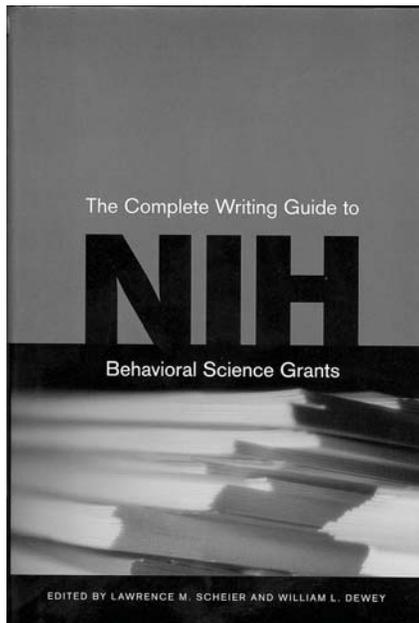


edited by Susan M Shirley



THE COMPLETE WRITING GUIDE TO NIH BEHAVIORAL SCIENCE GRANTS. EDITED BY LAWRENCE M SCHEIER AND WILLIAM L DEWEY. NEW YORK: OXFORD UNIVERSITY PRESS; 2007. 536 PAGES. HARDCOVER \$42.50. ISBN-13: 978-0-19-532027-5.

The Complete Writing Guide to NIH Behavioral Science Grants is a practical desktop reference that covers all phases of the grant-preparation process of planning, organizing, and writing a proposal for submission to the National Institutes of Health (NIH). Although the title implies that the book's target audience is people who are pursuing research careers in the behavioral sciences, anyone seeking grant funding from NIH in any field of biomedical research, whether novice or experienced grant writer, can gain much from this book.

In many biomedical research settings, especially in academic institutions, receipt of NIH funding is considered the "gold standard" when it comes to measuring a researcher's career success. However, the success rate of investigator-initiated proposals to NIH has declined greatly over the last several years to around 20%. The odds that a proposal submitted to NIH will be funded on the first try are much lower than that. Only the best of the best proposals are funded. It is impossible to overemphasize that in reality proposals must be near perfect—beginning with a solid study design and ending with perfect writing—to be considered among the best. *The Complete Writing Guide to NIH Behavioral Science Grants* is intended to be a step-by-step guide that offers strategies for achieving such proposal perfection.

Thirty authors, each chosen for his or her expertise in topics related to grant preparation, contributed to the book's 19 chapters. Lawrence M Scheier and William L Dewey, the gifted editors behind this book, combined their wide-ranging expertise as both grant seekers and grant reviewers to create this resource. Scheier is president of LARS Research Institute, Inc, and an adjunct professor of psychiatry in the School of Medicine at Washington University, and Dewey is a professor of pharmacology and toxicology in the School of Medicine and former vice president for research and graduate studies at Virginia Commonwealth University.

The book gives overviews of the NIH peer-review system and grant programs

available. Chapters specific to proposal writing cover such topics as general grantsmanship, budget preparation, human-subjects protection, and power analysis. Most of the book's content is relevant to anyone preparing an application to NIH.

The book's longest chapter (50 pages), titled "Financing and Cost Accounting of Science: Budgets and Budget Administration", offers a strikingly thorough discussion of budget preparation. It contains sound advice for determining how much money will be needed to complete a project and how to convince NIH that the money is needed. Examples of budgets and budget justifications are appended to the chapter. Such examples are rare, and their inclusion truly moves this book to the head of the class of grant-writing books on the market.

As evidenced by the current dismal success rates of proposals submitted to NIH, most proposals will not receive funding the first time they are submitted; usually a grant seeker will have to revise and resubmit a proposal at least once before an award is received. On resubmission, an applicant is required to prepare a three-page discussion addressing the reviewer's major critiques. Responses to the critiques must be written in a tone that is neither argumentative nor disrespectful—often a challenge to a disgruntled applicant. This book offers suggestions for handling critiques and then goes a step further in offering examples of responses to critiques.

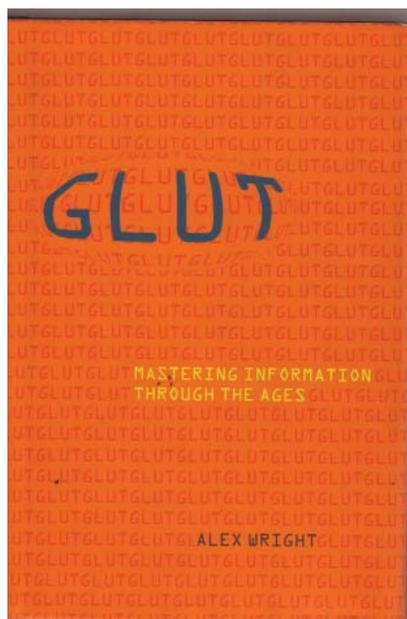
An entire chapter is devoted to NIH's transition from paper applications to a paperless submission process. Many grant-writing books on the market were written before the electronic-submission era and contain much content that became obsolete as soon as the transition to electronic submission began. This is one of the few grant-writing resources that are so current that they contain information on electronic submission.

Overall, the material covered in this book is comprehensive and up to date. The contributors have done just about everything right. There are valuable pointers in the book for grant writers at all stages of

their careers, and a reader who follows this book's advice will have a big head start in writing proposals that win NIH grants.

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GLUT: MASTERING INFORMATION THROUGH THE AGES. ALEX WRIGHT. WASHINGTON, DC: JOSEPH HENRY PRESS; 2007. 286 PAGES. HARDCOVER \$27.95. ISBN-13: 978-0-309-10238-4.

How are termite nests, pheromone trails left by ants, enterprising macaques in Japan, and ancient tribal practices of the Zuni people related to one another? Alex Wright, in *Glut*, connects those seemingly unrelated items at the beginning of a remarkable journey into the world of information management through the ages. He chronicles the relentless quest by humans to collect, organize, and classify knowledge from prehistory to today's digital age. By looking deep into our past, he tries to see what direction we might take in the future.

As Wright details the history of our attempts to classify knowledge, he provides surprising perspectives that will make readers rethink the progress of the collective human intellect. He has drawn from disciplines as varied as evolutionary biology, anthropology, history, mythology, taxonomy, and librarianship (and that is not the entire list) to present “the counters of a broader information ecology that has always surrounded us”.

Before touching on any of those topics, however, Wright introduces readers to the terms *networks* and *hierarchies* in the first chapter and the term *taxonomy* (which he defines as “reflections of human thought”) in the second chapter. Those are the concepts he builds on and around in the following chapters to explore our systems for categorizing knowledge. And as Wright takes readers through the different eras, he reveals how classification systems, which have roots in our cultural past, have endured through the ages. While dwelling on how humans have classified knowledge, Wright also tries to tell why they did what they did.

The answers—woven together with interesting facts, stories, and insights from experts—make for engrossing reading. Readers traverse the Ice Age, when symbolic expression emerged as a result of social proximity and art was born out of necessity. Then, Wright takes readers into “The Age of Alphabets”, a chapter in which he debunks the notion that writing was “the fruit of high culture”. He chronicles the surprisingly violent history of libraries, starting with the first library that was created by an “act of imperial confiscation”. Wright elaborates on how the first seeds of library science were sown in the Dark Ages, when written knowledge found its way from 12-ft-long papyrus scrolls into the codex books that “ushered in a whole new way of reading: random access”. He details the runaway success of the *Bestiary* (a book that explained basic Christian doctrine in allegorical terms) in the Middle Ages and expounds on how the power of the written word passed from the churches to the masses after the Gutenberg revolution.

Glut also contains the stories of visionaries, including some who tried to devise new means to classify knowledge and others who came up with innovative ideas for retrieving it. Wright pulls readers into the world of Linnaeus and his system of plant classification, Panizzi and his “highly politicized philosophy of librarianship” that revolutionized library cataloging in the Industrial Age, the great American cataloger Charles Ammi Cutter, Dewey and his decimal system, and Ranganathan and his five-faceted classification system. And Wright does not present two-dimensional pictures of those great thinkers; he lets readers

in on their idiosyncrasies (for example, why Dewey briefly preferred to be called “Dui”), their rivalries with contemporaries, their successes, and even their disappointments. He tells the stories of Paul Otlet, “the Internet’s forgotten forefather”, and his *Mundaneum*; Vannevar Bush’s Memex, toward which “computer scientists still genuflect reflexively” for inspiration; and how Eugene Garfield’s citation ranking of the 1950s is still used by Google. Wright effectively builds his narrative to reveal how library science and cataloging laid the foundations of the information technology in use today. He describes how Tim Berners-Lee’s World Wide Web “changed the lives of a huge swath of the planet’s population” and why Ted Nelson’s Xanadu, which has been described as “a new form of software with potentially revolutionary implications”, stayed a theory.

Glut is like a jigsaw puzzle, wherein each chapter is a piece; the complete picture slowly comes forth as the information in chapters is put together. But each chapter contains many stories; the longer chap-

ters are divided into sections, and Wright ties them together in the end. He uses quotations to start some chapters, and these foreshadow the content. He also uses diagrams effectively to clarify concepts that are difficult to visualize. At the end is an appendix that gives a glimpse of the classification systems that have influenced today’s information technology.

Wright reaches a surprising conclusion after presenting observations and insights that will compel readers to stop and think about information technology’s future. *Glut* makes compelling reading for those who want to understand the history and the future of information architecture and for those who want to know more broadly where we came from and where we are headed.

Misha Kidambi

MISHA KIDAMBI, a graduate student in science and technology journalism at Texas A&M University, wrote this review while a Science Editor intern.