

TCE: RECENT DEVELOPMENTS



**Copenhagen
Business School**
HANDELSHØJSKOLEN

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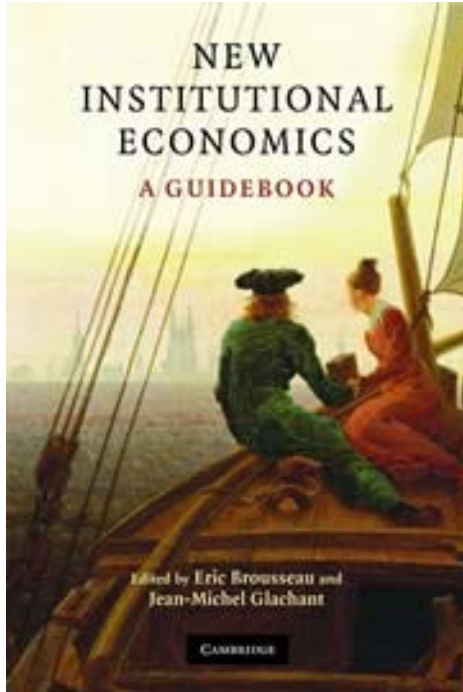
**Center for Strategic Management and
Globalization
Copenhagen Business School**

THEMES

- **Debates on TCE.**
 - **The capabilities debate.**
 - **Look at the papers in the light of these debates.**
 - **Test.**
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- (Masten, Scott, James Meehan, and Edward Snyder. 1991. "The Costs of Organization," *Journal of Law, Economics, and Organization* 7: 1-25.)
- Nickerson, Jackson & Todd Zenger. 2004. "A Knowledge-based Theory of the Firm: The Problem Solving Perspective," *Organization Science*, 15: 617-632.
- Argyres, N. and K. Mayer. 2007. "Contract Design as a Firm Capability: An Integration of Learning and Transaction Cost Perspectives," *Academy of Management Review*, Issue 32, 1060-1077.



- **Internal** critique (and discussion) is that taking place among adherents of the economic TOF.
- **External** critique is that directed against economic organization theory by scholars who don't subscribe to the economic TOF.

Nicolai Foss & Peter G Klein. 2008. "The Theory of the Firm and Its Critics: a Stocktaking and an Assessment" Eric Brousseau and Jean-Michel Glachant, eds. *Handbook of New Institutional Economics*. Cambridge: Cambridge University Press.



- **Coase (1937) criticizing Knight (1921).**
- **Alchian & Demsetz 1972 criticizing Coase (1937), Williamson (1985) criticizing A&D (1972)**
- **Grossman and Hart (1986) criticizing Williamson (1985).**

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$$x = \sqrt{1 + \sqrt{1 + \sqrt{1 + x}}}$$

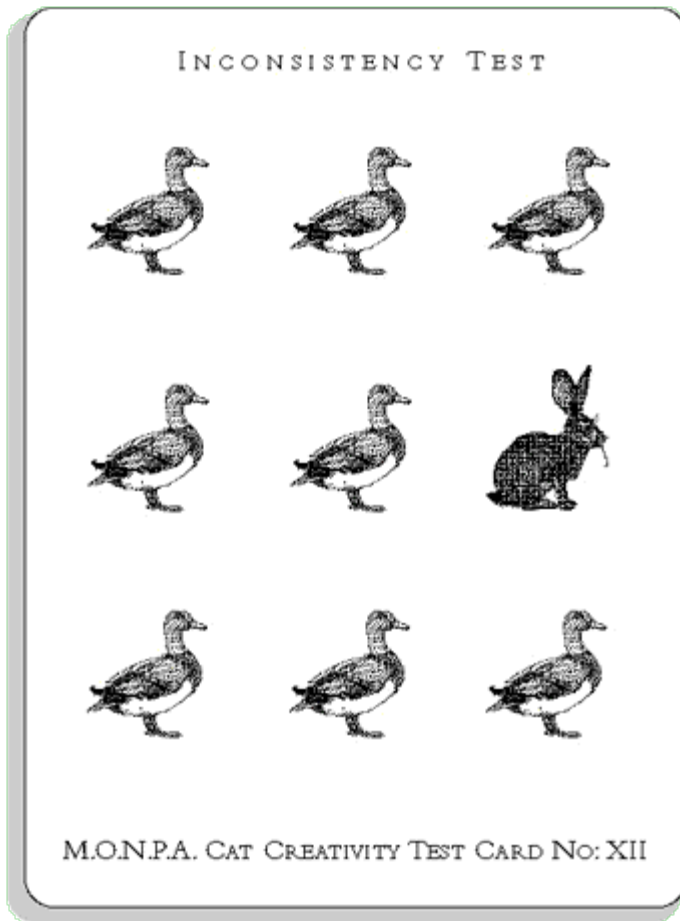
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$$x = \sqrt{1 + \sqrt{1 + \sqrt{1 + \sqrt{1 + \dots}}}}$$

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- **“The incomplete contracting controversy”:**
 - **Are complete contracting outcomes feasible even with incomplete contracting – i.e., under which conditions can efficient outcomes be realized when contracts incomplete?**
 - **Maskin, Tirole, Hart, Moore.**
- **Is the assumption of **dynamic programming** reasonable? (Kreps)**

- **Sociologists** (e.g., Perrow, Freeland).
 - **Heterodox** economists (e.g., Hodgson, Winter).
 - **Management** theorist (e.g., Pfeffer, Mintzberg, Ghoshal).
 - **Cognition and motivation** (incl. "bounded rationality" and "opportunism").
 - **Power and efficiency.**
 - **Firm heterogeneity and capabilities.**
 - **Entrepreneurship.**
 - **Process issues.**
 - **Empirical evidence.**
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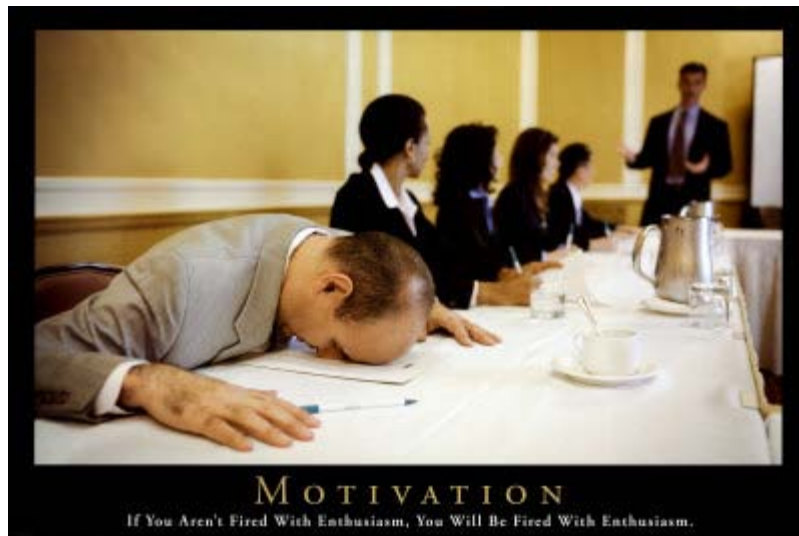
- “**Perfect rationality**” assumed in much of TOF (players know all strategies, payoffs, game structures, etc.)
- **Williamson** an exception.
- **Critiques**
 - Bounded rationality is not taken seriously (just a shorthand for **anything** that makes contracts incomplete) (e.g., Kreps 1997; ICC; Foss 2003, JEPsych).
 - **Inconsistency** between perfect foresight with respect to some variables and BR with respect to others? (Dow 1987; Foss & Foss 2000).
 - Cognition too **simplistically** modelled?

TAKING BR MORE SERIOUSLY?

- Implies a fundamental **challenge** to the game-theoretic underpinnings of much TOF – may **not** want to go that far.
 - BR literature is overwhelmingly **rich** -- incorporating its insights may lead to too many models and no robust generalizations.
 - Organizations can **specialize**, which economizes on cognitive resources.
 - What **exactly** is it we need BR for?
 - But ... later consider Mayer & Argyres (2004) that parties can “learn to contract”.
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MOTIVATION

- **Only** extrinsic motivation is considered; intrinsic motivation is neglected (Frey; Fehr and Gächter; Benabou and Tirole)
 - Intrinsic motivation may be **particularly** important for tasks where the provision of extrinsic motivation is (particularly) costly – e.g., corporate citizenship, knowledge sharing and other kinds of **solidary** behavior.
 - Providing “extrinsic motivators” (rewards, performance pay, monitoring) may crowd out intrinsic motivation on the margin.



- **Only** egoistic preferences are considered.
 - However, altruism/other regarding preferences/reciprocity **important** in the real world.
 - Somehow more important in **organizations**? Can organizations foster such behavior?



- The "dynamics of dispute" (Mäki) that drives progress in the TOF increasingly **includes** external critique.
- **Not** necessarily rejected as "extra-economic" and irrelevant.
- Look at **capabilities critiques** – and **TOF reactions** to that critique.



- Capabilities represent a **dominant theoretical lens** in a number of fields for thinking about firm-level heterogeneity, competitive advantage, differential innovative'ness – and economic organization.
- **Many issues** with capabilities – definition, emergence, micro-foundations, causal powers?
- Yet, it does point to some **weak spots** in the econ TOF.

“A useful strategy for explicating the decision to integrate is to hold technology constant across alternative modes of organization and to neutralize obvious sources of differential economic benefit.”

— Williamson (1985: 88)

CAPABILITIES CRITIQUE



- **Implicit dichotomy** in TCE: Knowledge for production is **free and perfect**; knowledge for transacting is fraught with **hazards** (Demsetz, 1988).

- **Neoclassical production theory** underlies TCE (Langlois & Foss, 1999).
- Knowledge for production is assumed to be **free and explicit**.



“[I]t seems to me that we cannot hope to construct an adequate theory of industrial organization and in particular to answer our question about the division of labour between firm and market, unless the elements of organisation, knowledge, experience and skills are brought back to the foreground of our vision” (Richardson 1972: 888).



G. B. Richardson (1924-)

- Capabilities as the “knowledge, experience, and skills” of the firm.
- **Similar** capabilities.
- **Complementary** capabilities.



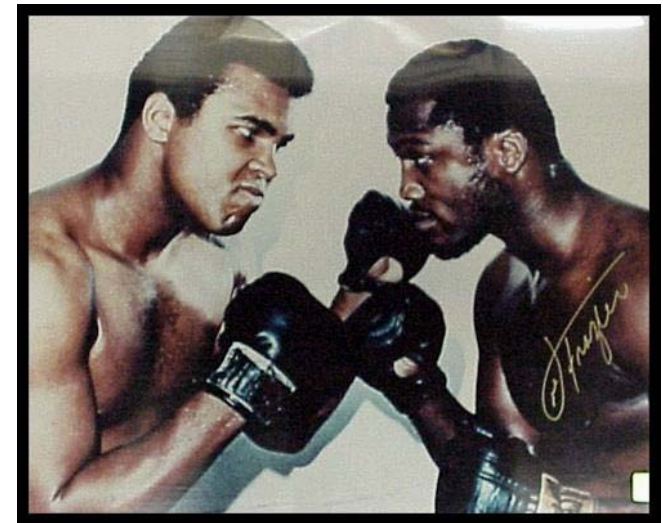
G. B. Richardson (1924-)

“Where activities are both similar and complementary they could be co-ordinated by direction within an individual business. Generally, however, this would not be the case and the activities to be co-ordinated, being dissimilar, would be the responsibility of different firms. Co-ordination would then have to be brought about either through co-operation, firms agreeing to match their plans *ex ante*, or through the processes of adjustment set in train by the market mechanism” (Richardson 1972: 895).



G. B. Richardson (1924-)

- Often in the past taken to be a **rival** approach (e.g., Kogut & Zander, 1992, 1996; Hodgson, 1996; Madhok, 1996; Osterloh & Frey, 2000).
- Strongly **critical** of the assumption of opportunism (Ghoshal and Moran 1996): assumption is not only “bad for practice” but also unnecessary in the TOF.
- Capabilities theorists argue that they can explain **the same as TCE** (i.e., existence, boundaries and internal organization of firms) – **and more** (firm heterogeneity, competitive advantage, innovation, learning).



3 COASIAN THEMES THROUGH THE CAPABILITIES LENS

- **Existence** -- Firms are superior mechanisms for integrating specialist knowledge (Grant, Conner and Prahalad), for cultivating learning capabilities (Lazonick, 1991; Kogut and Zander, 1992), and for providing shared vision (Witt, 1999).
- **Boundaries** -- Problems of transmitting complex, tacit and socially held knowledge across a market interface (Langlois, 1992; Kogut and Zander, 1992).
- **Internal organization** – Firms’ have “low-powered incentives” because this fosters knowledge-building (Ghoshal & Moran, 1996).



- Firms should be viewed as “... social communities in which individual and social expertise is transformed into economically useful products and services” (Kogut and Zander 1992). **Comment?**
- Firms exist because they can create conditions under which multiple individuals can integrate their specialist knowledge at low cost – markets can’t do this (Kogut & Zander 1992). **Comment?**
- Hierarchy is rather a facilitator of knowledge sharing than an opportunism-reducing mechanism (Ghoshal & Moran 1996). **Comment?**

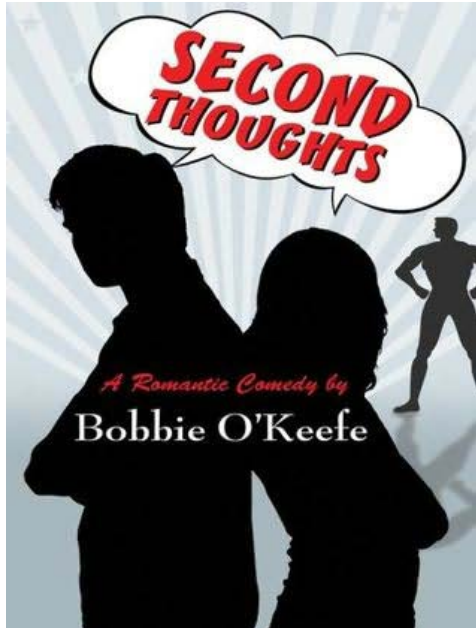




- Capabilities ideas **cannot** address economic organization in lieu of the notion of opportunism (Foss, 1996, *Org Sci*).
- Capabilities theorists **overdo** the distinction between firm and market organization (e.g., Kogut & Zander, 1996; Hodgson, 1996; Ghoshal & Moran, 1996) – e.g., Masten et al. (1996: 6):
 - *”The sharp distinction often drawn between internal and market organization costs, while expedient, is artificial. In reality, organization entails a multiplicity of activities independent of the governing institution. Planning, bargaining, contracting, monitoring, enforcing, and so on are common to both internal and market exchange. What the choice of organization form does is influence the allocation of effort across the elements of this list”*



- Capabilities and routines are **ill-defined**, not operationalized, dimensionalized, etc. (Williamson, 1999, *SMJ*; Felin & Foss, 2005, *SO*).
- March and Levitt (1988):
 - "The generic term 'routines' includes the forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which they operate. It also includes the structure of beliefs, frameworks, codes, culture and knowledge that buttress, elaborate and contradict the formal routine"



- “... the costs of organizing and the losses through mistakes will increase with an increase ... in the **dissimilarity** of transactions.” (Coase 1937).
- “... if one is to explain the institutional structure of production in the system as a whole it is necessary to uncover the reasons **why the cost of organizing particular activities differs among firms.**” (Coase 1988).
- ... transaction costs theory has been made to carry too much of the weight of explanation in the theory of organizations. We expect competing and complementary theories to emerge – theories that are founded on economizing on bounded rationality and that **pay more attention to changing technology and to evolutionary considerations.**” (Milgrom & Roberts 1988).
- “... it is surprising that leading economic theories ... have paid almost no attention to the role of **organizational knowledge.**” (Holmström & Roberts 1998).

- Phase 1: Mutual **rejection**.
 - Phase 2: Econ TOF and capabilities are **complementary** in an additive manner – capabilities view/RBV tell us which capabilities and resources we need for competitive advantage, TOF tells us about how to organize access to their services.
 - Phase 3: **Integration** efforts – i.e., bring learning, search, problem-solving, differential capabilities into the econ TOF.
-

- Making room for **heterogeneity** in TCE that goes beyond the (spec., freq., unc.) dimensionalization of transactions.
- **TCE**: Firms confronting **similar** transactions should organize these in **similar** ways (but they often don't – why?).
- Capabilities point: Firms have **heterogenous** capabilities for **organizing** transactions /**transacting**.



- Masten, Meehan & Snyder: **Internal organization** capabilities.
- Argyres & Mayer: **Contract design** capabilities.
- Nickerson & Zenger: **Search capabilities** and their organization.



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- **Context:** (Heterogeneous) **alliance capabilities** have become a big issue in inter-organizational research (Doz, 1996, SMJ; Kale, Dyer & Singh, 2002, SMJ, Kale & Singh, 2007, SMJ).
- **RQ:** How can such capabilities and their contribution to CA be **reconciled** with TCE – advancing inter-organizational research in the process?

4. CONDITIONS

OUTSOURCERS will solely accept tasks, given by the persons mentioned in Appendix II (APPENDIX II) of this SLA or their formally appointed representatives.

The supplier will make certain that only employees, for whom the SLA has been agreed upon, will make use of the services rendered.

5. ASPECTS OF ORGANISATION

5.1. Representation

The customer will appoint a representative for the daily activities concerning this Service Level Agreement. This person will act as the contact person for the supplier.

The customer will remain the formal recipient of reports, sent by the supplier.

The supplier will appoint a representative for safeguarding the level of the services, agreed upon in this Service Level Agreement.

The customer's representative and the supplier's representative will, on a three monthly basis, discuss the progress and quality of the services rendered. The supplier's representative will initiate the meeting and, in interaction with the customer's representative, draw up the agenda.

5.2. Reporting

The supplier will report quarterly to the customer concerning the results of the previous quarter. This report will show a survey of the registered data concerning the performance indicators, as agreed upon per (contract) service.

By this way of working, the customer receives an insight in the achievements of the supplier, so that, when necessary, appropriate actions can be undertaken.

The customer is entitled to an intermediate evaluation of the achievements of the supplier. The customer will initiate the meeting with the representative(s) of the supplier.

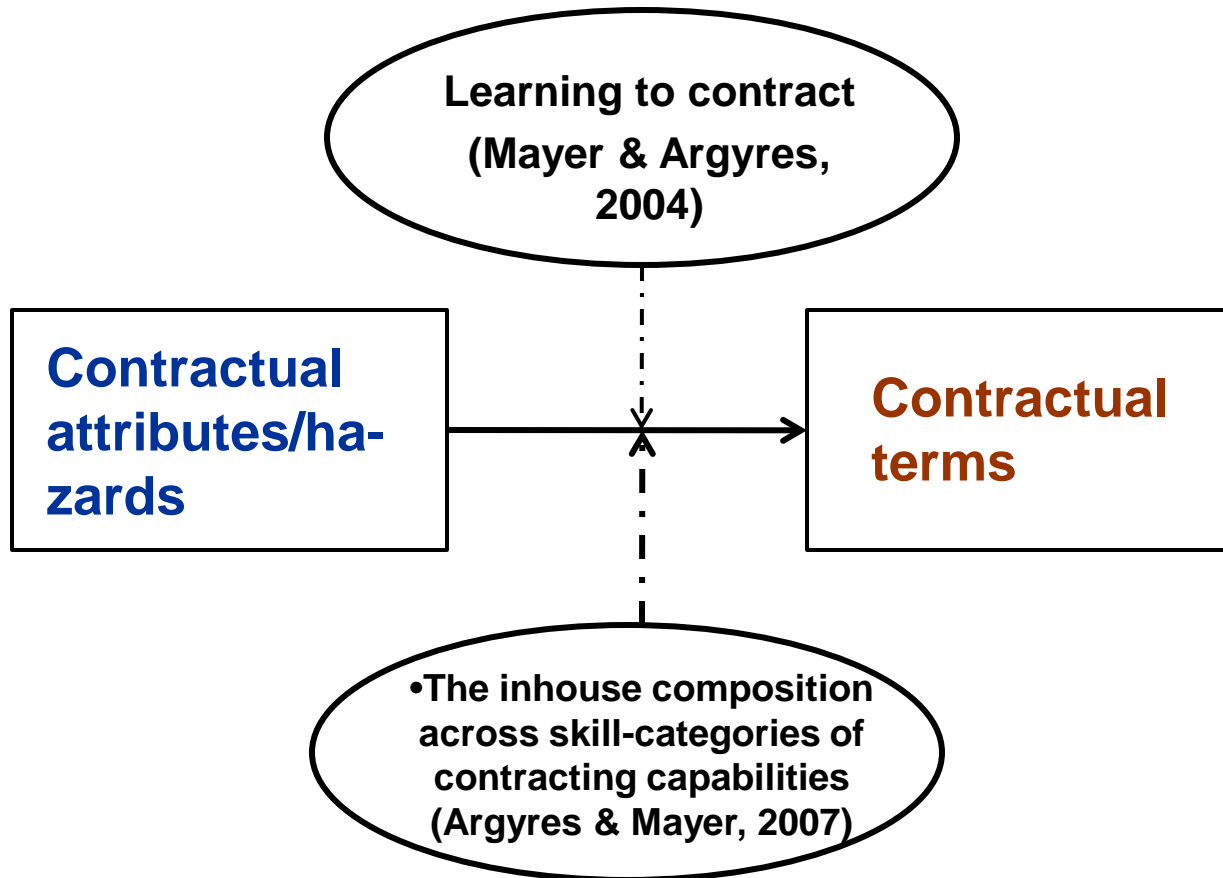
5.3. Change Management

In case of changes in and/or updates of principles and/or specifications, as mentioned in this SLA, an OUTSOURCER Change Management procedure will be formalized.

This will also occur when the criteria change, which the services rendered have to meet.

The Change Management procedure implies that, with approval of the customer, the changes in specifications / numbers / services or tasks are described and that subsequently will be estimated what the consequences will be for the service rendered. This also applies in case the reality structurally deviates from the mutually agreed demand.

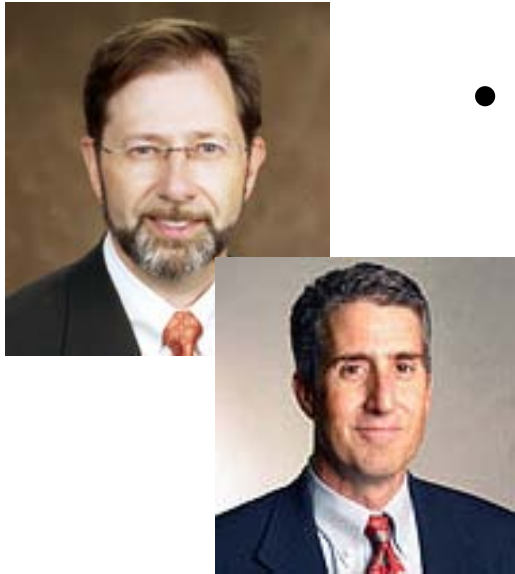
- **Relax** rationality/far sighted'ness assumption in TCE – i.e., that people are skilled at identifying future hazards and adjusting contract terms to reflect this.
- Implies that observed contract design may **not** be "equilibrium designs".
- Mayer and Argyres (2004) look at a time series of 11 contracts between the same two partners in the personal computer industry during 1989-1997.
- Observe many changes in terms that are **not explainable by changes in asset specificity** (or other exchange hazards).
- Enhance communication, clarifying expectations, improve contingency planning, problem reporting, etc.
- They infer that these changes reflect that firms **incrementally learn how to work together**.



- **Basic notion** ("dual alignment principle"): TCE is basically right on contracts – but needs to recognize that the design of contract terms should to be undertaken by different types of human capital – managers, engineers and lawyers.
 - **Why are contracting capabilities **not necessarily perfect**?**
 - Complex tasks, e.g., complex state of the art technology.
 - Tacit knowledge.
 - Genuine uncertainty.
 - The handling of specific contracts has not been allocated to right personnel.
 - **Why should all contracting responsibility **not** be left in the hands of corporate lawyers?**
 - Lack of, e.g., technical knowledge.
 - Often lack an ongoing relation with the contracting partner.
-

PROPOSITIONS

- E.g., lawyers are more significant repositories of contract design capability than managers and engineers for contingency planning terms in contract **templates**, **dispute resolution terms**, and the allocation of **decision and control rights**.
 - Conversely for terms relating to the allocation and description of **roles and responsibilities** and **communication** between the parties.
 - Correctly allocating the design of/influence on contract terms may lead to **competitive advantage**.
 - Contracting capabilities relating to roles and responsibilities, communication, and contingency planning **more likely** to be associated with CA than those relating to dispute resolution and control right.
-



- **Criticizes capabilities/knowledge-based view:**
 - Focuses on knowledge exchange/sharing rather than the **production of knowledge**.
 - Does not explain the circumstances under which markets are preferred to hierarchy and vice versa, i.e., **no theory of "alignment."**
- **Starting point:** The firm's/manager's knowledge-based objective is to develop new knowledge that can contribute to above-normal profits.
- Requires identifying a **problem** and the discovering valuable new **solutions**.
- Basic idea: governance structures **differ** with respect to how well they **facilitate** this process, that is, maximizes the probability of finding (problem, solution) pairs that are high in appropriable value.

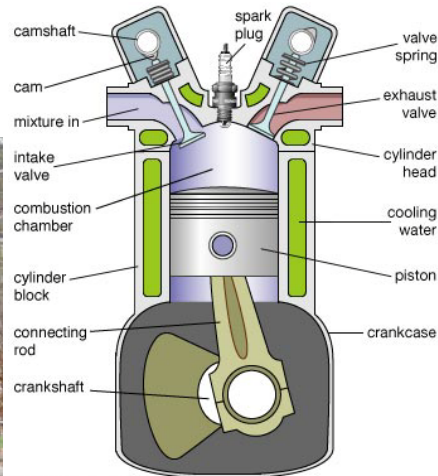


Herbert A Simon

- Builds on **Simon** and **Kauffman's** work on complex systems ("decomposability", "landscape" models).
- **Problem-solving** by means of (uncertain) "**search** over a solution landscape"

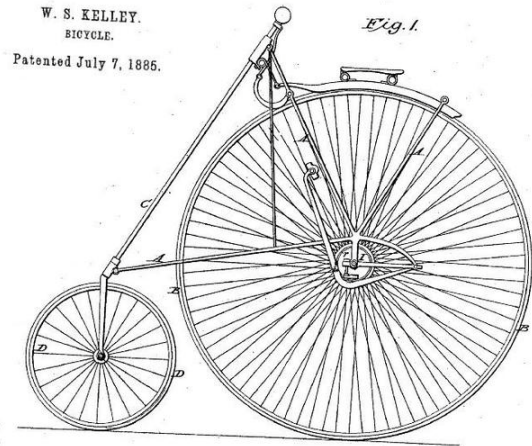
EXAMPLE

- **Problem:** A new means of transportation that make use of the internal combustion engine?
- **Solution landscape** defined by various combinations of, notably, these elements:



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W. S. KELLEY.
BICYCLE.
Patented July 7, 1885.



Cf. Fleming & Sorenson (2000).

SOLUTION LANDSCAPES

- Solution landscapes are those **combinations** of technology that may solve the problem.
- **Peaks** and **valleys** in the landscape of solutions (height measures appropriable value).



- **Rugged solution landscapes:** Solutions consist of "non-decomposable" knowledge sets – solving the problem requires much interaction among knowledge sets (e.g., leading edge microprocessor circuit).
- **Smooth solution landscapes** – Solutions consist of "decomposable" knowledge sets – solving the problem requires little interaction among knowledge sets (e.g., building a higher-performing PC – work independently on disk drive, ethernet card, memory, processor, etc.).

- Problems must be **matched** to the search for solutions.
- **Directional search:**
 - Actors can **independently** make trials, observe performance, and update search behavior.
 - Best for problems that involve **decomposable** knowledge sets ("smooth solution landscapes").



Heuristic search:

- Actors develop heuristics (theories) about how knowledge sets interact, and search of the basis of these. Likely to require knowledge sharing.
 - Best for problems that involve **non-decomposable** knowledge sets ("rugged solution landscapes").
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- **Basic prediction:** The value associated with (Problem, Search) pairs differs **systematically** across governance structures.
- **Markets** efficient for (decomposable problems, directional search).
 - Not necessary to build a shared language (in addition to what already exists).
 - Few knowledge exchange hazards.
- **Firms** efficient for (non-decomposable problems, heuristic search).
 - Firms mitigate knowledge exchange hazards (e.g., in connection with knowledge sharing),
 - Help developing "codes" (Arrow, Cremer).
 - Authority can be used to steer search, knowledge sharing, etc.