#### **Darold T Barnum**

Professor of Management Professor of Information and Decision Sciences Adjunct (Research) Professor of Pharmacy Administration University of Illinois at Chicago

**Research** My recent publications involve measuring organizational performance in a variety of settings, with co-authors who have acumen about those settings. My co-authors include professors and students in business administration, pharmacy, education, engineering, and public administration; and professionals from the World Bank, the Chicago Transit Authority and consulting organizations.

> My distinctive competence is the ability to integrate my skills with those of coauthors in ways that lead to publications in their areas of interest. I am eager to publish with new co-authors and in additional fields.

Over my career, my co-authors and I have published in journals such as: Management Science, Industrial and Labor Relations Review, International Transactions in Operational Research, IEEE Transactions on Engineering Management, Socio-Economic Planning Sciences, Public Productivity Review, Transportation Research, J of Small Business Strategy, J of the American Medical Association, Public Personnel Management, Review of Public Personnel Administration, J of Transportation Engineering, J of the Operational Research Society, Ecological Economics, Applied Economics, International J of Educational Advancement, J of Productivity Analysis, J of Medical Systems, American J of Health-System Pharmacy.

# Education Ph.D. in Business and Applied Economics,

Wharton School, University of Pennsylvania

M.B.A. with majors in Labor Relations and in Finance. Wharton School, University of Pennsylvania

B.B.A. with major in Personnel and minor in Accounting, University of Texas at Austin

# **Teaching** Awards

ITLer of the Year, University of Illinois at Chicago, for leadership in web-based instructional technology development and use

Amoco Foundation Award for Excellence in Teaching, Indiana University

"Loyal Order of the Prairie Dog" civic award, for education of public sector managers and union leaders, City of Lubbock Texas

# **EDUCATION**

# UNIVERSITY OF PENNSYLVANIA, Wharton School

Ph.D. in Business and Applied Economics, 1972. Industrial Relations major, with second field in Finance. Minors in Quantitative Methods (Statistics and Operations Research), and Economics. Industrial Relations Graduate Fellow.

M.B.A., 1970. Majors in Labor Relations and in Finance. Courses in Management Information Systems, Accounting Information Systems, Computer Science, Economics, Operations Research, and Statistics. Joseph Wharton Scholar, and Reynolds Investment Fund Fellow.

UNIVERSITY OF TEXAS AT AUSTIN, College of Business Administration

B.B.A., summa cum laude, 1966. Personnel and Industrial Relations major, and Accounting minor. Graduated 1 in class of 700. Honor societies of Beta Alpha Psi, Beta Gamma Sigma, Phi Kappa Phi, and Sigma lota Epsilon.

#### **ACADEMIC POSITIONS**

University of Illinois at Chicago, College of Business Administration, 1985 - present. Currently Professor of Management, Professor of Information and Decision Sciences, and Adjunct Professor of Pharmacy Administration, with tenure.

Indiana University-Northwest (Gary, IN), Division of Business and Economics, 1976 - 1985. Left as Professor of Management with tenure.

Texas Tech University (Lubbock, TX), College of Business Administration, 1973 - 1976. Left as Associate Professor of Management with tenure.

State University of New York at Brockport, Department of Economics, 1971 - 1973. Left as Assistant Professor of Economics.

#### SELECTED TEACHING AWARDS

UIC ITLer of the Year, 2002, University of Illinois at Chicago, In recognition for development and use of web-based instructional technology in both brick-and-mortar and online courses

Amoco Foundation Award for Excellence in Teaching, Indiana University System, 1980.

"Loyal Order of the Prairie Dog" Award, for work as Director of the Public Employee Relations Project, Texas Tech University, which involved educating public sector managers and union leaders in Texas, 1975. (Civic Service award from City of Lubbock)

# COURSES THAT I HAVE ESPECIALLY ENJOYED TEACHING

Negotiations, union-management relations, strategic management, statistics, website construction, labor economics, corporation finance, human resource management.

Developed course content and websites for first online undergrad and grad courses in the UIC College of Business Administration, using such tools as Dreamweaver, Flash, Fireworks, ColdFusion, database software, and user-side and server-side scripts

#### SELECTED ADMINISTRATIVE PERFORMANCE

Web Designer, Web Developer and Webmaster for ANL Sportswear (1998-2004). Pro-bono. ANL Sportswear produced and sold American Negro (baseball) League apparel and memorabilia. I designed, developed and operated its online store, with the website containing historical information about the Negro League and its players.

Founding Director, Center for Human Resource Management, University of Illinois at Chicago and University of Illinois at Urbana-Champaign (1991-94). As one of the Center's two directors (the other was from UIUC), I was jointly responsible for its administration and development. In the first three years, 20 corporate partners were recruited; annual revenue from these partners was \$150,000. We developed an academic membership of 60 faculty, held 6 partner roundtables, and funded 15 faculty research projects, many of which I mentored. The Center cited by U of I System President as one of the few examples of successful cooperation between two University of Illinois campuses, and of true collaboration between business and academia in business research. Member firms included Amoco, R.R. Donnelley, Abbott Labs, Caterpillar, Motorola, Allstate Insurance, Pfizer, FMC, Continental Bank, ARCO, Dow North America, Union Carbide, Western Building Products, W.W. Grainger, Honeywell, Ingersoll-Rand, Ameritech, Frito-Lay, Hartmarx, James River.

Head, Department of Management, University of Illinois at Chicago (1987-90). Performed all usual duties in department of 20 people, including planning, budgeting, hiring, evaluating and rewarding, and interfacing with other units. Recruited top-flight researchers, developed policies rewarding good teachers while encouraging research, and helped department become more unified and academically stronger. Implemented new HRM doctoral program, which involved chairing departmental PhD committee, coordinating course development, and student recruiting, selection and counseling.

**Associate Director, Institute for Urban Transportation, Indiana University-Bloomington (1981-85).** Developed selected professional education seminars, chose faculty, and taught in these and other seminars. Students were managers of more than 230 transit organizations from 43 states, representing more than 90 percent of U.S. transit service. Since leaving IU, continued as an instructor through 1994.

# LIST OF PUBLICATIONS

#### **BOOKS AND RESEARCH MONOGRAPHS**

Handbook of Human Resource Management. Editor, with Gerald Ferris and Sherman Rosen. Oxford, UK: Blackwell Publishers, July 1995.

"Toward Business-University Partnerships in Human Resources Management: Integration of Science and Practice." With Gerald Ferris, Sherman Rosen, Lawrence Holleran and James Dulebohn. Chapter 1, *Handbook of Human Resource Management*. Oxford, UK: Blackwell Publishers, 1995, pp. 1-13.

"Reinventing the Federal Government: Forging New Labor-Management Partnerships for the 1990s." With Edward Suntrup. Chapter 8, *Unions and Workplace Reorganizations*, Bruce Nissen, Editor. Wayne State University Press, 1997, 145-158.

The Use of Incentives to Attain Specified Performance Standards in Collective Bargaining for Mass Transit. Transportation Research Board, National Academy of Sciences, Washington, DC, 1988, 68 pages.

From Private to Public: Labor Relations in Urban Mass Transit. Lubbock, Texas: Texas Tech University College of Business Administration, 1977. 192 pages. Republished by Indiana University Institute for Urban Transportation, Bloomington, IN, 1983; reprinted in 1987.

Local Option Recognition and Bargaining: The Texas Fire Fighter and Police Experience. With I.B. Helburn. Lubbock, Texas: Texas Tech University College of Business Administration, 1976. 167 pages.

The Negro in the Bituminous Coal Mining Industry. Philadelphia, PA: University of Pennsylvania, Wharton School, Industrial Research Unit, 1970. 80 pages. Republished in Herbert R. Northrup et al. Negro Employment in Southern Industry. Philadelphia, Pennsylvania: University of Pennsylvania, Wharton School, Industrial Research Unit, 1971, Part IV.

#### REFEREED JOURNAL ARTICLES

Darold Barnum, John Gleason [Creighton University], Matt Karlaftis [Engineering, National Technical University of Athens], Glen Schumock [UIC Pharmacy], Karen Shields [Sisters of St. Francis Health Services], Sonali Tandon [Chicago Transit Authority] and Surrey Walton [UIC Pharmacy] (2012) Estimating DEA Confidence Intervals with Statistical Panel Data Analysis. *Journal of Applied Statistics*. DOI: <a href="http://dx.doi.org/10.1080/02664763.2011.620948">http://dx.doi.org/10.1080/02664763.2011.620948</a>

Barnum, D., Karlaftis, M., Tandon, S. (2011) Improving the Efficiency of Metropolitan Area Transit by Joint Analysis of Its Multiple Providers. *Transportation Research Part E – Logistics and Transportation*, Vol 47, 160–1176.

- Barnum, D., Walton, S., Shields, K., Schumock, G. T. (2011). Measuring Hospital Efficiency with Data Envelopment Analysis: Nonsubstitutable vs. Substitutable Inputs and Outputs. *Journal of Medical Systems*. DOI: 10.1007/s10916-009-9416-0
- Barnum, D., Gleason, J.M. (2011). Measuring efficiency under fixed proportion technologies. *Journal of Productivity Analysis*., <u>Volume 35, Number 3</u>, 243-262
- Barnum, D., Shields, K. L., Walton, S. M., Schumock, G. T. (2011). Improving the efficiency of distributive and clinical services in hospital pharmacy with DEA. *Journal of Medical Systems*. Volume 35, Number 1, Pages 59-70
- Coupet, J. and Barnum, D. (2010) HBCU Efficiency and Endowments: An Exploratory Analysis. *International Journal of Educational Advancement*. **10**, 186–197. doi:10.1057/ijea.2010.22
- Barnum, D., Gleason, J. M., Hemily, B., Lin, J., Wang, P. (2010). Progressing from uncertainty to risk for DEA-based decisions. *Journal of the Operational Research Society* 61, 1548 --1555
- Barnum, D., Gleason, J. M. (2010). DEA efficiency analysis involving multiple production processes. *Applied Economics Letters*. Vol. 17, No. 7, pp. 627-632
- Schumock, G. T., Shields, K. L., Walton, S. M., Barnum, D. (2009). Data envelopment analysis A method for comparing hospital pharmacy productivity. *Am J Health-Syst Pharm*. Vol. 66 Issue 18, p1660-1665
- Welch, E. W., Barnum, D. (2009). Joint Environmental and Cost Efficiency Analysis of Electricity Generation. *Ecological Economics*. *Volume 68, Issues 8-9, 15 June 2009*, *Pages 2336-2343*
- Barnum, D., Gleason, J. M., Hemily, B. (2009). Using panel data analysis to estimate confidence intervals for the DEA efficiency of individual decision making units. *Applied Economics*. Volume 41, Number 26, December, pp. 3319-3326(8)
- Barnum DT, Gleason JM, Hemily B. (2008) Using panel data analysis to estimate DEA confidence intervals adjusted for the environment. *Journal of Transportation Engineering*. 2008; 134:215-223.
- Lin J, Wang P, Barnum DT. (2008) A quality control framework for bus schedule reliability. *Transportation Research Part E: Logistics and Transportation Review.* 2008; 44:1086-1098.
- Barnum DT, Gleason JM. (2008) Bias and precision in the DEA two-stage method. *Applied Economics*. 2008; 40:2305-2311.

- Darold Barnum, Sonali Tandon, Sue McNeil. (2008) Comparing the Performance of Bus Routes after Adjusting for the Environment, Using Data Envelopment Analysis. *Journal of Transportation Engineering* 134(2), 77-85.
- Darold T. Barnum, Sue McNeil, and Jonathon Hart. (2007) Comparing the efficiency of public transportation subunits using data envelopment analysis. *Journal of Public Transportation*. 10 (2):1-16,
- Darold T. Barnum and John M. Gleason. (2007) Technical efficiency bias in data envelopment analysis caused by intra-output aggregation. *Applied Economics Letters* 14 (9):623-626.
- Barnum, D. T. and Gleason, J. M. (2006) Biases in technical efficiency scores caused by intra-input aggregation: Mathematical analysis and a DEA application using simulated data. *Applied Economics*, 38, 1593–1603.
- Barnum, D. T. and Gleason, J. M. (2006) Measuring efficiency in allocating inputs among outputs with DEA. *Applied Economics Letters*, 13 (6), 333-336.
- Barnum, D. T. and Gleason, J. M. (2005) Technical efficiency bias caused by intra-input aggregation in data envelopment analysis. *Applied Economics Letters*, 12 (13), 785-788.
- "A Performance Indicator Analysis of Proficiency Criteria in the Drug-Testing-Laboratory Certification Process of the DHHS." With John Gleason. *RISK: Health, Safety & Environment.* Vol. 11, No. 4 (Winter 2000), pp. 297-307.
- "Small Business Drug-Testing Strategy: Implications of Pre-employment Testing." With John Gleason. *Journal of Small Business Strategy*. Vol. 10, No. 2 (Fall/Winter 1999) pp. 20-31.
- "Analyzing Proficiency Criteria of Health Technology Systems: The Case of Drug Testing." With John Gleason. *IEEE Transactions on Engineering Management*. Vol. 46, No. 3 (August 1999), pp. 359-369.
- "Credibility of Drug Tests: A Multi-stage Bayesian Analysis." With John Gleason. *Industrial and Labor Relations Review.* Vol. 47, No. 4 (July 1994), pp. 610-621.
- "A Probabilistic Analysis of Multiple-Drug Testing Procedures in Sports Doping Control." With John Gleason. *International Transactions in Operational Research*. Vol. 1, No. 4 (1994), pp. 395-407.
- "Caveats Concerning the Use of Computer Random Number Generators to Select Urban Transportation System Employees for Drug Tests." With John Gleason. *Computers, Environment and Urban Systems.* Vol. 17, No. 6 (December 1993), pp. 481-489.

"Estimating Actual Rates of Drug Use." With John Gleason. *Socio-Economic Planning Sciences*. Vol. 27, No. 3 (1993), pp. 199-207.

"The Self-reporting of Cocaine Use." With John Gleason. *Journal of the American Medical Association*. Vol. 268, No. 17 (November 4, 1992), p. 2373.

"Determining Transit Drug Test Accuracy: The Multi-Drug Case." With John Gleason. *Transportation Research Record.* No. 1297. 1991, pp. 20-28. [refereed; chosen Best Paper in Transit Management and Performance at its 1991 Annual Meeting by the Transportation Research Board, National Academy of Sciences]

"Closure: Error Rates Increase When Testing for Multiple Drugs." With John Gleason. *Transportation Research Record*. No. 1297. 1991, pp. 30-31. [response to U.S. Department of Transportation published discussion]

"Risks of Employee Drug-Testing: An Analysis of Predictive Probabilities." With John Gleason. *Risk: Issues in Health and Safety*. Vol. 2, No. 3 (Winter 1991), pp. 3-18. [lead article].

"Accuracy in Transit Drug Testing: A Probabilistic Analysis." With John Gleason. *Transportation Research Record.* No. 1266. 1990, pp. 10-18. [refereed; chosen Best Paper in Transit Management and Performance at its 1990 Annual Meeting by the Transportation Research Board, National Academy of Sciences]

"Closure: Bayesian Approaches to Maintaining Proper Accuracy Standards in Transit Drug Testing." With John Gleason. *Transportation Research Record*. No. 1266. 1990, pp. 20-22. [response to U.S. Department of Transportation published discussion]

"Institutional Requirements for Competition: The Labor Issues." *Transportation Research Record.* No. 1209. 1989, pp. 40-48.

"Competition in Transit: Addressing the Labor Requirements." *PTI Journal*, Vol. 2, No. 1 (March/April 1988), pp. 22-29. [invited]

"Development and Implementation of a Performance-Based State Transit Subsidy Allocation Formula." With Kumares C. Sinha, John N. Parsons, and Essam A. Sharaf. *Transportation Research Record*, Number 1076, 1986, pp. 30-38.

"Multilateral Labor Relations in the Public Sector: Citizen Involvement." With Edward L. Suntrup. *Review of Public Personnel Administration*, Vol. 5, No. 2 (Spring 1985), pp. 56-69. [invited]

"A Method for Identifying the Impact of Revenue Source on Labor Efficiency: The Case of Mass Transit." With John M. Gleason. *Public Productivity Review*, Vol. 7, No. 1 (March 1983), pp. 52-67. [invited and refereed]

"Toward Valid Measures of Public Sector Productivity: Performance Indicators in Urban Transit." With John M. Gleason. *Management Science*, Vol. 28, No. 4 (April 1982), pp. 379-386.

"Influencing the Electorate: Experience with Referenda on Public Employee Bargaining." With I.B. Helburn. *Industrial and Labor Relations Review*, Vol. 35, No. 3 (April 1982), pp. 330-342.

"Human Resource Programming: The Experience of Steel's Consent Decree One." With Gopal C. Pati. *Human Resource Planning*, Vol. 2, No. 4 (1979), pp. 175-185.

"Effectiveness of OSHA Sanctions in Influencing Employer Behavior: Single and Multi-Period Decision Models." With John M. Gleason. *Journal of Accident Analysis and Prevention*, Vol. 10, No. 1 (March 1978), pp. 35-49. [invited and refereed]

"Caveats Concerning Efficiency/Effectiveness Measures of Mass Transit Performance." With John M. Gleason. *Management Science*, Vol. 24, No. 16 (December 1978), pp. 1777-1778.

"Making Personnel Decisions by Public Referenda." With I.B. Helburn. *Public Personnel Management*, Vol. 7, No. 2 (March-April 1978), pp. 119-126. Republished in Marvin J. Levine. *Labor Relations in the Public Sector: Readings and Cases*. Columbus, Ohio: Grid Publishing, 1984. [invited]

"Labor Relations by Local Option: Fire Fighter and Police Bargaining in Texas." With I.B. Helburn. *Labor Law Journal*, Vol. 28, No. 5 (May 1977), pp. 292-304.

"Crime Does Pay: An Analysis of the Burglary Profession." With John M. Gleason. *Interfaces*, Vol. 7, No. 3 (May 1977), pp. 55-60. [invited and refereed]

"Effectiveness of OSHA Penalties: Myth or Reality?" With John M. Gleason. *Interfaces*, Vol. 7, No. 1 (November 1976), pp. 1-13. [invited and refereed]

"National Public Labor Relations Legislation: The Case of Urban Mass Transit." *Labor Law Journal*, Vol. 27, No. 3 (March 1976), pp. 168-176.

"OSHA Sanctions: Implications for Public Policy." With John M. Gleason. *Monthly Labor Review*, Vol. 99, No. 4 (April 1976). [invited]. This paper originally appeared in Industrial Relations Research Association. *Winter 1975 National Proceedings*, Dallas Texas, 1975, pp. 84-92.

"From Private to Public: Labor Relations in Urban Transit." *Industrial and Labor Relations Review*, Vol. 25, No. 1 (October 1971), pp 95-115. Republished in Richard R. Rowan, editor. *Collective Bargaining: Survival in the 70's?*. Philadelphia, Pennsylvania: University of Pennsylvania, Wharton School, Industrial Research Unit, 1973. [invited]

# OTHER PUBLICATIONS

"An Assessment of the Digital-Economy-Friendliness of the Fifty Largest Consolidated Metropolitan Statistical Areas: A Data Envelopment Analysis." (With John Gleason). *Proceedings of the 2002 International Conference on Information Systems and Engineering*, San Diego, July 14-18, 2002, pp. 135-140.

"Looking for Better Ways to Rank B-Schools." *Business Week*. Readers Report. October 23, 2000, p 18.

Book review of *Public Transportation* by George Gray and Lester Hoel. *Transportation Research*. Vol. 27A, No. 5 (September 1993), pp. 413-415. [invited]

Book review of *Evaluating Medical Tests: Objective and Quantitative Guidelines*, by Helena C. Kraemer. *Risk: Issues in Health and Safety*. Vol.3, No. 2 (Summer 1992), pp. 275-278. [invited]

"Bayesian Analysis of Pre-employment Drug Testing." With John M. Gleason. *National Proceedings of the Decision Sciences Institute*, San Diego, CA, Nov 1990, pp. 791-793.

"Crisis in Drug Testing: A Bayesian Analysis of Reliability." With John M. Gleason. Business, Society and Government Division, Midwest Business Administration Association. *Proceedings of the 1989 Annual Meeting*. Chicago, IL, March 1989, pp. 11-13. [invited]

"Subcontracting and Contracting for Service: Collective Bargaining and 13(c) Agreement Requirements." U.S. Urban Mass Transportation Administration, *Proceedings of the Fourth Annual Symposium on the Private Sector and Public Transit*. New Orleans, LA, 1988. pp 141-148. [invited]

"Evaluating Transit: The Performance Tree Method." Eric Bers and Chris Hendrickson, Eds. *Managing Urban Transportation as a Business*. New York, NY: American Society of Civil Engineers, 1987, pp. 216-230. [invited and refereed]

"Attaining More Competition in Transit: The Labor Requirements." The Center for Urban Research and Policy Studies at the University of Chicago, *Proceedings of the 1987 Metropolitan Conference on Public Transportation Research*. Chicago, IL, 1987, pp. 139-148. [invited]

"Gainsharing' for Unionized Transit Workers." U.S. Urban Mass Transportation Administration, *Proceedings of the Third Annual Symposium on the Private Sector and Public Transit*. San Diego, CA, 1987, pp. 141-144. [invited]

"Developing Performance Indicators for Strategy Implementation: The Case of Cost Containment in Urban Mass Transit." With John M. Gleason. American Institute for

Decision Sciences. 1984 National Meeting Proceedings. Toronto, Canada, 1984, pp. 595-597.

"Attack on MBA's: An Unfair Indictment." *Crain's Chicago Business*, October 10, 1983, pp. 12, 14.

"The Impact of Revenue Source on Performance in Mass Transit." With John M. Gleason. American Institute for Decision Sciences. *1983 National Meeting Proceedings*. San Antonio, Texas, 1983, pp. 792-795.

"An ABC Analysis of Wildcat Strikes in the Coal Mining Industry." With John M. Gleason. American Institute for Decision Sciences. 1983 Southwest Conference Proceedings. Houston TX, 1983, p. 191.

Book review of Labor-Management Relations and Public Agency Effectiveness: A Study of Urban Mass Transit, by James L. Perry and Harold L. Angle. Public Productivity Review, Vol. 6, No. 4 (December 1982), pp. 318-319. [invited]

"Earnings of Burglars and Robbers: Implications for Criminal Justice System Effectiveness. With John M. Gleason. American Institute for Decision Sciences. *1982 National Meeting Proceedings*. San Francisco, California, 1982, Vol. 2, pp. 247-249.

"Efficiency and Effectiveness in Government: Forgotten Lessons of Systems Analysis." With John M. Gleason. American Institute for Decision Sciences. 1981 National Meeting Proceedings. Boston, Massachusetts, 1981, Vol. 2, p. 427.

Excerpts of my book, *From Private to Public: Labor Relations in Urban Mass Transit,* republished in Edwin R. Teple and Robert B. Moberly. *Arbitration and Conflict Resolution*. Washington, D.C.: Bureau of National Affairs, 1980, pp. 413-417. [invited]

"A Theory of Subsidy-Efficiency in Mass Transportation." With John M. Gleason. American Institute for Decision Sciences. *1980 National Meeting Proceedings*. Las Vegas, Nevada, 1980, Vol. 2, pp. 112-114.

"The Lady or the Tiger?" With Richard Mays and Gopal C. Pati. In Robert T. Golembiewski and Michael White. *Cases in Public Management*. Chicago, IL: Rand McNally, 1980, pp. 237-42. [Invited; initially presented at an Intercollegiate Case Clearing House refereed case workshop]

"Safety First (or What Ever Happened to Equal Opportunity?)." With Gopal C. Pati. In John Dittrich and Robert Zawacki. *People and Organizations: Cases in Organizational Behavior*. Dallas, TX: Business Publications, 1980, pp. 264-68. [Invited; initially presented at an Intercollegiate Case Clearing House refereed case workshop]

Republished in Robert Albanese. *Managing: Toward Accountability for Performance*. Homewood, Illinois: Irwin, 1981. [invited]

Republished in Raymond L. Hilgert, Sterling H. Schoen and Joseph W. Towle. Cases and Policies in Personnel/Human Resources Management. Fourth and Fifth Editions. Boston, Massachusetts: Houghton Mifflin, 1982 and 1985. [invited]

Republished John E. Dittrich and Robert A. Zawacki. *People and Organizations*. Dallas, Texas, Business Publications, 1984. [invited]

Republished in Richard J. Judd, Robert T. Justis and David B. Stevens. *Strategic Management and Policy: Concepts and Cases*. Englewood Cliffs, New Jersey: Prentice-Hall, 1987. [invited]

Republished in Raymond Hilgert, Sterling Schoen and Cyril Ling. Cases and Experiential Exercises in Human Resources Management. Boston, MA: Allyn and Bacon, 1990. [invited]

"Robbers as Risk Takers." With John M. Gleason. American Institute for Decision Sciences. 1979 Southwest Conference Proceedings. Dallas, Texas, 1979.

"Problems in the Use of Effectiveness Ratios for Urban Transit Decision Making." With John M. Gleason. American Institute for Decision Sciences. *1979 Midwest Conference Proceedings*. Chicago, Illinois, 1979, pp. 338-340.

"Who Should Drive the Wagons?" With I.B. Helburn. In William Glueck. *Cases and Exercises in Personnel*. Dallas, TX: Business Publications, 1978, pp. 159-64. [Invited; initially presented at an Intercollegiate Case Clearing House refereed case workshop]

Republished in Stuart Youngblood. *Case Problems in Personnel and Human Resource Management*. St. Paul, Minnesota: West, 1985. [invited]

"Discharge of Sleeping Beauty." With I.B. Helburn. In Leon Meggison. *Personnel: A Behavioral Approach to Administration*, third edition. Homewood, IL: Irwin, 1977, pp. 542-46. [Invited; initially presented at an Intercollegiate Case Clearing House refereed case workshop]

Republished in William F. Glueck. *Cases and Exercises in Personnel*. Dallas, Texas: Business Publications, 1978. [invited]

Republished in Leon C. Meggison. *Personnel and Human Resources Administration*. Homewood, Illinois: Irwin, 1980. [invited]

Republished in James M. Higgins. *Activities in Human Relations*. New York: Random House, 1984. [invited]

"Issues and Prospects in Texas Protective Service Labor Relations." With I.B. Helburn. Southern Methodist University. *Public Employee Labor Relations Symposium Proceedings*. Dallas, Texas, 1977, pp. J1-J23. [invited]

"OSHA Sanctions: Implications for Public Policy." With John M. Gleason. Industrial Relations Research Association. *Winter 1975 National Proceedings*, Dallas Texas, 1975, pp. 84-92. [refereed; was one of four papers chosen in a nationwide paper competition]

Republished in *Monthly Labor Review*, Vol. 99, No. 4 (April 1976). [invited]

Republished in Herbert Heneman and Donald Schwab. *Perspectives on Personnel/Human Resource Management*. Homewood, Illinois: Irwin, 1978. [invited]

Texas Public Employee Relations. Vol. II (1975). Newsletter on public sector labor relations, published by Texas Tech University Public Employee Relations Project. [Funded by the U.S. Department of Labor]

Texas Public Employee Relations. Vol. I (1974). Newsletter on public sector labor relations, published by Texas Tech University Public Employee Relations Project. [Funded by the U.S. Department of Labor]

Book review of *Enterprise Denied: Origins of the Decline of American Railroads*, by Albro Martin. *Monthly Labor Review*, Vol. 95, No. 5 (May 1972), pp. 79-80. [invited]

#### ADDRESS INFORMATION

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