies can be easily explained. The general public has never embraced autopsies. The autopsy is still viewed as a gruesome, disfiguring, and destructive procedure. The development of better and more imaging technologies have led to the assumption held by many individuals that the autopsy is redundant because everything inside the patient can now be seen. Health authorities in general are not overly enthusiastic about building better and safer autopsy rooms because of costs and, perhaps also, because the autopsy findings more often than not lead to compensation payouts for wrong diagnoses.

The Politics of Death Investigation

The cause of death statement is ideally an exhaustive and scientific analysis of all relevant medical information to arrive at a learned conclusion. Such cause-of-death data, when gathered systematically, can allow epidemiologist and health policymakers to understand the burden of diseases in their community and to target prevention strategies and health care resources.

Cause-of-death data are used to inform national statistics as well as to allow international comparisons. The *International Classification of Diseases* (ICD) has gone through many versions since 1946, and the current *ICD-10*, first introduced in 1989 and last updated in 2007, is the common tool used by the World Health Organization (WHO) to study world health and disease burden.

The adoption of the ICD system theoretically allows WHO to monitor the state of health of the world population and to develop strategies specific to regions and countries. At present WHO has 228 member states reporting to its ICD system. This provides a broad range and wide coverage of countries in the various regions of the globe and involves well-developed as well as underdeveloped countries.

The reality, however, is that many countries are not using any ICD codes or are using older versions of the ICD codes. These countries often do not have adequate health care systems and are most in need of help. Yet, ironically, because of the absence of data, little is known and aid is often not forthcoming.

Death reporting systems require a stable legal system. Countries in political turmoil or in a state of anarchy and lawlessness are unable to gather and register such information, and here again the absence of information will also lead to less international understanding and less aid.

The politics of death registration can also be seen locally; regimes may wish to manipulate data on causes of death. Increasing reports may attract attention and resources for specific research areas or projects and are hence encouraged. Conversely, increasing reports of an infectious disease may cause alarm among incoming tourists on occasion, leading authorities to suppress such information. Even at the individual case level, the politics of death registration can have a profound impact on individual lives and communities. In such situations, the issues usually revolve around the uncertainties of death determination, causation of death, and manner of death.

Declining Autopsies

It is obvious that the ideal determination of death does not exist in all areas of the globe. Even in developed countries where the medical and legal systems are in place and the possibility of obtaining accurate cause of death data is better than in lesser-developed countries, most experts argue that there is at least a 15% error rate. This stems from an inherent error in determining the cause of death in cases where no autopsies are performed. A continuing decline in autopsy rates worldwide creates an even greater concern over the accuracy of the cause of death data.

The Cause of Death Classification

An area of error lies in the actual process of writing a cause of death. Even in developed countries with structured and controlled systems of medical education and training, there is inadequate instruction on how to determine a cause of death. It is therefore common to find mistakes in the cause of death statement found on issued death certificates. Such mistakes should ideally be noticed by registrars of deaths who can notify the doctors concerned to have the mistake corrected. However, this process of counter-check is rare and seldom systematically applied.

Another limitation of the current system is that it allows effectively only one underlying cause of death. In many developed countries with aging population, death may be the result of a combination of degenerative diseases and failing organ systems. Thus their representation will often be underreported. Emerging diseases, such as the severe acute respiratory syndrome (SARS) in 2003, can cause confusion as they may be coded in a variety of different ways and lead to underreporting of the actual burden of the epidemic. In Hong Kong, where nearly 300 persons were reported to have died from this condition, the causes of death issued varied from pneumonia, to adult respiratory distress syndrome, to SARS, to corona viral infection.

In rural communities and in underdeveloped countries, the basic requirements of trained medical and legal personnel are often absent. It is, therefore, not surprising that the cause of death statement would not conform to those expected by the ICD system. Even where they do conform, the basis of such a conclusion is open to doubt.

Despite these limitations, the ICD system for gathering data on cause of death of the world's population is still a worthwhile endeavor that generates useful and important epidemiological data that can guide prevention policies and focus prevention programs. Recent publications of data and reports from WHO have included information on the reliability of the data, data collection systems, as well as an indication of the sophistication of the data-gathering infrastructure available in each individual country.

Manner of Death and Equivocal Death

In many jurisdictions, the cause of death statement will be followed by a legalistic conclusion of the manner of death. Manner of death is a simple form of classification of all deaths into one of the following: natural cause, accident, suicide, homicide, and undetermined. This delineation allows

epidemiologists and researchers to focus on specific types of deaths that they may be interested in. For example, changes in the pattern of deaths due to traffic accidents may lead to studies by car manufacturers and road designers to improve safety as well as efforts to modify dangerous driver behaviors such as speeding or driving under the influence of alcohol or drugs through education efforts as well as regulations and penalties for offenders. Deaths by suicide may inform on the state of mental health and the provision of mental health treatment in a community. It may also be useful for determining the presence of social ills and welfare needs in a community.

The determination of the manner of death is an "official" pronouncement; as such, it can have far-reaching consequences and effects on the surviving family members of the deceased, on the estate of the deceased, on the insurance claim and payout, and, perhaps more importantly, on the reputation of the deceased and his or her family. To illustrate this, consider the death of a person by hanging. Instinctively, one would be inclined to suggest that the manner of death was suicide. However, this determination can only be made if a full investigation has excluded sexual misadventure or homicide by suffocation or by intoxicating agents staged as a hanging death. Investigation of the scene of death is crucial in such cases; the manner of death may not be thought of as a suicide if sexual aids, bondage, and restraint equipment were found to have been used. Here, the possibility of an accidental death due to sexual asphyxia during sexual play or experimentation would perhaps be a more accurate assessment and conclusion of the manner of death.

Families frequently find the suggestion that death was a result of sexual asphyxia unacceptable. Such a manner of death determination often will be legally challenged. A finding of suicide to appease the family would be incorrect and can lead to prolonged civil action from insurers. In other cases, the impact of religion may also be a strong determinant for objection to the manner of death if labeled as suicide. Even a finding of natural death can result in prolonged angst for the family, if they believe that death was a result of a medical mistake or negligent care. Declarations of homicides too are not immune to challenge as they may lead to accusations of official persecution or outcries of failures of the law enforcement agencies.

Despite such issues, determination of the manner of death is generally straightforward. In many jurisdictions such determination is made by the coroner or medical examiner or perhaps an investigating magistrate. In the coroner's system that exists throughout the British Commonwealth countries, a jury is convened for assistance in determining more difficult cases as an aid to the coroner.

Changing Trends in the Causes of Death

The ICD system provides policymakers, health practitioners, and scholars with reasonably reliable information on changes in patterns of diseases within a country or within regions of the world. WHO data for the year 2007, for example, show that the causes of death are very different between countries that are developed, developing, and underdeveloped. The leading cause of death for countries with high per-capita incomes, such as the United States, is coronary heart disease. Other lifestyle-related diseases in the top 10 list for 2007 include chronic obstructive airway diseases, stroke and cerebrovascular diseases, and diabetes mellitus. Cancers of the lung, breast, colon, and stomach also were in the top 10 lists. In countries with low per-capita income, the leading cause of death is also coronary heart disease. However, infectious diseases such as HIV/AIDS, malaria, tuberculosis, and diarrheal diseases are among the top 10 causes of death. Perinatal conditions and road traffic accidents also are among the top 10 causes of death in countries with low per-capita income.

When studied over time the top 10 causes of death offer a unique view of developing trends, suggesting the need for health care resources in different communities. The trend appears to suggest that lifestyle-related diseases are affecting even the low-income countries, where the effects of a modern idle lifestyle is quickly catching on. Similarly, the prevalence of traffic fatalities reflects inadequate attention to good roads, well-maintained vehicles, and driver and pedestrian awareness of the dangers of their actions. The clear absence of infectious diseases in the list for countries with high income clearly illustrates the need to make resources available for the treatment of infectious diseases, as they are so infinitely preventable.

Finally, the study of lists within a country also can provide a good overview of the successes or failures of health care policies. Data from the U.S. National Vital Statistics Reports showed that the top 15 causes of death in the period from 1999 to 2005 have remained the same with the exception of a change in position between homicide and Parkinson's disease. However, the actual rates of death by homicide have gradually risen from 6.1 deaths per 100,000 population to 7.3 deaths per 100,000 population.

During this same period the death rate from heart diseases decreased from 259.9 per 100,000 population to a figure of 220 per 100,000 population. Some decrease in deaths resulting from malignant cancer also can be observed with the rate declining from 197 to 188.7 per 100,000.

The rise in accidental deaths provides a more somber conclusion for the increases recorded in the number of deaths due to accidents. Deaths associated with Alzheimer's disease also increased from 16 per 100,000 to 24.2 per 100,000, an almost 50% increase in the 7-year period. Such vicissitudes in the nature of death-related data are suggestive of important dynamics. Hence, cause-of-death data, although subject to complex systemic problems and recording procedures, provide a holistic perspective and assist in directing future attention to emerging areas of public health concern.

Philip Beh

See also Coroner; Coroner's Jury; Medical Examiner; Mortality Rates, Global; Mortality Rates, U.S.

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Causes of Death, Historical Perspectives

Through time there have been significant changes in the major causes of death for human populations. The major causes of death have changed from infectious and parasitic diseases to chronic conditions, such as heart disease and stroke. Numerous factors have influenced the changing causes of death, including nutrition and diet, personal hygiene, exposure to new environments or contagions, public health measures, changing perceptions of the causes of disease and illnesses, and medical advances and discoveries. With the historical changes in causes of death has come an increase in average life expectancy, particularly during the 20th century.

This entry outlines some of the major historical trends in causes of death, primarily for the United States, as well as the factors that are associated with such changes. The first section discusses the sources of data available to conduct a historical study of causes of death. The next three sections examine major causes of death during the colonial period, the 19th century, and the 20th century. The final section examines early 21st-century trends with a view toward future causes of death.

Data Sources and Data Quality

Records of death rates, causes, and differentials are limited in coverage for the United States before the late 1800s. Thus, information about mortality trends from colonial times until the mid-19th century is based upon data collected in smaller geographic units, such as cities or reporting states. Much of the early information about deaths was derived from personal journals, diaries and letters, newspaper accounts, or other public records. Deaths were not regularly reported or recorded in all areas, and this was particularly true of infant and child deaths. Church records and family histories can provide information about births, marriages, and deaths; however, much of the information is missing, somewhat inaccurate or incomplete (such as infant deaths occurring before baptism), or not analyzed in a systematic fashion.

The decennial census, beginning in 1790, established an important source of demographic data.

However, mortality information was not collected in the census until the mid-1800s, and the information was not consistently recorded in the public record. Individual states and the federal government were slow to develop vital registration systems to record demographic events, such as marriages, births, and deaths. In 1900, the federal government began publishing annual mortality statistics, based upon the newly established death registration system. The initial death registration area included 10 states, the District of Columbia, plus 153 cities not in the death registration states. Through the years additional states were included, and by 1933 the death registration system covered all of the United States.

Colonial Period Mortality Trends, 1600–1800

During the colonial period the major causes of death were primarily infectious diseases. Regional differences in death rates across colonial America were due to differences in rates of disease transmission and survival, immunity to disease, and the methods used to treat or prevent the spread of disease.

From 1600 through 1775 smallpox was a major cause of death in Europe and North America. A highly communicable viral disease, the smallpox virus typically is passed from host to host, but it also can remain infectious for months on inanimate objects, including bedding and clothing. Once infected, the person either dies or survives with a long period of immunity. In the urban areas of the Old World—Europe, Asia, and Africa—children were most likely to contract smallpox, and thus, adults were typically immune to the disease. Smallpox was brought to the New World from Britain and the West Indies, and outbreaks were highest in the port settlements, such as Charleston, South Carolina, and Boston, Massachusetts, where new immigrants arrived. Because the arrival of trade and passenger ships was not on a regular schedule, the outbreaks of smallpox were erratic. The periodic smallpox epidemic affected all ages, because the adults living in the colonies were less likely to be immune.

The smallpox death rate was lower in colonial America compared with that of Britain. A factor contributing to the lower colonial death rate was the introduction in 1720 of variolation. An early form of inoculation, variolation was the application of pus of an infected person to an incision in a healthy person who contracted a mild form of the infection, in turn building immunity against the deadly smallpox.

Another infectious disease that affected the colonists in coastal regions was yellow fever. Originating in Africa, the disease is spread by mosquitoes thought to have bred in water barrels on slave ships arriving in the Americas. The first outbreak of yellow fever is thought to have occurred in Boston in 1693 imported by a British ship from Barbados. Then, during the 1700s, yellow fever emerged in New York, Philadelphia, and Charleston on several occasions; New Orleans experienced an initial outbreak in 1796.

Yellow fever represented a puzzling disease because infected colonists who moved to new locations did not spread the disease, and the disease inexplicably disappeared during cooler months, particularly in the northern regions. The relationship between mosquitoes and the transmission of diseases such as yellow fever was speculated; however, the causal relationship was not verified until the end of the 1800s. Other infectious and contagious disease endemics during the colonial period included malaria and dysentery. Respiratory diseases such as pneumonia, influenza, and respiratory infections, as well as typhoid fever, typhus, diphtheria, scarlet fever, measles, whooping cough, mumps, and venereal disease had an effect upon the death rate.

Other causes of death were the result of infection associated with cuts, amputations, and other medical treatments during colonial times. Death also occurred due to the lack of adaptation to a new environment. It is estimated that in the southern colonies during the 1600s as many as 40% of the new arrivals did not survive the first year.

Native American Mortality Trends

Few serious epidemic diseases were evident in North America before European settlement. One reason is the fact that there were no large dense population centers to transmit and sustain epidemic diseases. Another reason was that Native Americans had fewer domesticated animals; thus it was less likely for infectious or contagious diseases to transfer from animals to humans. A number of

Old World contagious diseases can be traced to this animal-to-human transmission.

Before European colonization Native American deaths were caused by famine and nutritional deficiencies, warfare, parasites, and infectious or contagious diseases such as tuberculosis, influenza, and syphilis. The arrival of ships from the Old World brought new diseases to which the Native Americans had never been exposed, including smallpox, typhoid, diphtheria, scarlet fever, whooping cough, pneumonia, malaria, and yellow fever. The Native American populations were decimated by the introduction of these new diseases, particularly during the 16th and 17th centuries.

Colonial Response to Infectious Disease Epidemics

Epidemics were frequent and disruptive to life in general. Public offices were closed or meetings were moved to areas outside the affected urban centers. Colonial laws were enacted to quarantine persons with contagious diseases for periods of 10 to 12 days for newly arrived ships to monitor for potential diseased passengers. Residents who were infected with contagious diseases were required to be quarantined at home or in establishments such as "pest houses" to be isolated from the general population. Many persons felt infectious and epidemic diseases were God's punishment for sinful ways, and it was not uncommon for public and/or religious officials to call for a period of prayer and fasting to appeal to God's grace to stop the further spread of disease and death.

New England had the lowest death rates and the South had the highest. The mid-Atlantic colonies had death rates similar to those in New England. The lower death rates in New England were due to the development and enforcement of strict quarantine laws, which reduced the spread of disease. The higher death rates in the South were due to the warmer environment, which was a breeding ground for mosquito-borne diseases, plus the arrival of larger numbers of immigrants who were not quarantined.

Colonial War Casualties and Deaths

Wars have been fought on American soil and there have been deaths on the battlefield as well as noncombat deaths to service members. It has been estimated that only 2% of the war deaths during the American Revolution were due to battle casualties. Hundreds of soldiers died of smallpox in the early years of the warfare so General Washington and others insisted that new recruits be inoculated; the inoculations reduced smallpox deaths. Filthy encampments, inadequate or unsafe food and water, and lack of immunity resulted in many soldier deaths due to infectious and contagious diseases such as typhus fever, dysentery, and pneumonia.

19th-Century Mortality Trends, 1800–1900

Infectious and contagious diseases continued to be the major causes of death during the 19th century. Smallpox was less of a threat due to the discovery by Edward Jenner in the late 1700s, which encouraged the use of safe cowpox virus vaccinations. But yellow fever continued to be a threat during the warm summer months, and periodically it reached epidemic proportions. Other infectious diseases such as typhus, typhoid fever, scarlet fever, and tuberculosis also were major causes of death.

The first cholera epidemic occurred in 1832, brought by immigrants from England. Cholera is caused by bacteria that are spread through feces-contaminated water and food. The filth and poor public sanitation, particularly in urban areas, caused cholera epidemics to occur from 1832 to 1873.

Death Rates During the 19th Century

Historical genealogical records and death registration systems are useful to approximate the increase in death rates during the 1840s and 1850s. With enhanced transportation technology during the 1800 to 1860 period, increased migration, and greater trade opportunities across the country, cities became larger and more densely populated, jobs shifted from farms to factories, and public school opportunities expanded. Such changes resulted in increased contact among people and increased human exposure to infectious and contagious diseases.

A number of the infectious diseases negatively affected the nutritional status of children, which meant that affected children did not grow and develop at normal levels. Nutritional deficiencies

and delayed growth and development during childhood also resulted in lower average weight and height during adulthood. Military medical records indicate that there was a decline in average height for men born during the 1820s until the latter part of the late 19th century. The records also indicate social class differences in height existed among Union soldiers from the Civil War era. Laborers measured the lowest heights while farmers had the greatest height advantage. By the end of the 19th century there is evidence of social class differences in mortality rates, with persons in the professional occupations having the lowest death rates while the highest death rates were recorded among laborers and servants.

The Civil War was the most deadly in terms of battle casualties. It has been estimated that 6.3% of the Union soldiers and 7.1% of the Confederate soldiers died in combat. Infectious and contagious diseases also added to war casualties due to unsanitary conditions, inadequate food and clothing, and lack of immunity, which resulted in deaths from intestinal disorders, respiratory diseases, and other diseases such as measles and tuberculosis, particularly for Confederate soldiers.

After the Civil War, death rates decreased due to an enhanced standard of living that included improved diet and more adequate shelter as well as improvements in public health. In 1854, John Snow identified a public water pump to be the source of an epidemic of cholera in the city of London. Later discoveries about bacteria and other sources of contamination led to the important introduction of water filtration systems and the addition of chemicals into the water to destroy bacteria. Public works and public health reforms led innovations such as in Boston and New York City where aqueducts for piping fresh water were built prior to the Civil War. By the end of the 19th century many urban areas had established such public works programs. The result was a lowered rate of death in urban areas.

20th-Century Mortality Trends, 1900–2000

The advent of the 20th century was witness to dramatic improvements in death rates. In 1900, the crude death rate, which is the number of deaths per 100,000 persons, was 1,719. By 2000, the crude death rate had decreased to 874 deaths per 100,000 persons. However, there were events that occurred to affect the still high death rate. The 1918 worldwide influenza pandemic, for example, has been compared with the black plague of the 14th century in terms of human lives lost, resulting in the anomalous increase observed in 1918, for which the death rate increased to 1,810 per 100,000. But, overall, the declining death rates resulted in an increase in average life expectancy. In 1900, the average life expectancy at birth was 47.3 years; by the year 2000, life expectancy had increased to 77.0 years (74.3 for males; 79.7 for females).

The declining death rate was the result of a decrease in the affect of infectious disease, particularly influenza, pneumonia, and tuberculosis. The declining death rate due to infectious disease continued during the second half of the 20th century until about 1980 to the mid-1990s during which time the affect of HIV/AIDS is noted.

The Changing Focus in Cause of Death

The remarkable decline in infectious disease deaths during the 20th century was due to the application of scientific advances achieved during the late 19th century, including widespread public works programs and cleaning up streets and public areas to control the spread of disease. Implementation of quarantines for contagious disease, the use of vaccinations and antitoxins, enactment of standard procedures for handling food products, elimination of public access of dangerous medications through the establishment of the Pure Food and Drug Act of 1906, and stricter licensing of medical practitioners enhanced public awareness and government governance. The creation of germ theory by Louis Pasteur in the 1860s and the introduction of safe surgery at Johns Hopkins University led to further improvements in public health and a lessening of the effect of infectious disease.

With the decline of infectious diseases a concomitant change in the major causes of U.S. death also occurred, shifting in the early portion of the 20th century to chronic disease. Deaths due to infectious diseases declined, while heart disease became the leading cause of death starting in 1910, and in 1930 cancer emerged as the second leading cause of death. The death rates due to heart disease

were highest in the 1960s and 1970s; however, since that time the number of heart disease deaths has been declining.

During the second half of the 20th century medical research focused on chronic conditions, which led to increased awareness of disease causes and symptoms. A result was improvement in medical tests to detect early onset of numerous diseases, including heart disease and various cancers, as well as tests for genetic predisposition for certain degenerative and chronic conditions. Medications were introduced to treat or control the progress of chronic diseases such as high cholesterol and hypertension. Research also emphasized the influence of lifestyle factors, such as smoking, high-fat diets, and exercise on greater risks of early death.

The development of germ theory and the practice of preventive medicine and better sanitation also had an effect on reducing noncombat-related deaths due to infectious and contagious diseases for American soldiers at war during the 20th century. However, during World War I, the rate of noncombat deaths was high due to the 1918 worldwide influenza epidemic at the end of the war. The discovery of penicillin in 1943, and other antibiotics, also reduced nonbattle casualties for soldiers in World War II and later wars.

Differences in Mortality Rates

In the first half of the 20th century, mortality rates dropped for all ages—but most notably for infants, children, and young adults—as a result of the reduction of infectious and contagious diseases. Since the late 1960s death rates have declined rapidly for persons age 65 years and older due to medical advances in diseases of old age.

Females have longer life expectancy, and thus, lower death rates than males, although the gap has fluctuated over the past century. At the beginning of the century the gap was small (approximately 2 years) due to females' vulnerability to infectious disease and high rates of maternal mortality (i.e., deaths during pregnancy and childbirth). Female deaths due to infectious disease declined in the first two decades, although maternal mortality deaths remained high until the mid-1930s, primarily due to no or inappropriate care for birth complications. Maternal deaths declined from 1936 (582 deaths per 100,000 live births) to 1956 (40 deaths per 100,000 live births) due to the growth of obstetric care, the use of antibiotics to fight infection, more appropriate methods to deal with delivery complications, and the use of trained midwives for home births. The gap in male–female life expectancy widened until the mid-1970s because of increased male disadvantage in deaths from heart disease and cancer and declining rates of maternal deaths for females. The narrowing of the gap at the end of the century occurred with greater male improvements in deaths due to heart disease, cancer, suicide, and homicide.

There were great differences in death rates by race at the beginning of the 20th century, with average life expectancy at 47.6 years for whites and 33.0 years for nonwhites. By 1970, data were routinely collected for mortality statistics for African Americans. At this time the black–white gap in life expectancy yielded a 7.6-year advantage for whites. By the end of the century the gap had narrowed to 5.7 years with black average life expectancy at 71.9 years and 77.6 years for whites. The improvement in African American life expectancy has occurred due to declines in death rates for homicide, cancer, stroke, and HIV disease.

Black–white differences in infant death rates, which is the death of infants before their first birthday, also accounts for the life expectancy gap by race. Early records indicate that in 1916 the black infant death rate was 184 per 1,000 live births, whereas the rate for whites was 99. By the year 2000 the gap between blacks (14.0 deaths) and whites (5.7 deaths) had gotten smaller; however, the rate of black infant deaths was 2.5 times larger that that for whites. Much of the black–white infant death rate gap has been attributed to socioeconomic factors, such as mother's education and income; mother's health; access and use of prenatal health care; and birth outcomes, such as low birthweight.

The 21st Century and Future Causes of Death

The first 5 years of the 21st century have yielded a continued decline in death rates in the United States, particularly for persons over the age of 65 years. Total life expectancy in 2005 was 77.8 years. The male–female gap has decreased to

5.2 years (75.2 for males; 80.4 for females) and the black–white gap has decreased to 5.1 years (73.2 for blacks; 78.3 for whites). With increases in life expectancy and age of death, there have been some changes in the causes of death in that diseases that are more prevalent in the oldest ages, such as Alzheimer's disease and other dementias, are becoming more prevalent as causes of death. Another trend that will affect future causes of death is the growing prevalence of obesity across all age groups, particularly in the United States. Obesity has been linked with greater rates of diabetes, stroke, heart disease, and certain types of cancer, so increases in death rates most likely will occur in the future.

The United States has experienced one of the largest waves of immigration in its history, and there have been concerns about immigrant health. The majority of the recent immigrants have come from poor countries in Latin America and Asia, and many are in poor working conditions such as manual labor and are experiencing exposure to harmful agents such as pesticides and other chemicals. Poor immigrants are less likely to have access to adequate health care and are less likely to be immunized. Such factors may lead to increasing death rates at younger ages.

Although deaths due to infectious and contagious diseases declined precipitously during the beginning of the 20th century, by the end of the century there emerged new, more lethal infectious diseases, such as Legionnaires' disease, HIV/AIDS, Ebola virus, and severe acute respiratory virus (SARS) in addition to more drug-resistant strains of diseases such as malaria and tuberculosis. Factors that have led to the resurgence or spread of infectious diseases include greater travel between the Western world and remote or third world countries where there has been increased urbanization and overcrowding. In addition, the increased use of antimicrobials in food additives for animal production has led to resistant strains of *E. coli*, *Salmonella*, and other contaminants in food, air, and water, which have caused deaths and other health concerns.

Finally, climate and environmental changes are going to have an effect on all populations. The Western world is not immune to such changes, as evidenced by the effects of hurricanes, heat waves, and other natural disasters. Climate and environmental changes are going to have effects on food and water supplies, as well as other resources, which will ultimately affect death rates.

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See also Demographic Transition Model; Epidemics and Plagues; Gender and Death; Infant Mortality; Life Expectancy; Mortality Rates, U.S.; Race and Death

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Cemeteries

It was Elias Leavenworth who, in 1859, identified the cemetery as "the last great necessity" for his community, and for most of history it has been seen as such. However, globalization and the growth of new immigrant and ethnic communities from cultures and religions with divergent views about death and the dead are similarly manifested in divergent burial practices.

The word *cemetery* is derived from the Greek word for sleeping chamber, as the ancient Greeks believed that the dead were temporarily resting, awaiting the Day of Judgment when chambers would be emptied. Cemeteries are differentiated from other types of burial sites, such as graveyards