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# CQI Learning Lunch

## What Can We Do With a *System of Profound Knowledge?*

Host - Dennis Sergent  
517-381-5330

May 17th, 2011  
10:30 AM to 1:00 PM

*University Club of Michigan State*  
3435 Forest Road, Lansing, MI 48909  
517-353-5111

# Sponsoring Organizations



# Deming's System of Profound Knowledge (SoPK)

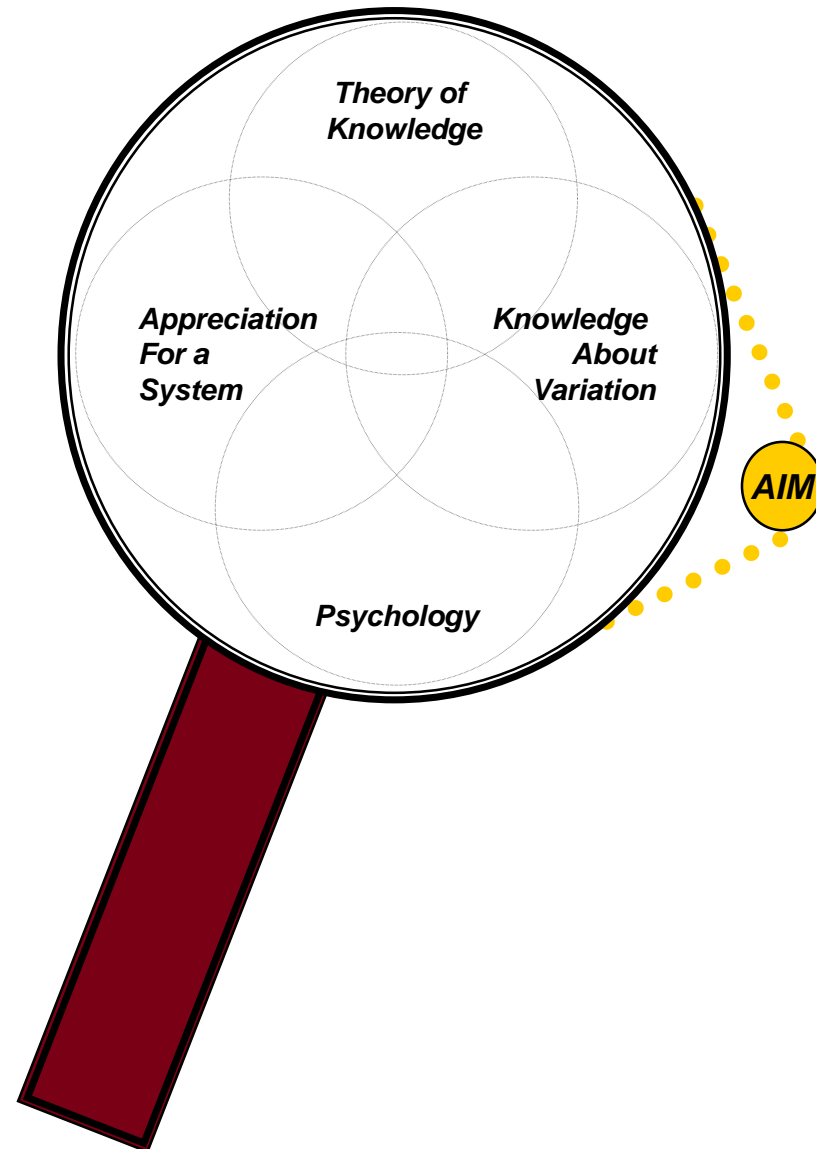
“The aim . . . is to provide an outside view - a lens . . . provides a map of theory by which to understand the organizations that we work in”

## Components of The Whole

- **Theory of Knowledge**
  - Knowledge is built on theory
- **Appreciation for a System**
  - A system is a network of interdependent components that work together to accomplish the aim of the system
- **Knowledge About Variation**
  - There will always be variation.....
- **Psychology**
  - Individuals
  - Groups
  - Society
  - Change

“One need not be eminent in any part of profound knowledge in order to understand and to apply it”

“The various segments of the system . . . Cannot be separated. They interact with each other. For example knowledge about psychology is incomplete without knowledge of variation.”





# Deming's System of Profound Knowledge - Components

## TIMELINE of PROFOUND KNOWLEDGE - IMPORTANT COMPONENTS

1900s	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s
<b>KNOWLEDGE</b>										
Realism of Pragmatism, John Dewey - 1905		Mind & The World Order, C.I. Lewis - 1929	How We Think, John Dewey - 1933			Experiential Learning Theory, Carl Rogers - 1969	Double Loop Learning in Organizations, Chris Argyris - 1974			Descriptive & Normative Learning Models, Carlile & Christensen - 2005
							Adult Learning Theory, Malcolm Knowles - 1975			
<b>PSYCHOLOGY</b>										
	Lewin's Equation, Kurt Lewin - 1920	Anthropological Theories Applied to Business, Edward Tolman - 1932		Organizational Development, D. McGregor - 1950	Human Side of Enterprise, D. McGregor - 1960	Relationship Awareness Theory, Elias Porter - 1971				
	Participation Management, Mary Parker Follett - 1925			Socio-Technical System, Eric Trist, Tavistock Institute - 1951	Maslow's Hierarchy of Needs, A. Maslow - 1962	Attribution Error, Lee Ross - 1977				
	Hawthorne Experiments, Elton Mayo - 1927				Motivation Theory, Herzberg - 1968					
<b>SYSTEMS</b>										
	Scientific Management, F. Taylor, Frank & Lillian Gilbreth - 1920s		General Systems Theory, Ludwig von Bertalanffy - 1949	Holistic Management, Stafford Beer - 1959	Principles of Systems, Jay Forrester - 1968			Creating The Corporate Future, Russ Ackoff - 1981	Theory of Constraints, Eli Goldratt - 1990	
								The Goal, Eli Goldratt - 1984	Fifth Discipline, Peter Senge - 1990	
								Open Systems, Fred Emery		
<b>VARIATION</b>										
	Shewhart Control Chart, W. Shewhart 1924	Economic Control of Quality of Manufactured Product, W. Shewhart - 1931	Use of Statistical Methods to Support The War Effort 1941 to 1945		Enumerative vs. Analytic Studies, W. E. Deming 1960					
	Design of Experiments, Sir Ronald Fisher - 1925	Statistical Method From the Viewpoint of Quality Control, W. Shewhart - 1939	Sampling Methods Developed, H. F. Dodge							

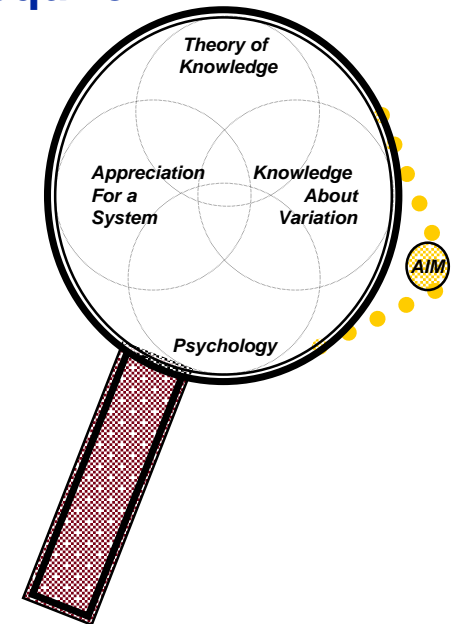
# SoPK - Theory of Knowledge

“One need not be eminent in any part of profound knowledge in order to understand and to apply it”

- Management is prediction
- Knowledge is built on theory
- Information is not knowledge
- Rational prediction requires theory
- Interpretation of data from a test or experiment is prediction
- There is a need for operational definitions
- Enlargement of a committee is not a reliable way to acquire knowledge

## OPERATIONAL DEFINITION:

Knowledge is a statement which predicts a future outcome, built on theory, which can be proven by observation and measurements, with the risk of being wrong.



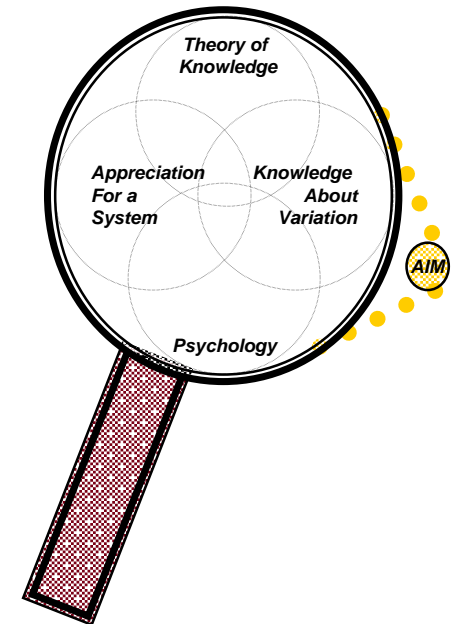
# SoPK - Appreciation For A System

“One need not be eminent in any part of profound knowledge in order to understand and to apply it”

- A system must have an aim
- The aim is a value judgment
- A system includes the future and competitors
- A system must be managed, it will not manage itself
- A system can not understand itself and needs guidance from outside
- The bigger the system, the more difficult to manage
- The greater the interdependence between components
  - The greater the need for cooperation between them
- Management must manage the interdependence
  - Between components
  - Towards the aim of the system
- Left to themselves, the components become:
  - Selfish,
  - Competitive
  - Thus destroy the system

## OPERATIONAL DEFINITION:

A system is a network of interdependent components that work together to try to accomplish the aim of the system.



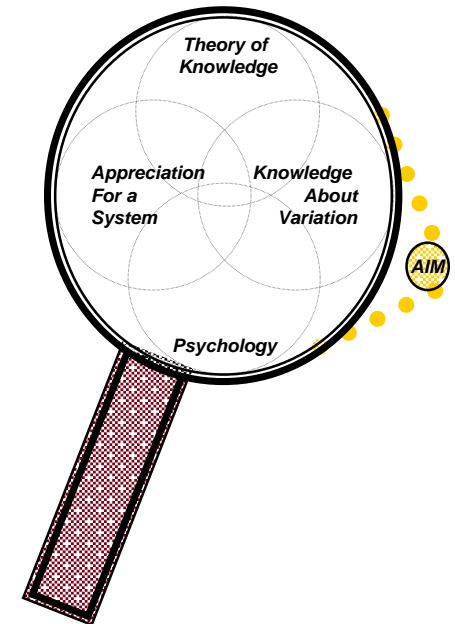
# SoPK - Knowledge About Variation

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- There will always be variation in every thing
- Variation in common causes and special causes are to be understood
- Stable systems and their capabilities must be studied to be understood and appreciated
- Use of data about a system requires knowledge about the different sources of uncertainty and variation
- Use of data requires understanding of the distinctions between enumerative studies & analytic problems
  - **Enumerative Studies = Information about the frame**
  - **Analytic Problems = Results of a test or experiment must be inferred**
    - To a predicted future state
- **The cost of mistakes of thinking and action**
  - **Fundamental Attribution Errors**
  - **Tampering**

## OPERATIONAL DEFINITION:

Numerical differences in measurable, observable characteristics of a process or product.



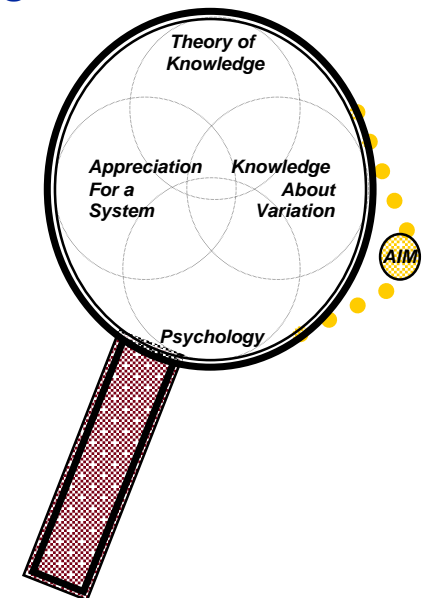
# SoPK - Psychology

“One need not be eminent in any part of profound knowledge in order to understand and to apply it.”

- Psychology helps understand people and the interactions between them
- Every person is different than every other person
- People are born with a natural inclination to learn
- People learn in different ways and at different speeds
- People are born with a need to be in relationships with others and need love, respect and esteem by others
- All people are motivated differently by extrinsic and intrinsic factors
  - See Daniel Pink “You Tube” Video
- Intrinsic and extrinsic sources motivate in much different ways
- Total submission to extrinsic motivation
  - Leads to destruction of the individual

## OPERATIONAL DEFINITION:

Psychology is the science and study of the connections between mind and actions, to understand behavior and mental processes and thereby, solve problems in many different spheres of human activity.





# Lunch!

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- **Let's collect our lunch!**
- **Room will be secure**
- **Staff will take your drink orders**
- **While you dine, discuss this**
- **Make sure everyone is heard from**
- **Be prepared to share your answers to the following questions!**

# TABLE DISCUSSIONS

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## AT EACH TABLE DISCUSS:

- **WHAT ARE OUR NEXT ACTION STEPS?**
  - **What did I learn here?**
  - **What do we need to discuss next?**
  - **Who else should be here?**
  - **What will we do with this learning?**
  - **When do we meet again?**

# Future Agenda

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## Future Discussions = 3 Weeks + 1 Weekday

- June 8th, 2011 = Overcoming Roadblocks
  - June 30th, 2011 = Innovation and the Alternatives
  - July 22nd, 2011 =
  - August 15th, 2011 =
  - September 6th, 2011 =
  - September 28th, 2011 =
  - October 20th, 2011 =
  - November 21st, 2011 =
  - December 8th, 2011 =
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- What Are Your Ideas?



# Other Subject & Speaker Suggestions

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- Benchmarking
- Brainstorming
- Civility - Lack of it Costs up to \$300 Billion Annually (Pattie McNeil)
- Comparisons of Quality Management Systems
- Continuous Improvement
- Design & Control of Quality (Ian Bradbury of Peaker Services, Inc.)
- Effective Measurement for Training & Development Initiatives
- Gipsie Ranney
- Having Difficult Conversations - Principles and Tools
- How to Plan the Perfect Meeting
- Influence (Influencing Your Leader and Your Team)
- InThinking, Investment Thinking, Thinking Roadmap
- Lean Project: Eliminating the Waste In Performance Reviews (R. Steele of Peaker Services)
- Mentoring & Partnership Between Generations (Baby Boomer, GenX, GenY, Transition to Future)
- Quality Assurance Through Proofing
- Six Sigma
- Training vs Learning - What Makes The Difference in Performance?
  
- What Are Your Ideas?

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*System of Profound Knowledge?***

