

GUILLERMO OWEN

Current Address: Department of Mathematics, Code MA/On
Naval Postgraduate School
Monterey, California 93943
Telephone: (831)-656-2720
E-mail: gowen@nps.edu

Research Interests:

Game Theory
Terrorism and Low-Intensity Conflict
Voting
Economic Equilibrium

Education: School Certificate 1953, Lycée Jaccard (Lausanne)
B. A. 1958 (Mathematics), Fordham University
Ph. D. 1962 (Mathematics), Princeton University

Principal Academic Positions:

1961-69, Assistant professor, then associate professor of mathematics, Fordham University, New York, NY
1969-77, Associate professor, then professor of mathematical sciences, Rice University, Houston, TX
1978-82, Professor of mathematics and industrial engineering, University of the Andes, Bogotá, Colombia
1983-present, Professor, then distinguished professor of Mathematics, Naval Postgraduate School, Monterey, CA

Other academic positions (visiting or adjunct professor):

1967-68, Adjunct member of faculty, New School for Social Research, New York, NY
1968-69, Visiting professor of mathematics and industrial engineering, University of the Andes, Bogota, Colombia
1968-69, Visiting professor of mathematics, University of Dacca, East Pakistan
1970, Visiting professor of mathematics, University of Rajshahi, East Paskistan.
1973-80, Adjunct professor of biomathematics, Baylor College of Medicine, Houston, TX
1974-79, Adjunct professor of quantitative management sciences, University of Houston, Houston, TX
1974, 1990, Visiting professor of biometry, Texas School of Public Health, Houston, TX
1975-76, Visiting professor of mathematics of decisions, University of Paris IX (Dauphine), Paris, France
1976, Visiting professor of computation, University of Turin, Italy
1976, 1987, 1993, Visiting professor of mathematics, Hebrew University of Jerusalem, Israel
1977, Visiting professor of mathematics, Jadavpur University, Calcutta, India

1978-80, 2006, Adjunct professor of mathematics, Universidad Externado de Colombia, Bogotá, Colombia
1978, Visiting professor of mathematics, Universidad Nacional Autónoma de México, Mexico, D. F., Mexico
1980-82, 1992, Visiting professor of economics, University of California, Irvine, CA
1982-84, Visiting professor of economics, University of Iowa, Iowa City, IA
1986, Visiting professor of mathematics, University of Defense Technology, Changsha, Hunan, People's Republic of China
1986, 1990, 1993, 2001, Visiting professor of mathematics, Polytechnic University of Catalonia, Barcelona, Spain
1989, Visiting professor of mathematics, Catholic University, Nijmegen, Netherlands
1989, Visiting professor of economics, University of Århus, Denmark
1989, 1990, Visiting professor of economics, Friedrich-Wilhelms University of the Rhine, Bonn, West Germany
1989, 1990, 1994, 1995, 2001, 2002, Visiting professor of mathematics, University of Bergamo, Italy
1989, 1990, 1991, Visiting professor of economics, University of Brescia, Italy
1989, Visiting professor of operations research, Karl-Franzens University, Graz, Austria
1990, 1993, Visiting professor of political economics, University of Siena, Italy
1990, Visiting professor of economics, University of Barcelona, Spain
1990, 1993, Visiting professor of mathematics, University of Santiago de Compostela, Spain
1990, 1993, Visiting professor of mathematics, University of the Basque Country, Bilbao, Spain
1990, 1995, 1997, 1998, 1999, 2000, 2001, 2004, 2005, Visiting professor of economics, University of Caen, France
1990, 1992, 1993, 2001, Visiting professor of econometrics, Catholic University of Brabant, Tilburg, Netherlands
1990, 1993, Visiting professor of economics, School of Advanced Studies in Social Sciences, Marseille, France
1990, Visiting professor of mathematical economics, University of Bielefeld, Germany
1991, 2005, Visiting professor of operations research, Catholic University of Louvain, Louvain-la-Neuve, Belgium
1992, Visiting professor of economics, University of Copenhagen, Denmark
1993, Visiting professor of economics, Autonomous University of Barcelona, Spain
1994, Visiting professor of economics, Menéndez y Pelayo International University, Barcelona, Spain
1994, 2001, 2004, 2005, Visiting professor of mathematics, Complutense University, Madrid, Spain
1995, Visiting professor of mathematics, University of Modena, Italy
1996, Visiting professor of mathematics, University of Limburg, Maastricht, Netherlands
1998, Visiting professor of economics, Frederick II University, Naples, Italy
2001, Visiting professor of Political Science, University of Salamanca, Spain
2001, Visiting professor of economics, University of Paris-I, France
2001, Visiting professor of Economics, University of Bergen, Norway

2001, Visiting professor of economics, Autonomous University of Madrid, Spain
2005, Visiting Professor, Waseda University, Tokyo, Japan

Industrial Positions (consultant):

Hudson Institute, Harmon-on-Hudson, NY
Mathematica, Princeton, NJ
Compañía Colombiana de Seguros, Bogota, Colombia
Bavaria, S. A., Bogota, Colombia
Social Rehabilitation Service, Washington, DC
Instituto SER, Bogota, Colombia
Punch, S. A., Bogota, Colombia
Inderena, Bogota, Colombia
Proexpo, Bogota, Colombia

Editorial Positions:

1969-81: Manuscript review committee, Behavioral Science
1973-86, associate editor, Management Science
1974-2001, associate editor, International Journal of Game Theory
1988-92, associate editor, Game Theory and Economic Behavior
1990-97, associate editor, Revista Española de Economía
2000-pres., associate editor, International Game Theory Review
1978-83, editorial columnist, The Latin American Times

Honors:

Member of Colombian Academy of Physical and Exact Sciences since 1979
Member of Royal Academy of Arts and Sciences of Barcelona, Spain, since 1987
Member of Third World Academy of Sciences since 1990
Honorary degree of "Naval Science Professional" from Escuela Naval Almirante Padilla, Cartagena, Colombia, 2004

President, Houston area chapter, Operations Research Society of America, 1973-74
President, Naval Postgraduate School Chapter, Sigma Xi Society, 1986-88
Faculty Secretary, Naval Postgraduate School, 1987-89
Faculty Chairman, Naval Postgraduate School, 1992

BIBLIOGRAPHY

Books

Game Theory, Philadelphia (W. B. Saunders), 1968

Spieltheorie, translation of above by H. Skarabis, Berlin (Springer Verlag), 1971

Teoriya Igr, translation of above by I. N. Vrublevsky et al, Moscow (Mir), 1971

Game Theory, translation of above by K. Miyasawa, Tokyo (Toyo Keizai Shinposhe), 1972

Teoria Gier, translation of above by A. Wieczorec, Warsaw (Panstwowe Wydacnitwo Naukowe), 1974

Teoria Jocurilor, translation of above by M. Dragomirescu, Bucharest (Editura Tehnika), 1975

Finite Mathematics, Philadelphia (W. B. Saunders), 1971

(with M. E. Munroe): Finite Mathematics and Calculus, Philadelphia (W. B. Saunders), 1972

Game Theory, 2nd edition, New York (Academic Press), 1982

Game Theory, 3rd edition, San Diego (Academic Press), 1995

Discrete Mathematics and Game Theory, Boston (Kluwer), 1999

Edited books:

(with B. Grofman): editor, Information Pooling and Group Decision Making, Greenwich, Connecticut (JAI Press), 1986

(with M. J. Holler): editor, Power Indices and Coalition Formation, Boston (Kluwer), 2001.

Professional Articles

"The Tensor Composition of Non-Negative Games," in Advances in Game Theory, Annals of Mathematics Study No. 52, ed. M. Dresher, L. S. Shapley, and A. W. Tucker, Princeton, 1964, 307-326

"A Class of Discriminatory Solutions to Simple n-Person Games," Duke J. Math., 1965, 545-554

"Game Theory," New Catholic Encyclopædia, Washington, 1966

"Discriminatory Solutions of n-Person Games," Proc. Am. Math. Soc., 1966, 653-657

"Game Theory," American People's Encyclopædia, New York, 1967

"An Elementary Proof of the Minimax Theorem," Management Science, 1967, 765

"A Note on the Shapley Value," Management Science, 1968, 731-732

"n-Person Games with only 1-, n-1-, and n-Person Coalitions," Proc. Am. Math. Soc., 1968, 1258-1261

"Minimization of Fatalities in a Nuclear Attack Model," Operations Research, 1969, 489-505

"The Four-Person Constant-Sum Games: Discriminatory Solutions on the Main Diagonal," Pacific J. Math., 1970, 461-480

"Political Games," Naval Res. Log. Quart., 1971, 345-354

"Multilinear Extensions of Games," Management Science, 1972, P64-P79

"Optimal Threat Strategies of Bimatrix Games," International J. Game Thy., 1972, 3-11

"Values of Games without Side Payments," International J. Game Thy., 1972, 94-109

"Cutting-Planes for Programs with Disjunctive Constraints," J. Opt. Thy. and Appl., 1973, 49-55

"An Outline of Linear Programming," J. Opt. Thy. and Appl., 1973, 567-589

(with S. C. Littlechild): "A Simple Expression for the Shapley Value in a Special Case," Management Science, 1973, 370-372

"Some Comments on the Minimax Principle," Management Science, 1974, 1316-1317

"A Generalization of Lanchester's Laws of Combat," Rev. Colombiana de Matemáticas, 1974, 135-143

- "A Note on the Nucleolus," International J. Game Thy., 1974, 101-103
- "Bargaining Theory," Encyclopædia of Computer Science and Technology, II, 1975, 43-51
- (with M. Maschler and G. Kalai): "Asymptotic Stability and Other Properties of Trajectories and Transfer Sequences Leading to the Bargaining Sets," International J. Game Thy., 1975, 193-214
- "Evaluation of a Presidential Election Game," American Poli. Sci. Rev., 1975, 947-953
- "On the Core of Linear Production Games," Math. Programming, 1975, 358-370
- "A Note on Convergence of Transfer Sequences in n-Person Games," International J. Game Thy., 1975, 221-228.
- (with R. V. Nydegger): "Two-Person Bargaining: an Experimental Test of the Nash Axioms," International J. Game Thy., 1975, 239-249
- "Multilinear Extensions and the Banzhaf Value," Naval Res. Log. Quart., 1975, 741-752
- "Rejoinder to a Commentary," American Poli. Sci. Rev., 1976, 1223-1224.
- "Existence of Equilibrium Points in Continuous Games," International J. Game Thy., 1977, 97-105
- "Characterization of the Nucleolus for a Class of n-Person Games," Naval Res. Log. Quart., 1977, 463-472
- "Computation of Equilibrium Price and Quantity Vectors," in Convex Analysis and Its Applications, ed. A. Auslender, Berlin (Springer Verlag), 1977, 170-179
- (with R. V. Nydegger): "The Norm of Equity in Three-Person Games," Behavioral Science, 1977, 32-37
- (with S. C. Littlechild): "A Further Note on the Nucleolus of the Airport Game," International J. Game Thy., 1977, 91-95
- "Finite Mathematics," McGraw-Hill Encyclopædia of Technology, 1977
- "Values of Games with a Priori Unions," in Mathematical Economics and Game Theory, ed. R. Henn and O. Moeschlin, Berlin (Springer Verlag), 1977, 76-87
- "A Generalization of the Kohlberg Criterion," International J. Game Thy., 1977, 249-255

"Game Theory and Gaming," in Handbook of Operations Research, ed. S. Elmaghraby and J. Moder, Princeton (van Nostrand), 1978, 451-484

(with J. Becker and R. M. Thrall): "A Game-Theoretic Analysis of Alternate Energy Source Development," in Energy Policy, ed. J. Aronovsky, A. G. Rao, and M. Shakun, New York (North Holland), 1978, 245-252

"A Characterization of the Banzhaf-Coleman Index," SIAM J. Appl. Math., 1978, 315-327

"A Note on the Banzhaf Axioms," in Game Theory and Political Science, ed. P. Ordeshook, New York (New York University Press), 1978, 451-463

(with H. Diaz): "Fair Subsidies for Urban Transportation Systems," in Applied Game Theory, ed. S. Brams, A. Schotter, and G. Schwödianer, Würzburg (Physica Verlag), 1979, 325-333

"Las Ciencias Exactas: Camino hacia la Cibernética," El Tiempo, Bogota, Colombia, La Década de los 70, 29 December 1979, 7

(with S. C. Littlechild): "An Austrian Theory of the Entrepreneurial Market Process," J. Econ. Thy., 1980, 361-379

"Values of Market Games without Side Payments," Rev. de la Acad. Colombiana de Ciencias Exactas, October 1981, 5-24

"A Modification of the Banzhaf-Coleman Index for Games with a Priori Unions," in Power, Voting, and Voting Power, ed. M. Holler, Würzburg (Physica Verlag), 1981, 232-238

(with B. Grofman and S. Feld): "Average Competence, Individual Competence, and Group Judgmental Accuracy," Psychology Reports, 1982, 683-688

(with B. Grofman and S. Feld): "Evaluating the Competence of Experts," in Dependence and Inequality, ed. R. Geyer and J.v. d. Zouwen, Oxford (Pergamon Press), 1982, 221-238

(with B. Grofman): "A Game-Theoretic Approach to Measuring Degree of Centrality in Social Networks", Social Networks, 1982, 213-224

(with B. Grofman and S. Feld): "Thirteen Theorems in Search of the Truth," Theory and Decision, 1983, 261-278

(with B. Grofman): "To Vote or not to Vote: the Paradox of Non-Voting," Public Choice, 1984, 311-325

(with B. Grofman): "Coalitions and Power in Political Situations," in Coalitions and Collective Action, ed. M. Holler, Würzburg (Physica Verlag), 1984, 137-144

(with B. Grofman and S. Feld): "Group Size and the Performance of a Composite Group Majority," Organizational Beh. and Human Perf., 1984, 350-359

(with B. Grofman): "Condorcet Models, Avenues for Future Research," in Information Pooling and Group Decision-Making, ed. B. Grofman and G. Owen, Greenwich, CT (JAI Press), 1986, 93-101

"Fair Indirect Majority Rules," in Information Pooling and Group Decision-Making, Greenwich, CT (JAI Press), 1986, 223-229

"Values of Graph-Restricted Games," SIAM J. Alg. and Disc. Meth., 1986, 210-220

"Game Theory," in Academic Press Encyclopædia of Physical Sciences, 1987, V, 756-762

"Application of Game-Theoretic Analysis to a Problem in Demography," Management Science, 1987, 253-257

(with A. Glazer, B. Grofman, and N. Noviello): "Stability and Centrality of Legislative Choice in the Spatial Context," Amer. Poli. Sci. Rev., 1987, 539-553

(with B. Grofman): "A Theorem on the Optimal Allocation of Effort," Rev. Colombiana de Matemáticas, 1987, 201-212

(with B. Grofman): "Optimal Partisan Gerrymandering," Polit. Geog. Quart., 1988, 5-22

(with F. Carreras): "Evaluation of the Catalonian Parliament, 1980-1984," Math. Social Sci., 1988, 87-92

"Multilinear Extensions and the Diagonal Procedure," in The Shapley Value, ed. A. Roth, New York (Cambridge University Press), 1988, 139-151

(with M. Maschler and B. Peleg): "Paths Leading to the Nash Set," in The Shapley Value, ed. A. Roth, New York (Cambridge University Press), 1988, 321-330

(with A. Wuffle, S. Feld, and B. Grofman): "Finagle's Law and the Finagle Point: A New Solution Concept for Spatial Voting Games," Amer. J. Poli. Sci., 1989, 348-375

(with L. S. Shapley): "Optimal Location of Candidates in Ideological Space," International J. Game Thy., 1989, 125-142

(with B. Grofman and S. L. Feld): "Proving a Distribution-Free Generalization of the Condorcet Jury Theorem," Math. Soc. Sci., 1989, 1-16

(with A. Glazer and B. Grofman): "A Model of Candidate Convergence under Uncertainty about Voter Preferences," Mathematical & Comp. Modelling, 1989, 471-478

(with M. Maschler): "A Consistent Value for Hyperplane Games," International Journal of Game Theory, 1989, 389-407

"Stable Outcomes in Spatial Voting Games," Mathematical Social Sciences, 1990, 269-280

(with E. Winter): "Multilinear Extensions and the Coalitional Value," Games and Economic Behavior, 1992, 582-587

(with P. Borm and S. Tijs): "On the Position Value for Communication Situations," SIAM J. of Discrete Mathematics, 1992, 305-320

(with R. v. d. Brink and R. Gilles): "Games with Permission Structures: The Conjunctive Case," International Journal of Game Theory, 1992, 277-293

"The Assignment Game: The Reduced Game," Annales d'Économie et Statistique, 1992, 71-79

"The Finagle Point for Characteristic Function Games," in Rational Interaction, ed. R. Selten, Berlin (Springer Verlag), 1992, 35-43

(with M. Maschler): "The Consistent Shapley Value for Games without Transferable Utility," in Rational Interaction, ed. R. Selten, Berlin (Springer Verlag), 1992, 5-12

(with M. LeBreton and S. Weber): "Strongly Balanced Cooperative Games," International Journal of Game Theory, 1992, 419-427

"Game Theory," in Academic Press Encyc. of Phys. Sciences, 1992, VII, 37-44 (revision of 1987 article)

"The Not-Quite Non-Atomic Game: Normal Approximation," Int. J. Game Theory, 1993, 404-417

(with P. Borm, A. v. d. Nouweland, and S. Tijs): "Cost Allocation and Communication," Naval Research Logistics, 1993, 733-744

"The Non-Consistency and Non-Uniqueness of the Consistent Value," in Essays in Game Theory in Honor of Michael Maschler, ed. N. Megiddo, Berlin (Springer Verlag), 1994, 155-162

(with G. Gambarelli): "Indirect Control of Corporations," Int. Journal Game Thy., 1994, 287-302

(with G. Gambarelli): "50 Years of Game Theory," Journal of European Business Education, 1994, 30-45

"The Not-Quite Non-Atomic Game: Homogeneous Games on Two Measures," International Journal of Game Theory, 1995, 399-413

(with F. Carreras): "An Analysis of the Euskarian Parliament," in Collective Decision-Making: Social Choice and Political Economy, ed. N. Schofield, Boston (Kluwer-Nijhoff), 1996, 251-263

(with D. Granot, M. Maschler, and W. R. Zhu): "The Kernel/Nucleolus of a Standard Tree Game," Int. J. Game Thy., 1996, 219-244

(with R. Amer, F. Carreras, and A. Magaña): "Multilinear Extensions and Quotients of Simple Games," Naval Res. Logistics, 1996, 103-118

(with F. Carreras): "Valor Coalicional y Estrategias Parlamentarias," Revista Española de Investigaciones Sociológicas, 1996, 157-176

"The Consistent Value for Non-Atomic Games," in Understanding Strategic Interaction: Essays in Honor of Reinhard Selten, ed. W. Albers, W. Güth, P. Hammerstein, B. Moldovanu and E. Van Damme, Berlin (Springer), 1996, 279-285

(with G. M^cCormick): "Revolutionary Origins and Conditional Mobilization," European J. Political Economy, 1996, 377-402

(with F. Carreras): "Automorphisms and Weighted Values of Games," Int. Journal Game Thy., 1997, 1-10

(With B. N. Grofman): "Estimating the Likelihood of Fallacious Ecological Inference: Linear Ecological Regression in the Presence of Context Effects," Political Geography, 1997, 675-690.

"Pari-Mutuel as a System of Aggregation of Information," Game-Theoretical Applications to Operations Research and Economics, ed. T. K. Parthasarathy et al, Dordrecht (Kluwer), 1997, 183-196

(with A. Glazer and B. N. Grofman): "A Neo-Downsian Model of Group-Oriented Voting and Racial Backlash," Public Choice, 1998, 23-34

"Game Theory (an Overview of)," in Encyclopædia of Applied Ethics, II, ed. R. Chadwick, Academic Press, 1998, 357-367

(with G. M^cCormick): "□ Simple Decision Model of Non-Proliferation," Mathematical and Computer Modelling, 1998, 27, 12, 69-84.

(with G. M^cCormick): "Bargaining between Heterogeneous Coalitions," Topics in Mathematical Economics and Game Theory: Essays in Honor of Robert J. Aumann, ed.

M. Wooders, American Mathematical Society, 1999, 95-104

(with B. N. Grofman and C. Collet): "So What's the Question? Rethinking the Partisan Effects of Higher Turnout", Public Choice, 1999, 357-376

"Applications of Game Theory to Economic Equilibrium," International Game Theory Review, 1999, 1-8

(with G. M^cCormick): "Security and Coordination in a Clandestine Organization," Mathematical and Computer Modelling, 2000, 31, 175-192.

"Game Theory," in International Encyclopedia of the Social & Behavioral Sciences, ed. N. J. Smelser and Paul B. Baltes, Pergamon, Oxford, 2001, 5863-5867

"Game Theory," in Academic Press Encyclopædia of Phys. Sciences, 2002, VI, 389-396 (revision of 1987 article)

"The Condorcet Jury Theorem," in Supplement III, Encyclopædia of Mathematics, Kluwer Academic Publishers, 2002, 109-110

"The Condorcet Paradox," in Supplement III, Encyclopædia of Mathematics, Kluwer Academic Publishers, 2002, 110

(with G. Gambarelli): "Power in Political and Business Structures," in Power and Fairness, ed. M. J. Holler, H. Kliemt, D. Schmidtchen, and M. E. Streit, Jahrbuch für neue politische Ökonomie, Mohr Siebeck, Tübingen, 2002, 57-68.

(with M. Holler): "On the Present and Future of Power Measures," Homo Oeconomicus, 2002, 281-295; republished as "Present and Future of Power Measures", in Group Decisions and Voting, ed. J. Kacprzyk and D. Wagner, Warsaw, Academicka Oficyna Wydawnicza EXIT, 2003, 31-46.

(with C. Manuel, E. Gonzalez, D. Gomez, M. del Pozo, and J. Tejada): "Centrality in Social Networks: A Game Theoretic Approach", Mathematical Social Sciences, 2003, 27-54.

(with G. M^cCormick): "Factionalism, Violence, and Bargaining in Civil Wars," Homo Oeconomicus, 2004, 361-390.

(with C. Manuel, E. Gonzalez, D. Gomez, M. del Pozo, and J. Tejada): "Splitting Graphs when Calculating the Myerson Value for Pure Overhead Games," Mathematical Methods of Operations Research, 2004, 479-489.

(with Gianfranco Gambarelli): "The Coming of Game Theory," in Theory and Decision, 2004, 1-18. Also in Essays in Cooperative Games, ed. G. Gambarelli, Kluwer, 2004.

(with C. Manuel, E. Gonzalez, D. Gomez, and M. del Pozo): "A Unified Approach to the Myerson Value and the Position Value," Theory and Decision, 2004, 63-76. Also in Essays in Cooperative Games, ed. G. Gambarelli, Kluwer, 2004.

"Consistency in Values," International Game Theory Review, 2004, 461-473.

"IFORS' Operational Research Hall of Fame: Harold W. Kuhn," International Transactions in Operational Research, 2004, 715-718.

(with S. Flåm and M. Saboyá): "The Not-Quite Non-Atomic Game: Non-Emptiness of the Core in Large Market Games," Mathematical Social Sciences, 2005, 279-297.

(with B. N. Grofman): "Two-stage Electoral Competition in Two-party Contests: Persistent Divergence of Party Positions," Social Choice and Welfare, 547-569, 2006.

(with G. M^cCormick): "A Game Model of Counterproliferation, with Multiple Entrants," to appear in International Game Theory Review, 2006.

(with C. Manuel, E. Gonzalez, D. Gomez, M. del Pozo and M. Saboyá): "A Game-Theoretic Approach to Cohesiveness in Social Networks," to appear in Annals of Operations Research, 2007.

(with I. Lindner, S. L. Feld, B. N. Grofman, and L. Ray): "A Simple 'Market Value' Bargaining Model for Weighted Voting Games: Characterization and Limit Theorems," to appear in International Journal of Game Theory, 2007.

(with G. M^cCormick): "Finding a Moving Fugitive. A Game Theoretic Representation of Search", to appear in Computers and Operations Research, 2007.

(with I. Lindner and B. N. Grofman): "Modified Power Indices for Indirect Voting," to appear in a volume in honor of Manfred Holler, 2007.

35 editorial columns for The Latin American Times, Bogota, Colombia, over the period 1979-1983.

Book Reviews

N. Howard: Paradoxes of Rationality, in Behavioral Science, 1973, 128-129

R. J. Aumann and L. S. Shapley: Values of Non-Atomic Games, in International J. Game Thy., 1977, 186-188

S. Gal: Search Games, in American Scientist, 1981, 572

S. Nitzan and J. Paroush: Collective Decision Making, in Journal of Economic Behavior and Organization, 1989, 302-303

E. E. Zajac: Political Economy of Fairness, in Public Choice, 1996, 214-217

R. J. Aumann and S. Hart, eds., Handbook of Game Theory with Economic Applications, Volume 3, in Journal of Economic Literature, 2003, 1274-1275