John N. Warfield, Systems Engineering Bibliography
A bibliography of books and papers relevant to complexity, organization, and design (August 1997)
Below you find an extract from Warfieds extensive sites being extracted again by Heiner Benking to see links between Systems, ISM, and and

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Systems Engineering Bibliography

John N. Warfield

Excerpt by Heiner Benking for the preparation of the EuropesWorld interview.

A Bibliography of Books and Papers Relevant to Complexity, Organizations and Design., 2nd rev. ed., compiled by John N. Warfield. Institute for Advanced Study in the Integrative Sciences (IASIS), George Mason University, Fairfax, VA. The order of listing is chronological. Topics include:

* Systems Theory
* Interactive Management
* Policy Sciences
* Interpretive Structural Modeling (ISM)

Background

At one time the full collection of THE IASIS FILE was kept at George Mason University's Main Library, but the papers were moved to Mexico in July, 1994, where a more receptive climate for their study and use was in evidence.

The first purpose of this collection, begun over 20 years ago, was to document the development and use of Interpretive Structural Modeling (ISM), following its initial development at Battelle Memorial Institute, Columbus, Ohio, in the early seventies. Additional papers, from the eighties and nineties, refer to the development of ISM and its incorporation into a Science of Generic Design, which was primarily conceived and taught at the Center for Interactive Management at two Virginia universities, the University of Virginia, at Charlottesville, and George Mason University, in Fairfax, Virginia. Annotations, which follow nearly all of the listings, were provided by Rosamond Warfield and other IASIS secretaries.

Bibliography

Dewey, John and Arthur F. Bentley, Knowing and the Known (Excerpt, pages 313329). Beacon Press, Boston, (1949).

This is a letter written by Dewey to a colleague, and the letter has been published as an Appendix to the Dewey/Bentley work. Dewey praises works of 19th century philosophers as a basis for his own philosophical inquiries.

Miller, George A., The Magical Number Seven, Plus Or Minus Two: Some Limits On Our Capacity For Processing Information. Psychological Review v63 n2 (March 1956)

A psychologist studies human shortterm memory, and concludes that the maximum number of items which the human brain can retain in short term

memory is "usually somewhere in the neighborhood of seven".

Vickers, Geoffrey, Control, Stability and Choice, the Ninth Wallberg Lecture, October 30, 1956. Applied Science & Engineering, University of Toronto Press (1956) 23p.

A discourse on the relationships between individual engineering designers and the institutions and organizations within which they must operate, with suggestions for effectiveness and successful planning.

Lasswell, Harold D., Technique of Decision Seminars MidwestJ. Political Science v4 n3 August (1960) 213-236.

Suggestions for improving group decision making by study of the operational characteristics of the decision process. Detailed lists for data handling, scope definitions, roles, etc. This is a refinement and more detailed extension of his 1956 speech at the University of Maryland.

Tuckman, Bruce W., Developmental Sequence in Small Groups Psychological Bulletin v63 n6 (1965) 384-399.

After surveying 50 articles written by behavioral scientists on the subject of group behavior, this author concludes that in all types of group work the participants can be seen to go through four developmental stages, which he calls `Forming, Storming, Norming and Performing.'

McGrath, Joseph E. and Irwin Altman, Small Group Research: A Synthesis and Critique of the Field, Part 2, Perspectives on the Small Group Field, pp. 4498. Holt, Rinehart & Winston, (1966).

A study of the research that is being done in small groups, includes a lengthy bibliography of the various research projects and authors.

Ackoff, Russell L., Toward an Idealized University, Guest Editorial. Management Science v15 n4 (December 1968)

Ackoff suggests corrective measures in a conceptual framework of change in which goals are approached as ideals, which will change over a span of time, dealing with strategic long range planning, tenure questions, administration, research, etc.

Kamrany, N. and A. Christakis, Systems Approach to Public Policy Estimation: Urban Planning at the County Level. Socio-Econ. Plan. Sci v3 (1969)

This paper proposes a systems formula for measuring the value of varying development plans, at the level of a county government.

Hill, J. D. and J. N. Warfield, Unified Program Planning. IEEE Trans. on Systems, Man & Cybernetics vSMC2 n5 (November 1972)

A presentation of philosophical and mathematical fundamentals for techniques in the participative methodologies, for use in problem solving. Proceeding from problem definition, a value system design and system synthesis steps are discussed, and interrelated through use of interaction matrices. Particular emphasis is given to defining objectives and measuring the attainment of objectives.

Christakis, A. N., Regional Economic Development Futures. Futures

(March 1972) 1223.

A presentation of methods for obtaining consideration of alternatives in planning for economic development on a regional basis.

Warfield, J. N. and J. D. Hill, The DELTA chart: A Method for R&D Project Portrayal. IEEE Trans. on Engineering Management vEM18 n4 (November 1971) 132-139.

A description of a new kind of flowchart, designed to incorporate not only events and activities but also decision and logic functions. DELTA charts can display a number of different options, as well as `loops' in project plans, at the research and development stage .

Warfield, J. N. and J. Douglas Hill, A Unified Systems Engineering Concept (Battelle Monograph No. 1). Battelle Memorial Institute, Columbus, OH (June 1972) 137p. variously paged

A manual for systems engineers. Contains information on design of tree structures, interaction planning and management, the DELTA chart, problem definition, value system, analysis and optimizations, etc.

Warfield, John N., Participative Methodology for Public System Planning. Computers & Electrical Engineering v1 n1 (1973) [Reprinted from Proceedings International Symposium On Systems Engineering And Analysis, October 23-27, 1972, v1. Purdue University Schools of Engineering, West Lafayette, Indiana (1972) 23-40]

In his October 1972 Symposium presentation, Warfield described for the first time in public his new Interpretive Structural Modeling concept, a methodology by which complex problems could be graphically displayed for group study.

BOGAN:

Warfield, J. N. Designs For the Future of Environmental Education: Energy, Environment Economy, Education, Ethics Publication No. E8139000. (USGPO No. 337840/9216). Office of Educational Research & Improvement, U.S. Dept. of Education, Washington, D.C. (1981) 86p.

Summary of a two-year project, involving seven universities and research institutes. Appendix 1 lists all of the 12 resource and reference reports produced during the project, which was headquartered at University of Virginia under direction of John N. Warfield, for Contract No. 30070004028 to the U. S. Office of Environmental Education. The contract manager was Walter Bogan, who was Director of the U.S. Office of Environmental Education, Department of Health, Education and Welfare, during the time the research contract was in operation.

Christakis, Alexander N. and Walter J. Bogan, Jr., The Concept of the Regional Environmental Learning System. Proc. Of The International Conference on Cybernetics & Society, Tokyo, Japan, November 3-8, 1978, IEEE, NY (1978)