The Theory of the Firm and Its Applications in Management Research I

June 22-24, 2009

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A LITTLE ABOUT ME

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- **Education: MSc., Economics, University of Copenhagen, 1989; PhD, Copenhagen Business School, 1993.**
- **Positions: Assistant Prof., CBS, 1993; Full Prof., 1998; Professor at Norwegian School of Economics and Business Adm., 2001-.**

- **Director, Center for Strategic Management and Globalization, CBS, since 2005 (15 faculty).**
- **Editorial boards of *Org Sci, SMJ, JoM, JMS, SO, LRP,* and 14 other journals.**
- **Research interests: Strategic management, KM and eship – particularly as informed by the economics of organization.**

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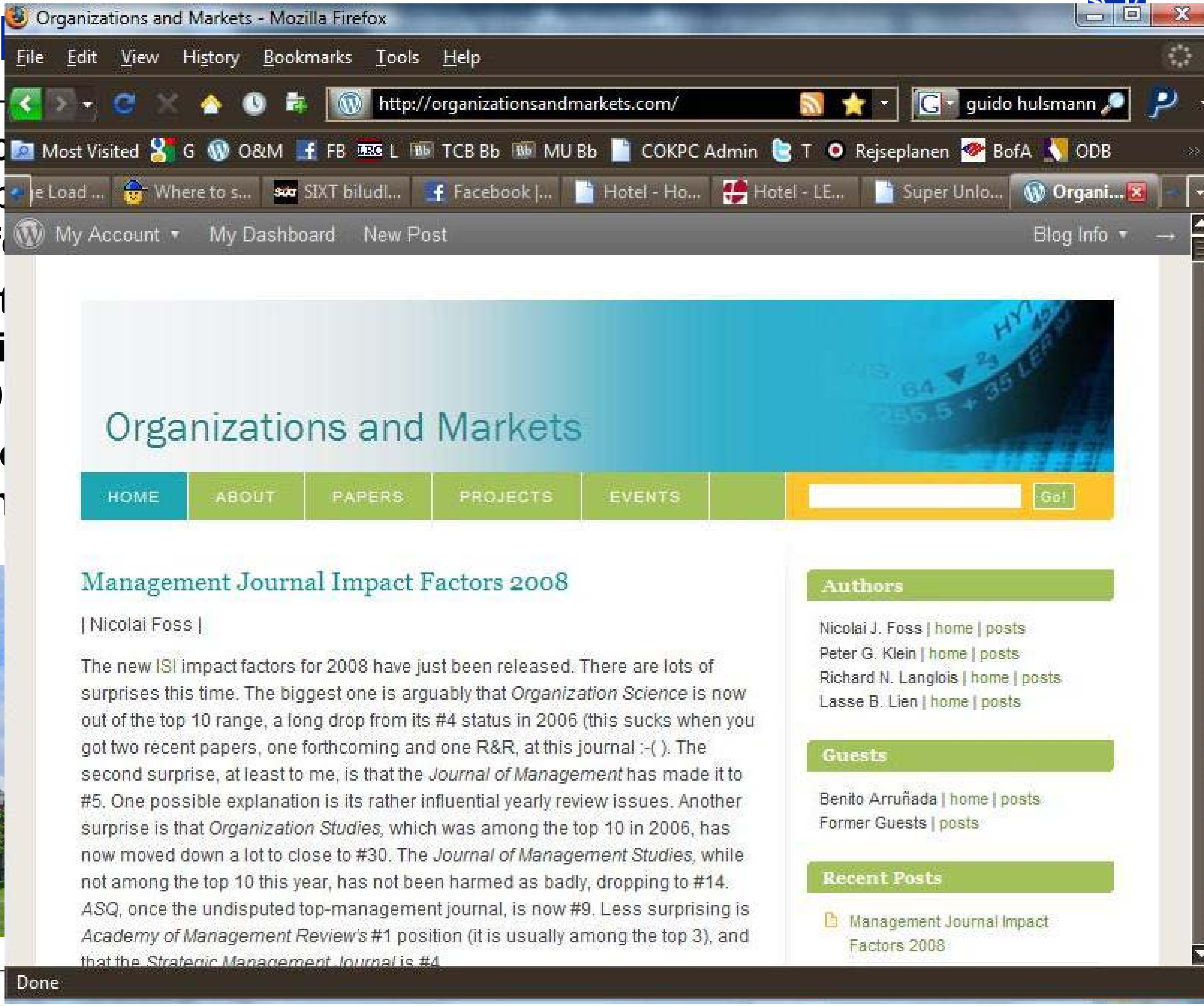

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OVERALL PURPOSE

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- Make you acquainted with some of key theories of the firm/economic organization – mainly PA theory and TCE.
- Discuss their potentials and their limitations, particularly with respect to management research.
- Entrepreneurship as the ”case field.”
- The course can – in the nature of things – at best serve as an appetizer.
- Coming up: Theories of the Firm II.

THE THEORY OF THE FIRM: WHAT IS IT? AND HOW IS IT RELEVANT?

Nicolai J Foss

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AGENDA

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- **Why the theory of the firm matters (to management research).**
- **The economic theory of the firm: Overall characteristics and context.**
- **Shared assumptions and differences between various ToFs.**
- **Things that Econ ToF can and cannot tell us in management research – e.g., in eship research.**

READINGS

Increasing specificity

David Kreps. 1997. "Economics: The Current Position," *Daedalus* 126: 59-86.

Foss, Nicolai and Peter G Klein. 2009. "Organizational Governance," in Raphael Wittek, Tom Snijders and Victor Nee, eds. *Handbook of Rational Choice Social Research*. New York: The Russell Sage Foundation.

Foss, Nicolai and Peter G Klein. 2005. "Entrepreneurship and the Economic Theory of the Firm: Any Gains From Trade?," in Sharon A. Alvarez, Rajshree Agarwal and Olav Sorenson, eds. *Handbook of Entrepreneurship Research: Interdisciplinary Perspectives*. Springer.

- **ToF generally recognized as important source theories for important, even foundational inputs,**
  - **Strategic management, organizational theory, relational marketing, and international business.**
  - **(Considerable controversy).**

- **Basic reason: The firm as a fundamental unit of analysis in most of management.**
  - **Many dependent and independent variables in management research are firm-level.**
  - **TOF is very much taken up with firm-level variables.**

THE VALUE-ADDED OF THE TOF?

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- Other (organizational) theories also deal with firm-level variables (contingency, resource-dependency, etc.).

Could be things like:

- Explicit behavioral assumptions.
- (Some) variables that are given to operationalization.
- Clear causal logic linking (measurable) variables.
- Multi-level.
- Clear (unique) predictions.
- Empirical support
- Efficiency focus.
- Yet, an attempt (at least in the case of TCE) to also include insights outside of econ.

(SOUND) SOCIAL SCIENCE EXPLANATION

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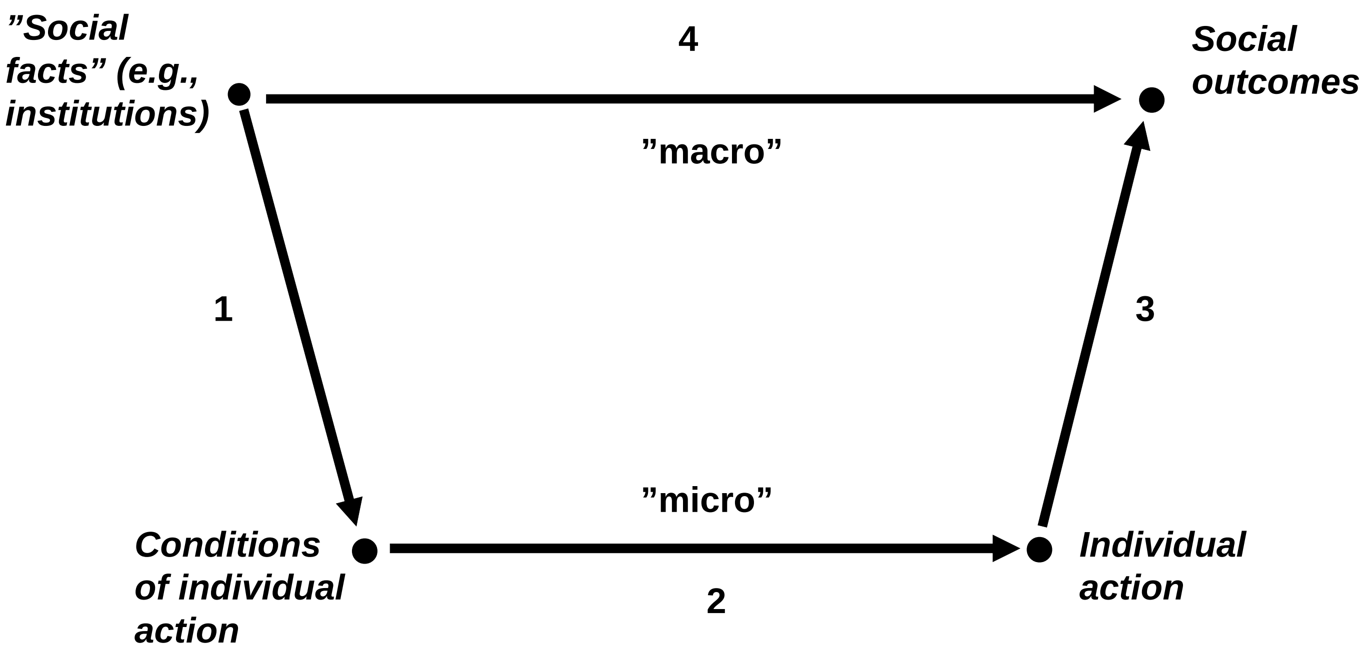
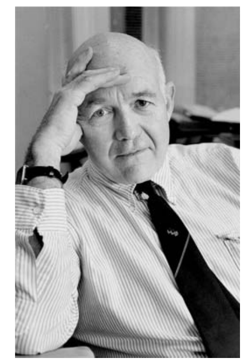
Figure 1: *A General Model of Social Science Explanation*





Source: James S Coleman. 1990. *Foundations of Social Theory.*

Note: Explicitly link variables together causally, 2 levels (can be expanded), need to explicate behavioral assumptions …

STRATEGIC MANAGEMENT AND THE TOF

”… [o]f all the new subfields of economics, the transaction cost branch of organizational economics has the greatest affinity with strategic management. … [TCE]… is the ground where economic thinking, strategy and organizational theory meet”

-- Rumelt, Schendel and Teece (1991).

"...firms have choices to make if they are to survive. Those that are *strategic* include: the selection of goals; the choice of products and services to offer; the design and configuration of ... competitive strategy; the choice of an appropriate level of scope and diversity; and the design of organization structure, administrative systems and policies used to define and coordinate work ... It is the *integration* (or reinforcing pattern) among these choices that makes a set a strategy"

-- Rumelt, Schendel & Teece 1994

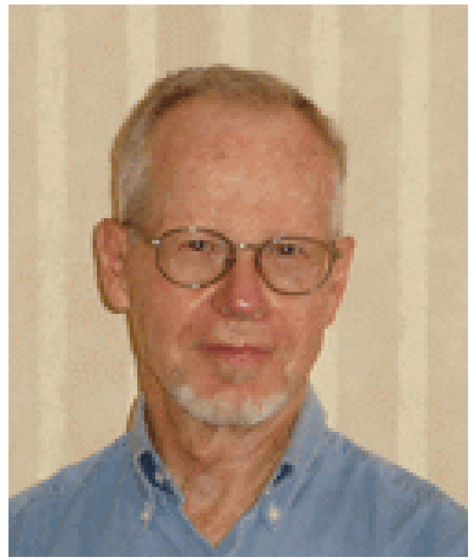
THE BROADER PICTURE

- **Porterian positioning: Ultimately founded on the neoclassical theory of the firm (Porter, 1981, AMR).**
- **The RBV: Founded on a specific version of the neoclassical theory of the firm (e.g., Peteraf, 1993; see Foss, 2000).**
- **Dynamic capabilities: Founded on behavioral and evolutionary TOF (e.g., Boerner, Pierce & Teece, 2002).**
- **Srat man research on vertical integration based on TCE (e.g.,Mahoney, 1992; D'Aveni & Ravenscraft, AMJ, 1992)**
- **Strat man research on diversification based on PAT (e.g., Lane et al., 1998; SMJ; Denis et al., 1999, SMJ).**

CITATIONS

For the 1994-2000 period, among the top cited documents in the *Strategic Management Journal* were:

 # 5: Williamson 1975.
 # 6: Nelson & Winter 1982.
 # 9: Cyert & March 1963.
 # 12: Wernerfelt 1984.
 # 13: Barney 1991.
 # 16 Penrose 1959.
 # 23: Jensen & Meckling 1976.
 # 25: March & Simon 1958.



- **Source: Ramos-Rodriguez and Ruiz-Navarro. "Changes in the Intellectual Structure of Strategic Management Research," SMJ 25: 981-1004 (2004).**

Citations to Williamson's TCE Work, by Discipline over 5 year Intervals, 1981-2000
Numbers of Citations

Year	Economics	Business	Law	Sociology	Poli sci	Other	Total
81-85	343	188	43	87	32	34	727
86-90	488	419	91	159	76	63	1296
91-95	736	688	146	267	124	169	2130
96-00	759	1203	229	337	237	295	3060

Percentages

Year	Economics	Business	Law	Sociology	Poli sci	Other	Total
81-85	47%	26%	6%	12%	4%	5%	100%
86-90	38%	32%	7%	12%	6%	5%	100%
91-95	35%	32%	7%	13%	6%	8%	100%
96-00	25%	39%	7%	11%	8%	10%	100%

Citations in the Business Literature to Williamson's TCE Work, By Fields over 5 Year Intervals, 1981-2000

Number of Citations

Year	Strategy	OB	Marketing	Finance	OM	Acct	Total
81-85	85	40	20	14	10	19	188
86-90	249	68	34	26	18	25	420
91-95	386	104	69	51	47	31	688
96-00	614	219	123	86	128	33	1203

Percentages

Year	Strategy	OB	Marketing	Finance	OM	Acct	Total
81-85	45%	21%	11%	7%	5%	10%	100%
86-90	59%	16%	8%	6%	4%	6%	100%
91-95	56%	15%	10%	7%	7%	5%	100%
96-00	51%	18%	10%	7%	11%	3%	100%

BAD FOR PRACTICE ARGUMENTS

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- **Ghoshal, S. and P. Moran. 1996. “Bad for Practice,” *Academy of Management Review* 21: 13-47. Google scholar: 640.**
- **Ghoshal, S. 2005. “Bad management theories are destroying good management practices”. *Academy of Management Learning and Education*, 4: 75-91. Google scholar: 239.**
- **Mintzberg, H., Simons, R. and Basu, K. 2002. ”Beyond selfishness”. *Sloan Management Review* (Fall, 2002). Google scholar: 62.**
- **Ferraro, F., Pfeffer, J, and Sutton, R.I. 2005. “Economics language and assumptions: How theories can become self-fulfilling” *Academy of Management Review* 30: 8-24. Google scholar: 123.**
  - **AMR Best Paper Award 2006.**

BAD FOR PRACTICE CONTROVERSY

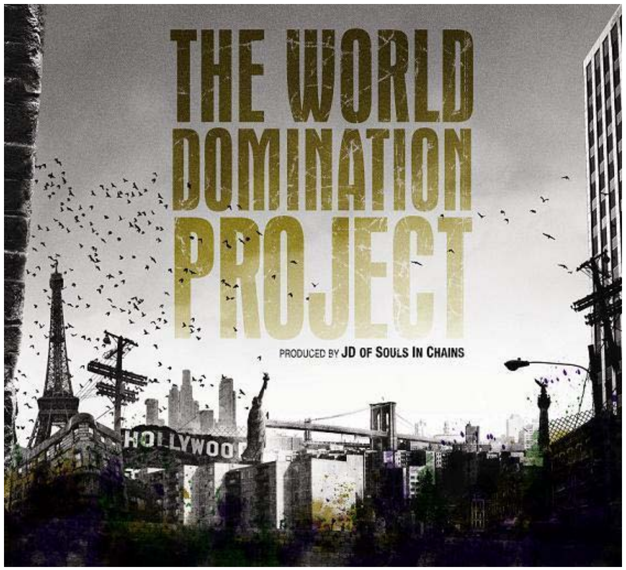
- Most sophisticated statement in Ferraro, Pfeffer and Sutton (2005, AMR, ”
- The teaching of econ, particularly TOF, creates a self-fulfilling prophecy. (Note: Economics is ”initially” false).
- Negative theoretical arguments concerning human nature are conveyed, diffused and reinforced through language, social norms, and organizational and institutional design.
- The latter determine behavior, ”confirming” the theory – i.e., a ”self-fulfillling prophecy.”

THE OTHER SIDE OF THE ARGUMENT

Check out Teppo Felin & Nicolai Foss. " Social Reality, the Boundaries of Self-Fulfilling Prophecy, and Economics," Organization Science 20: 654-668.

- **Many things are problematic in the FPS argument.**
- **E.g., naïve belief that people are just duped into accepting and disseminating false constructions.**
- **Neglects that there are economic fundamentals.**
- **Theories most likely to be adopted when they are true.**
- **Lopsided view of economics.**
- **Etc. ;-)**

DOMINANCE OF ECON/TOF?



- **Ferraro, Pfeffer & Sutton (and Ghoshal, Mintzberg, etc.) take this for granted.**
- **Strategic management.**
- **A study of the literature on organizational incentive systems (Merchant, Van der Stede, and Zheng, 2003, AOS) reveals that:**
  - **61% of the papers are based on econ ToF (mainly agency theory).**
  - **28% are behaviorally-based**
  - **11% cite both literatures**
  - **The economics papers received about 6 citations per paper, the behavioral ones 3.**
- **But the average AMR/ASQ/AMJ/OS/etc. paper is not exactly based on econ TOF.**

AN ALTERNATIVE VIEW

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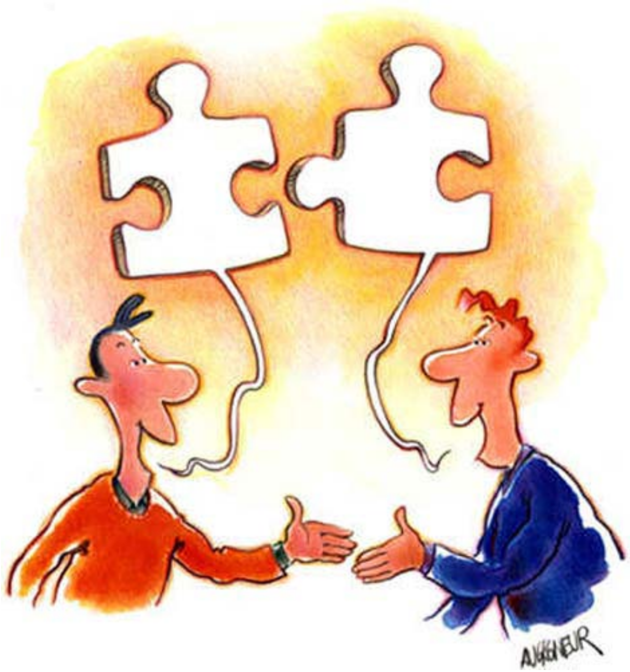


- **TOF can assist dialogue ("conversation", cf. Mahoney and Pandian, 1992) in management research.**
- **Do we need such dialogue?**

- **"...the goal of an integrated, coherent and relevant 'science of management' seems, if anything, further away than it did in the halcyon 1950s" (Whitley 1984).**
- **Still true – but is this a problem?**

BENEFICIAL PLURALISM? OR HARMFUL FRAGMENTATION?

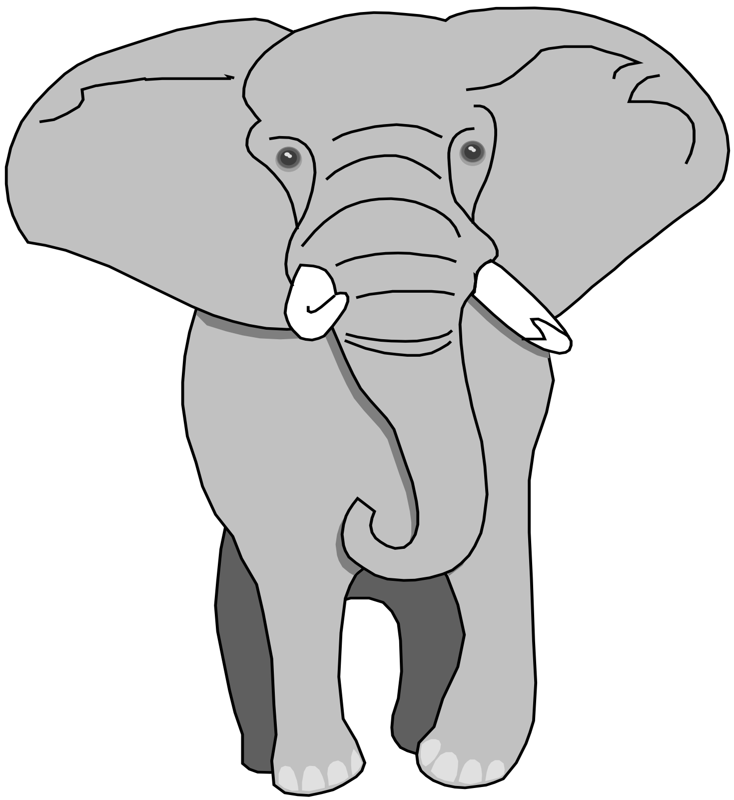
"Am I to understand that my proposal is greeted with some skepticism?"

- **Though fundamentally an economics stream, TOF makes contact to sociology and (social-) psychology -- i.e., the three dominant base disciplines in management).**
- **Certain integrative ambition -- particularly in Williamson's TCE.**
- **Many contract theorists also see their work as linking up with sociological organization theory (e.g., Robert Gibbons, ASQ, 2001; ICC, 2003; JEP 2004; David Kreps).**

SO … WHAT IS IT, THEN?

”A systematized body of knowledge about what firms <u>are</u>, what firms <u>do</u>, what causes them to <u>behave</u> in certain ways, what makes them <u>exist</u>, <u>change</u>, undertake the <u>production</u> of certain products, <u>demand</u> certain inputs, <u>learn</u> and <u>innovate</u>, <u>differ</u> from other firms, etc.”

INCLUDING …



Grandparent theories
Neoclassical
Behavioral
Managerial

Extended family
Evolutionary theory of the firm
Resource-based view
Dynamic capabilities, etc.

Nuclear family
Agency theory
Transaction cost economics
Property rights theory

Consider ”nuclear family theories” – Econ ToF

MORE NARROW CONCEPTUALIZATION

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The Nature of the Firm

By R. H. Coase

Economic theory has suffered in the past from a failure to state clearly its assumptions. Economists in building up a theory have often omitted to examine the foundations on which it was erected. This examination is, however, essential not only to prevent the misunderstanding and needless controversy which arise from a lack of knowledge of the assumptions on which a theory is based, but also because of the extreme importance for economics of good judgment in choosing between rival sets of assumptions. For instance, it is suggested that the use of the word "firm" in economics may be different from the use of the term by the "plain man."[1] Since there is apparently a trend in economic theory towards starting analysis with the individual firm and not with the industry,[2] it is all the more necessary not only that a clear definition of the word "firm" should be given but that its difference from a firm in the "real world," if it exists, should be made clear. Mrs. Robinson has said that "the two questions to be asked of a set of assumptions in economics are: Are they tractable? and: Do they correspond with the real world?"[3] Though, as Mrs. Robinson points out, "more often one set will be manageable and the other realistic," yet there may well be branches of theory where assumptions may be both manageable and realistic. It is hoped to show in the following paper that a definition of a firm may be obtained which is not only realistic in that it corresponds to what is meant by a firm in the real world, but is tractable by two of the most powerful instruments of economic analysis developed by Marshall, the idea of the margin and that of substitution, together giving the idea of substitution at

[1] Joan Robinson, *Economics is a Serious Subject*, p. 12.
[2] See N. Kaldor, "The Equilibrium of the Firm," *Economic Journal*, March, 1934.
[3] Op. cit., p. 6.

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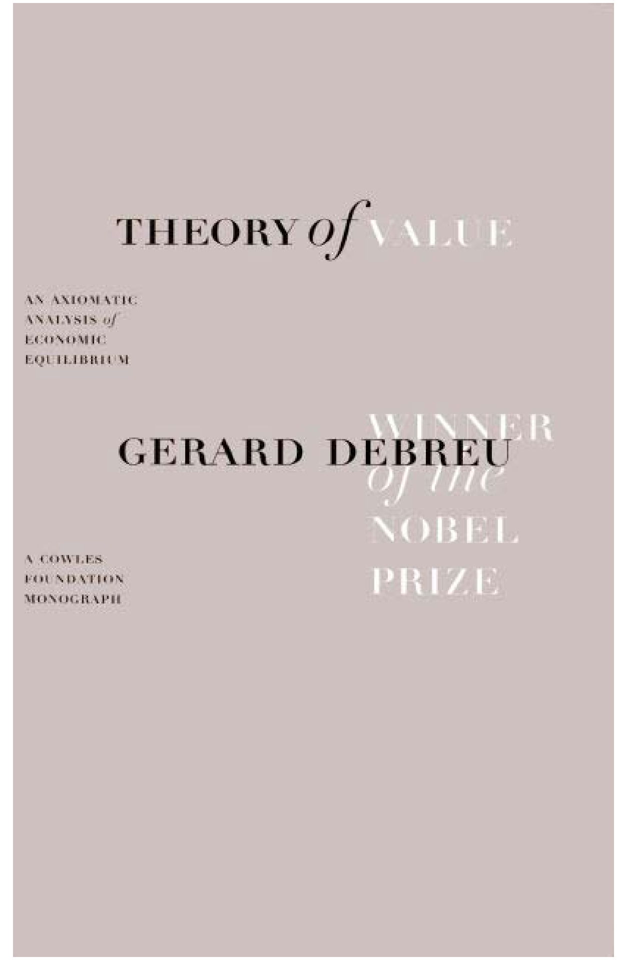
A theory that explains

- The **existence** of the firm (and other kinds of economic organization).
- The **boundaries** of the firm (ditto).
- The **internal organization** of the firm (ditto).

Ronald H Coase, 1910-

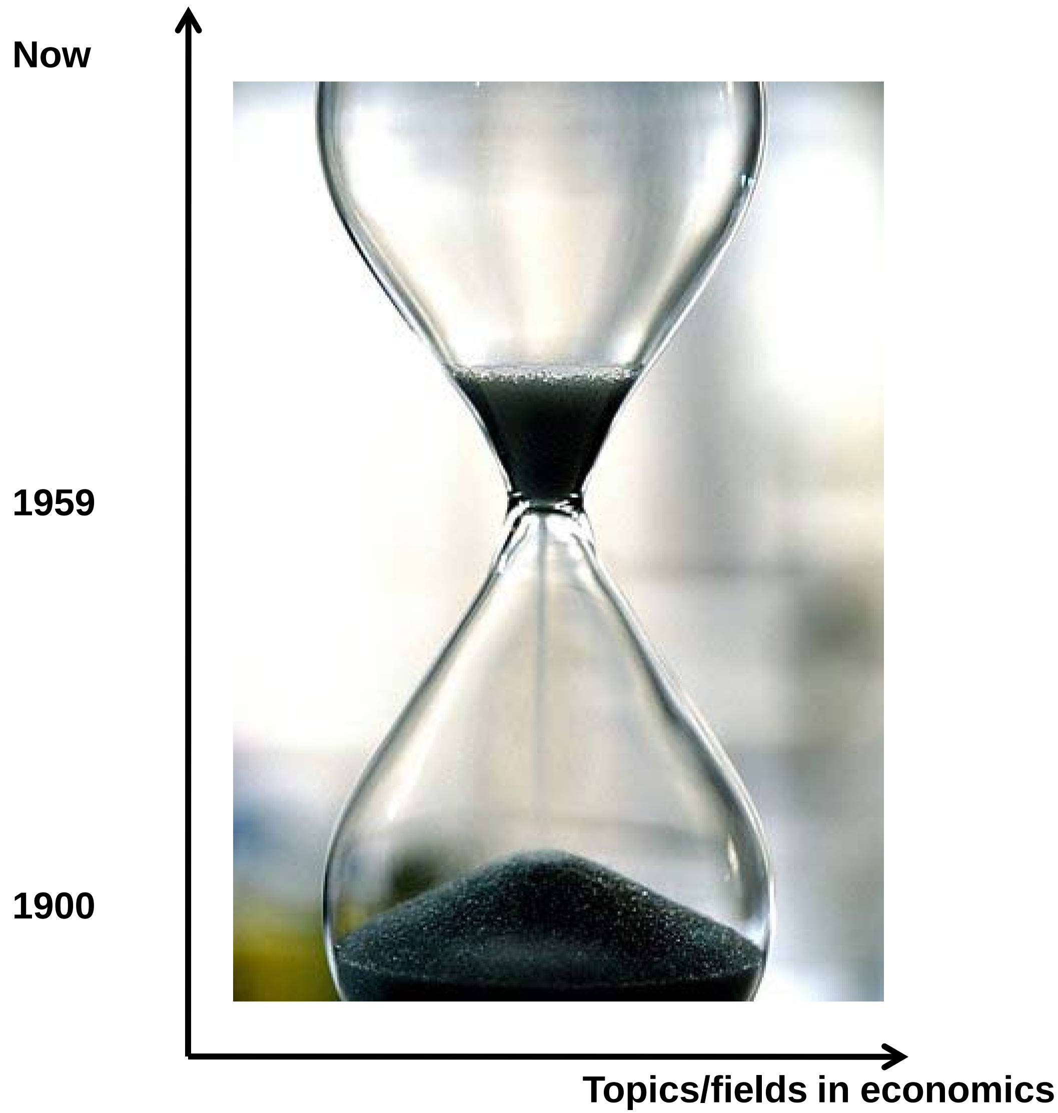
THE FIRM IN ECONOMICS – APPR. 1959

”… the concept of a *producer*, i.e., an economic agent whose role is to choose (and carry out) a production plan.   … For a producer … a production plan (made now for the whole future) is a specification of the quantities of all his inputs´and all his outputs; outputs are represented by positive number, inputs by negative numbers. With this convention … a production plan is represented by a point, y_j, of Rl, the commodity space” (Debreu 1959: 38).



ROMER'S TIMEGLAS

- Coase's ”The Nature of the Firm” published in **1937**.
- Debreu's 1959 firm much more **primitive**. Why?



THE CHANGING ECONOMIC CANON

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1959

Purposeful behavior (often ”greed”)

Forward-looking agents

Full information

Equilibrium

Competitive markets

2009

Purposeful behavior (but many more ”purposes”)

Forward-looking agents (but not perfect)

Asymmetric and imperfect information

Great proliferation of equilibrium concepts

Small numbers interaction

Claim in Foss & Klein (2009): This radical change in the ”economic canon” paved the way for the TOF from the beginning of the 1970s.

DIFFERENT TOFs

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1. "Old" property rights tradition (Coase, Cheung, Alchian & Demsetz, Barzel.)
2. Early, verbal agency theory (Jensen & Meckling, Fama, Demsetz ...).
3. Principal-agent theory (Wilson, Ross, Holmström, Milgrom, Roberts, Hart, Tirole, Laffont, ...).
4. Williamsonian transaction cost economics (Joskow, (B & P) Klein, ..)
5. New property rights economics (Hart, Moore).
6. Coordination and team theories (Wernerfelt, Sah & Stiglitz, Dessein, Garicano...).

- Contracting: Complete or incomplete?
- Which transaction costs are considered?
- Assumptions about human actors?
- Formalization/closeness to mainstream economics?
- Mode of explanation?

NOTE: Only 4 and 5 are TOFs in the narrow Coasian sense.

BUT THEY ARE ALL ABOUT ...

1) value creation,

2) why it may be difficult for a group of cooperating agents to realize maximum value creation (”efficient outcomes”), and

3) what they can do on the level of contracting and institution-building to get closer to the optimum.

VALUE MAXIMIZATION

- **Cooperating agents want to max the value they jointly create**
- **Doesn't this depend on how much each get?**
- **Not if TC are zero (or small) -- then their bargaining strength will *not* matter to the size of the value they create (as long as each get at least his opportunity cost) (Coase theorem).**
- **Intuition: With a bigger pie, at least one agent can get a bigger slice and the rest can get the same slices – and they can always negotiate towards this (Pareto optimality).**

CREATING VALUE THROUGH BARGAINING

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Define the ”negotiation set” of two agents – e.g.,

V = [(a,b) , (c, d)]; a, b, c, d, are payoffs, (a, c) are player 1’s pay-offs, and (b, d) are player 2’s.

Relation between the two pairs if the two player negotiate in 1994 about a *marketing-joint-venture* in China, where (a, b) are payoffs created by investments and (c, d) are status quo payoffs?

In the latter case, (c,d) are called ”default outcomes”*.*

Core problem in ToF:

Agents may confront situations where it is not trivial to realize the ”good” outcomes and avoid the ”bad” (default) outcomes.

Example

		B	
		v	z
A	x	2,2	0,0
	y	0,0	4,1

		B	
		v	z
A	x	2,2	0,0
	y	0,0	4-u, 1+u

Two (Nash) equilibria: (x,v) and (y,z).

Problem: Make A and B play (y,z) and share 5

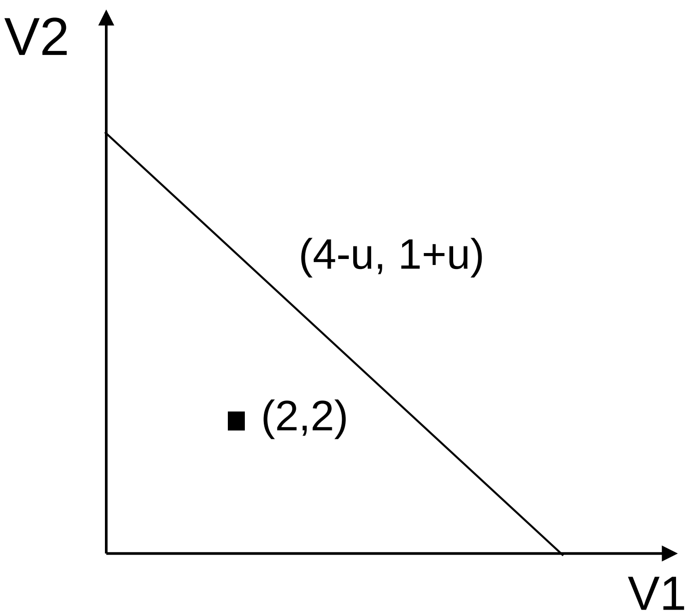
Potential solution: A offers B a bribe, u, for playing z; $1 < u < 2$.

Pot sol because it expands the bargaining set.

New problem: Is A: y, B: z a set of subgame perfect strategies?

NEGOTIATION AND VALUE MAX

When players can make ”side-payments””



- … the negotiation set may be portrayed as in the fig.
- … total value may be defined as the sum of the players’ payoffs, TV = V1 + V2.
- … the set of efficient outcomes are those that maximize the total value.
- … the compensation is irrelevant to total value creation (as long as 1 < u < 2)
- All this is for TC = 0.
- Continue with the example, now adding TC.

		B	
		v	z
A	x	2,2	0,0
	y	0,0	4-u, 1+u

A gives B u for playing z

Will B play z?

Situation 1:

Situation 2:

A promises B to give him u after B has played z

A and B play

Will A give B u?

(x,v) or (y,z)?

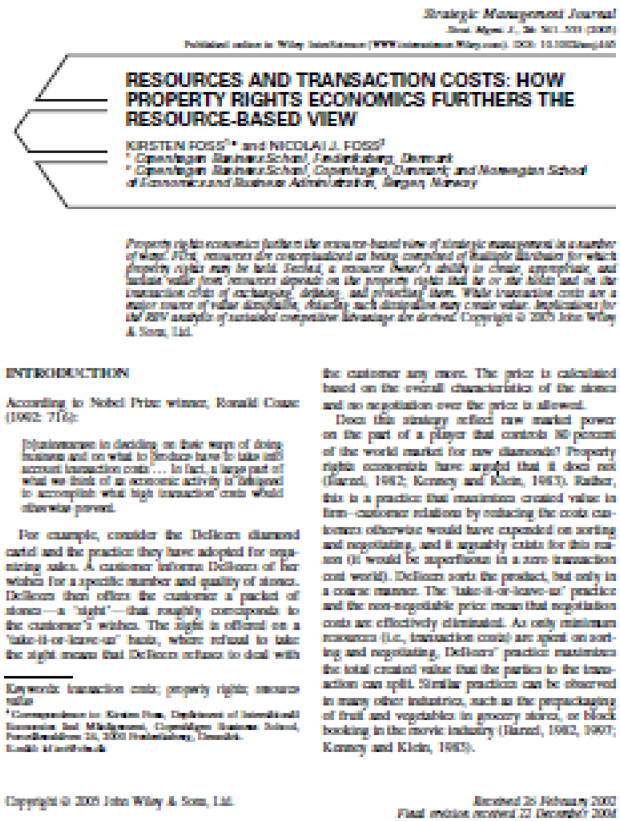
Contract enforcement? E.g., repeated dealings?

Contracting – complete or incomplete?

Verifiability?

Firm organization or market organization?

NOTE OBVIOUS STRATEGY IMPLICATIONS



Strategic Management Journal

RESOURCES AND TRANSACTION COSTS: HOW PROPERTY RIGHTS ECONOMICS FURTHERS THE RESOURCE-BASED VIEW

KIRSTEN FOSS[1]* and NICOLAI J. FOSS[2]

[1] Copenhagen Business School, Frederiksberg, Denmark

[2] Copenhagen Business School, Copenhagen, Denmark and Norwegian School of Economics and Business Administration, Bergen, Norway

INTRODUCTION

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- **Transaction costs are impediments to value creation.**
- **Value can be created by reducing TC (Foss & Foss, 2005, SMJ).**
- **Firms can have a transaction cost-reducing competitive advantage.**
- **Superior contract (and more broadly: relation) drafting, monitoring, managing, etc. capabilities. (Will get back to this).**

”THE TOF ANALYTICAL ENGINE”

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TOF begins from individual actors, examines their interaction, and ”builds up” from this (”methodological individualism”)

… making specific assumptions about cognition, motivation and structure of interaction (”low-fat modelling”)

… pinning out why exchange processes usually fail to reach first-best outcomes (”market failure”)…

… but also identifying how (smart) actors may succeed in reaching the second-best, using contracts and governance structures (”comparative institutionalism/contracting”).

THE EXPLANATORY REACH OF TOF

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- Recall that TOF addresses the existence, boundaries and internal organization of firms.
- These are highly abstract theoretical conceptualizations of phenomena.
- E.g., what exactly does it mean to say that TOF explains ”internal organization”?
- E.g., psychological contracts? Organizational belief systems? The moulding of behaviors by organizational culture? Leadership behavior? Power relations? Empowerment? Solidary behaviors within the firm? Trust? Etc.

EXPLANATORY REACH – CONT'D

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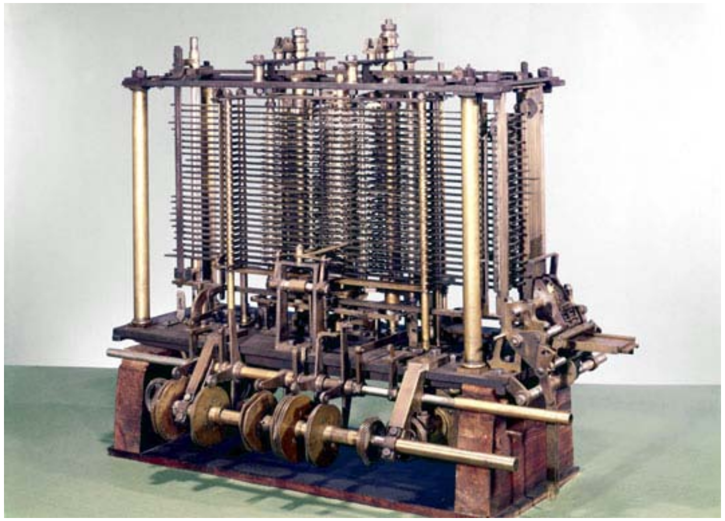
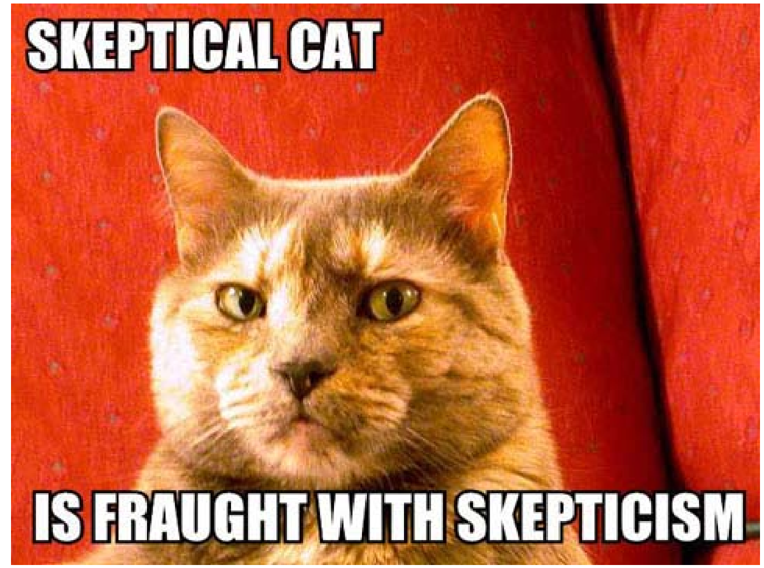


- In fact, there is TOF work on such "soft" issues.
- Social psychology, political science, anthropology?
- These issues are all addressed in the TOF, using the "TOF Analytical Engine."

- E.g., Kreps (1990) conceptualize corporate culture within the logic of repeated games.
- Foss, Foss and Vazquez (2006) do the same with respect to psychological contracts.
- Jensen and Meckling (1992) shows how delegation ("empowerment") allows for a better use of local knowledge.
- Milgrom (1988) shows how the rigidy of hierarchical rules may reflect attempts to reduce rent-seeking.

EXPLANATORY REACH – CONT'D

- **TOF theorists have been successful of providing conceptualizations and explanations of such phenomena within the confines of the TOF.**
- **Are these stories convincing? Do they capture the essential aspects of the phenomena? Are they to empirical testing? subject**



EXPLANATORY REACH – CONT'D

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- Remember Kreps' (1997) point: Economics has drastically expanded its explanatory power by modifying 1) behavioral assumptions and 2) assumptions about interaction.
- More "realism."
- Does economics still make strong assumptions?

EXPLANATORY REACH – CONT'D

- Recall earlier game theory example.
- Assumed that A and B know, 1) about the other player's existence, 2) the other player's rationality, 3) the other player's strategies, 4) their own strategies, 5) that the other player knows, 6) the structure of the game, etc. (and all this is common knowledge).
- Where all this comes from is ”black-boxed.”
- Rationality perfect.
- While players can be asymmetrically informed about (are ignorant about) a few things, they have perfect knowledge about other things (Foss & Foss, 2000, JEM) – ”spanners-in-the-works”, ”on-off approach”.
- Motivation and cognition are separate things.

CONSIDER ENTREPRENEURSHIP

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- **Eship "involves the study of sources of opportunities; the processes of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them."**

- **Also consider "how the exploitation of entrepreneurial opportunities are organized in the economy."**

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2000, Vol. 25, No. 1, 217-226.

NOTE

THE PROMISE OF ENTREPRENEURSHIP AS A FIELD OF RESEARCH

SCOTT SHANE
University of Maryland

S. VENKATARAMAN
University of Virginia

To date, the phenomenon of entrepreneurship has lacked a conceptual framework. In this note we draw upon previous research conducted in the different social science disciplines and applied fields of business to create a conceptual framework for the field. With this framework we explain a set of empirical phenomena and predict a set of outcomes not explained or predicted by conceptual frameworks already in existence in other fields.

For a field of social science to have usefulness, it must have a conceptual framework that explains and predicts a set of empirical phenomena not explained or predicted by conceptual frameworks already in existence in other fields. To date, the phenomenon of entrepreneurship has lacked such a conceptual framework. Rather than explaining and predicting a unique set of empirical phenomena, *entrepreneurship* has become a broad label under which a hodgepodge of research is housed. What appears to constitute entrepreneurship research today is some aspect of the setting (e.g., small businesses or new firms), rather than a unique conceptual domain. As a result, many people have had trouble identifying the distinctive contribution of the field to the broader domain of business studies, undermining the field's legitimacy. Researchers in other fields ask why entrepreneurship research is necessary if it does not explain or predict empirical phenomena beyond what is known from work in other fields. Moreover, the lack of a conceptual framework has precluded the development of an understanding of many important phenomena not adequately explained by other fields.

One example of this problem is the focus in the entrepreneurship literature on the relative performance of individuals or firms in the context of small or new businesses. Since strategic management scholars examine the differences in and sustainability of relative performance between competitive firms, this approach is not unique (Venkataraman, 1997). Moreover, the approach does not provide an adequate test of entrepreneurship, since entrepreneurship is concerned with the discovery and exploitation of profitable opportunities. A performance advantage over other firms is not a sufficient measure of entrepreneurial performance, because a performance advantage may be insufficient to compensate for the opportunity cost of other alternatives, a liquidity premium for time and capital, and a premium for uncertainty bearing. Therefore, although a conceptual framework to explain and predict relative performance between firms is useful to strategic management, it is not sufficient for entrepreneurship.

We attempt an integrating framework for the entrepreneurship field in the form of this note. We believe that this framework will help entrepreneurship researchers recognize the relationship among the multitude of necessary, but not sufficient, factors that compose entrepreneurship, and thereby advance the quality of empirical and theoretical work in the field. By providing a framework that both sheds light on unexplained phenomena and enhances the quality of research, we seek to enhance the field's legitimacy and prevent its marginaliza-

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THINGS TOF CAN SAY ABOUT ESHIP

- **New firms** emerge through entrepreneurial acts – Existence of the firm issue (Foss & Klein, 2005)
- **Changes in the boundaries of firms may reflect entrepreneurial experimentation with new asset combinations (Matsusaka, 2001; Klein & Klein, 2002).**
- **Spinoffs may reflect incentive problems in parent firm (agency issue; internal organization) (spawning literature, Gompers et al., 2004, JFE).**
- **What asset combinations are necessary to realize opportunities (Teece, 1986).**

AND HAVE A HARDER TIME ADDRESSING

- Antecedents of opportunity discovery – genes, psychological dispositions, non-extrinsic motivation, networks, etc.
- Process and team aspects of opportunity discovery/creation.
- Opportunity evaluation.