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Strategically Managing Corporate Entrepreneurship and Innovation in Turbulent Times

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I. Corporate Longevity*

- Compare Fortune 100 in 1965 vs. Fortune 100 in 2005

(Note: Based on quick “eyeballing approach”)

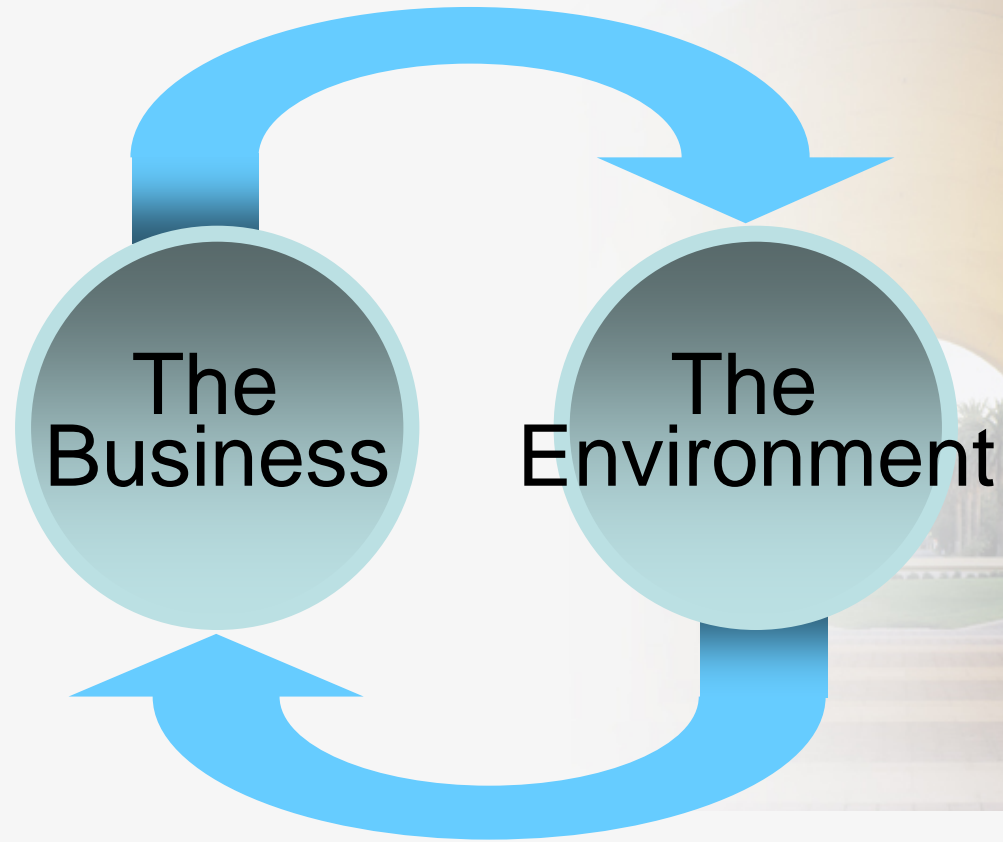
	Top 10	Top 20	Top 50	Top 100
-Survivors	5	6	12	19
-Fell out:	1	4	11	15
-Gone/acq.:	4	10	27	66

.	Gen. Mot. Exxon Mob. Ford Mot. Gen Elect. IBM	Gen.Mot. Exxon Mob Ford Mot. Gen. Elect. IBM Chevron Tex.	Gen.Mot. Exxon Mob. Ford Mot. Gen. Elect. IBM Chevron Tex. Boeing P&G Lock. Mart. ConocoPhil. Unit. Techn. Dow Chem.	Gen.Mot. Exxon Mob. Ford Mot. Gen. Elect. IBM Chevron Tex. Boeing P&G Lock. Mart. ConocoPhil. Unit. Techn. Dow Chem. Caterpillar, DuPont, Int. Paper, Honeywell Int., Alcoa, Coca Cola, Weyerhauser
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*Source: Burgelman, R.A. and Grove, A.S., “Let Chaos Reign, then Rein in Chaos - Repeatedly: Managing Strategic Dynamics for Corporate Longevity,” *Strategic Management Journal*, October 2007.



II. Strategic Dynamics





III. Types of “Rules of the Game” *

1. **Normative** rules – based on laws, customs, administrative principles
2. **Technological** rules – based on available technical solutions
3. **Economic** rules – reflecting existing bargaining power relationships among industry players (often captured in contracts)
4. **Cognitive** rules – widely shared judgments about key success factors

Note:

“Innovation” typically involves changing some or all of the “rules of the game”

*Source: Burgelman, R.A. and Grove, A.S., “Let Chaos Reign, then Rein in Chaos - Repeatedly: Managing Strategic Dynamics for Corporate Longevity,” *Strategic Management Journal*, October 2007.



IV. Strategic Dynamics Situations

P_i 's Strategic Actions

	Rule-abiding	Rule-changing ¹
Rule-abiding (E, e)	Limited industry change	P_i -controlled industry change
Rule-changing ¹	P_i -independent industry change	Runaway industry change

¹ Rule-changing actions have the potential to change the competitive context for all the players (they materially change the competitive value of existing product-market positions and/or distinctive competencies of the players).



V. Examples from Intel's Evolution*

1. **P_i -independent industry change:** Intel's exit from DRAM
(Late 70's to early 80's)
2. **P_i -controlled industry change:** Intel's sole source strategy
(From mid 80's on)
3. **Potential runaway industry change:** The battle of RISC versus CISC within Intel (1989-1991)
Note: Vectoring Intel behind CISC led to co-evolutionary lock-in and strategic inertia (1991-1998)
4. **Intel's new P_i -controlled industry change:** Intel's "right hand turn" (2000-2003; and beyond): Centrino and "platform" strategy



CREATE LINKAGE

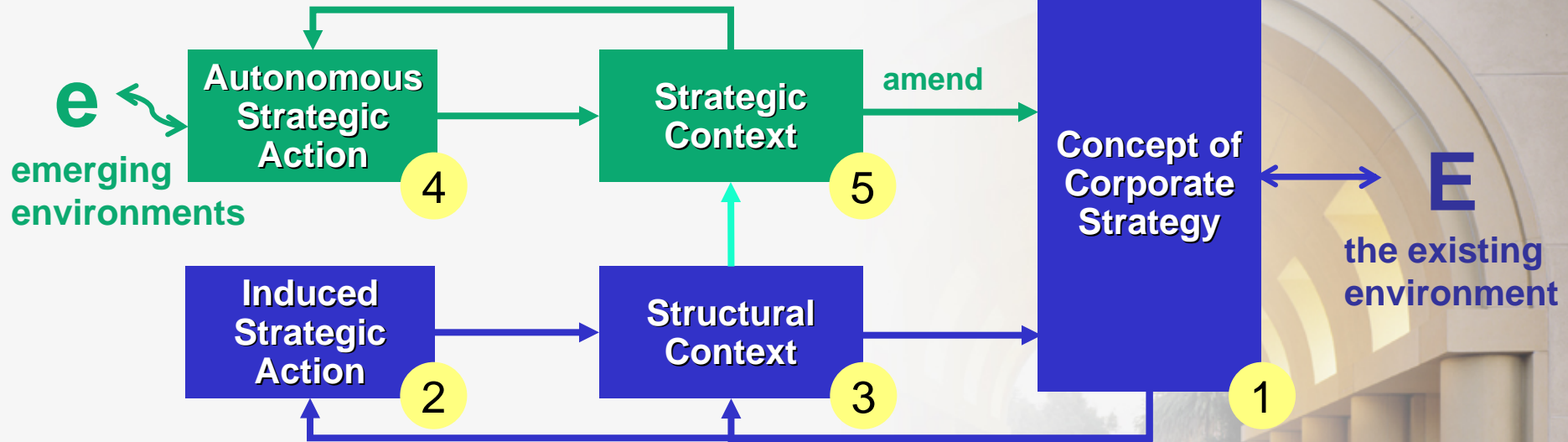
Radical Innovation

(initially not necessarily large)

But: **Complement** or **Substitute**?

Middle/Senior Mgt : Increase Scale

1. Conceptual Skills
2. Political Skills



Incremental Innovation
(not necessarily small)

1. Organizational Structure
2. Planning & Control Systems
3. Resource Allocation Rules
4. Measurement & Reward Systems
- ... Principles of Behavior

Top Management Beliefs about:

1. Distinctive Competence
2. Product Market Domain
3. Core Values
4. Objectives

Organizational Learning

ACHIEVE ALIGNMENT



VII. Managing Strategic Dynamics: Accumulating resources for autonomous strategic initiatives

Example: Percentage of Developmental Resources Allocated to Induced and Autonomous Strategy Processes at Critical Times in Intel's Evolution*

	1976 ¹	1984 ²	1989 ³	1991 ⁴	1998-2001 ⁵	2003 ⁶	2005 ⁶
Induced (I):	75	65	66	87	65	70	50
Autonomous (A):	25	35	34	13	35	30	50

* As estimated by A.S. Grove, based on personal experience and company documents

¹ I = memory related; A = microprocessor related

² I = memory related; A = microprocessor related

³ I = x86 microprocessor related; A = non-x86 (RISC) microprocessor related

⁴ I = x86 microprocessor related; A = non-x86 (RISC) microprocessor related

⁵ I = x86 microprocessor business related; A = related to networking and communications businesses

⁶ I = pure microprocessor business related; A = platform-business related (including Centrino)



VIII. Managing Strategic Dynamics: Scaling up and vectoring resources for autonomous strategic initiatives

Top Management Strategic Choices Related to Autonomous Opportunities

		Autonomous Opportunity	
		Validated	Not-yet-validated
Cash Reserves	Sufficient*	Safe bet	Wait to bet
	Insufficient	Bet the company	Desperate bet

* To protect the company from disaster in case scaled-up autonomous initiative ultimately fails.

IX. Managing Strategic Dynamics: Matching induced and autonomous strategy processes with strategic dynamics

		STRATEGIC DYNAMICS SITUATIONS			
		P_f -independent industry change	P_f -controlled industry change	Runaway industry change	
		Linear and Stable (Base Case)	Nonlinear and Disruptive	Nonlinear and Complex	Nonlinear and Chaotic
Induced Strategy Process	Serves to exploit core business opportunities	Serves to retreat orderly from core business	KEY: Serves to exploit new major opportunities through “vectoring” the organization in the new strategic direction	KEY: Serves to align the organization behind a “safe bet,” ¹ or “bet the company” ² strategic direction	Serves to maintain alignment during “wait to bet” ³ decision
OR					
Autonomous Strategy Process	Serves to explore potential new growth opportunities	KEY: Serves to develop new opportunities consistent with distinctive competence in advance of threats to current ones	Serves to continue to explore potential new future growth opportunities	Serves to reduce uncertainty of new possible strategic directions before betting on one	KEY: Serves to continue to experiment with new opportunities While waiting to bet
IMPLICATIONS FOR RESOURCE ALLOCATION	Watch evolution of growth opportunities to marginally re-balance support of both processes	Gradually increase resource allocation to winning new opportunities in autonomous process	Massive increase in support of induced strategy process but maintain viability of autonomous process	Massive increase in support of induced strategy process but maintain viability of autonomous process	Gradually increase resource allocation to winning new opportunities in autonomous process

¹ *Safe bet* = validated opportunity and cash reserves; ² *Bet the company* = validated opportunity and no cash reserves; ³ *Wait to bet* = not-yet-validated opportunity and cash reserves.



X. Strategic Leadership Challenge: Simultaneously managing for “fit” and “evolvability”

A. Theoretical Foundation

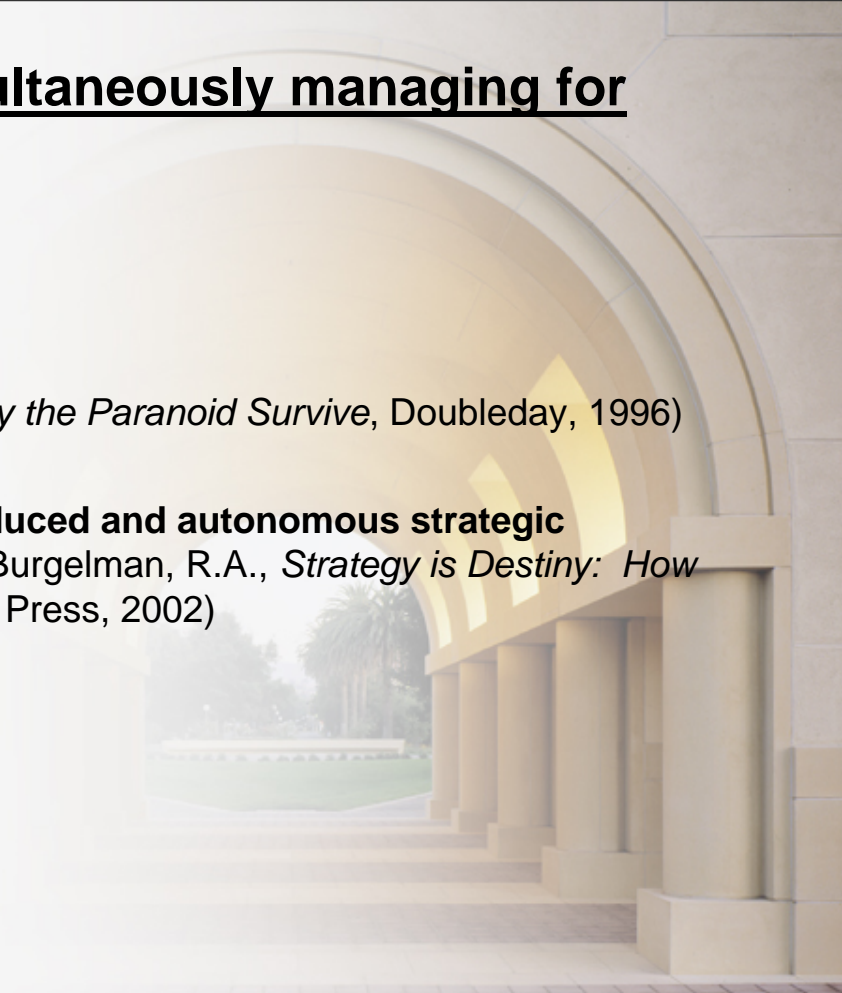
- 1. The continued evolution of “complex adaptive systems” depends on “mutations” and “innovations” occurring stochastically** (in our terms: generated through the autonomous process) **and becoming integrated into the system by the “deterministic relations prevailing at the moment”** (in our terms: becoming part of the induced process). (Prigogine, I., *From Being to Becoming*, Freeman, 1980:128)
- 2. Successful systems move toward “adaptation at the edge of chaos”** (Kauffman, S. *The Origins of Order: Self-Organization and Selection in Evolution*, Oxford University Press, 1993)
“Such systems must be adaptive, but too much (and too precise) a local fitting may freeze a system in transient optimality with insufficient capacity for future change. Too much chaos may prove fatal by excessive and unpredictable fluctuation, both in external environments and internal states. But a capacity to adapt to chaotic situations also confers evolvability. Adaptation at the edge of chaos balances both desiderata of current functionality and potential for future change, or evolvability.”
(Gould, S.J., *The Structure of Evolutionary Theory*, Harvard University Press, 2002, pp. 1273-74)



X. Strategic Leadership Challenge: Simultaneously managing for “fit” and “evolvability”

3. Therefore:

- “Let chaos reign, then rein in chaos” (Grove, A.S., *Only the Paranoid Survive*, Doubleday, 1996)
- **But never completely: Adjust the balance between induced and autonomous strategic processes throughout the company’ evolution** (Burgelman, R.A., *Strategy is Destiny: How Strategy-Making Shapes a Company’s Future*, Free Press, 2002)





X. Strategic Leadership Challenge: Simultaneously managing for “fit” and “evolvability”

B. Some Strategic Action Implications for Top Management:

1. Continuously optimize the induced strategy process:

- Closely manage the link between customers' perceived value and cost of delivering that value; think of reducing costs as freeing up resources for additional value creation
- Look for ways - new technology, new organization - to shift the possibilities frontier that links customer value and costs
- Heed (what I call) Moore's Second Law: "You never get well on your old products," and maintain sufficient cash reserves to be able to continue to invest in downturns

2. Impose appropriate discipline on the autonomous process

- Suspend the selective pressures of the structural context, but only temporarily, and don't communicate how much you are willing to invest in autonomous initiatives
- Require autonomous initiative takers to define successive "minimum winning games"* and associated milestones and hold them to these; remember that stopping losers creates resources for the next potential winners
- Rely on senior executives below top management to set the stage for determining the strategic context for a growing autonomous initiative; this reduces uncertainty and provides the logic for why top management should move from "maybe" to "yes" in putting the full support of the corporation behind such initiative, thereby making it part of the induced strategy process going forward

*Source: Burgelman, R.A. and Siegel, R.E. "Defining the Minimum Winning game in High-Technology Ventures," *California Management Review*, Spring 2007.



XI. Self-Similarity Across Scale* - From the Corporate to the Societal Level: Some Remarkable Parallels

A. Somewhat unwittingly but ultimately felicitous: “Let Chaos Reign:”

1. Communist entrepreneurs in Pre-1989 Eastern Europe:

“This book is about innovative individuals in Eastern Europe and the Soviet Union. I call them entrepreneurs, because they have traits commonly associated with entrepreneurship. They are achievement-oriented, and strong-willed, and they disregard rules. They are mavericks who have built productive and creative organizations in environments which reward people more for doing what they are told than for exercising initiative.” (Kiser, J. W. III, *Communist Entrepreneurs: Unknown Innovators in the Global Economy*, Franklin Watts, 1989:1.)

2. Deng’s industrial revolution in China during the 1970s:

“Yet the process by which these astonishing changes have occurred owes as much to accident and to experiment as to grand design. Deng likened his non-ideological, gradualist approach to ‘crossing the river by feeling for the stones’. Many of the so-called market reforms were little more than giving space – often by turning a blind eye – to what China’s entrepreneurial citizens were already doing.” (Pilling, D. “China’s ‘warp-speed’ industrial revolution,” *Financial Times*, December 19, 2008)

*Source: Gaddis, J.L. *The Landscape of History: How Historians Map the Past*, Oxford University Press, 2002



XI. Self-Similarity Across Scale - From the Corporate to the Societal Level: Some Remarkable Parallels

B. Catastrophic Failure to “Rein in Chaos:”

1. Today’s financial and economic crisis:

- At the corporate level: Top management of major financial institutions irresponsibly failed to understand the substance and potential liabilities of the autonomous strategic initiatives associated with so-called “collateralized debt obligations” (CDOs) and other financial instruments based on complex mathematical formulas that they were supporting.

(For a limited analogy, remember how Intel’s top management had to resolve the internal competition between RISC versus CISC adherents to prevent potential “runaway change” in the PC industry)

- At the societal level: Regulators, comfortably relying on the faulty assumptions about the self-correcting nature of markets, regularly and forcefully espoused by an idolized Chairman of the Federal Reserve, did not pay attention to the weak signals coming from dissenting voices and thereby failed to capitalize on “strategic dissonance”* to anticipate the coming “runaway change” and ensuing debacle.

*Source: Burgelman, R.A. and Grove, A.S. “Strategic Dissonance,” *California Management Review*, Winter 1996.



XII. Conclusion: A Call to Arms for Academics

We must accelerate the development of the analytical and conceptual tools that may help our leaders to better meet the rapidly growing challenges posed by nonlinear strategic dynamics

THANK YOU
