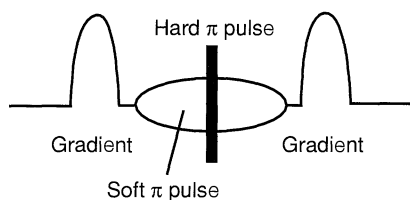


"Schematic representation of an experiment designed to record a two-dimensional proton-proton NOESY [nuclear Overhauser experiment] subspectrum for each of a set of ^{15}N sites excited by a soft radiofrequency pulse. This would represent a significant time-saving compared with the conventional three-dimensional spectroscopy method, where a second evolution period is introduced to allow precession at the ^{15}N chemical shifts." [From *Spin Choreography*]

ed to the uninitiated; Freeman's approach is to isolate many of the "basic steps" to build up a coherent picture. The coverage is broad, but this is not an encyclopedic treatment of magnetic resonance—the field already has an eight-volume encyclopedia. It is also not really a reference book. Even with the subjects he does treat, Freeman makes little attempt to list all the important papers or establish who did what first; the references are usually to the papers he likes best, often many years after the original work. The book is essentially a compendium of topics in high-resolution NMR that Freeman finds particularly interesting, most of which are related to his work over the years.

The emphasis is on presenting the material at an inviting level for beginning students, and thus the approach is intentionally more pictorial than mathematically rigorous. For the most part, the style is both breezy and lucid. After the obligatory re-



A pulsed-gradient technique, "called WATERGATE, employs a hard π pulse at the same time as a selective π pulse for the water resonance, sandwiched between two equal field gradient pulses of the same polarity. All the coherences that are dispersed by the first gradient pulse are refocused by the second, except for the water signal which experiences no net refocusing pulse. This gradient-recalled spin-echo technique is now one of the most popular schemes for water suppression." [From *Spin Choreography*]

view of the vector model, Freeman lays out the product operator formalism in a way that looks very accessible. A chapter entitled "Separating the wheat from the chaff" discusses multiple-quantum filters and pulse gradients in a very clear way. The chapter "In defence of noise" outlines the most basic concepts behind advanced signal-processing methods; "Water" presents the ideas behind simple solvent suppression. In many cases one really feels like one is viewing a concept through Freeman's eyes; thus I think even experienced NMR spectroscopists will find the treatment interesting and even sometimes educational.

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Browsings

Polio. Thomas M. Daniel and Frederick C. Roblin, Eds. University of Rochester Press, Rochester, NY, 1997. viii, 202 pp., illus. \$29.95. ISBN 1-878822-90-x.

The history of a now-eradicated disease in America over the past half century, recounted "not comprehensively, but personally" by way of memoirs of three of its victims, two physicians who administered its treatment with the iron lung and other devices, two virologists who studied it in the laboratory, and two public health officers involved in its control in Brazil and elsewhere in Latin America.

Soft Interfaces. The 1994 Dirac Memorial Lecture. P. G. de Gennes. Cambridge University Press, New York, 1997. x, 117 pp., illus. \$19.95 or £14.95. ISBN 0-521-56417-4.

An expanded version of a lecture given at St. John's College, Cambridge, covering mobile borders (as between liquids and solids), decorated borders (involving polymer melts), principles of adhesion, and polymer/polymer welding.

Other Books Received

Fluid Mechanics. Joseph H. Spurk. Springer-Verlag, New York, 1997. xii, 513 pp., illus. \$49.95. ISBN 3-540-61651-9. Translated from the German edition by Katherine Mayes.

From Print to Electronic. The Transformation of Scientific Communication. Susan Y. Crawford, Julie M. Hurd, and Ann C. Weller. Published for the American Society for Information Science by Information Today, Medford, NJ, 1996. x, 117 pp. \$39.50. ISBN 1-57387-030-7. ASIS Monograph.

From Soul to Mind. The Emergence of Psychology from Erasmus Darwin to William James. Edward S. Reed. Yale University Press, New Haven, CT, 1997. xviii, 283 pp. \$25. ISBN 0-300-06967-7.

Granite. From Segregation of Melt to Emplacement

Fabrics. J. L. Bouchez, D. H. W. Hutton, and W. E. Stephens, Eds. Kluwer, Norwell, MA, 1997. x, 358 pp., illus. \$166 or £99 or Dfl. 260. ISBN 0-7923-4460-x. Petrology and Structural Geology, vol. 8.

Group Theory in Subnuclear Physics. Fl. Stancu. Clarendon (Oxford University Press), New York, 1997. xiv, 421 pp., illus. \$145. ISBN 0-19-851742-4. Oxford Studies in Nuclear Physics, 19.

Handbook of Liquid Crystal Research. Peter J. Collings and Jay S. Patel, Eds. Oxford University Press, New York, 1997. xvi, 600 pp., illus. \$195. ISBN 0-19-508442-x.

Handbook of Microscopy. Applications in Materials Science, Solid-State Physics and Chemistry. S. Amelinckx *et al.*, Eds. VCH, New York, 1997. 3 vols. Methods I. xxiv pp. + pp. 1-536, + supplementary material., illus. DM 398. ISBN 3-527-29280-2. Methods II. xxvi pp. + pp. 537-986, illus., + supplementary material. DM 398. ISBN 3-527-29473-2. Applications. xxxii pp. + pp. 1-833, + supplementary material, illus. DM 401. ISBN 3-527-29293-4.

The Hidden Curriculum. Faculty-Made Tests in Science. Sheila Tobias and Jacqueline Raphael. Plenum, New York, 1997. 2 vols. Part 1, Lower-Division Courses. xii, 199 pp. Paper, \$24.95. ISBN 0-306-45580-3. Part 2, Upper-Division Courses. x, 135 pp., illus. Paper, \$22.95. ISBN 0-306-45581-1. Innovations in Science Education and Technology.

The Honolulu Heart Program. An Epidemiological Study of Coronary Heart Disease and Stroke. Abraham Kagan, Ed. Harwood Academic (Gordon and Breach), Amsterdam, 1996 (U.S. distributor, International Publishers Distributor, Langhorne, PA). xii, 204 pp., illus. \$90 or £54 or ECU 69, ISBN 3-7186-5802-x; paper, \$33 or £20 or ECU 25, ISBN 3-7186-5803-x.

Horn of Darkness. Rhinos on the Edge. Carol Cunningham and Joel Berger. Oxford University Press, New York, 1997. x, 246 pp., + plates. \$25. ISBN 0-19-511113-3.

Immunoassay. Eleftherios P. Diamandis and Theodore K. Christopoulos, Eds. Academic Press, San Diego, 1997. xxxii, 579 pp., illus. Paper, \$69.95. ISBN 0-12-214730-8.

Integrin-Ligand Interaction. Johannes A. Eble and Klaus Kühn, Eds. Chapman and Hall, New York, and Landes, Austin, TX, 1997. xiv, 273 pp., illus. \$89.95. ISBN 0-412-13861-1. Molecular Biology Intelligence Unit.

Linking Science and Technology to Society's Environmental Goals. Committee on the National Forum on Science and Technology Goals: Environment, National Research Council. National Academy Press, Washington, DC, 1997. xiv, 530 pp., illus. \$69.95. ISBN 0-309-05578-4.

The Origin and Evolution of Pacific Island Biotas, New Guinea to Eastern Polynesia. Patterns and Processes. Allen Keast and Scott E. Miller, Eds. SPB Academic, Amsterdam, 1996. viii, 331 pp., illus. \$228.50 and Dfl. 365. ISBN 90-5103-136-x.

Progress in Preventing AIDS? Dogma, Dissent and Innovation. David Buchanan and George Cernada, Eds. Baywood, Amityville, NY, 1997. viii, 359 pp., illus. Paper, \$44.95. ISBN 0-89503-176-0.

Reactive Transport in Porous Media. Peter C. Lichtner, Carl I. Steefel, and Eric H. Oelkers, Eds. Mineralogical Society of America, Washington, DC, 1997. xiv, 438 pp., illus. Paper, \$28. ISBN 0-939950-42-1.

Sidereus Nuncius and Stella Polaris. The Scientific Relations between Italy and Sweden in Early Modern History. Marco Beretta and Tore Frängsmyr, Eds. Science History Publications/USA (Watson), Nantucket, MA, 1997. iv, 168 pp., illus., + plates. \$39.95. ISBN 0-88135-188-1. Uppsala Studies in History of Science, vol. 24. From a symposium, Stockholm, Dec. 1995.

The Social Engagement of Social Science. A Tavistock Anthology. Vol. 3. The Socio-Ecological Perspective. Eric Trist, Fred Emery, and Hugh Murray, Eds. University of Pennsylvania Press, Philadelphia, 1997. xii, 718 pp., illus. \$69.95. ISBN 0-8122-8194-2.

Structured-Population Models in Marine, Terrestrial, and Freshwater Systems. Shripad Tuljapourkar and Hal Caswell, Eds. Chapman and Hall, New York, 1997. xii, 643 pp., illus. Paper, \$39 or £29.95. ISBN 0-412-07271-8. Population and Community Biology, 18.