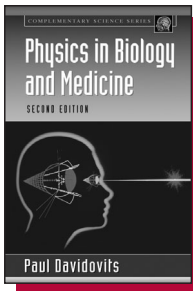




Alpha Sigma Au

JESUIT HONOR SOCIETY NEWSLETTER • Winter 2003

2003 Jesuit Book Award winners

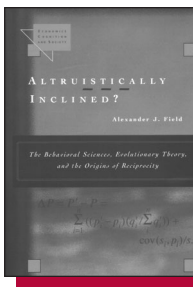


Physics in Biology and Medicine (second edition: Harcourt/Academic Press, 2001) by **Paul Davidovits** (Professor of Chemistry, Boston College)

At one time scientists believed that a “vital force” governed the structure and organization of biological molecules. Today, most scientists realize that organisms are governed by the laws of physics on all levels.

While almost two centuries of research have found that physical laws fully apply to biology, work is far from complete. Basic questions at the atomic, molecular, and organismal levels remain unanswered. Even when typically complex molecular structure is known, function is not yet predictable. Nourishment, growth, reproduction and communication distinguish biological matter from inorganic matter, yet these mechanisms are understood only qualitatively.

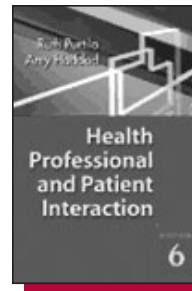
This book furthers our understanding by relating important concepts in physics to living systems. Applications of physics in biology and medicine are emphasized, with no previous knowledge of biology required. Each chapter of this self-contained book begins with a brief review of the physical fundamentals before embarking on the biological implications and applications. The analysis is largely quantitative, but only high school physics and mathematics are assumed. Underlying basic physics appears in appendices. Biological systems are described in only enough detail for physical analysis.



Altruistically Inclined? The Behavioral Sciences, Evolutionary Theory, and the Origins of Reciprocity (The University of Michigan Press, 2001) by **Alexander J. Field** (The Michel and Mary Orradre Professor of Economics, Santa Clara University)

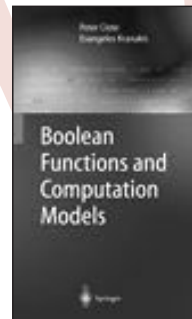
Altruistically Inclined examines the implications of recent research in the natural sciences for two important social scientific approaches to individual behavior: the economic/rational choice and the sociological/anthropological. It considers jointly two controversial and related ideas, the operation of group selection within early evolutionary processes, and the likelihood of modularity: domain-specific adaptations in our cognitive mechanisms and behavioral predispositions. Experimental research shows that people will often cooperate in one-shot prisoner’s dilemma (PD) games and reject positive offers in ultimatum games, contradicting commonly accepted notions of rationality. Predispositions to behave in these ways could not, upon first appearance, have been favored by natural selection operating only at the level of the individual organism.

A central thesis of the book is that humans are born with the rudiments of a PD solution module, and differentially prepared to learn norms supportive of it. A novel emphasis is on failure to harm as opposed to the provision of affirmative assistance as, among those not closely related, the empirically dominant form of biologically altruistic behavior.



Health Professional and Patient Interaction (sixth edition: W.B. Saunders Company, 2002) by **Ruth Purtilo** (Center for Health Policy and Ethics, Creighton University) and **Amy Haddad** (School of Pharmacy and Allied Health Professions, Creighton University)

Respect is the thread that weaves together discussions regarding professional and patient encounters in the health care environment. In *Health Professional and Patient Interaction, 6th ed. (HPPI)*, clarification of health professional and patient values sets the stage for exploring the context of interactions and the unique perspective that the health professional and patient bring to this relationship. HPPI includes the basic content from the foundational disciplines that support productive interactions in health care, such as sociology, psychology, anthropology, communications, ethics and the most current clinical research. This book is designed to aid students by (1) enhancing their self-understanding (2) helping them to clarify the dynamics of the health professional-patient relationship; and (3) developing their awareness of the larger societal and health care context in which the relationship takes place.



Boolean Functions and Computation Models (Springer-Verlag Berlin Heidelberg, 2002) by **Peter Clote** (Departments of Biology and Computer Science, Boston College) and **Evangelos Kranakis** (School of Computer Science, Carlton University in Canada)

“Boolean Functions and Computation Models” is a 615 page research monograph in Computational Complexity Theory, a branch of Theoretical Computer Science, which concerns research on boolean functions, circuits, parallel computation models, function algebras, and proof systems. The text surveys most of the mainstream results concerning upper and lower bounds for complexity measures for boolean circuit and proof system depth and size for combinatorial problems, motivated by attempts to gain understanding in the combinatorial under-pinnings of whether deterministic polynomial time is equivalent to nondeterministic polynomial time, i.e. the P =? NP question.

The main aim of the book is to elucidate the structure of “fast” parallel computation, emphasized through a variety of techniques ranging from finite combinatorics, probability theory and finite group theory to finite model theory and proof theory. Chapter 3 focuses on the authors’ results which involve the application of classification theory for finite simple groups, and Chapter 7 focuses on P. Clote’s new results concerning higher type parallel computation theory. A preliminary version of Chapter 5 has been used in a graduate seminar in computer science at M.I.T.

Triennial conference 2003

Propelled by Alpha Sigma Nu energy and facilitated by Regis University's generous hospitality, the delegates at the 29th Triennial Conference called for the next initiative for the Society to be "ongoing formation of Jesuit values learned at Jesuit institutions, nurtured through life." The delegates, 31 students, 17 faculty advisers, 9 Board members, and 8 Alumni Club presidents, identified the need, and the newly elected Board strongly endorsed, the focus on Jesuit values formation for student chapters activity as well as alumni club programming. Student chapter delegates, faculty advisers, and club presidents met in small groups to share best practices and plans for the future. Alumni Club presidents received Club Charters on behalf of their membership.

Delegates also took time to thank Daniel Lahart, S.J., Georgetown '82, Board President, and Peg Fennig, Marquette '51, Executive Director, for their incomparable leadership and stewardship of Alpha Sigma Nu, as well as congratulate Sara Jarrett, Regis '98, Regis' faculty adviser, and Karen Metzger, Regis '03, campus coordinator, on a successful conference. Delegates were treated to two inspirational speakers, Joanne McClatchey on vocation, and the Alpha Sigma Nu Richard and Ann Panlener Lifetime Achievement Award recipient Russell Goings, Xavier '59, who challenged delegates to live the Alpha Sigma Nu mission.

The delegates passed new Bylaws, and elected new Board members and officers.

The 2003-2006 Board:

Mark A. Kadzielski, President, John Carroll '67
William M. Bichl, S.J., Vice President, John Carroll '98*
Thomas P. Lenehan, Treasurer, Georgetown '91*
Robert Harrison III, Secretary, Fairfield '97
Benjamin Fiore, S.J., Board Faculty Advisor, LeMoyne '63
Alumni Adviser to be appointed

Mary J. Bohr, Loyola Chicago '73*
Thomas H. Franks, Fordham '02*
Chadd K. Kraus, Loyola Maryland '99
Brian F. Linnane, S.J., College of the Holy Cross '95
David T. Ralston, Georgetown '76*
Jane M. Van Slyck, Loyola College Maryland '03*

*newly elected

Online with AΣN

Address: www.AlphaSigmaNu.org
Member Directory Password: **asnsls**

Online donations are now being processed by Pay Pal. Go to Donate Now and follow the directions.

While online, update your directory information. If you want to receive your next Newsletter by e-mail, please let us know and send us your email address. Thanks.



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FALL 2003

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Peg Fennig, Executive Director
Kate Gaertner, Director of Alumni Clubs
Tina Haiser, Assistant Director

Feeling left out?

Alpha Sigma Nu is looking for the next Alumni Club site. If you are interested in joining an Alumni Club Planning Committee in Cleveland, Los Angeles, Baltimore or Philadelphia, email Kate Gaertner at kate.gaertner@marquette.edu, or call 414-288-0271.

Remember the password!

The password to Alpha Sigma Nu Online Directory is **asnsls**, for Alpha Sigma Nu, Scholarship Loyalty, Service. It is in the Summer Newsletter as well, which can be found on the News page of the website.

AΣN moves forward



Peg Fennig and Kate Gaertner

When Mark Kadzielski, newly elected board president of Alpha Sigma Nu, announced that Kate Gaertner will become the fourth Executive Director of Alpha Sigma Nu, the delegates at the 29th Triennial Conference burst into spontaneous applause. Gaertner will combine the role of Director of Alumni clubs with the managerial role to become a full time Executive Director on July 1, 2004.

Earlier, the board had accepted the resignation of Peg Fennig, effective June 30, 2004. Fennig served as director for ten years that were marked by successive growth and accomplishment. In this decade, the Member Directory, web page, alumni initiatives, book award expansion. Scholarships were granted to all member institutions and then doubled.

After receiving a standing ovation, Fennig stated, "I have enjoyed every moment of my tenure. Now, all of the pieces of the succession plan are in place. Alpha Sigma Nu is in good hands. My heart will remain with this outstanding society and its great future."



First Executive Director dies

Richard J. Panlener, Marquette '33, the first Executive Director of Alpha Sigma Nu entered eternal life on August 15, 2003. Dick's organizational skills set in place the systems, procedures and member records which formed the base on which AΣN continues to build. He served from 1975 to 1987, organizing the Sustaining Fund and beginning the Endowment Fund. A man of many talents, Dick also designed some of the AΣN jewelry.

He will be missed.