

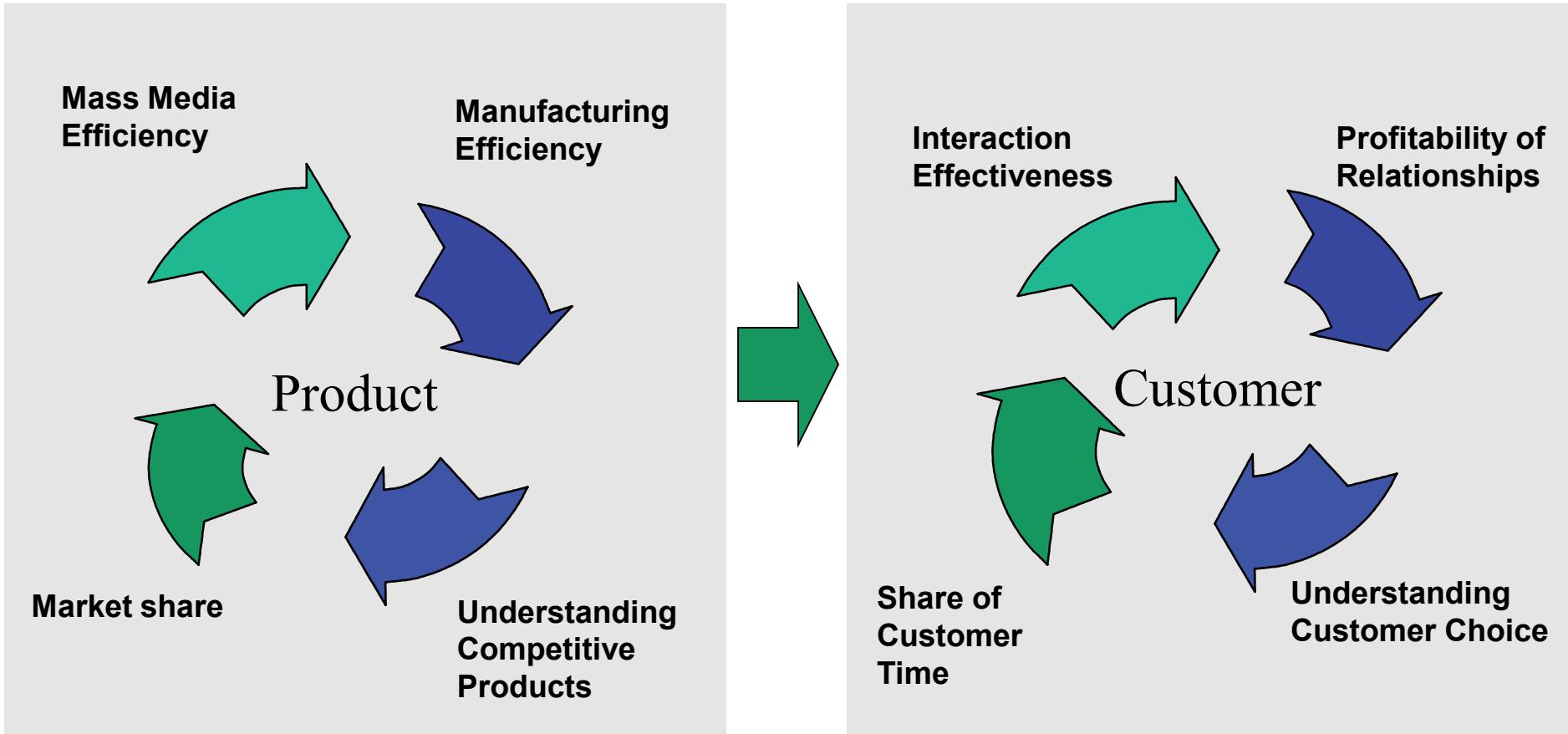
# Business competitiveness and the customer experience space

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# Companies are beginning to reorient...



A new form of competitive advantage  
based on superior customer knowledge  
and quicker business response is  
emerging...

Is this really new?

# Imagine a bike race...



# The new scarcity

- Then
  - What was scarce
    - The capital and knowledge needed for manufacturing excellence
  - Why is it no longer scarce?
    - Low labor costs, quality replication, quick diffusion of knowledge across cultures
  - What did this create?
    - Illusion of sustainable competitive advantage based on Porter's five forces
    - The need to protect the capital investment in the plant
- Now
  - What is scarce
    - Knowledge of customers gotten and applied within needed time frames
  - Why is it scarce?
    - Complexity, uncertainty, fragmentation, inability to replicate knowledge across cultures
  - What does this create?
    - Sustainable competitive advantage based on cybernetic knowledge
    - The need to protect customer relationships

# The side-effect

- Managing customer relationships has emerged as a possible competitive advantage
  - Accumulating customer knowledge is the conventional approach
  - Integrating business processes to better attract and keep customers appears to be a conventional approach (inside-out)
  - Technology-induced change seems wide-spread
- But... more needs to be done
  - The business strategy needs to be *rethought*
  - The role of customer relationships in the business strategy needs to be articulated better (outside-in)
  - The emphasis on technology needs to be reduced
  - The difficulty in *really* doing this needs to be understood

# What is a business for?

- To serve customers and make money doing so
- The essence of business strategy is to arrange resources so that more customers *choose* the business at the expense of other choices
- If the customer choice is the lynchpin, why not ruthlessly focus on the customer choice???

# Why do business avoid examining customer choices?

My mind to your mind...

- Clear, unvarnished understanding of customers is threatening. It raises emotions. It creates fear. We instinctually try to reduce this stress. It seems built into our biology as primates and human beings
- Businesses prefer to translate subjectivity and emotion with the language of science. Along the way, the essence of the matter gets lost and knowledge fails to evoke visceral responses in others, and hence action is deferred or lost.
- Because of this preference for the rational over the irrational, businesses get sidetracked into all sorts of areas one or two steps removed from clearly understanding customer choice: data warehousing, internal business processes, software applications, measuring customer satisfaction, etc.

But there is still more...

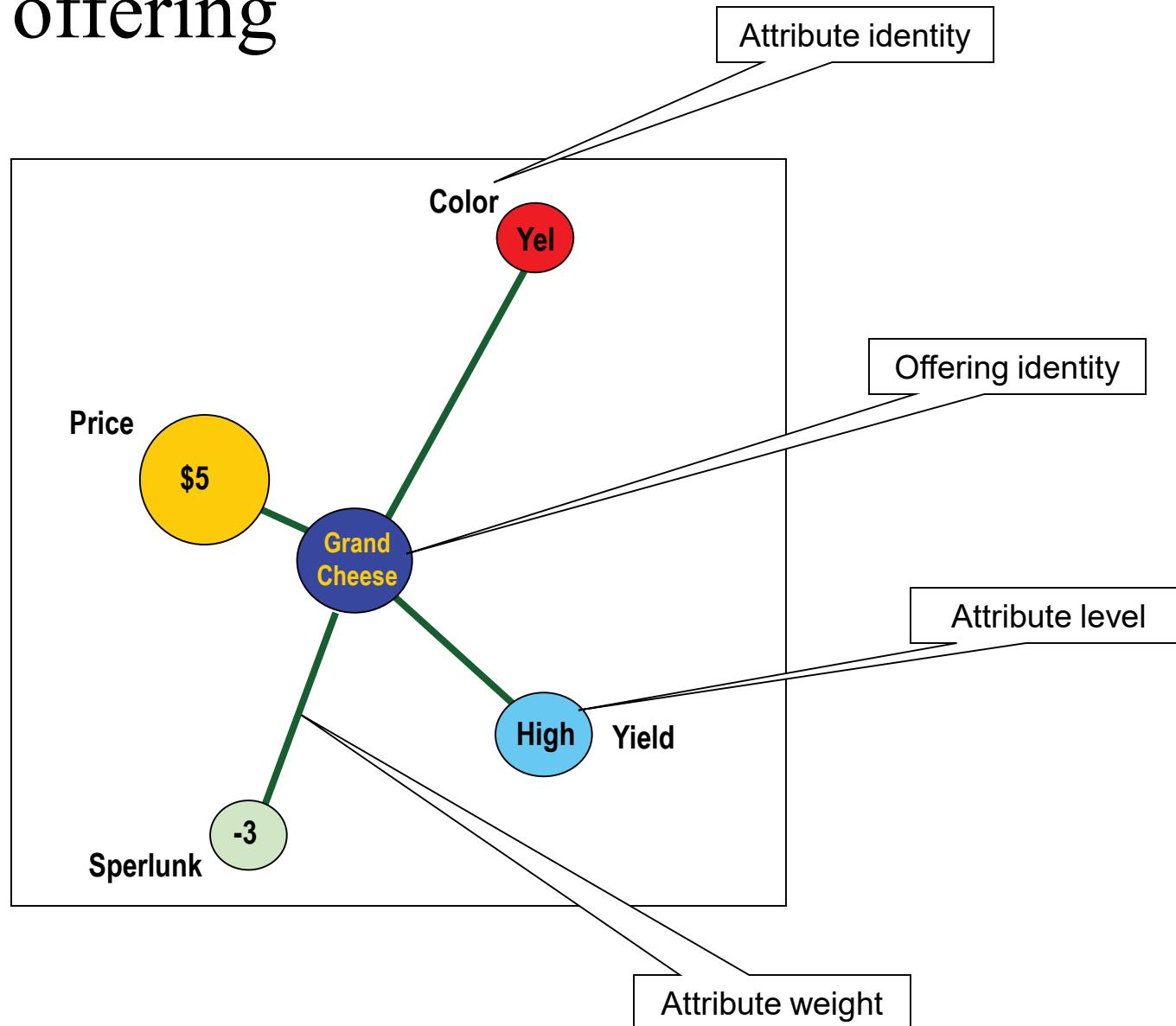
# Let's examine the customer choice

- Customers have an idea of what they wish to purchase
  - Where did this idea come from? Very interesting...
    - Mass marketing and the modern project
    - Targeted marketing and postmodern consumerism
- Businesses have an idea of what they want to sell, and more or less have an idea of what the customer wants
  - Where do they get their idea from? Very interesting...
    - Listening to customers
    - Playing with molecules
    - From the hunch and intuition of leaders inside
    - From other innovators (by observation, theft and spies)
    - From competitors (by observation, theft and spies)

# What does a customer choose?

- Offerings. Which have the following attributes:
  - An identity, attributes, weights (importance) and levels
  - Associated offerings
- Other terms
  - Agents can be customers or producers
  - $O$  is an offering as intended by an agent
  - $O'$  is an offering as desired by an agent
  - All versions of  $O$  and  $O'$  can be collectively referred to as an offering
- Offerings propagate and mutate
  - Offerings are not simply copied. They may change as they are communicated. For example, as a customer begins to be more involved in a product category, their desired offering begins to change. Experience with an offering, either while searching for it, buying it or using it, can change  $O'$ .
  - Similar terms: replicate, select

# An offering



# An offering is not just product attributes



# The first set of problems

Producers and customers don't always agree on offerings, attributes, weights and levels

## Offering identity problem

- Producer says: “Our product name is ‘No. 14 General Widget Deluxe Gold’
- Customer thinks: “I can forget this one”

## Offering association problem

- Producer says: “Our product name is ‘Brundě’”
- Customer thinks: “Reminds me of my sink’s garbage disposal”

## Attribute identity problem

- Producer says: “This cheese has great sperlunk”
- Customer thinks: “What is sperlunk?”

## Attribute level problem

- Producer says: “This cheese has a glorious puce coloring”
- Customer thinks “Looks chartreuse to me”

## Attribute weight problem

- Producer says: “Reheating is the most important attribute”
- Customer thinks: “Not to me”

# The second set of problems

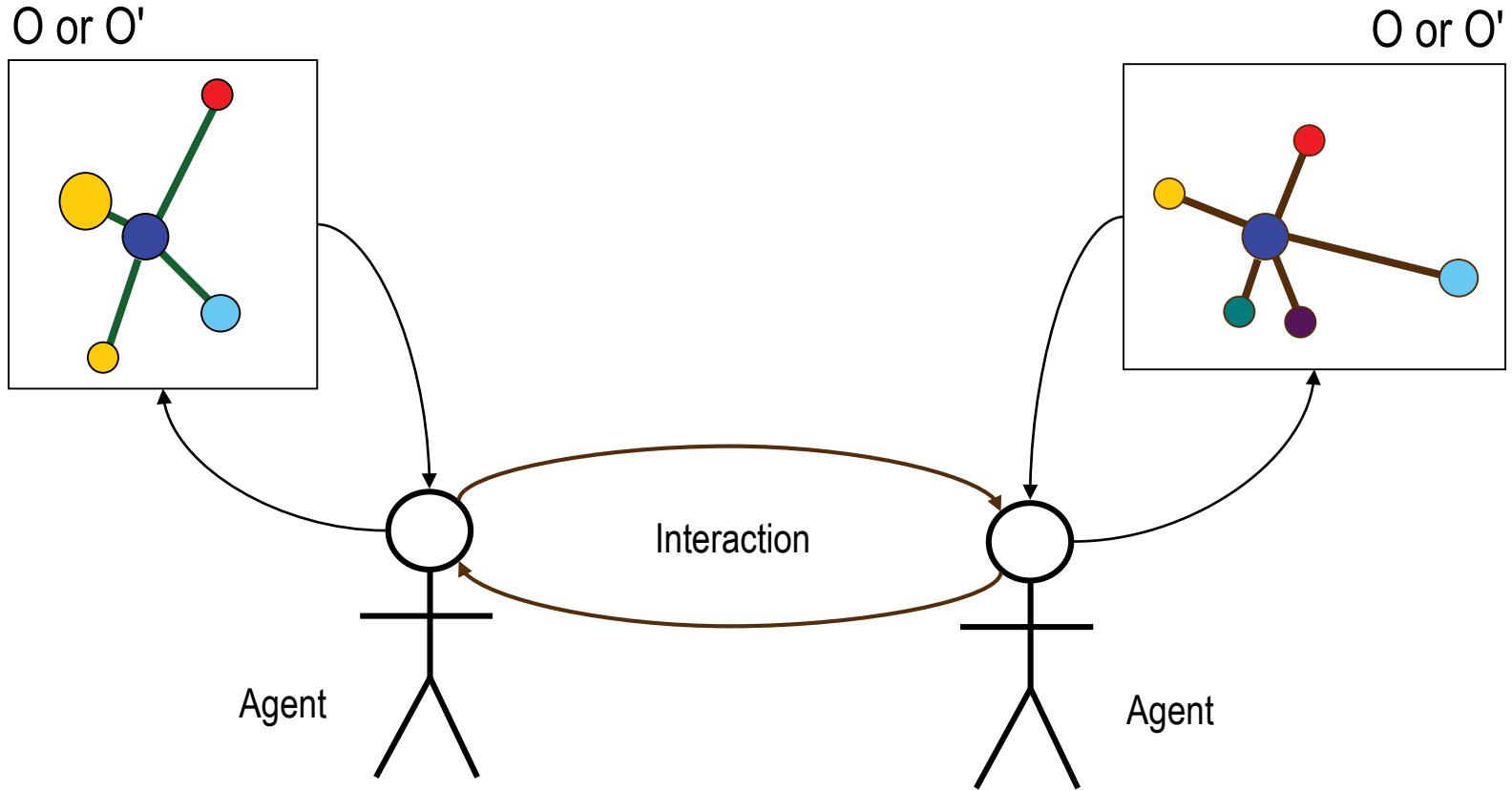
O' attribute weights, levels, identities and associations can change

- From moment to moment as a result of
  - Inspecting or selecting the offering
  - Conversing with the producer
  - Sleeping on it
  - Conversing with or observing other customers

O attribute weights, levels, identities and associations can change

- From moment to moment as a result of
  - Using the Internet and personalization
- Slowly as a result of
  - Inspecting or selling the offering
  - Conversing with the customer
  - Sleeping on it
  - Conversing with or observing other producers

# Propagation



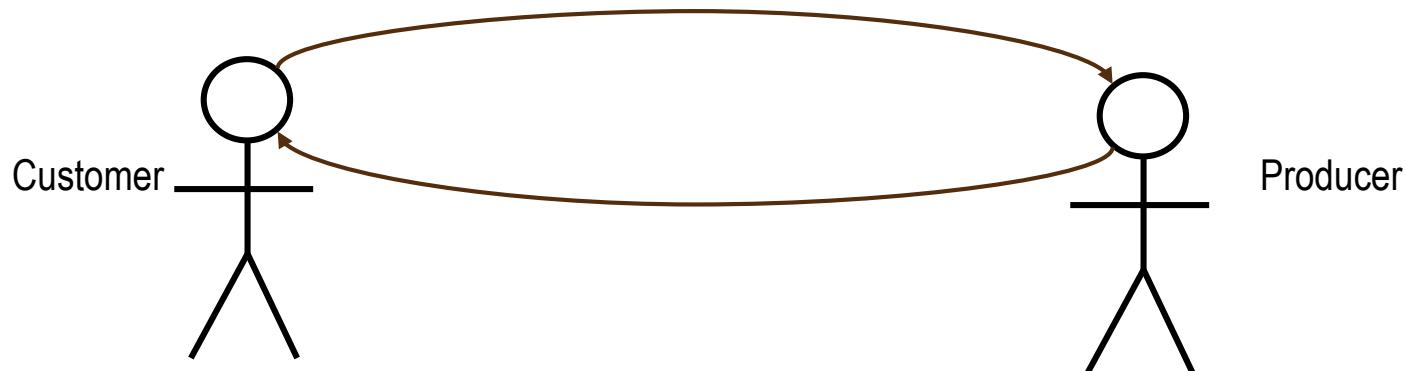
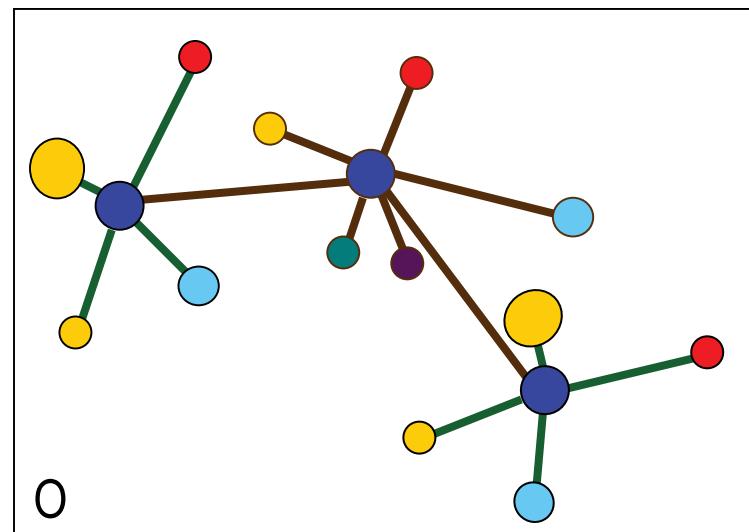
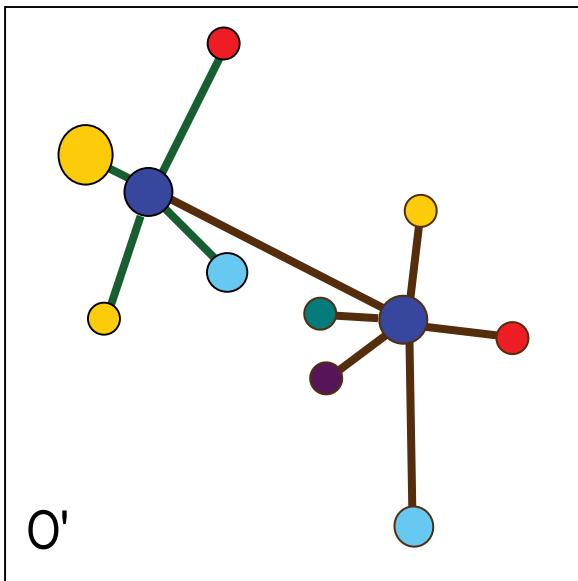
An agent can be either a buyer or seller. An interaction is any form of communication between agents regarding  $O$  or  $O'$ . When an agent selects  $O$  or  $O'$ , the offering is said to have propagated. As a result of the interaction (which may involve selection),  $O$  and  $O'$  may undergo change (mutation).

# Targeting, segmenting and 1:1 personalization

How should producers design offerings for maximal selection?

- The maximum complexity in this is:
  - Design one O for every O' that exists (1:1 personalization) for every moment in time that each O' changes.
- Simplifying principles
  - People do not always have idiosyncratic O'. Users share versions of O' that are similar enough to each other.
    - Call the groups of users that share a common O' a segment.
  - Producers can design O so that it appeals to as many versions of O' as possible. This is a necessary compromise in order to economically address the problem.
    - This is often called targeting
- How do producers keep O and O' in sync?
  - Getting customers to change O'. (Educating customers)
  - Changing O in response to changes in O'. (Redesigning offerings)

# But wait, there is still more...

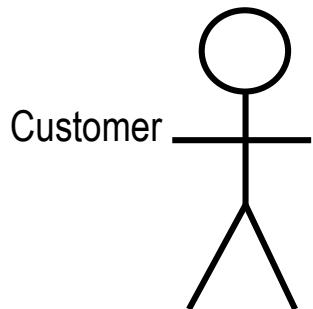
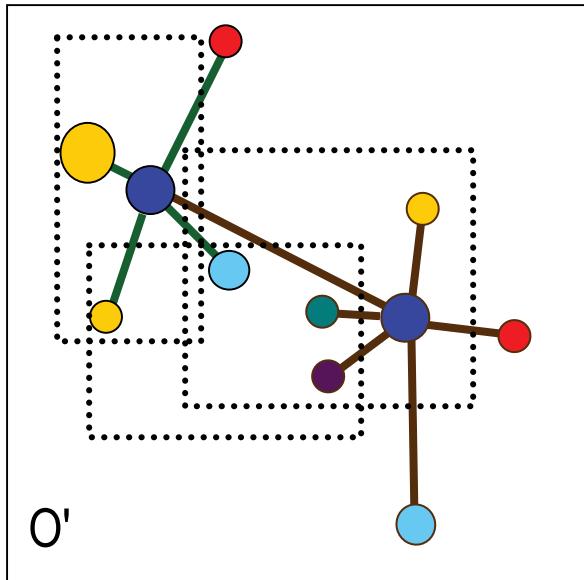


Offerings can have associated offerings (a.k.a., brand associations), which significantly complicates the propagation process.

# Brand associations are interesting

- Tiger Woods and Nike
  - What are the attributes, attribute levels and attribute importance for these two offerings?
  - Where do Tiger attributes start and Nike attributes begin?
  - How much does Tiger contribute to the Nike purchase?
  - How much does Nike contribute to Tiger fame?
  - What would an entire depiction of all brand associations for Tiger and Nike look like?

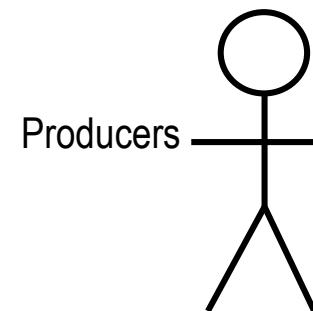
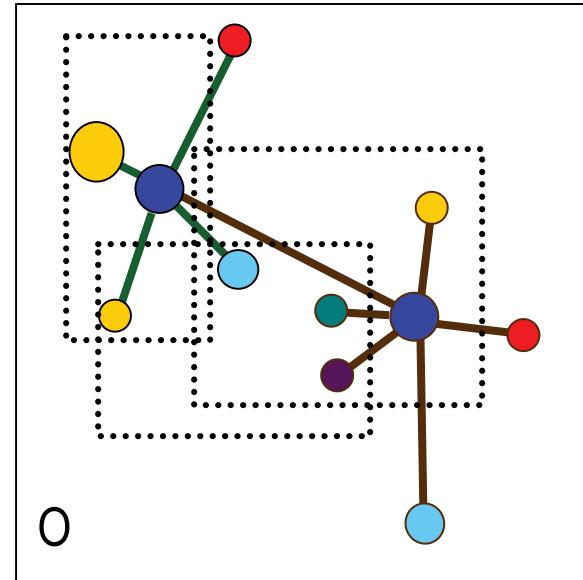
# And more....



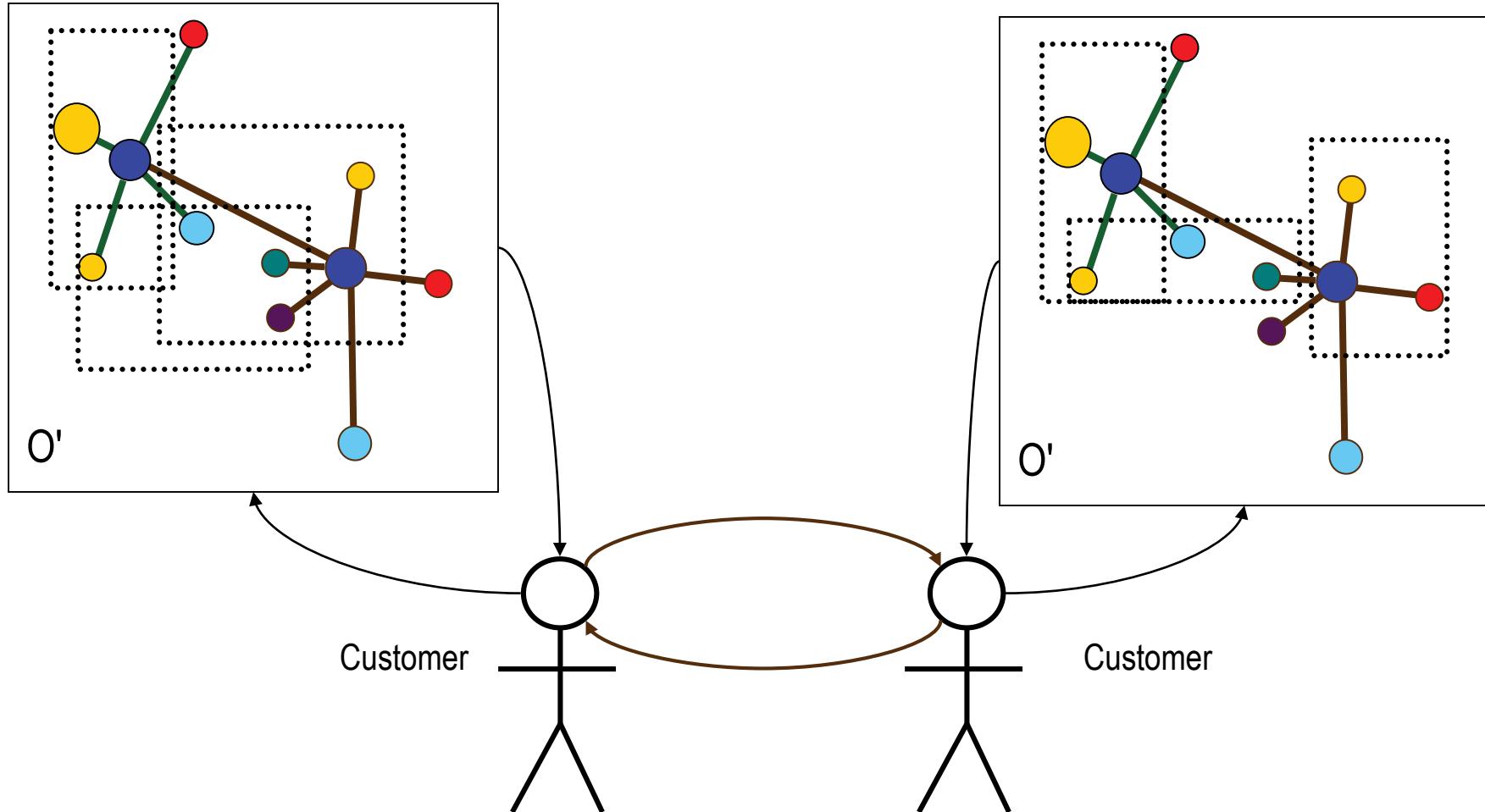
Customers may have multiple coexisting subsets (or higher-level 'maps') of the overall  $O'$  structure that they use to select  $O$ . Limits of cognition may prevent full use of  $O'$ . Also, customers are increasingly *fragmented*. The availability of complex offerings encourages this fragmentation. Large groups of customers that exhibit fragmented behavior receive reinforcing offerings from producers....

# Yes, more...

Producers may have multiple coexisting subsets (or higher-level ‘maps’) of the overall  $O$  structure that they use to design  $O$ . This is usually as a result of fragmented understanding of the offering within the producers’ environment. In other words, producers are increasingly *fragmented*. This fragmentation can cause  $O$  and  $O'$  to drift apart. In other cases, producers respond to customers fragmentation with differentiated behavior which produces differentiated offerings.

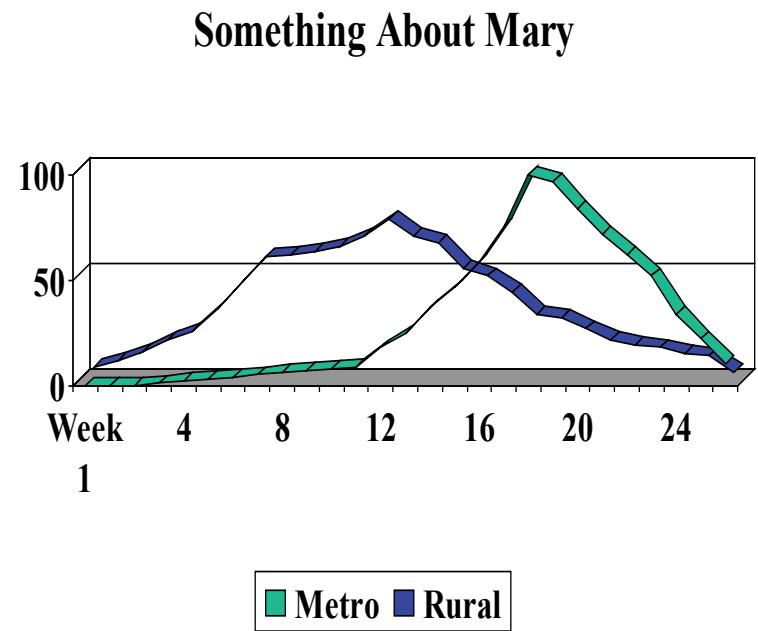
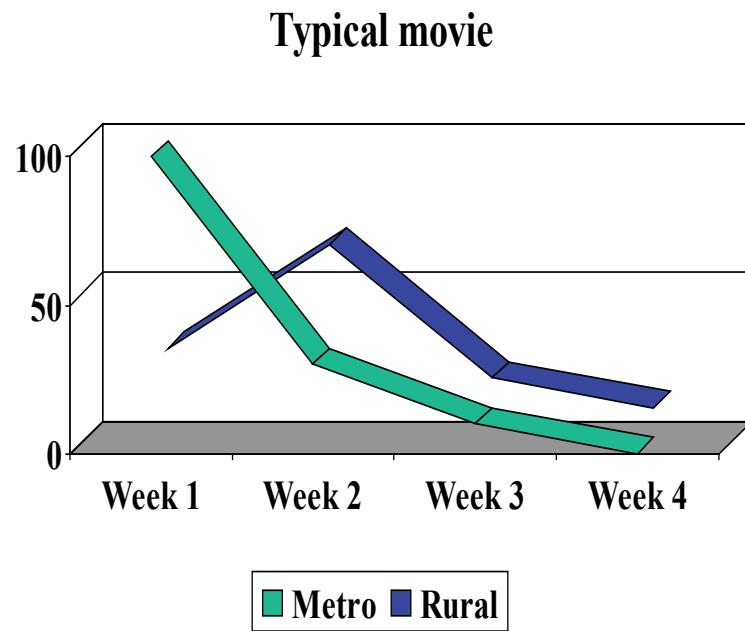


# Customers talk to each other, too



Word-of-mouth, chat, e-mail, phone, propagate O', causing drift away from O. Community management was an attempt in the early days of the Internet to influence this dynamic. Viral marketing, PR and other surreptitious marketing techniques continue the efforts.

# An example of customers talking...



*Something About Mary* was released amid a flurry of lousy reviews which called the movie crass. The movie did well in non-urban areas through word-of-mouth despite reviewers efforts to dissuade the public. Later, it began to sell into urban areas. Numbers here are illustrative only.

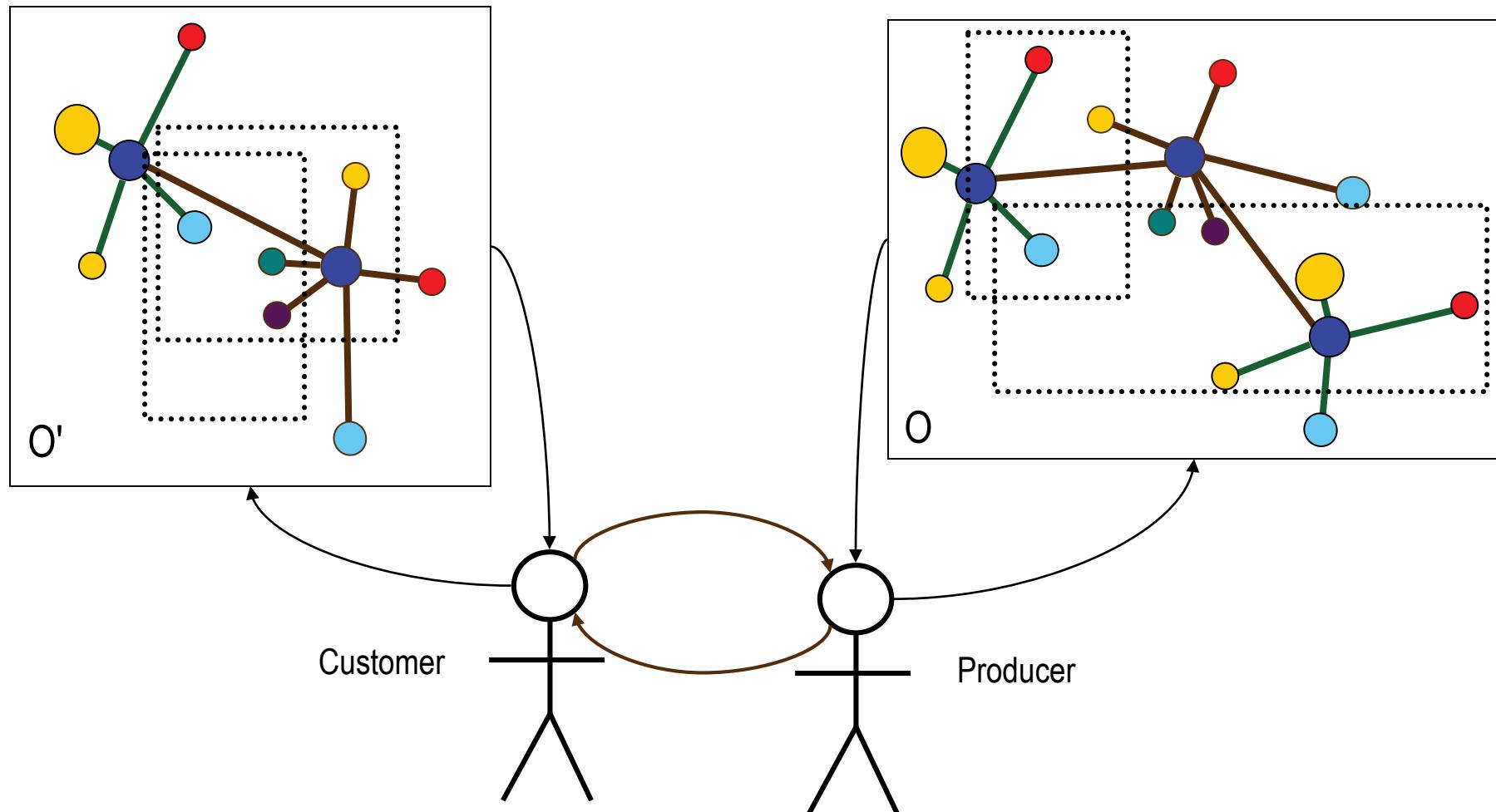
# An analogy

- Offerings can be considered memeplexes that:
  - Compete with each other for maximal propagation
  - Mutate with each other for maximal propagation
- If so, than producers do not design offerings.
  - *Instead, producers and customers co-create memeplexes as a byproduct of selection or propagation. This co-creation process creates successful memeplexes that emerge serendipitously.*
- This co-creation process leads to increased complexity in memeplexes which leads to unprecedented choice for customers and untapped knowledge for producers. It also creates perpetual novelty. With each turn of propagation, opportunity is created to redesign O for better propagation (since O' has changed). Selecting O changes O' and perhaps O.
- Is this postmodern consumerism?

# Impact on strategy

- So much happens outside the current attention of management with regards to O and O'
- If the maximal selection of offerings is the essence of business strategy, why don't businesses increase the sophistication of their conceptual models around customers and offerings?
  - Cost too high? Information not easily gotten, nor easily acted upon.
  - Advantage too ephemeral? Perpetual novelty nullifies advantages.
  - Biologically, culturally and in the history of business, have we just not spent enough time learning how to deal with the customer problem?
- I ask companies to stack up all their research and diagrams related to products and manufacturing facilities and compare that to the size of their stack of customer research.
  - We are at the beginning stages of this evolution. This new pivot point corresponds to the rise of the information age.

# The customer experience space

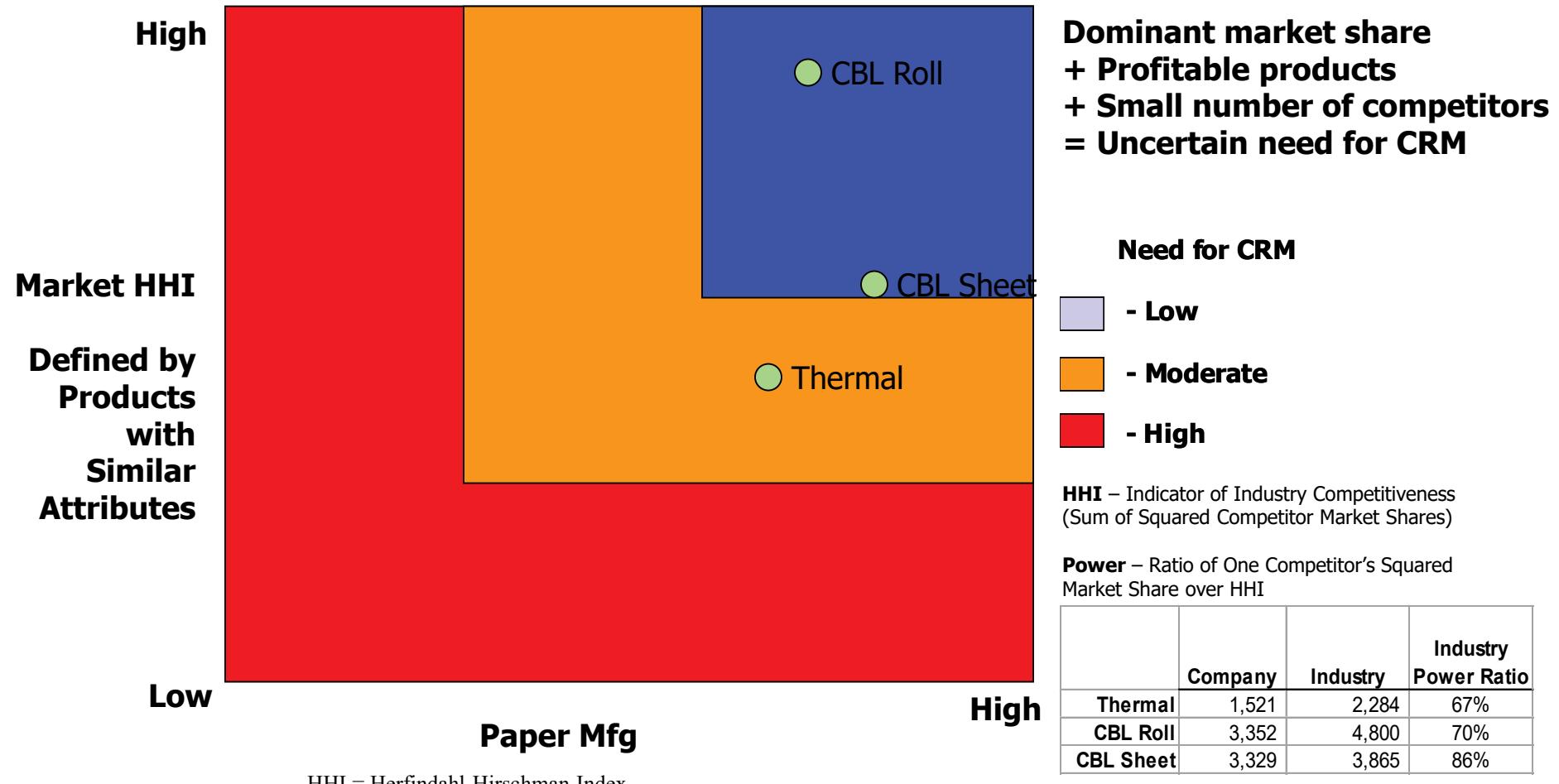


Offerings compete and mutate with each other for maximal propagation

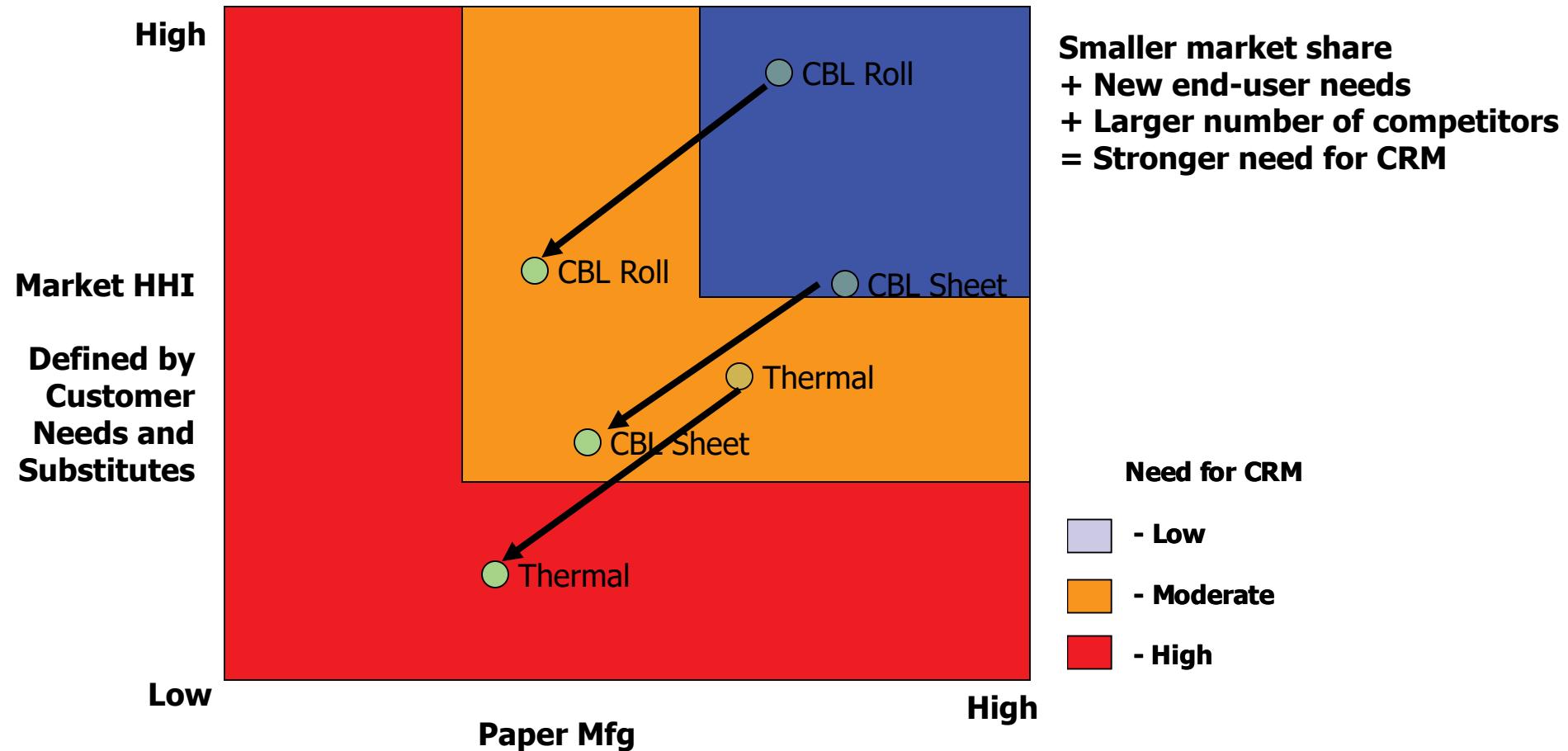
# What is the competition?

- If businesses ruthlessly focus on what offerings actually compete for customer's wallets, competition would be more broadly defined
  - Paper manufacturers compete with computer companies (since computers cause declines in some forms of paper products)
  - Disney competes with home decorating (I think I'll stay home and finish the deck instead of taking my family to Disney)
  - Kodak competes with Microsoft (I think I'll take a digital photo and use Microsoft's software to print it rather than buy Kodak film and Kodak paper)
- Many producers believe they do not have access to the customer experience space and do not know the customer choice set
  - This is an illusion. You can reach almost any customer experience space over the Internet. The real problem is that many producers do not have the skills to reach or understand the customer experience space.

# Marketplace definition of competition



# Customer experience space definition



# Different kinds of “marketing”

Marketing Type Factor	Transactional Marketing	Relationship Marketing		
	Transaction Marketing (1:Infinity)	Database Marketing (1:N)	Interaction Marketing (1:1)	Network Marketing (M:M)
Purpose of exchange	Economic transaction	Information and economic transaction	Interactive relationships between buyer and seller	Connected relationships between firms
Nature of communication	Firm to mass market	Firm to targeted segments	Individuals with individuals (across organizations)	Firms with firms (involving individuals)
Type of contact	Arm's-length, impersonal	Personalized (yet distant)	Face-to-face (close, based on commitment, trust and cooperation)	Impersonal to interpersonal (ranging from distant to close)
Managerial intent	Customer attraction (to satisfy the customer at a profit)	Customer retention (to satisfy the customer, increase profit, increase loyalty, decrease customer risk)	Interaction (to establish, develop, and facilitate a cooperative relationship for mutual benefit)	Coordination (interaction among sellers, buyers and other parties across multiple firms for mutual benefit, resource exchange, market access)
Managerial focus	Product or brand	Product/brand and customers (in a targeted market)	Relationships between individuals	Connected relationships between firms (in a network)
Managerial level	Functional marketers (sales manager, product development manager)	Specialist marketers (customer services manager, loyalty manager)	Managers from across functions and levels in the firm	General Manager

Source: "How Firms Relate to Their Markets," Journal of Marketing, Summer 2002.

# The three dragons of CRM

- Complexity
  - The customer experience space is complex. Business market places are complex. The number of agents, objects and relationships to monitor can be overwhelming.
- Uncertainty
  - O' changes in unpredictable ways. Producer reaction causes perpetual novelty. A future state cannot be easily extrapolated from past states.
- Fragmentation
  - Customers simultaneously employ quite different versions of O'.
  - Because of internal fragmentation, businesses inadvertently create different versions of O that conflict with each other.

# CRM = uncertainty and differentiation

- CRM
  - Uncertainty
  - Differentiation
  - Too many vendor choices
- Complete knowledge of customer behaviors is uncertain.
- Customization drives ROI and enhances the proprietary relationship between company and customer.

How do we do this?



In an incremental  
and adaptable way

*versus*

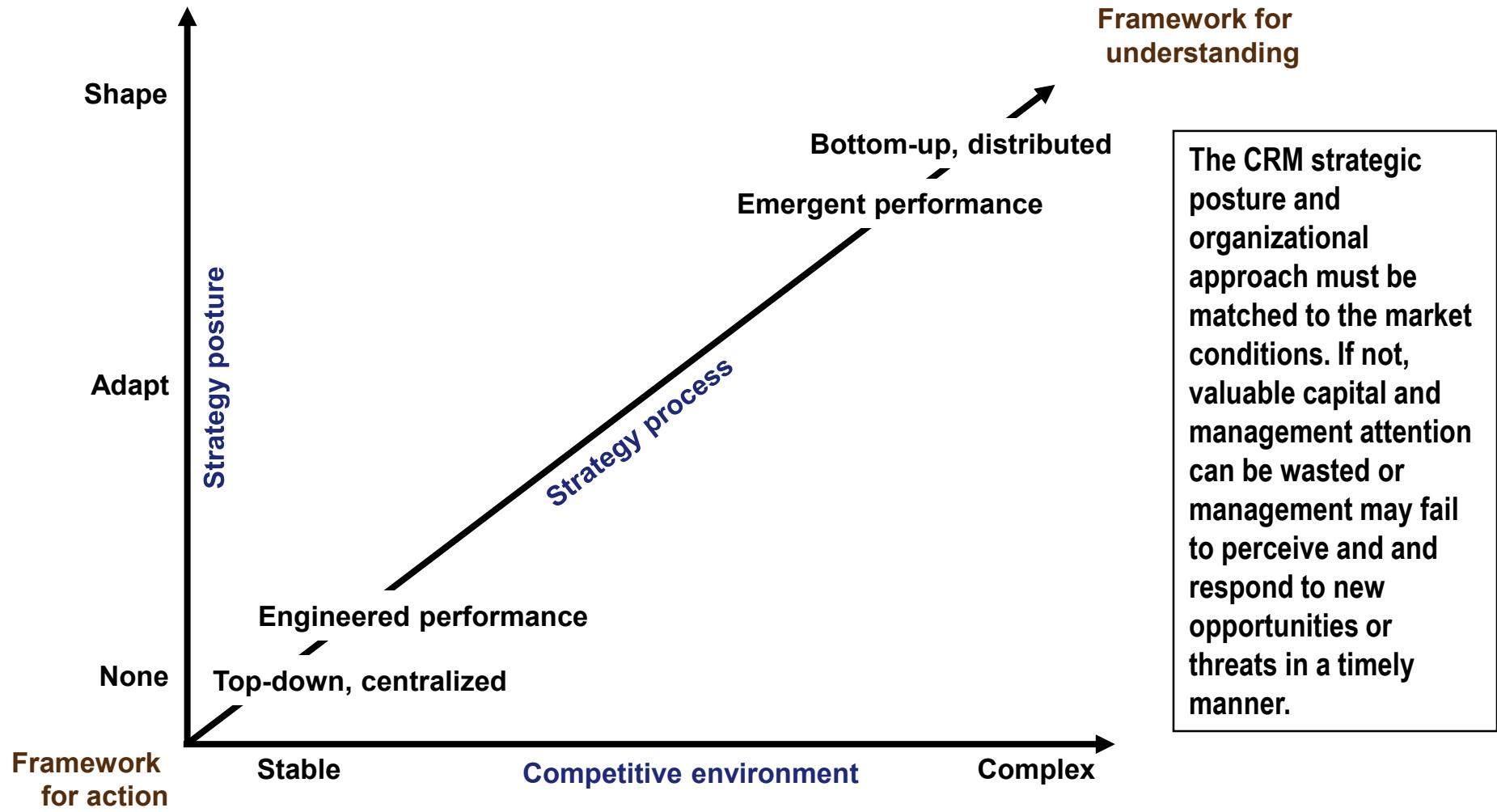
- ERP
  - Certainty
  - Standardization
  - Few vendor choices
- Internal processes are observable and certain. ROI comes from standardization.
- Standardization of processes reduces cost and errors.



Engineered, system –  
wide change

# OK. What are the choices?

Market conditions will determine the correct CRM approach



# Product development: what needs to change?

- So much of new product development (NPD) is focused on the manufacturing aspect
- Customer research, while beginning to be included in the NPD process, is brought in not early enough or is not well integrated
- Customer choices can be better understood
  - Through ethnographic methods
  - Through choice modeling via the Internet. Virtual techniques deployed over the web can approximate physical product tests (MIT & Sloan, ‘The Virtual Customer’)
- Customer choice models can be merged with NPD design
- Customer choice models can be the basis for market share planning

*Fast-moving consumer goods companies are leaders here*

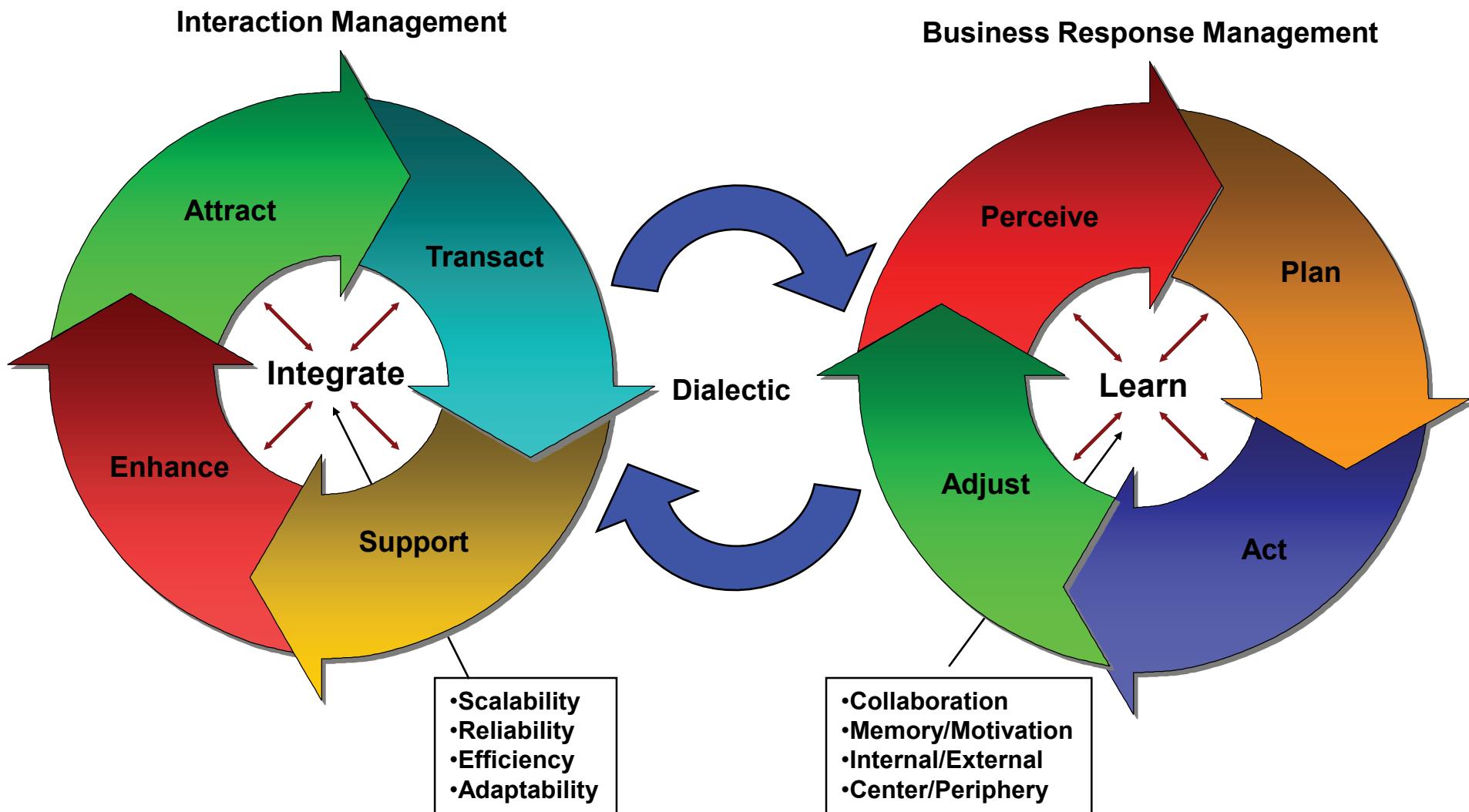
# Some philosophical questions

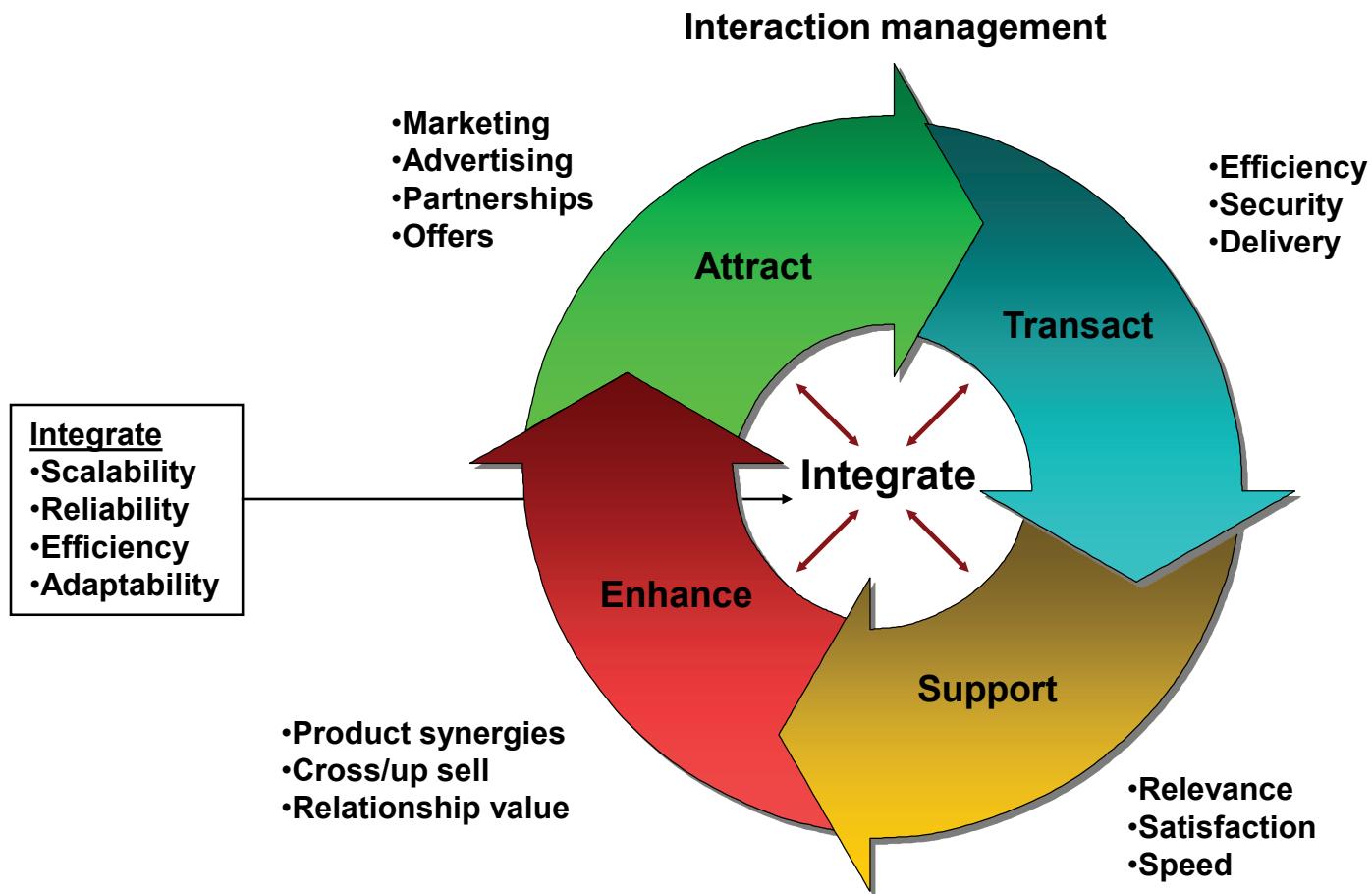
- What is strategy?
  - A pattern in a stream of decisions (H. Mintzberg)
- Reactive versus preemptive strategy?
  - No strategy exists in a vacuum. All companies begin from a context. All strategies essentially start as a reaction to the perceived current state. The real question is “How much does external data, like customer data, drive the strategy?” Also, how much does the strategy alter O', causing competing offerings to be disadvantaged?
- What is a customer?
  - Anyone who adds value to or receives value from an offering.
  - Is this too broad?
- What is CRM?
  - A strategy aimed at maximizing selection of a company's offering through a stronger emphasis on understanding customers over a longer period of time.

Because of the complexity, fragmentation  
and uncertainty, is iteration in order?

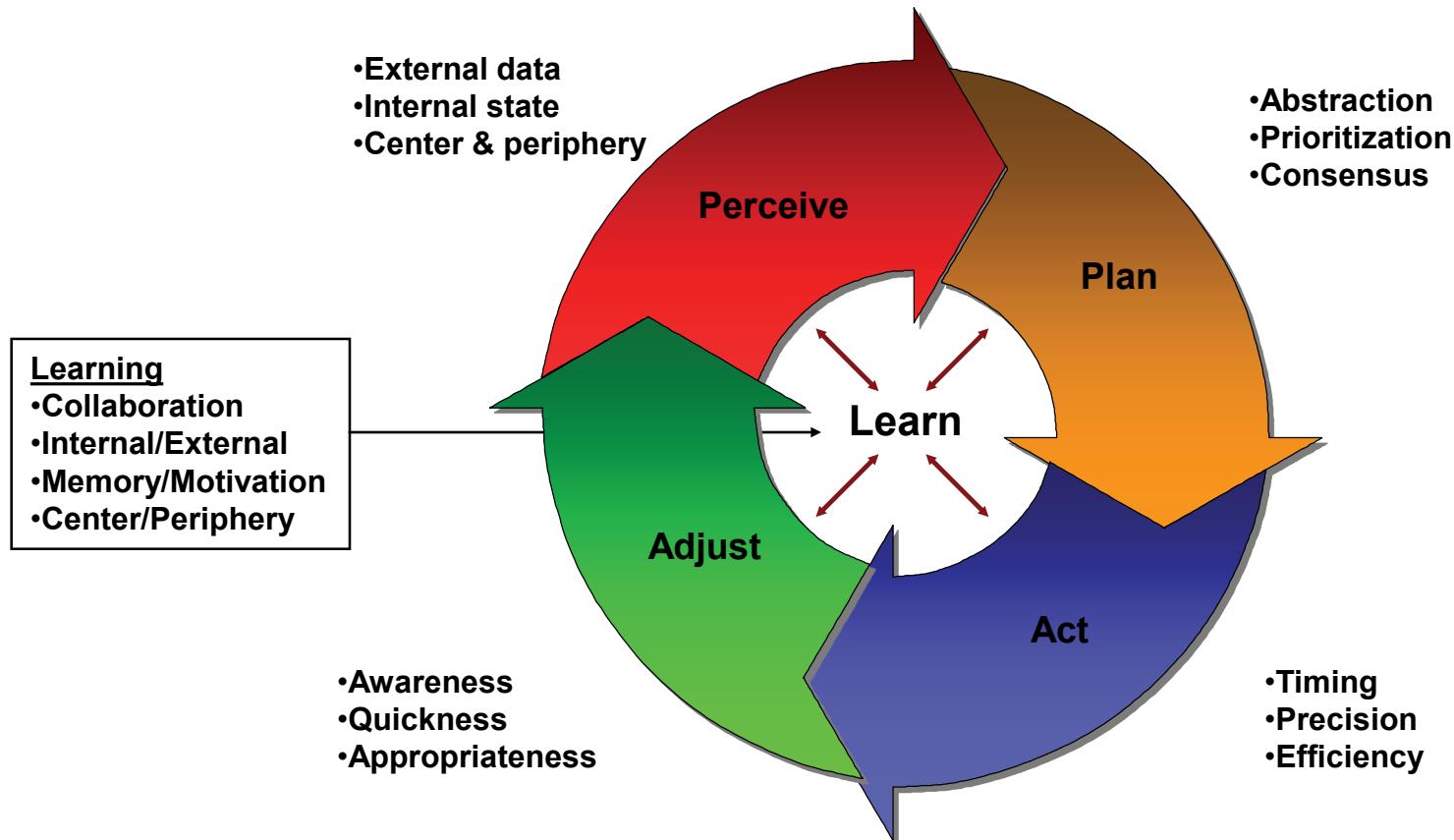
Muddling through? Incrementalism?

# Adaptive CRM

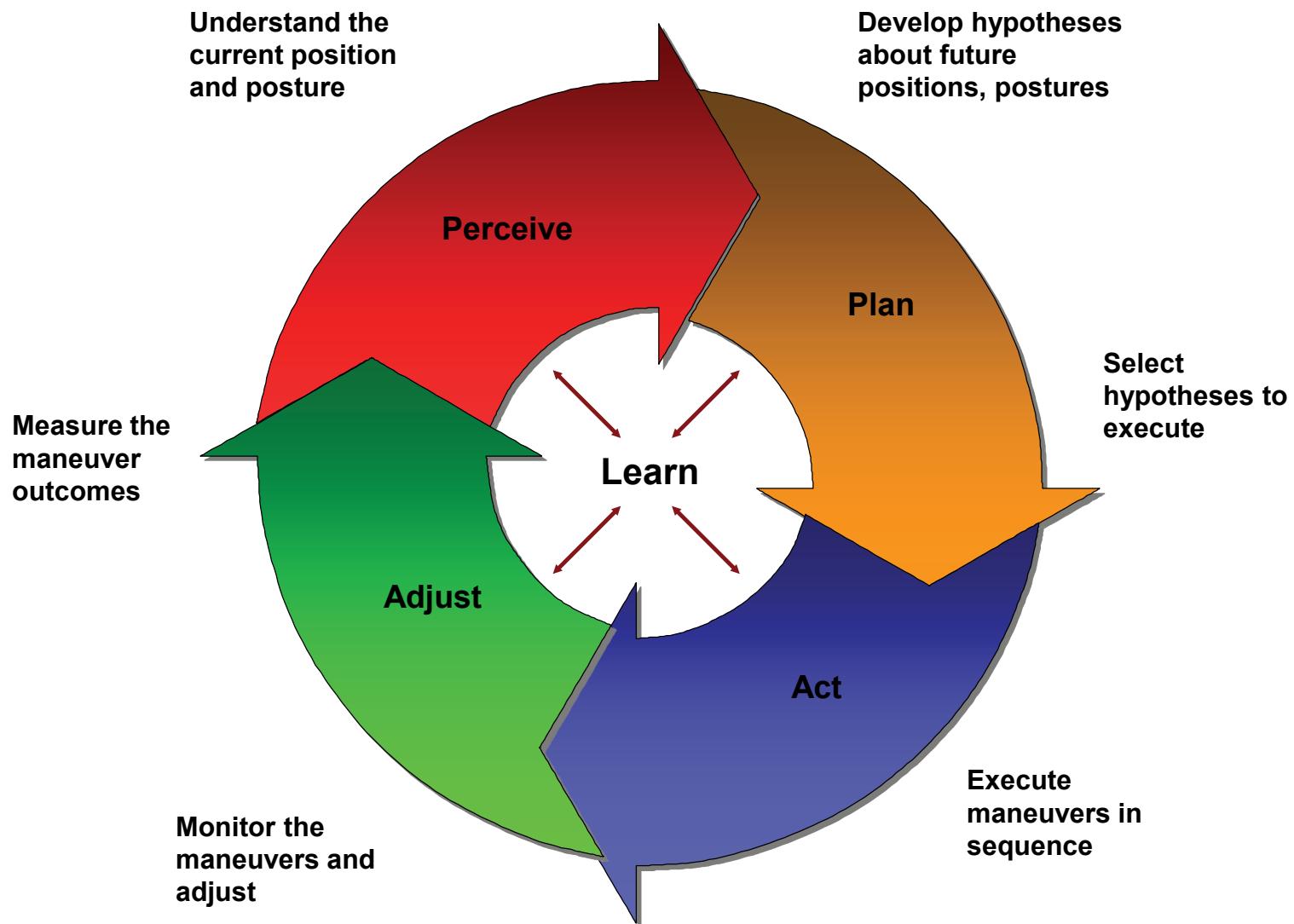




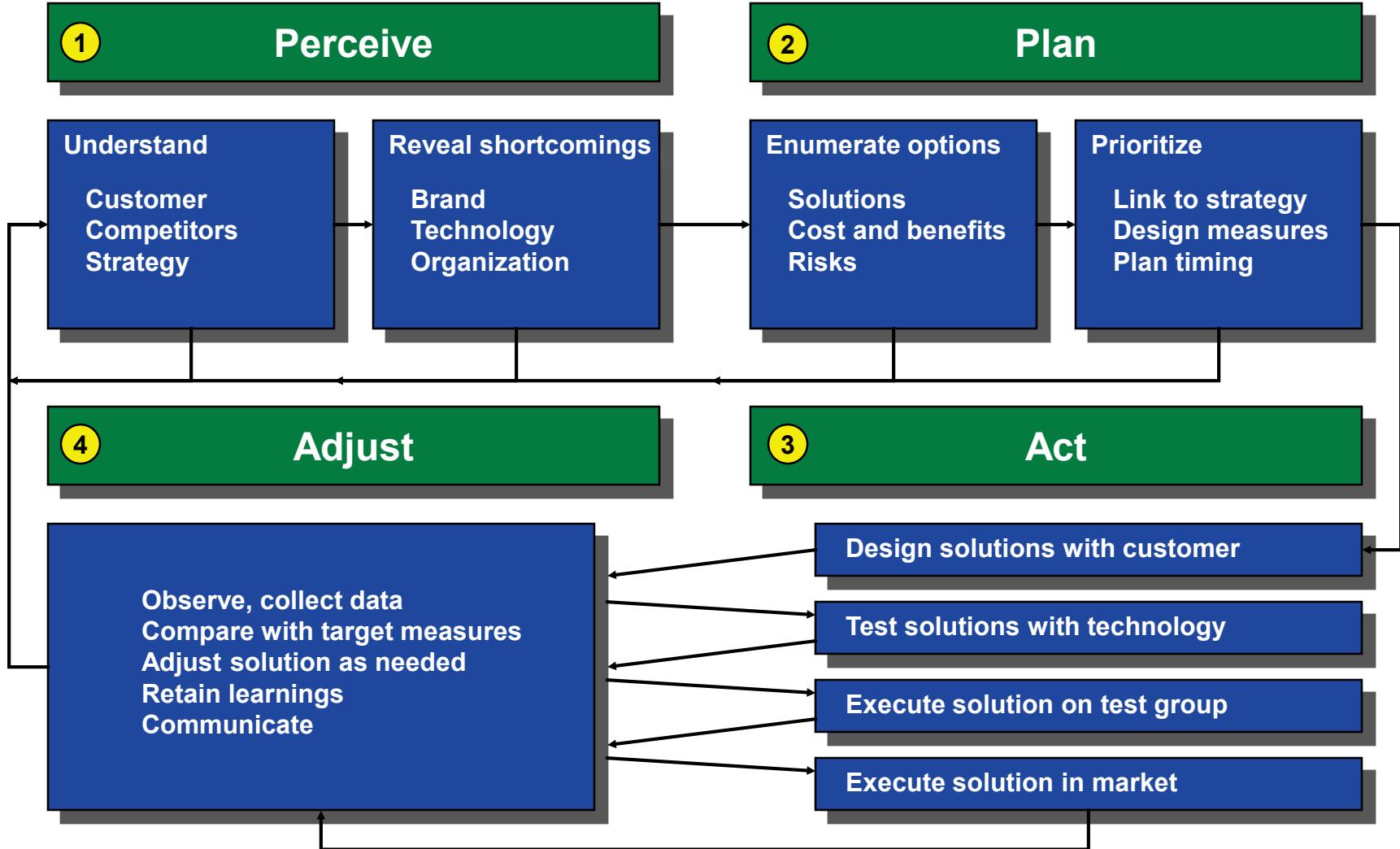
## Business Response Management



# Business response management



# An approach...



# What do must companies look like to a customer?

Like an Alzheimer's patient with multiple personalities.

## Some solutions:

- Decrease internal fragmentation with process and data integration. Organize around the customer
- Increase learning through knowledge management and decreased organizational defensiveness

# What is needed?

- It is still possible to probe irrationality with rationality
  - But we need to be able to cross the chasm seamlessly between the two
- Much stronger research skills
  - Concept testing, discrete choice analysis (conjoint analysis and its variants)
  - Clever survey designs
  - Qualitative and ethnographic research techniques (hire cultural anthropologists)
- Constant reevaluation of the business strategy
- Managers that can handle complexity, multi-linear simultaneity
- CEOs that can quickly absorb the multifaceted nature of “organizing around the customer”
- Strong measurement skills to continually learn from actions
- Continuous improvement, learning

# Internet Concept Testing

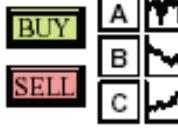
# Web Technology Enables New Speed and Capabilities Across Three Dimensions of Customer Learning

Source: MIT, Stanford University

# Internet Concept Testing: Multiple Techniques

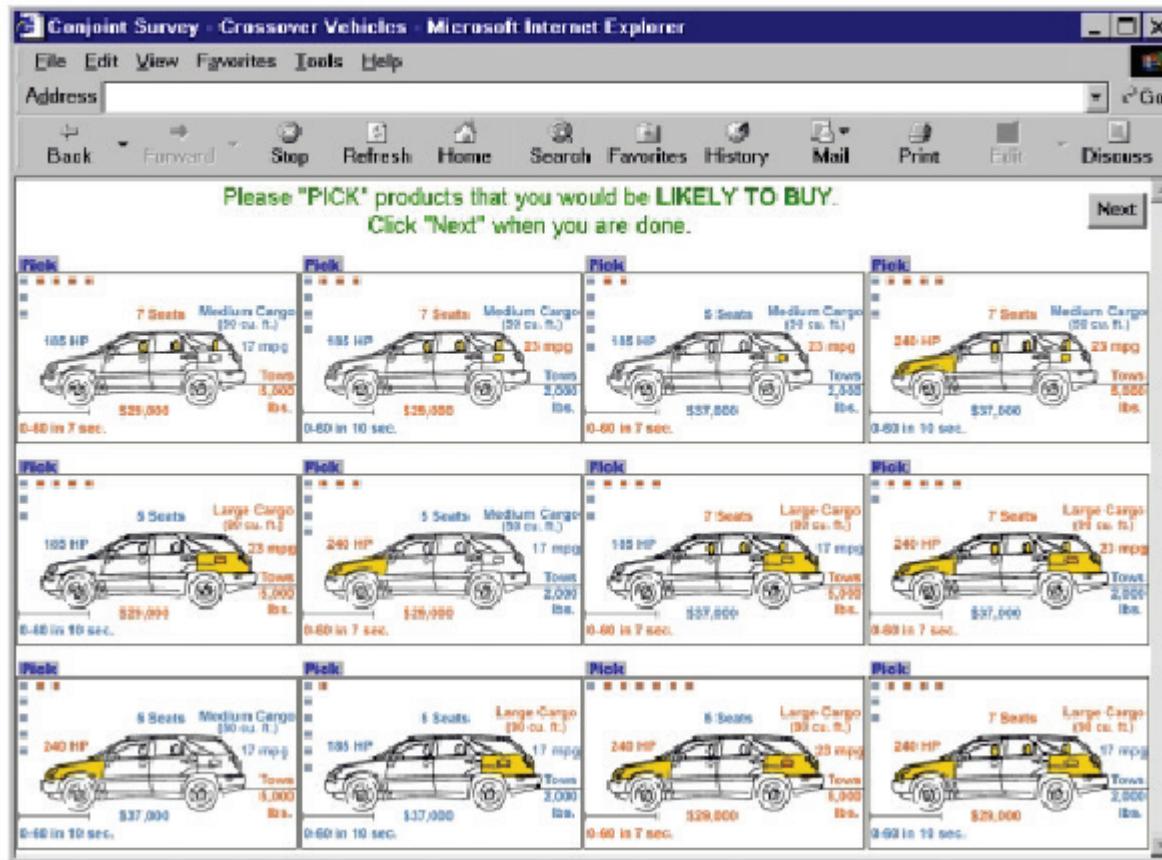
Source: MIT, Stanford University

Table 1: How Virtual Customer Research Exploits Web Technology

Method	Description of Respondents' Task	User Interface	Communication	Conceptualization	Computation
WEB-BASED CONJOINT ANALYSIS (WCA)	Sort attribute-bundles by clicking on cards. To reduce the number of stimuli per screen, respondent pre-sorts into 3 piles.		✓	✓✓	✓
FAST POLYHEDRAL ADAPTIVE CONJOINT ESTIMATION	Paired comparisons of attribute bundles. Respondent clicks radio buttons to express relative preference between two stimuli.		✓	✓	✓✓
USER DESIGN (UD)	An "ideal" product is configured using visual drag-and-drop. Respondent trades off features against price or performance.		✓	✓✓	✓
VIRTUAL CONCEPT TESTING (VCT)	"Buy" from amongst competing concepts based on price and media-rich, integrated concepts. Analyzed as a two-attribute conjoint study.		✓	✓✓	✓
SECURITIES TRADING OF CONCEPTS (STOC)	Each product concept is represented by a "security" and is bought and sold by respondents interacting with one another. Concepts can be richly depicted.		✓✓	✓	✓
INFORMATION PUMP (IP)	Players formulate questions about product concepts and guess how others will react to their questions. Fine-tuned so respondents think hard and tell the truth.		✓✓	✓	✓

# Web-based Conjoint Analysis

Figure 5: Web-based Conjoint Analysis of Crossover Vehicles (rank order task)



Source: MIT, Stanford University

# Securities Trading of Concepts Captures Between-Respondent Interaction

Figure 11: Virtual Concept Test of Crossover Vehicles



## Securities Trading Of Concepts (STOC)

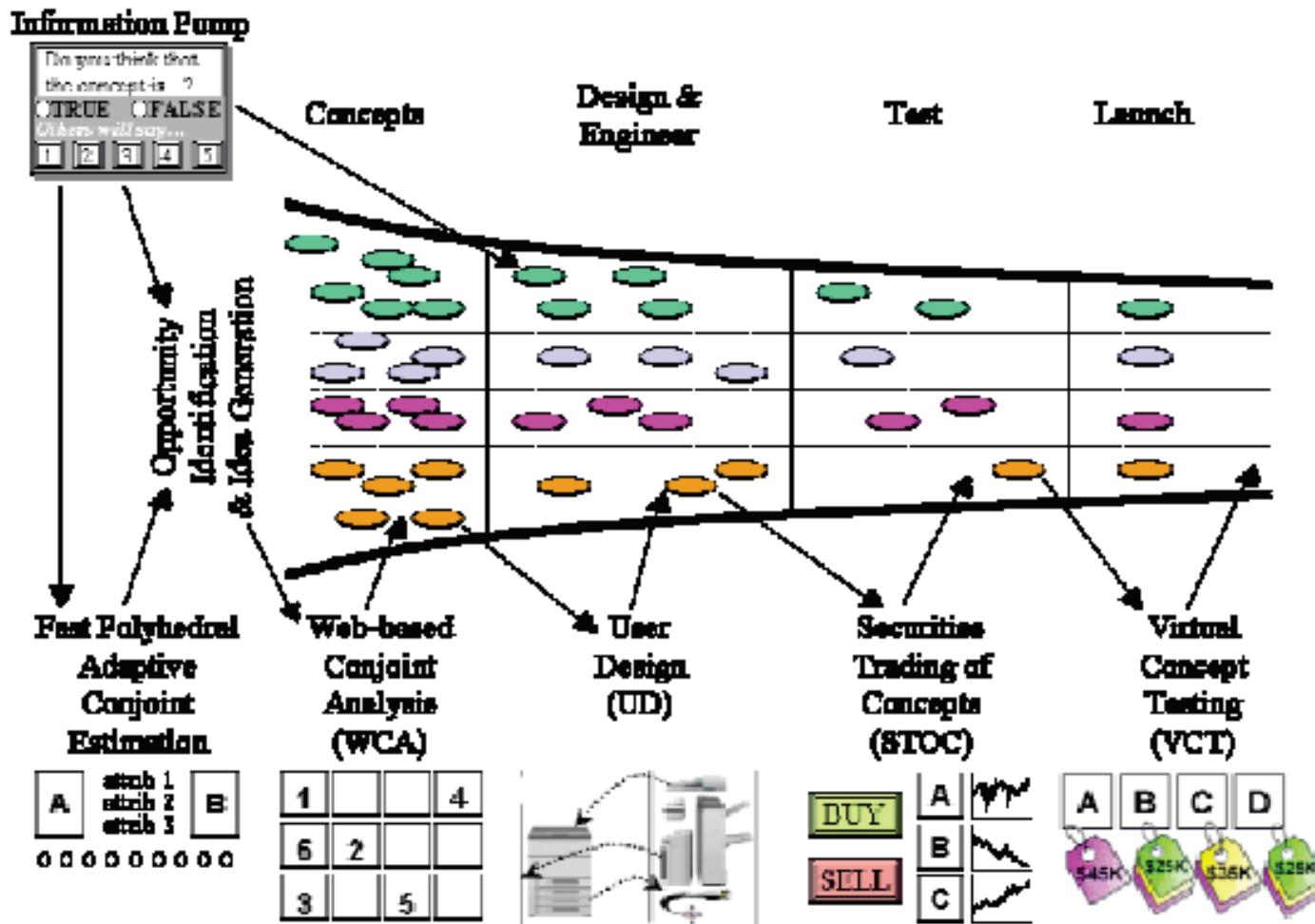
While web-based conjoint analysis, polyhedral estimation, user design, and virtual concept testing all exploit the capabilities of the web to enhance communication, conceptualization, and computation, all remain within the paradigm of the PD team requesting feedback from customers. These methods do not exploit the ability of the web to enhance communication among customers. By structuring incentives carefully so that customers act in their own best interests, PD teams can use the computational capability of web-based servers to monitor customer interactions in a manner that reveals customers' true preferences. In doing so, PD teams might be able to address the criticisms of response biases and demand artifacts in survey research (Sawyer 1975, Shimp, Hyatt, and Snyder 1991). In addition, inter-customer communication might be particularly suited to products for which customers may be influenced by others' opinions and choices – an externality that is not easily accounted for with traditional concept testing methods.

Source: MIT, Stanford University

# A Method of Concept Testing Enabled by Multiple Techniques

Source: MIT, Stanford University

Figure 16: Virtual Customer Use at the Stages of Product Development



# What Other Ways Can One Technique be Used in Ecommerce?

- Technique: Conjoint Analysis
- What it does: Determines most important variables considered in a tradeoff situation
- Applications:
- [Product Configuration](#)
- [Voice of the Customer](#)
- [Sawtooth Software](#)

# What is the role of information technology?

- To collect all kinds of customer/competitor data with minimal effort
- To more easily and more frequently measure CRM maneuvers, business processes and their outputs
- To share and synchronize knowledge between people
- To integrate closely with decision-making processes
- To help build one coherent firm, one consciousness, in the eyes of the customer

The truth is out there...

