___Thomas D. Wason, PhD ___

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EDUCATION_____

Ph.D., Experimental Psychology, North Carolina State University, Raleigh, NC, 1993.
Dissertation: *Construction and evaluation of a three-dimensional display from a two-dimensional projection surface based on theoretic considerations of metrification and affine space.*

M.S., Experimental Psychology, North Carolina State University, Raleigh, NC, 1983.
Thesis: *Auditory auto-correlation: An experimental study of central nervous system processing of direct and reflected speech sounds.* Psi Chi: Academic Honor Society in Psychology.

B.S., Mechanical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, MA, 1964.
Thesis: *Instrumentation of the human distal esophageal sphincter.*

Premedical Studies. Duke University, Durham, NC, & University of N.C. at Chapel Hill, 1966/1967.

PROFESSIONAL EXPERIENCE_____

North Carolina State University, The Meitzen Laboratory, Dept. of Biological Sciences, North Carolina State University, Raleigh, NC, Visiting Scientist, Theoretical/Computational Neuroscientist, 2017-present. Current research: *Coherent apertures in the central nervous system: a model of the internal experience* (draft).

Independent Research, 2010-present. Conducting independent research in theoretical neurobiology. *Coherent apertures in the central nervous system: a model of the internal experience* (draft).

Consultant. 2010. Contributed to the development of MacMillan's metadata system.

Intelligent Automation, Inc., Rockville, Maryland. Senior Scientist, Education and Training Technology Division, Jan. 2007-Nov. 2009. Investigated the use of SCORM e-learning specifications for the Advanced Distributed Learning (ADL) Initiative CoLab as a member of the technical team. Developed e-learning tools and agent-based simulations.

Teleologic Learning Company, LLC, and the **Center for Advanced Learning, Inc**. (offshoot of TLC), Atlanta, Illinois. Learning Architect (TLC), Staff Scientist (CAL), 2003-2006. Developed methods for online course development, taxonomy and metadata system development, and organizational systems for online course development.

IEEE Industry Standards and Technology Organization, Piscataway, New Jersey. Consultant, 2002-2003. Served as a lead editor for Liberty Alliance Project Web services architecture (WSA) standards. Extensive international travel.

IMS Project of Educause/IMS Global Learning Consortium, Inc., Lake Mary, Florida (www.imsglobal.org). Metadata Lead, 1999-2001. Developed specifications and XML-Schemas for the IMS e-learning standards. Liaison with numerous governmental, educational, and standards communities in the US and internationally. Contributed to the development of specifications for digital content packaging, metadata, and taxonomies. An IMS representative to the IEEE Learning Technology Standards Committee. Extensive international travel.

Institute for Academic Technology (IAT), University of North Carolina at Chapel Hill, 1996-1998. Special Projects, 1996-1997; Director of Research and Evaluation, 1998. Member of the IMS start-up team.

Thoughtbytes, Raleigh, North Carolina. Founding Partner, 1994-1996. Developed interactive multimedia program content. IBM Business Partner.

Wason Consulting, Raleigh, NC. Founder/President, 1993-1996. Developed systems for the human-computer interaction, and medical, neurophysiological, and audio equipment.

Cardiovascular Diagnostics, Inc., Research Triangle Park, NC. Vice President of Development, 1992-1993. Led development of a product for bedside testing of blood coagulation time; product incorporated electronics, mechanics, embedded computers, software, and biochemistry. Initiated, planned, and evaluated a clinical trial.

Allotech, Inc., Raleigh, NC. Founder/President, 1984-1992. Secured five federal grants and contracts for visual and auditory research, much of which was performed in collaboration with Vanderbilt University. Developed medical, neurophysiological, and audio equipment including patented audio and visual displays. Developed custom test systems for the EPA's neurophysiology laboratory.

Wason Engineering, Raleigh, NC. Founder/President, 1971-1984. As a consultant, led R&D for a small R&D company in the development of utility remote meter reading systems, including custom integrated circuit design. Designed and fabricated custom industrial automation systems. Professional engineer (NC).

Independent Research, Raleigh, NC. 1969-1971. Conducted independent research on visual perceptual processes related to three-dimensional perception.

RCA Industrial & Automation Systems, Inc., Plymouth, Michigan. Opto-Electronics Group Leader, 1967-1969. Led teams that designed and fabricated custom automated optical inspection systems.

Texas Instruments, Inc., Richardson, Texas. Engineer, R&D Lab, 1964-1966. Following an internship in advanced production methods, as a mechanical engineer designed research optoelectronic system hardware and scanners.

SELECTED PUBLICATIONS_____

Haynes, J., Zbylut, M., Wason, T. & Maloor, P. (2007). "The Play's the Thing": Teaching High Level Skills through Dramatic Simulations. Paper and Presentation for the *Interservice/Industry Training, Simulation and Education Conference (I/ITSEC) Conference, 2007*.

Norris, B. & Wason, T. (2005). *Air Force Institute for Advanced Distributed Learning e-CDC Transition Project, Executive Summary*. www.maxwell.af.mil/au/afiadl/ecdcproject.pdf, 18 January 2005.

Cherry, A., Wason, T. & Carlton, T. (2004). Tag and Go Seek: Ensuring Successful Tagging, Discoverability and Reusability of Content. Paper and Presentation for the *Interservice/Industry Training, Simulation and Education Conference (I/ITSEC) Conference, 2004*.

Wason, T. & Perrin, B. (2004). *AFIADL Taxonomy Project Final Report*. GSA Task Order ID: 4TFG57030729 Dec. 2004. www.maxwell.af.mil/au/afiadl/adl/TaxonomyFinalReportDec2004.pdf.

Wason, T. & Wiley, D. (2001). Structured Metadata Spaces. In Greenberg, J. (ed.), *Metadata and Organizing Educational Resources on the Internet*, NY: Haworth Press (263-277); co-published in *Journal of Internet Cataloging* (2000), 3 (1-3). Invited contribution.

Wason, T. (2001). *Dr. Tom Guides*: www.twason.com/drtomguides.html. A series of guides for the use of IMS and IEEE LTSC e-Learning standards. Translated into Spanish.

Wason, T., Anderson, T., & Griffin, S. (1999). IMS XML binding of the IEEE Learning Object Metadata.

Hodgins, W., Wason, T., & Duval, E. (1998). *Learning Object Metadata (LOM) Draft Document v2.1*. IEEE Learning Technology Standards Committee (LTSC).

Hodgins, W., Wason, T., & Duval, E. (1998). *Learning Object Metadata Dictionary v2.1*. IEEE Learning Technology Standards Committee (LTSC).

Griffin, S., & Wason, T. (1997). The Year of Metadata. *Educom Review*, 32(6) (Nov/Dec), 56-58.

Cohen, J.A., Charles, L., Wason, T.D., Dermott, S.C., & Macik, B.G. (1992). Delay in sample processing may significantly decrease whole blood and plasma APTTs obtained from heparinized patients resulting in establishment of erroneous therapeutic whole blood ranges. Paper presented at American Society for Hematology, Fall 1992 meeting.

Lappin, J. & Wason, T. (1991). The perception of geometrical structure from congruence. Chapter 28 in Ellis, S. (ed.). *Pictorial communications in virtual and real environments*, London: Taylor & Francis. Previously published in Ellis, S. R., Kaiser, M. K., & Grunwald, A. (eds.), *Spatial Displays and Spatial Instruments; NASA Conference Publication 10032* 18-1 - 18-15.

Lappin, J., Wason, T., & Akutsu, H. (1987). Visual detection of common motion of spatially separate points. *Bulletin of the Psychonomic Society*, 25(5), 342.

Janssen, R. & Wason, T. (1987). *A small animal ultrasound auditory stimulation system*. U.S.E.P.A. Internal Report.

PATENTS

US 5,751,927, Wason, T., 1998. Method and apparatus for producing three dimensional displays on a two dimensional surface.
US 5,020,108, Wason, T., 1991. Audible display of electrical signal characteristics.
US 4,787,054, Wason, T., 1988. Interdial compensation technique for angular position detectors.
US 4,754,411, Wason, T., 1988. Angular position detector.
US 4,710,889, Wason, T., 1987. Angular position detector.
US 4,704,690, Wason, T., 1987. Angular position detector.
US 4,606,008 / ROC (Taiwan) NI-25618, Wason, T., 1986. Angular position detector.
US 4,556,844, Wason, T., 1985. Apparatus for mounting an electrical sensing device or encoder on a data output indicator or meter.
US 4,477,860, Wason, T. & Cain, C., 1984. Electrode array.
US 4,438,434 (1984) / CAN 1,194,956, Wason, T., 1984. Self-sequencing data bus allocation system.
US 4,433,332 / UK GB 2,059,593B / MEX 148,528, Wason, T., 1984. Apparatus for remotely determining the position of rotating objects.
US 4,034,661, Boosalis, M. & Wason, T., 1977. Apparatus for heating and dispensing food articles.
US 3,893,554, Wason, T., 1975. Torque limiting clutch.
US 3,761,186, Wason, T., 1973. Apparatus for optically inspecting the condition of a surface having known variations in the condition.