Engineering Systems Doctoral Seminar ESD.83-- Fall 2009

Class 12--December 2, 2009

Faculty: Chris Magee and Joe Sussman

TA: Judy Maro

Guest: Dr. Adam Ross, SEAri/MIT

Class 12 Overview

- Welcome, Overview and Introductions (5 min.)
- Dialogue with Dr. Ross (55min)--Redaction provided by Bruce Cameron
- Break (10 minutes)
- Discussion of ESD.83 faculty-provided theme-related papers led by Vivek Sakhrani (approximately 30-40 min)
- Theme and topic integration: Report from the front; Teaching and Learning Time -- (Sussman)
- Next Steps -preparation for Class 13 - (Sussman)

Theme and topic integration: Class 12, December 2, 2009

- Report from the front---1)Boston Globe, November 28, 2009, "Patrick, Kirk at odds over wind farm: Governor urges Obama to back it":

An added starter--2) NY Times, Dec 1, 2009, "Steelers' Ward Voices Conflict Between Team Goals and Player Safety"

- "Teaching and Learning Time"
- Class 13 Plan

"Teaching and Learning Time"

- More on "Stakeholders"
- Perspectives on "Strategy"
- To think about: Match-up of Class 12 with
  - Framing Questions
  - Learning Objectives

The Four "S"s

- Stakeholders - A pragmatic point for "system designers"; An ethical point, as well
- Strategy - The long-term, inclusive "systems" perspective
- Structure - Form follows function - purposeful systems--more than an org chart although that's one example--"architecture" is another term we use
- Scenarios - Dealing with uncertainty and recognizing "the bend in the trend"; organizational learning

Stakeholders

- We have already discussed stakeholders from several perspectives
  - Ross et al.
  - Gregory and Keeney
  - Rubinstein and Kochan

Here's one more viewpoint

Stakeholder Theory and A Principle of Fairness

Robert A. Phillips
Business Ethics Quarterly
Volume 7, Issue 1
1997

Problem with Stakeholder Theory

- The lack of a coherent justificatory framework
- The problem of adjudicating between stakeholders
- The problem of stakeholder identification

Principle of Fairness I

- Discussed in the political philosophic literature of Rawls, Simmons, and Cullity among others

Phillips--"Whenever persons or groups of persons voluntarily accept the benefits of a mutually beneficial scheme of co-operation requiring sacrifice or contribution on the parts of the participants and there exists the possibility of free-riding, there exist obligations of fairness on the part of these persons or groups to co-operate in proportion to the benefits accepted."

Donaldson

Despite its important insights, the stakeholder model has serious problems. The two most obvious are its inability to provide standards for assigning relative weights to the interests of the various constituencies, and its failure to contain within itself, or make reference to, a normative, justificatory foundation.

Fairness

Obligations of fairness arise when individuals and groups of individuals interact for mutual benefit. Such persons and groups engage in voluntary activities that require mutual contribution and restriction of liberty. These voluntary activities provide a normative justification (on par with consent) for the idea of stakeholder management

Discussion I

- How does stakeholder theory relate to engineering system concepts?

Discussion II

- Boundaries
- Feedback
- System of Systems (SoS)

Discussion III

- Why involve stakeholders?

Discussion IV--Why involve stakeholders ?

- Better representations
- Better designs (strategic alternatives, bundles)
- Better selection among bundles
- Pragmatic considerations for deployment
- Ethical considerations--"it's the right thing to do"

Freeman--seminal author in this area of study

- He defines a stakeholder as: "Any group or individual who can affect or is affected by the achievement of the firm's objectives"
- Those who "can affect"--that's pretty clearcut
- But why "those who are affected"?

Freeman

Freeman explains…”it is less obvious why "those groups who are affected by the corporation" are stakeholders as well, for not all groups who can affect the corporation are themselves affected by the firm. I make the definition symmetric because of the changes which the firm has undergone in the past few years. Groups which 20 years ago had no effect on the actions of the firm, can affect it today, largely because of the actions of the firm which ignored the actions of these groups. Thus, by calling those affected groups "stakeholders," the ensuing strategic management model will be sensitive to future change…”

Rawls I

The principle of fair play may be defined as follows. Suppose there is a mutually beneficial and just scheme of cooperation, and that the advantages it yields can only be obtained if everyone, or nearly everyone, cooperates. Suppose further that cooperation requires a certain sacrifice from each person, or at least involves a certain restriction of his liberty…

Rawls II

…Suppose finally that the benefits produced by cooperation are, up to a certain point, free: that is, the scheme of cooperation is unstable in the sense that if any one person knows that all (or nearly all) of the others will continue to do their part, he will still be able to share a gain from the scheme even if he does not do his part. Under these conditions a person who has accepted the benefits of the scheme is bound by a duty of fair play to do his part and not to take advantage of the free benefit by not cooperating.

When the duty of fair play is operative in a coop scheme…

- mutual benefit
- justice
- benefits accrue only under conditions of near unanimity of cooperation
- cooperation requires sacrifice or restriction of liberty on the part of participants
- the possibility of free-riders exists
- voluntary acceptance of benefits of cooperative scheme.

This all strikes me as a system of systems idea-- as per Maier

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