

CURRICULUM VITAE

Jerry L. Purswell

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EDUCATION:

Ph.D., Industrial Engineering, Texas Tech University, 1967, Major in Ergonomics.

M.S., Engineering, University of Alabama, 1961.

B.S., Industrial Engineering, Lamar State University, 1959.

B.S., Mechanical Engineering, Lamar State University, 1959.

TEACHING AND RESEARCH INTERESTS:

Dr. Purswell has taught ergonomics, human factors engineering, industrial engineering and product safety, statistics, biomechanics and experimental methodology for human performance studies. He has conducted research dealing with highway safety, occupational safety, consumer product safety, work physiology and occupational biomechanics.

PROFESSIONAL EXPERIENCE:

5/95-Present Professor Emeritus and Adjunct Professor, University of Oklahoma; President of Purswell & Purswell, Engineering & Ergonomics.

Dr. Purswell served on student graduate committees as the advisor for their research and taught on an irregular schedule. Dr. Purswell consults with manufacturers, government agencies and attorneys in the areas of safety and ergonomics. He has continuing research interests in the areas of highway safety, occupational safety, product safety and occupational biomechanics. The basic principles of safety practice and ergonomics, and their relationship have been a continuing interest of Dr. Purswell over the last 40 years.

11/93-5/95 Professor of Industrial Engineering, the University of Oklahoma.

Taught and performed research in the areas of ergonomics, safety and their relationship as applied to the design of products, transportation systems and workplaces.

9/92-11/93 Professor and Interim Director of the School of Industrial Engineering, the University of Oklahoma.

Provided administration and leadership for the faculty and staff of the school. Taught and performed research in the areas of ergonomics, safety and their relationship as applied to the design of products, transportation systems and workplaces. Served on a variety of university and professional committees; also served on national advisory committees for safety and ergonomics. Consulted with manufacturers and attorneys.

9/82-9/92, 11/93-5/95 Professor of Industrial Engineering, the University of Oklahoma.

Taught and performed research in the areas of ergonomics, safety and their relationship as applied to the design of products, transportation systems and workplaces.

8/81-8/82 Chief, Occupational Safety and Health Branch, the International Labor Organization, Geneva, Switzerland.

Dr. Purswell directed the activities of a staff of 40 medical doctors, engineers and translators dealing with worldwide concerns in Occupational Safety and Health. The Branch produced international standards (codes of practice) dealing with a variety of OSH issues, conducted international technical meetings on OSH topics and operated a computer data base of worldwide OSH information.

1/81-7/81 Professor of Industrial Engineering, the University of Oklahoma.

Performed research, taught and consulted in the areas of ergonomics; occupational and product safety; work physiology and biomechanics.

6/78-12/80 Director, Directorate of Safety Standards Programs, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor; and Special Assistant for Scientific and Regulatory Affairs to the Assistant Secretary for OSHA.

In his capacity as Director of Safety Standards Programs, Dr. Purswell directed a staff of approximately 40 engineers and safety specialists who produced safety standards for the full range of industry, including construction, general manufacturing industry, shipbuilding and marine terminal operations. In addition to directing safety standards development for OSHA, Dr. Purswell also coordinated the entire range of scientific and technical activities of OSHA. He advised the Assistant Secretary on issues related to the development and enforcement of both safety and health standards and acted for the Assistant Secretary to provide a coordinated approach to scientific and regulatory matters for all OSHA programs. (Dr. Purswell was on assignment to the U.S. Department of Labor from the University of Oklahoma under an Intergovernmental Personnel Act (IPA) appointment.)

9/77-6/78 Professor of Industrial Engineering, the University of Oklahoma.

Performed research, taught and consulted in the areas of ergonomics; occupational and product safety; work physiology.

6/73-8/77 Professor and Director, School of Industrial Engineering, the University of Oklahoma.

Directed the activities of curriculum review, student and faculty evaluation, laboratory and research program development, and also performed usual faculty duties as described above, although on a reduced scale.

9/70-6/73 Associate Professor, School of Industrial Engineering, the University of Oklahoma.

Performed research, taught and consulted in the areas of ergonomics, occupational and product safety, transportation safety and work physiology.

6/68-8/70 Assistant Professor, School of Industrial Engineering, the University of Oklahoma.

Duties and responsibilities same as period 9/70-6/73.

9/67-5/68 Assistant Professor of Industrial Engineering, the University of Arkansas, Fayetteville.

Taught ergonomics and statistics and performed research in ergonomics.

1/65-5/65 *Assistant Professor, University of Texas at Arlington.*

Taught statistics and engineering mechanics.

9/62-1/65 *Manager, Staff Industrial Engineer, Collins Radio Company, Dallas, Texas*

Managed a group of 15 highly qualified industrial engineers who served as internal consultants to Collins Radio Company. Activities included sales analyses, facilities planning, standard company operating procedures, development of manufacturing methods and development of staff requirements.

6/61-8/62 *Industrial Engineer, Proctor and Gamble, Macon, Georgia and Cincinnati, Ohio*

Industrial engineer in charge of planning, budgeting, wage administration, and method improvement for an operating department.

5/59-9/59 *Technical Service Engineer, the Pure Oil Company, Nederland, Texas (later purchased by ARCO)*

5/60-9/60 *Technical Service Engineer, the Pure Oil Company, Nederland, Texas (later purchased by ARCO)*

Technical service engineer who documented existing process piping and equipment for refinery operating units, planned repairs needed after an accident in cracking unit, evaluated maintenance needs for a variety of operating units on an ongoing basis as well as for "turnarounds" and planned maintenance operations during "turnaround".

CONSULTING:

Consulting services have been provided to corporations, insurance companies and legal firms in matters involving ergonomics and safety. Service also includes consultation in occupational safety and ergonomics to the National Institute of Occupational Safety and Health (NIOSH), the U.S. Department of Labor (OSHA), the U.S. Congress (Office of Technology Assessment), the United Nations (International Labor Office), and the Centers for Disease Control, Injury Prevention Program. Consultations in the areas of product hazard warnings/instructions, occupational safety, and the ergonomics of product design have included clients in all fifty states and Canada.

PROFESSIONAL AFFILIATIONS:

National Society of Professional Engineers.

Human Factors and Ergonomics Society.

Ergonomics Research Society of England.

American Industrial Hygiene Association.

Institute of Industrial Engineers.

HONORARY SOCIETIES:

Tau Beta Pi - National Engineering Honorary.

Alpha Pi Mu - National Industrial Engineering Honorary.

HONORS AND AWARDS:

Standard Oil Award for \$1,000 for teaching excellence in 1971.

Faculty Advisor for National AIIE Student Paper Contest Winner for 1970, 1971 and 1974.

Outstanding Educator Baldwin Study - Travel Award of \$1,000 for superior teaching as judged by students and alumni, 1984.

David F. Baker award for outstanding research contributions in Industrial Engineering - awarded by Institute of Industrial Engineers, 1985.

Demco Distinguished Lecturer - College of Engineering - \$2,500 awarded each year over five years of service, 1985.

Appointed to Board of Scientific Advisors, National Institute for Occupational Safety and Health, 1988-1990.

Appointed to Advisory Board for The Center to Protect Workers' Rights, a research organization of the national building trades unions with funding from NIOSH and the unions (occupational safety and ergonomics expertise), 1992-present.

Chosen by Industrial Engineering students as Outstanding Professor, 1991 & 1993.

PUBLICATIONS:

1. Purswell, J.L., Ramsey, J.D. *The Correlation of Mechanical and Physiological Measures of Work for Movement of the Upper Limb*. AIIE Transactions, 1971.
2. Purswell, J.L. *Recognizing and Reducing Work Stress in Plant Engineering and Maintenance Operations*. ASME Paper No.68-PEM-7.
3. Purswell, J.L. *Final Report: Phase 1A, Project Driver*. Prepared for the Department of Public Safety under Contract to DOT.
4. Purswell, J.L., Sliepcevich, C. *Escape Worthiness of Vehicles and Occupant Survival*. DOT Contract FH-11-7303, 1970, (Issued by NTIS).
5. Purswell, J.L., Sliepcevich, C. *Escape Worthiness of Vehicles for Occupancy Survivals and Crashes*. DOT Contract FH-11-7512, 1972, (Issued by NTIS).
6. Purswell, J.L. *Physiologically Optimum Levels of Task Variables for a Typical Work Task Considering the Problem of Static - Dynamic Work Equivalence*. NSF Initiation Grant Report.
7. Purswell, J.L., Karim, B. *A Preliminary Study of Maximal Control Force Capability of Female Pilots*. FAA-AM-72-27, 1972, (Issued by NTIS).
8. Purswell, J.L., Krenek, R. *Automobile Escape Worthiness - An Approach to Predictive Model*. Proceedings of the Sixteenth Annual Meeting of the Human Factors Society, 1972, pp. 199-204.
9. Purswell, J.L., Greenshaw, L., Oats, C. *An Inspection Task Experiment*. Proceeding of the Sixteenth Annual Meeting of the Human Factors Society, 1972, pp. 297-300.

10. Purswell, J.L., Cochran, D., Hoag, L. *Development of a Predictive Model for Dynamic Visual Inspection Tasks*. Proceedings of the Seventeenth Annual Meeting of the Human Factors Society, 1973, pp. 31-43.
11. Purswell, J.L., Hoag, L., Gurney, D. *A Comparison of Single and Multiple Inspection Systems*. Proceedings of the Seventeenth Annual Meeting of the Human Factors Society, 1973, pp. 429-432.
12. Purswell, J.L., Hoag, L. *Strategies for the Improving Visual Inspection Performance*. Proceedings of the Eighteenth Annual Meeting of the Human Factors Society, 1974, pp. 397-403.
13. Purswell, J.L., Hoag, L., Howard, J. *Adaptive Effects of Static Muscular Strength Training*. Proceedings of the Nineteenth Annual Meeting of the Human Factors Society, 1975, pp. 388-393.
14. Purswell, J.L., Stephens, Roger, *Blood Pressure and Static Work - An Important Consideration in Work Design*. Proceeding of the Human Factors Society, 1975. pp 199-202.
15. Purswell, J. L., Mill, R., Beaulieu, H. *Multidisciplinary Accident Investigation Final Report - Oklahoma*, Prepared for U. S. Dept. of Transportation, Contract No. DOT-HS-219-3-708, February 25, 1975
16. Purswell, J.L., Ayoub, M., Hoag, L. *Research Requirements on Hand Tools*. Prepared for NIOSH, 1975.
17. Purswell, J.L., Devine, M., Bae, H. *Analysis of Data from the Office of Pipeline Safety Information System*. Pipeline and Gas Journal, March 1976.
18. Purswell, J. L., Mill, R., Beaulieu, H. *Multidisciplinary Accident Investigation Final Report – Oklahoma*. Prepared for U. S. Dept. of Transportation, Contract No. DOT-HS-801-799, January, 1976.
19. Purswell, J.L. *Data Collection for Hand Tool Injury: An Approach*. Proceedings of a National Bureau of Standards Workshop, Gaithersburg, MD., May 26-28, 1976.
20. Purswell, J.L., Terrell, R. *The Influence of Forearm and Wrist Orientation on Static Grip Strength as a Design Criterion for Hand Tools*. Proceedings of the Sixth Congress of the International Ergonomics Association, 1976, pp. 28-32.
21. Purswell, J.L. *Designing Jobs for Women: Productivity Implications*. Proceedings of AIIE Systems Engineering Conference, 1976, pp. 107-110. (Reprinted by Coca-Cola for worldwide distribution.).
22. Purswell, J.L., Dorris, A. *Warnings and Human Behavior: Implications for the Design of Product Warnings*. Journal of Products Liability, 1977.
23. Purswell, J.L., Dorris, A. *Auditory and Biomechanical Performance Requirements for Motorcycle Helmets*. Proceedings of the Twenty-First Annual Meeting of the Human Factors Society, 1977, pp. 226-230.
24. Purswell, J.L., Dorris, A. *Human Factors in the Design of Effective Product Warnings*. Proceedings of the Twenty-Second Annual Meeting of the Human Factors Society, 1978, pp. 343-346.
25. Purswell, J.L. *A Study of Post-Crash Bus Evacuation Problems*. Proceedings of the Twenty-Second Annual Meeting of the Human Factors Society, 1978, pp. 522-527.
26. Purswell, J.L., Chaffin, A. *Anthropometric and Biomechanical Considerations in Government Regulations*. Proceedings of NATO Symposium, Cambridge, England, 1980.

27. Purswell, J.L. *The Need for Ergonomics Data in Safety and Health Standards*. Proceedings of AIIE Fall Conference, 1980, pp. 171-172.
28. Purswell, J.L. *Injury Epidemiology*. Proceedings of Symposium on Occupational Safety Research and Education. NIOSH sponsored Symposium, 1980, pp. 7-12. Invited Papers Only, Proceedings published 2/82, DHHS No. 82-103.
29. Purswell, J.L. *World Picture for the Next Decade in Occupational Safety and Health*. Journal of the American College of Toxicology, 2:1 1983.
30. Purswell, J.L., Dorris, A., Stephens, R. *Evacuation of Intercity Buses*. DOT Contract No. DOT-FH-11-92161978, (Issued by NTIS).
31. Purswell, J.L., Dorris, A. *Impact of Motorcycle Helmet Usage in Oklahoma*. DOT Contract No. DOT-HS-6-01483, (Issued by NTIS).
32. Purswell, J.L., Rumar, K. *Occupational Accident Research: Where Have We Been and Where Are We Going?* Journal of Occupational Accidents, 6(1984) pp. 219-228. (Also published in Proceedings of the International Seminar on Occupational Accident Research, Elsevier, Amsterdam, 1984).
33. Purswell, J.L. *Safety and Health Practices of Multinational Enterprises*. Published as monograph by ILO, Geneva, Switzerland, 1984, (with contribution by John Northcott).
34. Purswell, J.L. *Summary of Technical Themes*. Proceedings of Sixth International Symposium on Technologies for Dust Control in Mining, Bochum, Germany, 1984, pp. 2195-2198.
35. Purswell, J.L. *Preventing Illness and Injury in the Workplace*. Published by the Office of Technology Assessment, U.S. Congress, April, 1985, (Contributed to several chapters).
36. Purswell, J.L. *Control Design for Drilling and Servicing Rigs*. Published as a Technical Report No. 7 in Petroleum Safety Program Series, 1985.
37. Purswell, J.L. *Health and Safety Technologies in the Workplace*. Office of Technology Assessment, U.S. Congress (invited contribution, written with R.L. Stephens), Published by NTIS, 1985.
38. Purswell, J.L., Stephens, Roger, *Blood Pressure and Static Work - An Important Consideration in Work Design*. Proceeding of the Human Factors Society, 1973. pp 199-202.
39. Purswell, J.L., Schlegel, R., Kejriwal, S. *A Prediction Model for Consumer Behavior Regarding Product Safety*. Proceedings of 30th Annual Meeting of the Human Factors Society, Dayton, OH, 1986, pp. 1202-1205.
40. Purswell, J.L., Dorris, A., Krenek, R. *Warning Effectiveness: What Do We Need To Know?* Proceedings of the 31st Annual Meeting of the Human Factors Society, New York, N.Y., pp. 1116-1120.
41. Purswell, J.L., Ratliff, R., Hughes, M., Hadwiger, J. *A Content Validation Methodology for Job Related Physical Performance Test*. Public Personnel Management, Vol. 18, No. 4, Winter, 1989.
42. Purswell, J.L., Schlegel, R., Stanevich, R. *Evaluation of the Coefficient of Friction of Structural Steel Coatings*. Proceedings of the Tenth International Ergonomics Association Meeting, Sydney, Australia, August, 1988.

43. Purswell, J.L., Schlegel, R. *Correlation of Subjective Slipperiness Judgments with Quantitative COF Measurements for Structural Steel*. Research report prepared for NIOSH, CDC Control No. 200-86-2929.
44. Purswell, J.L., Ray, P., Schlegel, R. *A Behavioral Approach to Improve Safety at the Workplace*. Proceedings of the Annual International Industrial Ergonomics and Safety Conference, June 10-13, 1990.
45. Purswell, J.L., Ratliff, R. Hughes, A. *Job Related Physical Performance Tests*. Proceedings of the Annual International Industrial Ergonomics and Safety Conference, June 10-13, 1990.
46. Purswell, J.L., Ray, P., Schlegel, R. *Evaluating and Improving Safety Behavior in the Workplace*. Proceedings of International Conference on Ergonomics and Safety, 1989.
47. Purswell, J.L., Ratliff, R. Hughes, A. *Job Related Physical Performance Tests*. Advances in Industrial Ergonomics and Safety, January, 1990.
48. Purswell, J.L., *A Behavioral; Approach to Safety at the Workplace*. Advances in Industrial Ergonomics and Safety, January, 1990.
49. Purswell, J.L., McCauley, P., Merrick. *"Job Related Physical Performance Tests for Firefighters."* Advances in Industrial Ergonomics and Safety III, Taylor and Frances, 1991.
50. Purswell, J.L., Schlegel, R., Rao. *"A Safety Data Collection and Analysis System*. Advances in Industrial Ergonomics and Safety III, Taylor and Frances, 1991.
51. Purswell, J.L., Ray, P., Bowen, D. *"Long Term Effect of a Behavioral Safety Program."* Advances in Industrial Ergonomics and Safety III, Taylor and Frances, 1991.
52. Purswell, J.L., Swensen, E., Schlegel, R., Stanevich, R. *Coefficient of Friction and Subjective Assessment of Slippery Work Surfaces*. Human Factors, 1992, 34(1), pp. 67-77.
53. Purswell, J.L., Bouhatab, A., Schlegel, R. *Effects of Individual Characteristics, Context, and Warnings on Hazard Awareness and Safety Compliance*. Proceedings of the Annual International Industrial Ergonomics and Safety Conference, June, 1992.
54. Purswell, J. L., Ray, P. and Bowen, D. *Behavioral Safety Program: Creating a New Corporate Culture*. International Journal of Industrial Ergonomics, 12, (1993), pp. 193-198.
55. Purswell, J. L. *Evaluation of Back Belts in the Prevention of Manual Materials Handling Injuries*. Proceedings of M. M. Ayoub Occupational Ergonomics Symposium, April 1993, Lubbock, Texas.
56. Purswell, J. L., Abu-Ali, M., Schlegel, R. *Psychophysically Determined Work-Cycle Parameters for Repetitive Hand Gripping*. Proceedings of the Annual International Conference (Advances in Industrial Ergonomics and Safety VI), June, 1994, Taylor and Francis, London, pp. 573-578.
57. Purswell, J. L., Abu-Ali, M. *Human Machine Reliability Using Fault-Tree Analysis, Ergonomics of Hybrid Automated Systems IV*. Proceedings of the 4th International Conference on Human Aspects of Advanced Manufacturing Hybrid Automation, Manchester, United Kingdom, June 1994, Taylor and Francis, London.

58. Purswell, J. L., Rodarte, E., Schlegel, R. *Escape Worthiness of Vehicles with Passive Belt Restraint Systems*. Proceedings of the Human Factors and Ergonomics Society, 38th Annual Meeting, October, 1994, pp. 893-897.
59. Purswell, J. L., et al., *Effectiveness and Cost-Effectiveness of Employer-Issued Back Belts in Areas of High Risk of Back Injury*. Journal of Occupational Medicine, 36 (1), 90-94.
60. Purswell, J.L., Vasmatzidis, I., Schlegel, R., *Cognitive Resource Depletion under Heat Stress*. Proceedings of the Konz/Purswell Occupational Ergonomics Symposium, 91-98, April 1995.
61. Purswell, J. L., Bowen, D., Schlegel, R., Purswell, J. P. *Preferred Tension and Psychophysical Lifting Limits With and Without Back Belts*. Advances in Industrial Ergonomics and Safety VII, Taylor & Francis, 1995, pp. 735-740.
62. Purswell, J. L., Abu-Ali, M., Schlegel, R. *Psychophysically determined work-cycle parameters for repetitive hand gripping*. International Journal of Industrial Ergonomics (Elsevier), 17, 1996, 34-42.
63. Purswell, J. L., Abu-Ali, M., Schlegel, R. *Human Machine System Reliability Using Fault Tree Analysis*. Proceedings of the 4th International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation, Manchester, United Kingdom, July 6-8, 1994.
64. Purswell, J. L. *Designing Control Rooms to Minimize Human Errors that Lead to Spills*. Conference on Chemical Hazards sponsored by American Institute of Chemical Engineers, Houston, Texas, 1994.
65. Purswell, J. L., Vasmatzidis, I., Schlegel, R. *Effects of a Hot Environment on Time-Sharing Performance*. Advances in Industrial Ergonomics and Safety VII (A. C. Bittner and P. C. Champney, eds.) London: Taylor & Francis, 265-271, 1995.
66. Purswell, J. L., Madala, D., Schlegel, R. *Physiological Effects of Abdominal Belt Use during a Lifting Task*. Advances in Industrial Ergonomics and Safety IX (W. Karwowski and B. Das, eds.) London: Taylor & Francis, 1997.
67. Purswell, J. L., Swenson, E., Schlegel, R. *Effects of Session Length and Time between Sessions on the Reliability of Psychophysical Evaluations of Repetitive Hand Grasping*. Advances in Industrial Ergonomics and Safety IX (W. Karwowski and B. Das, eds.) London: Taylor & Francis, 1997.
68. Purswell, J. L., Kweon, O, Schlegel, R. *Power Window Control Location Stereotypes*. Proceedings of 36th Annual Meeting of the Human Factors and Ergonomics Society, 1992, 485-489.
69. Purswell, J.L., Schlegel, R. *In Vitro Study of the Interaction of Cellular Phones with Cardiac Pacemakers*. Proceedings of the Electromagnetics, Health Care & Health, IEEE Workshop Symposium, Montreal, September 1995.
70. Purswell, J.L., Krenek, R.F. *Warning Label Content Strategies: An Approach to the Integration of User Knowledge and Designer Judgment*. International Journal of Cognitive Ergonomics, 2 (1-2), 1998, 53-60.
71. Purswell, J.L., Kasbaum, T., Purswell, J.P., Krenek, R.F. *Hot Water Burn Hazards: Warning Label Influence on User Temperature Adjustment*. International Journal of Cognitive Ergonomics, 2 (1-2), 1998, 145-157.

72. Purswell, J.P., Purswell, Jerry L. *"The Effectiveness of Audible Backup Alarms as Indicated by OSHA Accident Investigation Records."* Advances in Occupational Ergonomics and Safety. pp. 444-450. IOS Press: 2001
73. Purswell, J.P., Purswell, Jerry L. *OSHA's Citation Practices of Ergonomic Hazards under the "General Duty" Clause.* Proceedings of the Human Factors and Ergonomics Society, 45th Annual Meeting, October, 2001.