The Deming Philosophy—New Ways to Think about the World

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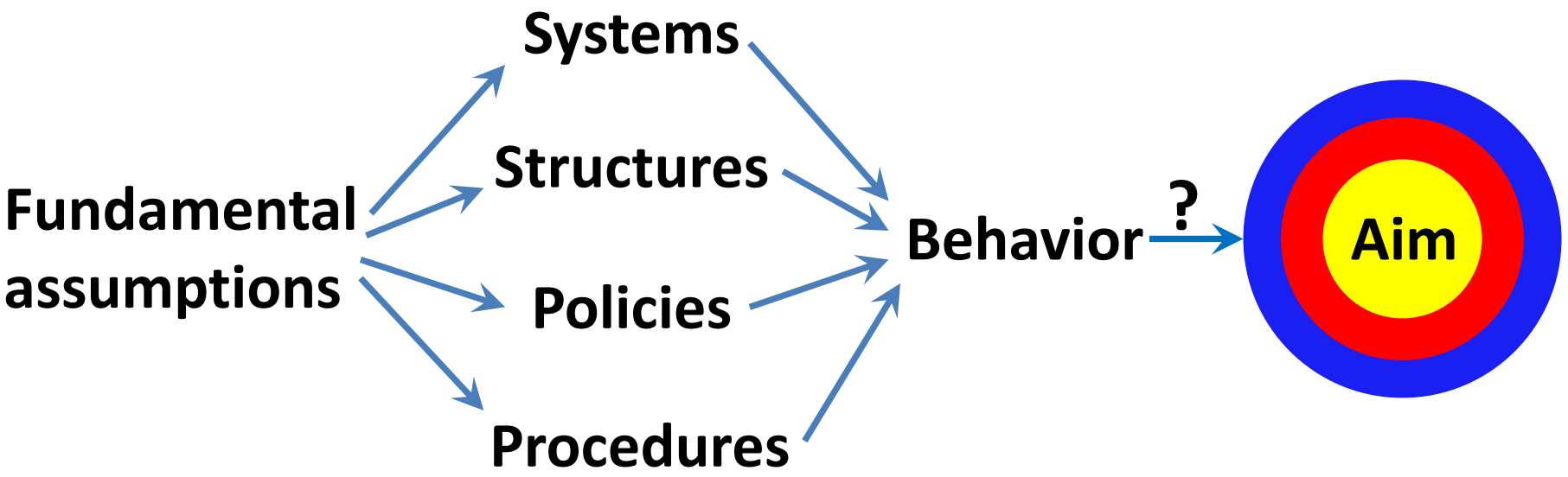
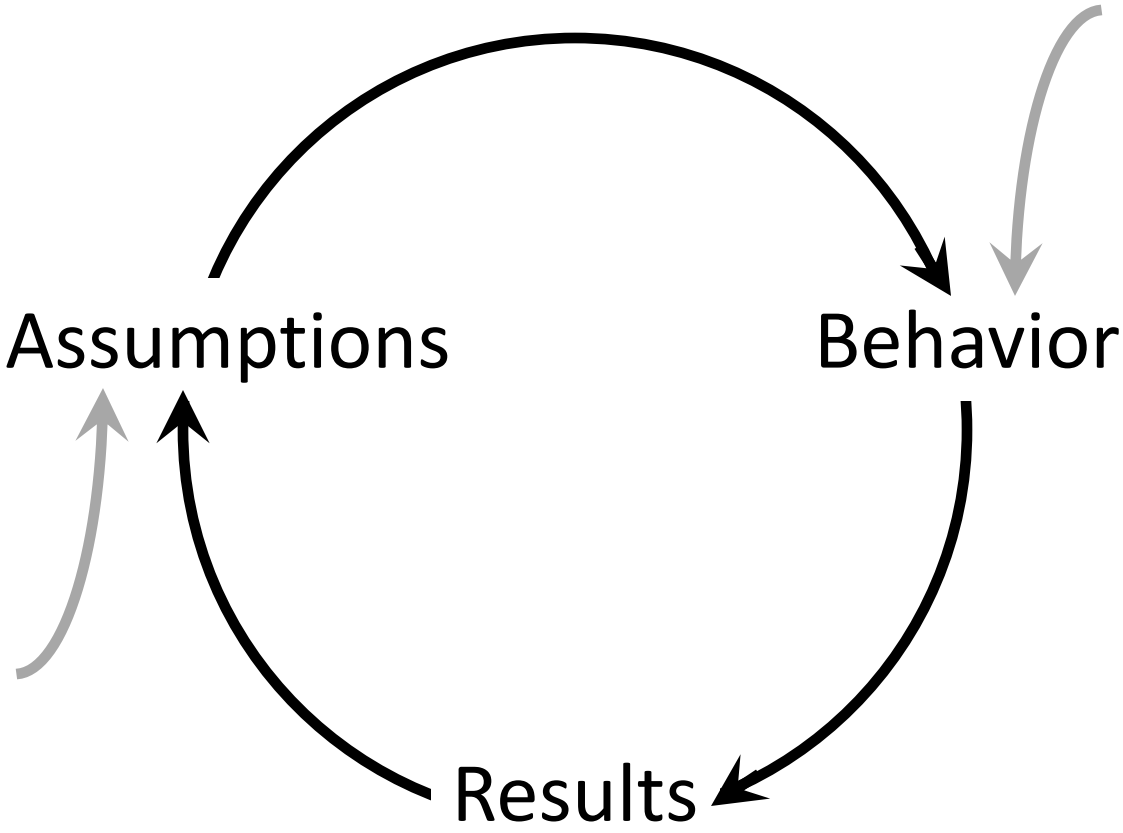
The Deming Philosophy: New Ways to Think about the World

- Introduction
- A Theory of Behavior
- Deming's System of Profound Knowledge
- Alternative Views of the World about:
  - Organizations
  - Variation
  - Knowledge and prediction
  - Cause and effect
  - Relationships
  - Motivation
- Summary

A Theory of Behavior



Changing Behavior



Dr. Deming's System of Profound Knowledge

A system of profound knowledge. The layout of profound knowledge appears here in four parts, all related to each other:

- Appreciation for a system
- Knowledge about variation
- Theory of knowledge
- Psychology

Deming, W.E. 1993. *The New Economics for Industry, Government, Education*, page 96.

More about SoPK

The system of profound knowledge provides a lens. It provides a new map of theory by which to understand and optimize the organizations that we work in, and thus to make a contribution to the whole country.

Deming, W.E. 1993. *The New Economics for Industry, Government, Education*, page 94.

Still More about SoPK

One need not be eminent in any part of profound knowledge in order to understand it and to apply it. The 14 points for management (*Out of the* Crisis, Ch. 2) in industry, education, and government follow naturally as application of the system of profound knowledge, for transformation from the present style of Western management to one of optimization.

Deming, W.E. 1993. *The New Economics for Industry, Government, Education*, page 96.

Profound Knowledge Comes from the Outside

Question in a seminar. Please elaborate on your statement that profound knowledge comes from outside the system. Aren't the people in the system the only ones that know what is happening, and why?

Answer: The people that work in any organization know what they are doing, but they will not by themselves learn a better way. *Their best efforts and hard work only dig deeper the pit that they are working in.* …

Deming, W.E. 1993. *TNE*, page 104

Change

- First Order Change: Change **within** a system. This kind of change, no matter how persistently applied, will not fundamentally change the system.
- Second Order Change: Change **of** the system. Some actions taken to effect second order change will seem irrational to those inside the system

Watzlawick, Weakland, & Fisch. 1974. *Change.*

NOTE: *Transformation requires second order change.*

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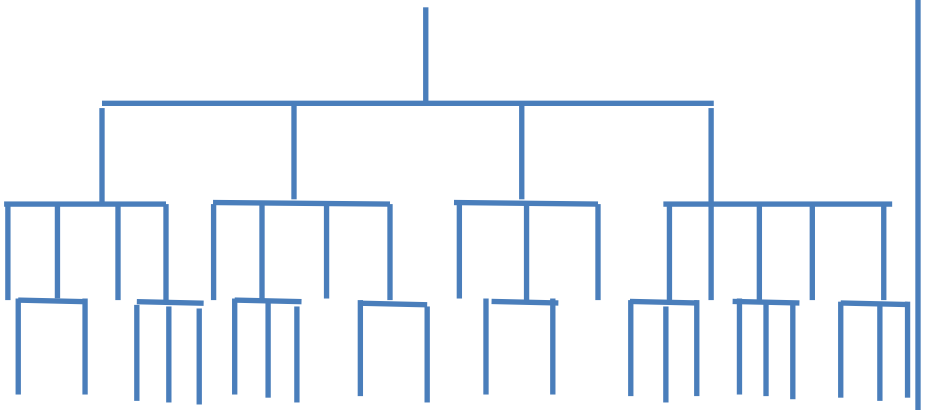
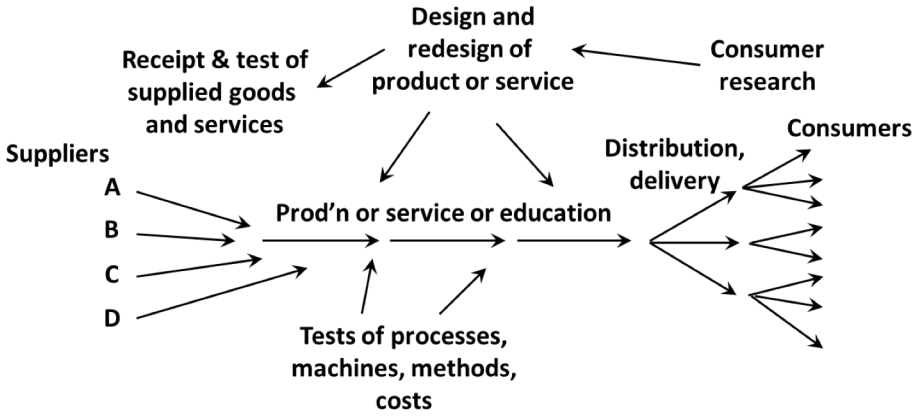
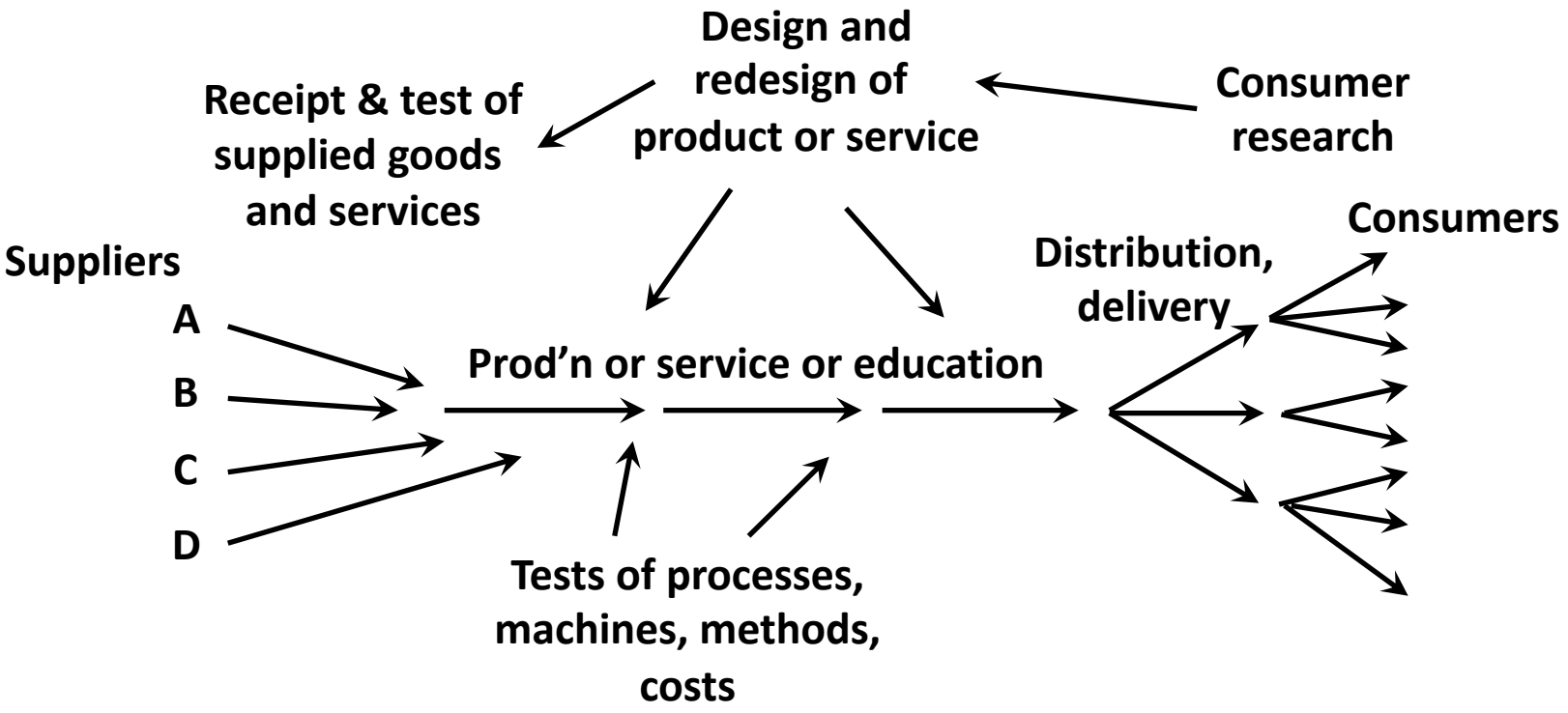
Views of Organizations

Hierarchical view versus **Systems view**



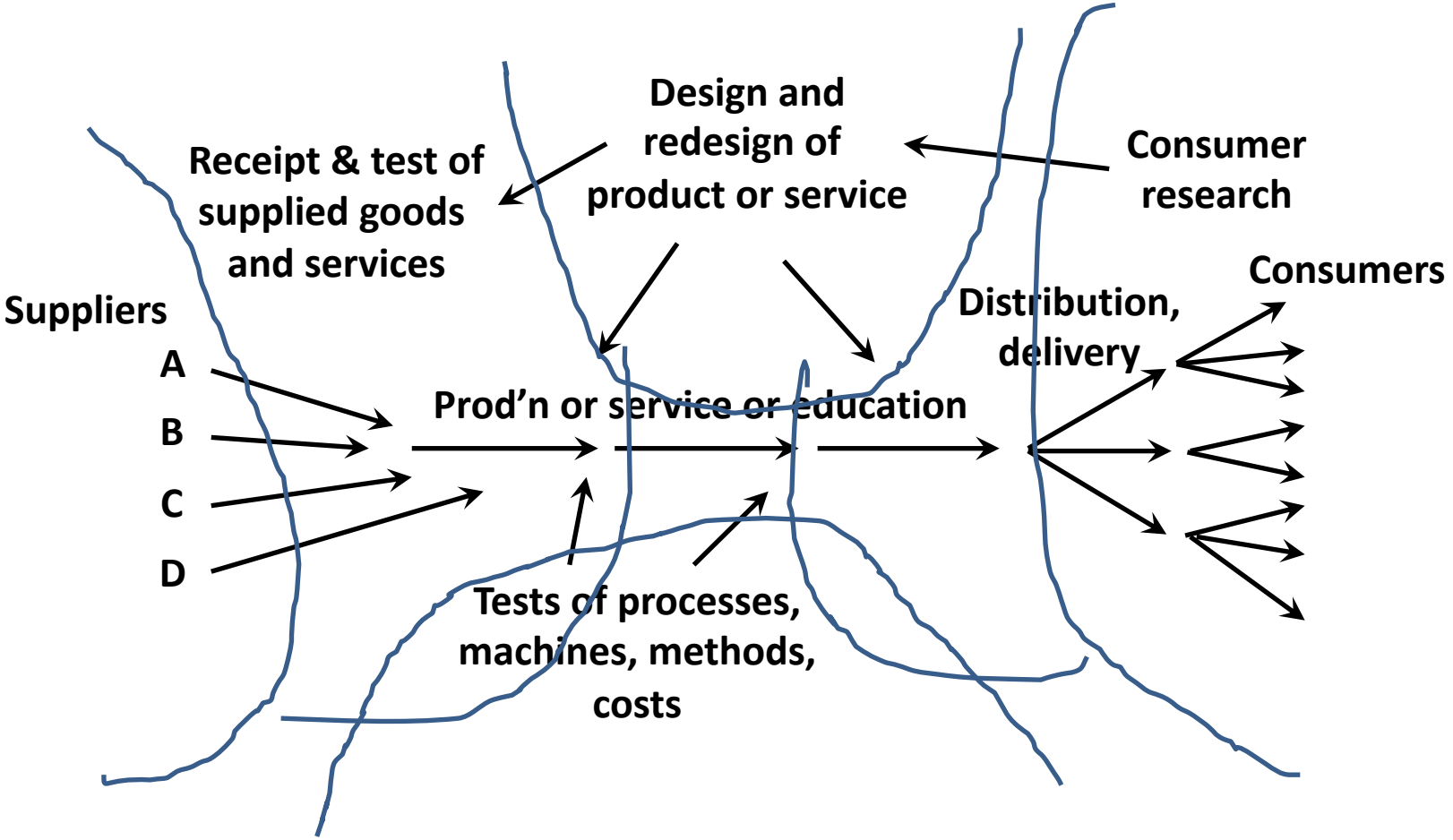


Deming's Vision for an Organization



Based on W.E.Deming, *Out of the Crisis*, Fig. 1, page 4.

What Happens to the Vision



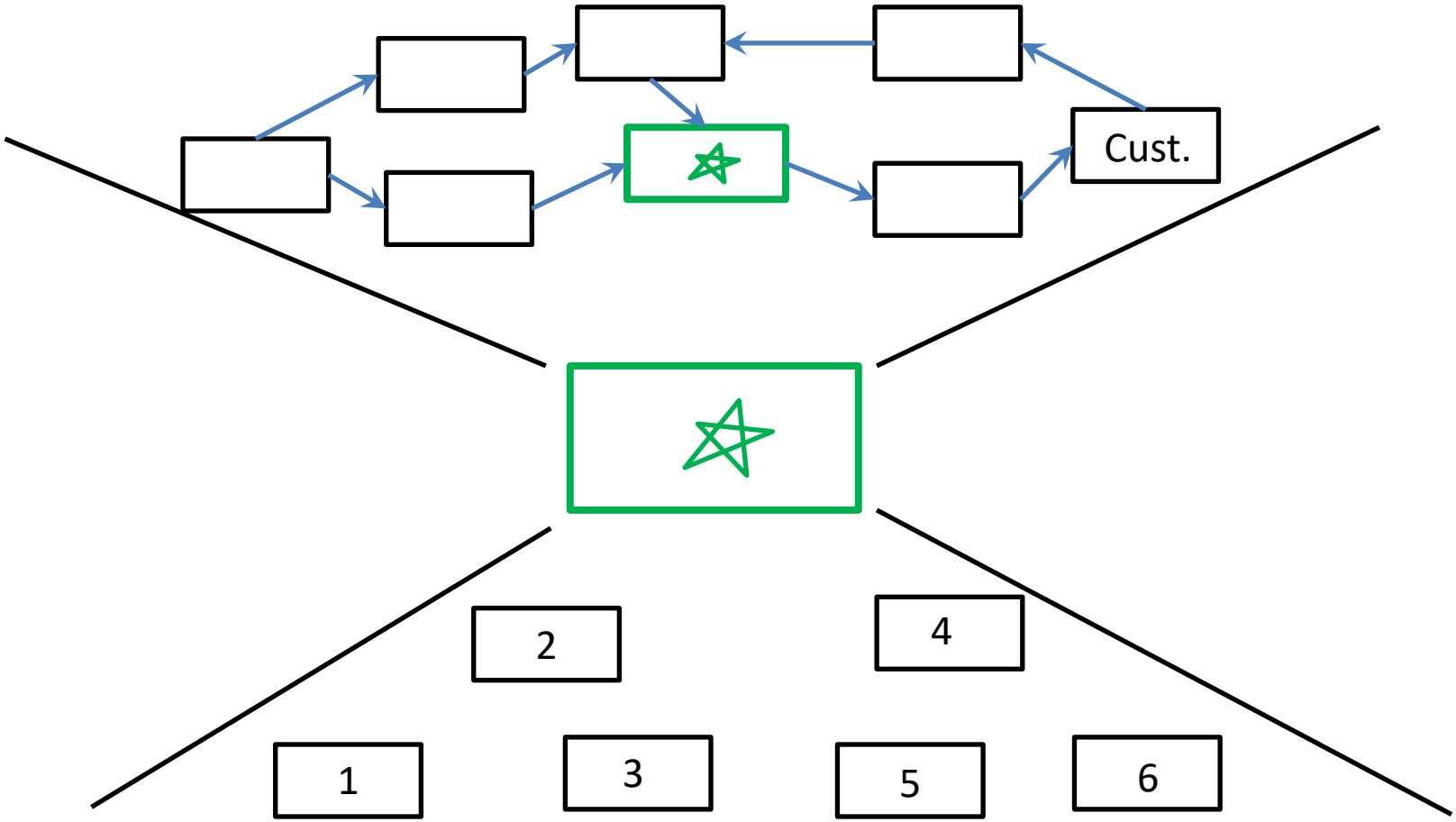
Based on W.E.Deming, *Out of the Crisis*, Fig. 1, page 4.

Russell Ackoff on Systems

A system is not the sum of its parts;

rather, it is the product of their interactions.

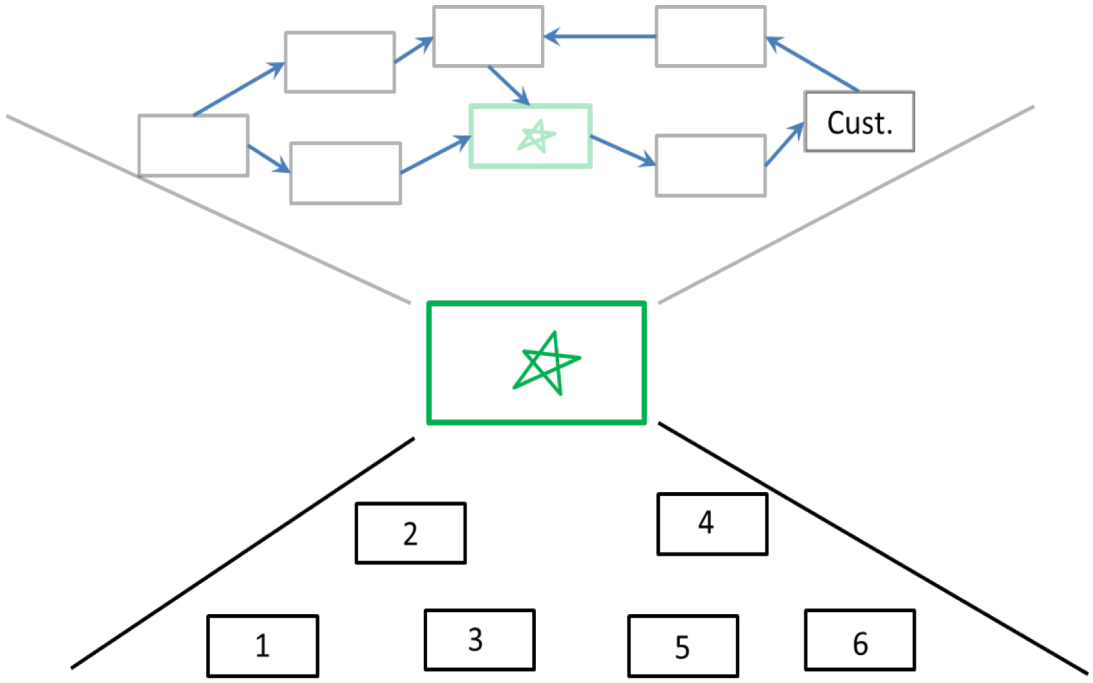
A Process, its Parts, and it as Part of a Larger System



Analysis (from Ackoff)

To understand something:

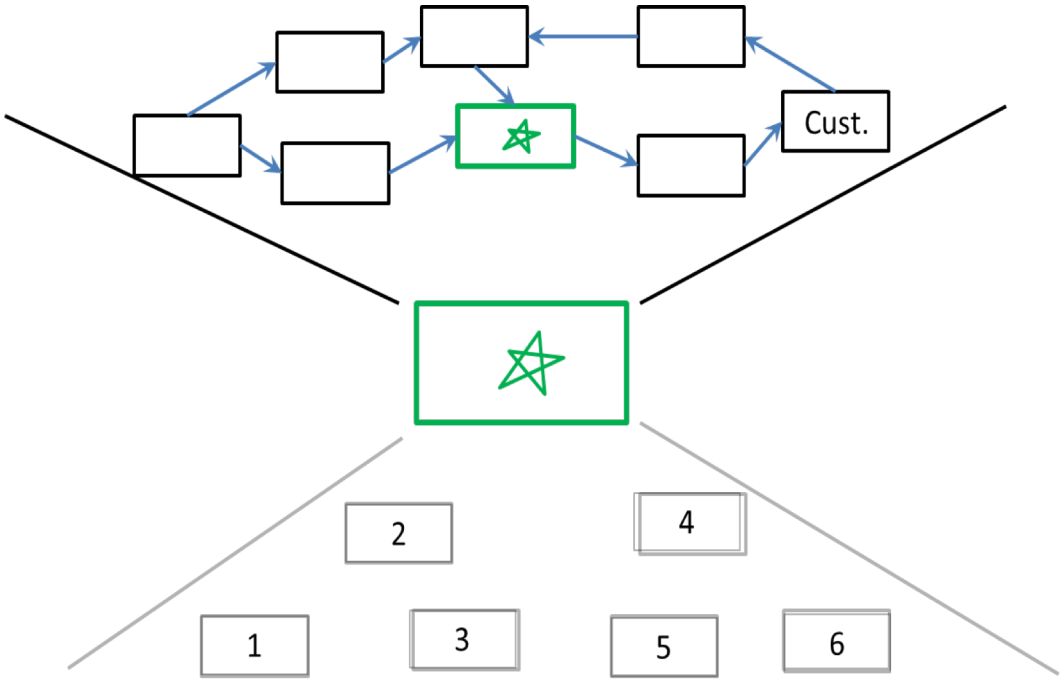
- Take it apart
- Understand the behavior of each of the parts
- Aggregate them into a whole



Synthesis (from Ackoff)

To understand something:

- Take it as part of the larger whole
- Understand the behavior of the larger whole
- Disaggregate the larger whole and understand the function of the part in the larger whole



Ackoff on Systems Thinking

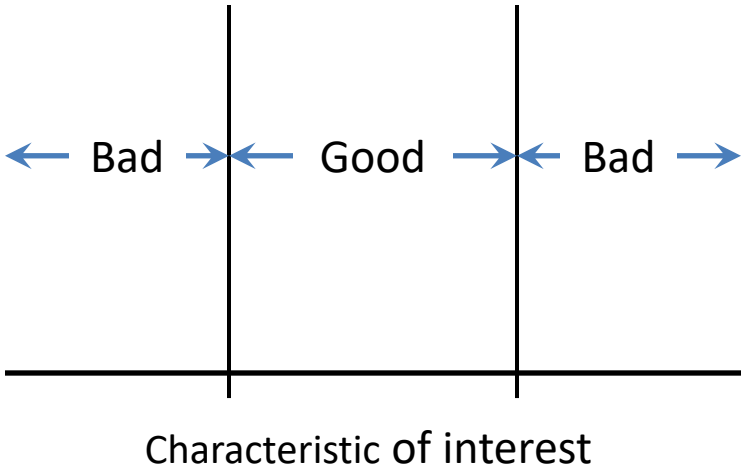
Design the system as a whole and derive the properties of the parts.

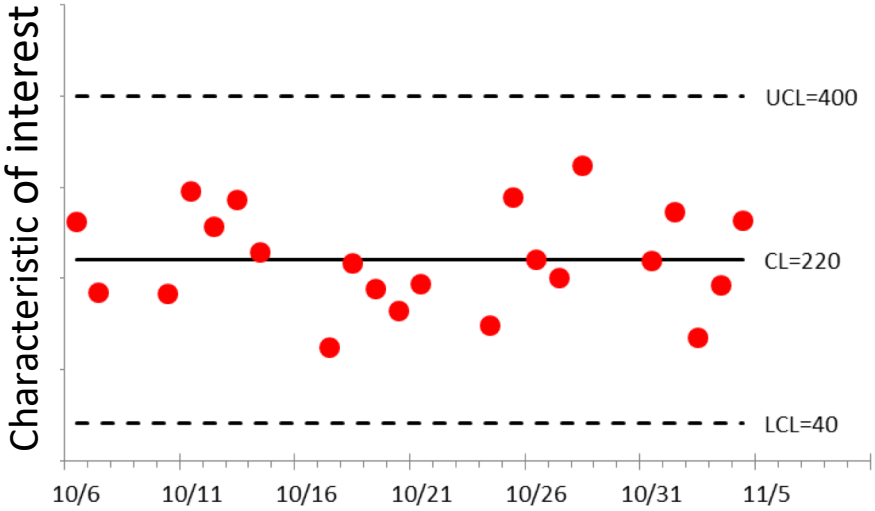
— instead of —

Design the parts and determine the properties of the whole.

Views of Variation

Judge good vs. bad versus **Understand what the process gives**

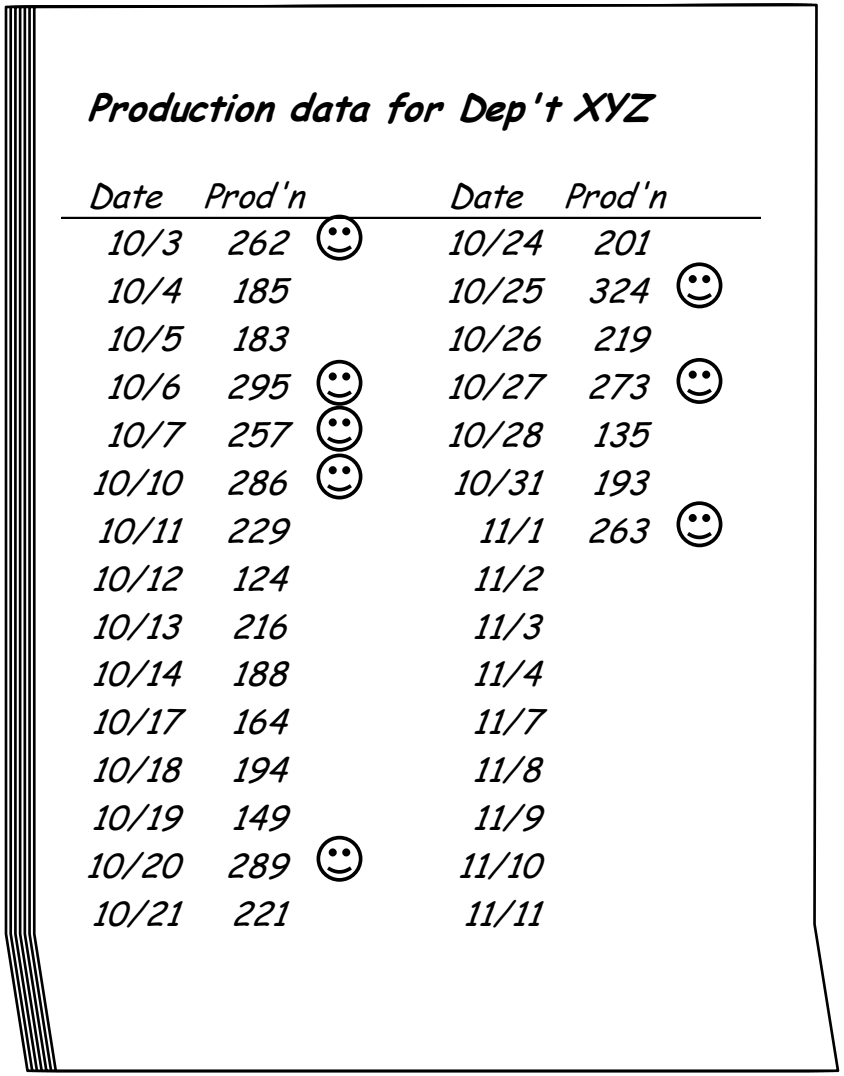




Two Views of Variation (Nolan & Provost, *QP*, 5/90)

	Variation that indicates good or bad performance	Variation that results from common or special causes
Focus	Outcomes of the process (product or service)	Causes of variation in the process
Aim	Classify outcomes as acceptable or not	Provide a basis for action on the process
Basis	What the customer wants or needs	What the process is actually delivering
Methods	Specifications, budgets, forecasts, numerical goals, other tools for judging performance	Control charts

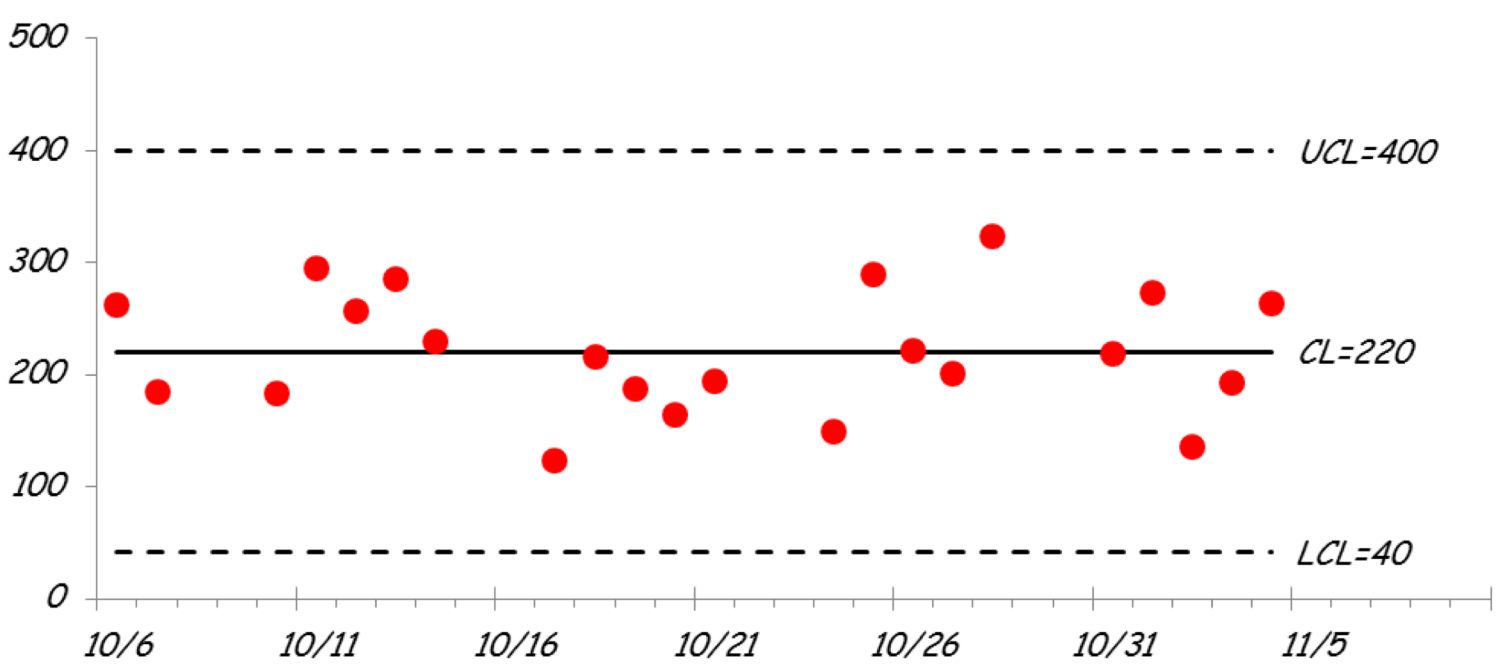
Daily Production:
"Voice of the Customer"



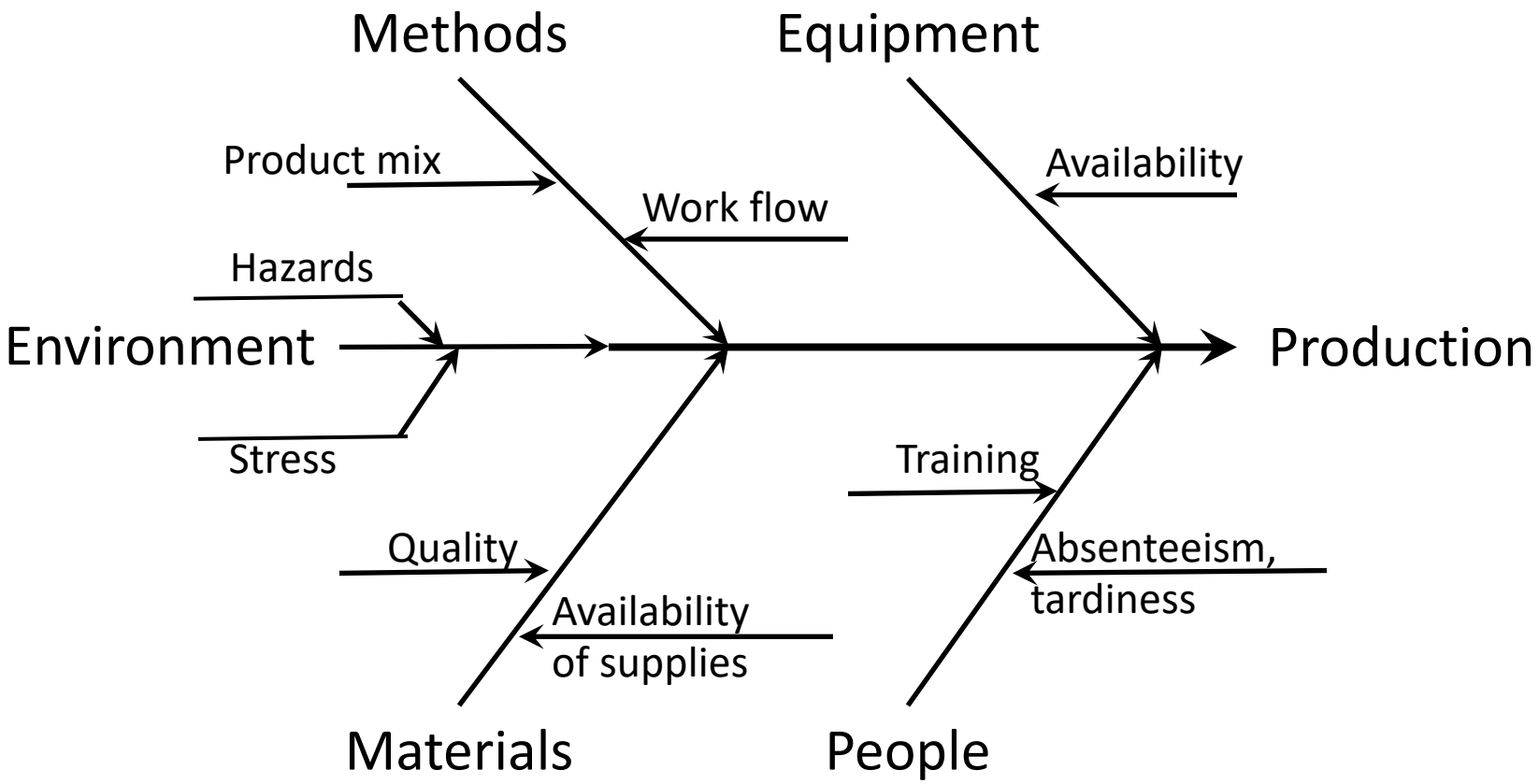
Production data for Dep't XYZ

Date	Prod'n		Date	Prod'n	
10/3	262	☺	10/24	201	
10/4	185		10/25	324	☺
10/5	183		10/26	219	
10/6	295	☺	10/27	273	☺
10/7	257	☺	10/28	135	
10/10	286	☺	10/31	193	
10/11	229		11/1	263	☺
10/12	124		11/2		
10/13	216		11/3		
10/14	188		11/4		
10/17	164		11/7		
10/18	194		11/8		
10/19	149		11/9		
10/20	289	☺	11/10		
10/21	221		11/11		

Daily Production:
“Voice of the Process”

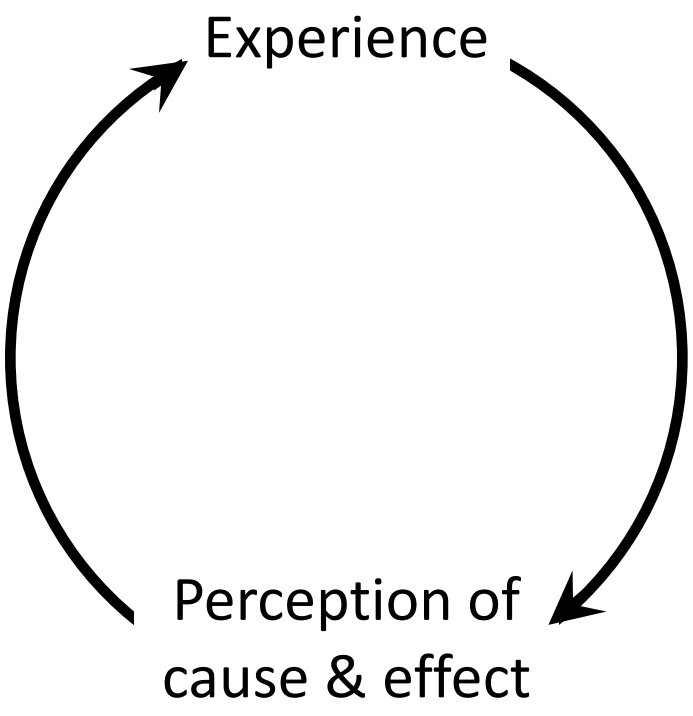


Daily Production: Appropriate Action

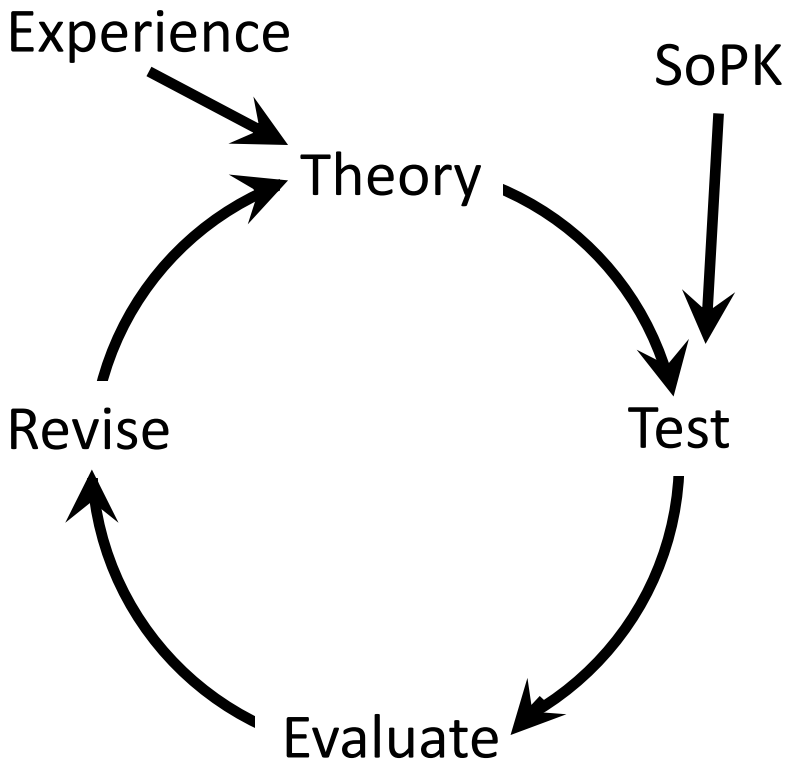


Views of Knowledge & Prediction

Knowledge from experience

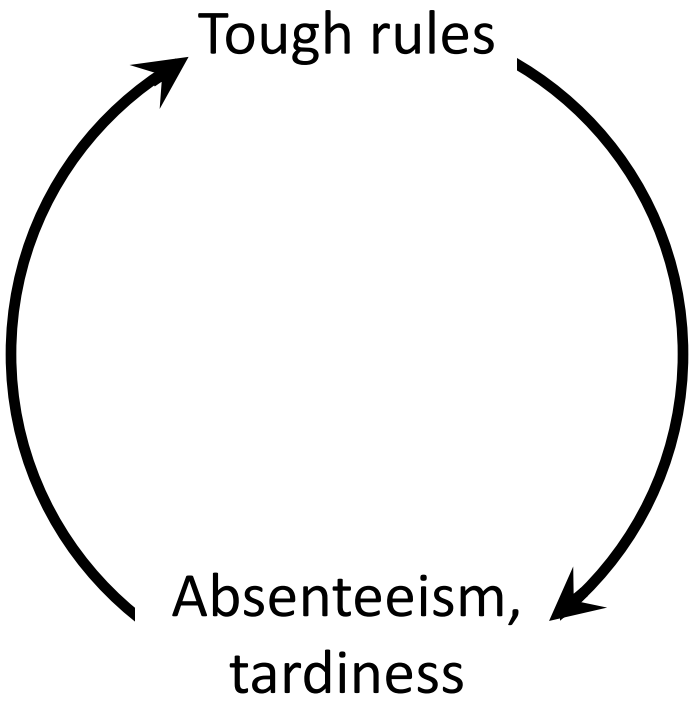


versus **Knowledge from theory**



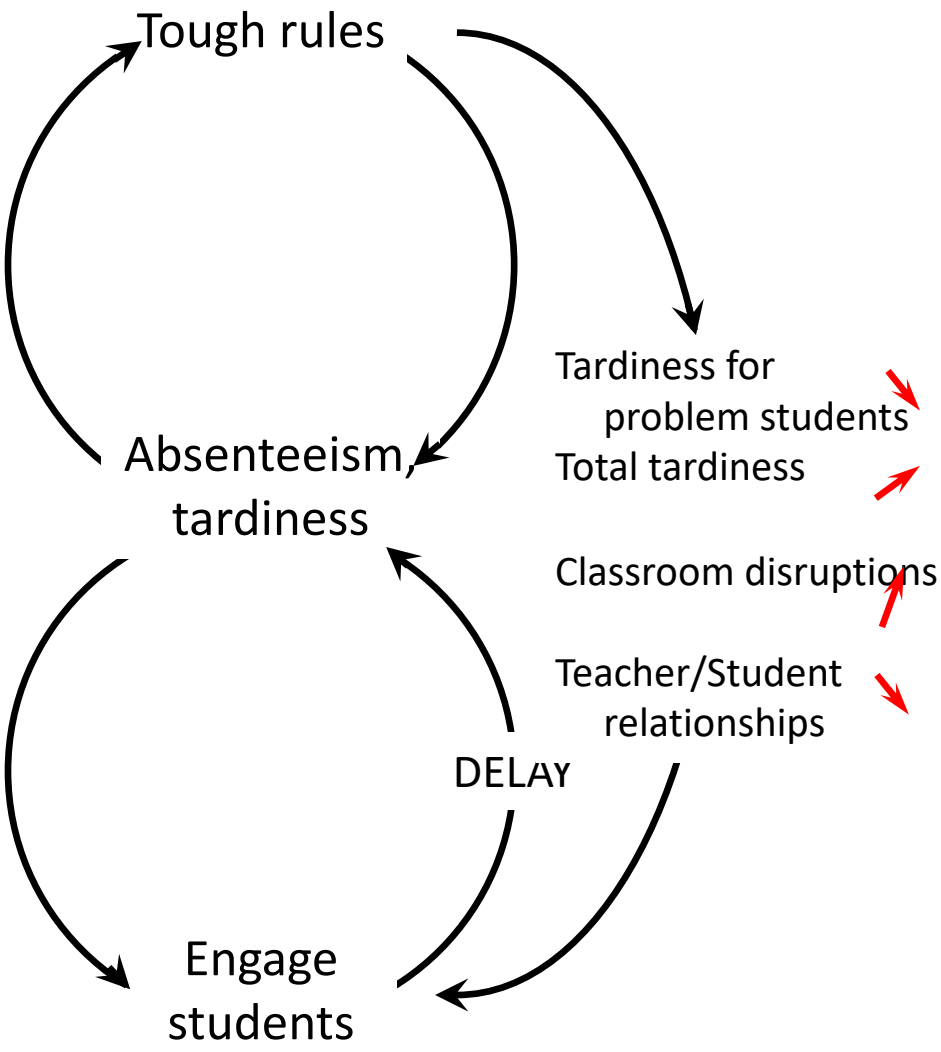
Example from a School: Tardiness & Absenteeism

- “Tardiness and absenteeism are the fault of the students involved.”
- “Tough rules will solve the problem.”
- The tough rules didn’t work. Conclusion: “The rules aren’t tough enough, the penalties aren’t severe enough.”



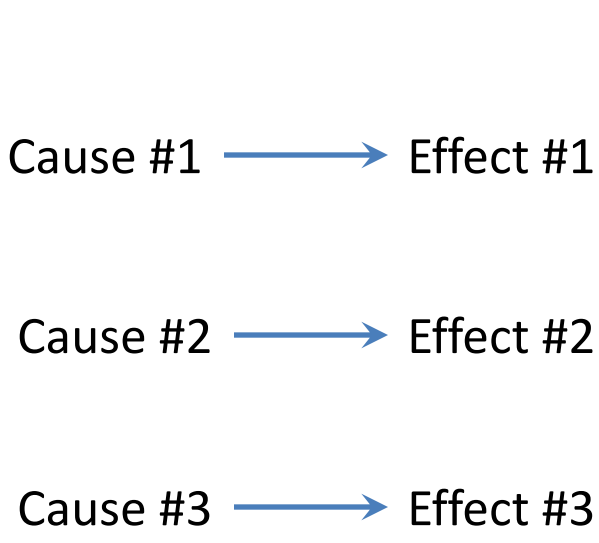
Tardiness & Absenteeism (cont'd)

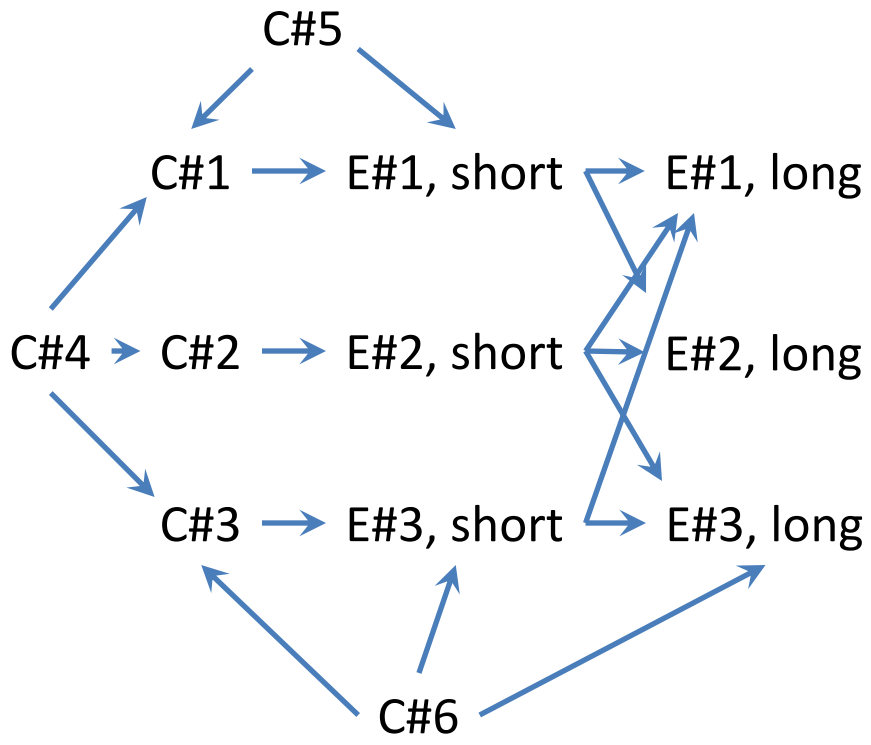
- The aim was to have "students in school, ready to learn."
- The initial "solution" treated the two parts of the aim as though they were independent.
- Coercing students to come to school, even if it worked, would undermine ability to achieve the aim.



Views of Cause and Effect

Linear, independent versus **Interdependent**

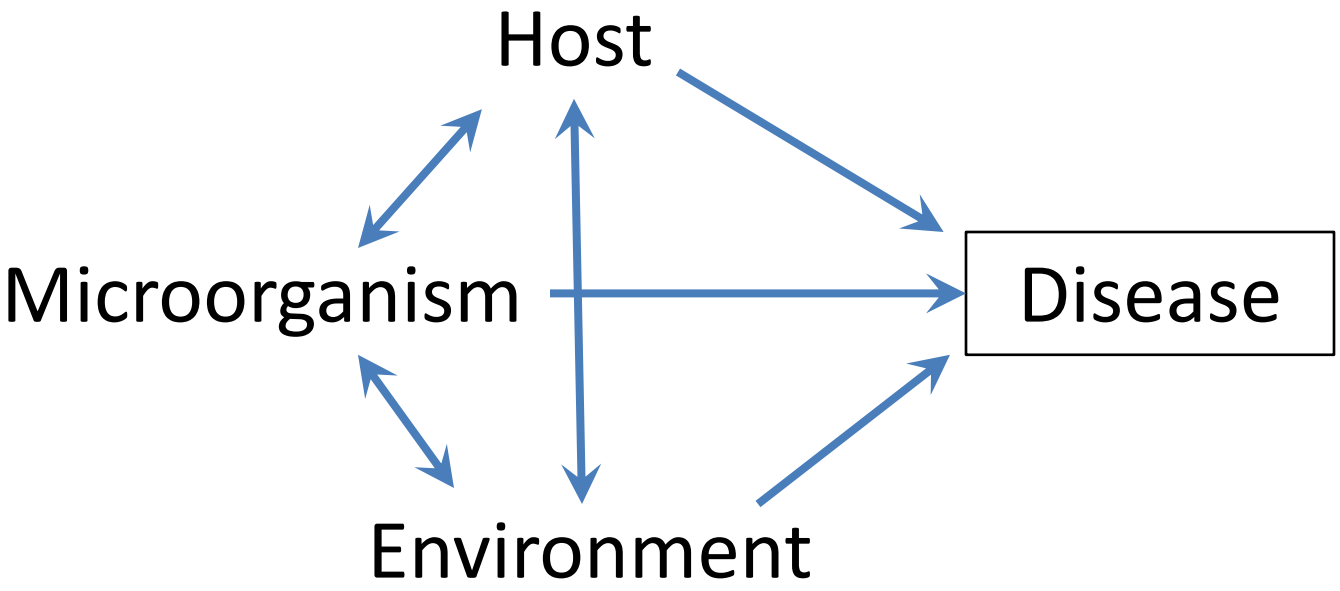




Cause & Effect Example: The Germ Theory of Disease

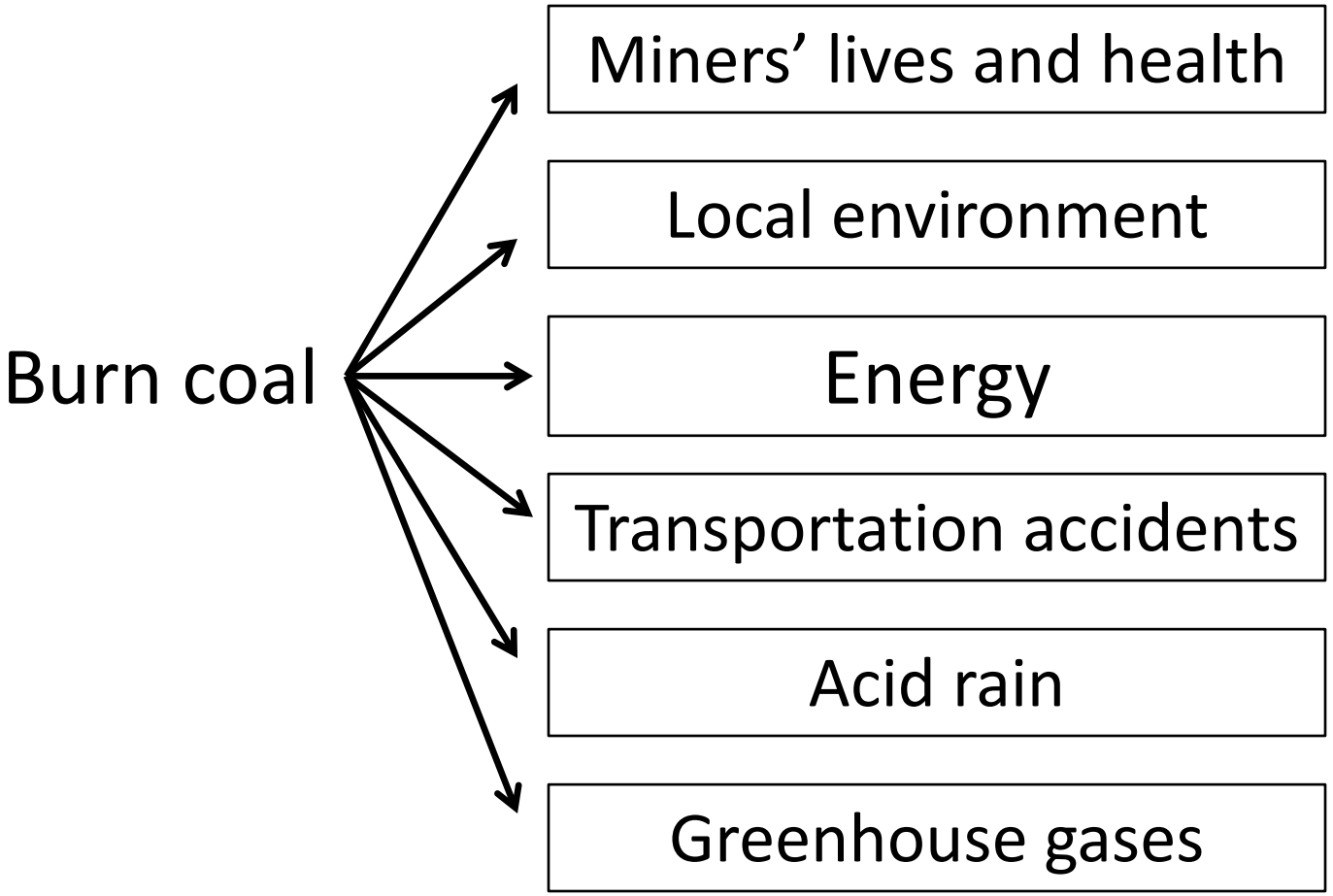
- from Fritjof Capra, *The Turning Point*

Cause & Effect Example: The Germ Theory of Disease



- from Fritjof Capra, *The Turning Point*

Example: Cost of Coal



est. 10-20¢/kwh

Views about Relationships

versus

Compete adversarially

WIN-LOSE (really LOSE-LOSE)

Cooperate toward common aim

WIN-WIN

Views about Motivation

versus

Extrinsic motivation (If you do this, you'll get that)

Intrinsic motivation

Summary

Dr. Deming's teaching wasn't about **doing** things differently.

Instead, it was about **thinking** differently.