

Russell L. Ackoff, Ph.D

Background:

Russell L. Ackoff, Ph.D. is a multifaceted academic and business thinker. He was born in Philadelphia in 1919, and has been characterized as an architect, philosopher, city planner, operations researcher and a problem solver. He is perhaps best known for his work in developing systems thinking as a discipline.

Dr. Ackoff is the Anheuser Busch Professor Emeritus of management science at the Wharton School of the University of Pennsylvania, the Anheuser-Busch Visiting Professor of Marketing, Olin School of Business, Washington University, St. Louis. He is a former President of the Operations Research Society of America and the Society for General Systems Research.

Dr Ackoff is the Chairman of the Board of INTERACT, the Institute for Interactive Management, a Philadelphia-based educational consulting firm whose clients have included numerous Fortune 500 companies, not-for-profits, and government agencies, here and abroad.

Dr Ackoff received his undergraduate degree in architecture and his Ph.D. in Philosophy of Science from the University of Pennsylvania. He was a member and former Chairman of the Social Systems Science Department and The Busch Center, which specializes in systems planning, research, and design.

Dr. Ackoff is the author and co-author of 21 books, including Redesigning Society (2003) Ackoff's Best—His Classic Writings on Management (1999), Re-Creating the Corporation: A Design of Organizations for the 21st Century (1999), The Art of Problem



Solving (1987), Creating the Corporate Future (1981), The Democratic Corporation (1994).

Operations Research:

attempts to provide an objective and quantitative basis for the solution of managerial and administrative problems. Like typical scientific research it proceeds analytically and is a simple process. First we disassemble it to try to understand the parts taken

separately and then you try to understand the relationship of the parts to understand the whole.

He came to the conclusion that Operations Research was limited for several reasons. First, he found that the problems that they were solving tended to generate additional problems, they were better problems, and usually more problems were created by the solutions than the problems that they solved. They discovered, gradually, that you have to increase the size of things to systems to make them tractable, particularly when dealing with systems that contain people.

Ackoff was continuously confronting problems in social systems that he found that traditional methods of Operations Research couldn't deal with. For example: Operations Research is largely the application of mathematics to the solution of managerial problems. Most of the problems in large systems do not involve quantities, they involve qualities. So increasingly one has to worry about how to handle qualitative factors in systems as opposed to quantitative. And that raises questions about the effectiveness of the mathematical/analytical technique of Operations Research.

Facilitator's Body of Knowledge Research Project

This led him, in the late 60's, to leave operations research, professionally, to start Social Systems Sciences. The difference between a Systems Approach and Thinking and Operations Research is very fundamental and multi-dimensional.

Systems Approach: is an integrated whole whose essential properties arise from the relationships between its parts from the Greek *synhistanai*, meaning 'to place together'.

Systems Thinking: is the understanding of a phenomenon within the context of a larger whole; to understand things systemically literally means to put them into a context, to establish the nature of their relationships.

What he discovered in the 1940's and 50's under Operations Research is that analysis cannot produce understanding of systems. A system is a whole whose characteristics are derive out of the interactions of its parts. Not the actions of its parts taken separately, it's the way the parts interact. And therefore when a system is taken apart, like an automobile, if it's disassembled, it's no longer an automobile. It's not the sum of its parts, it's a product of the interaction of its parts. So the automobile loses its characteristics when it's disassembled, and so do its parts. You cannot examine a system by looking at its parts, you must look at it as a part of a larger whole.

So analysis, he discovered, yields information about the structure of something, and how it works, that's knowledge, know how. Explanations lie outside, that's synthetic thinking. Synthesis yields understanding, analysis yields knowledge, and it was that distinction that was critical for the emergence (<http://www.open2.net/systems/thinking/eme.html>) of the systems sciences. It uses both, but to understand systems, particularly those that involve people, synthetic thinking is required.

There's another very fundamental change that Systems Thinking had to take into account. In 1900 it is estimated that about 95% of the people employed in the U.S. could not do the

job as well as their bosses could. Today it's estimated that over 95% of the people employed can do their jobs better than their bosses can. They cannot be manage in the same way they were in the 1900's.

When you're managing subordinates who know how to do what their doing better than you do, you don't manage what they do, you manage the way they interact. That requires a different type of organization and a different type of management. Conventional management and conventional organization cannot do it.

Application:

Dr. Ackoff has had a dramatic impact on Organizational Sciences. This directly impacts the approached used by facilitators in organizations. Facilitators must help their groups examine the interaction of their parts on the system and the qualities that they system generates to increase both knowledge and synthesis in the group. Greater study of Systems Thinking is highly recommended.

Resources:

<http://ackoffcenter.blogs.com/> : Ackoff Center Web Log on Operations Research

<http://www.managementwisdom.com/abdrusa.c.html> a website devoted to W.E. Deming.

<http://www.interactdesign.com/>

<http://www.open2.net/systems/practice/rus.html>



Ackoff's Best: His Classic Writings on Management

Russell L. Ackoff

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Redesigning Society

Russell L. Ackoff

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