Organizational Design

Theories of Organization

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Weeks 1–2

Key definitions

Any organized human activity entails two equally important but contrasting objectives:

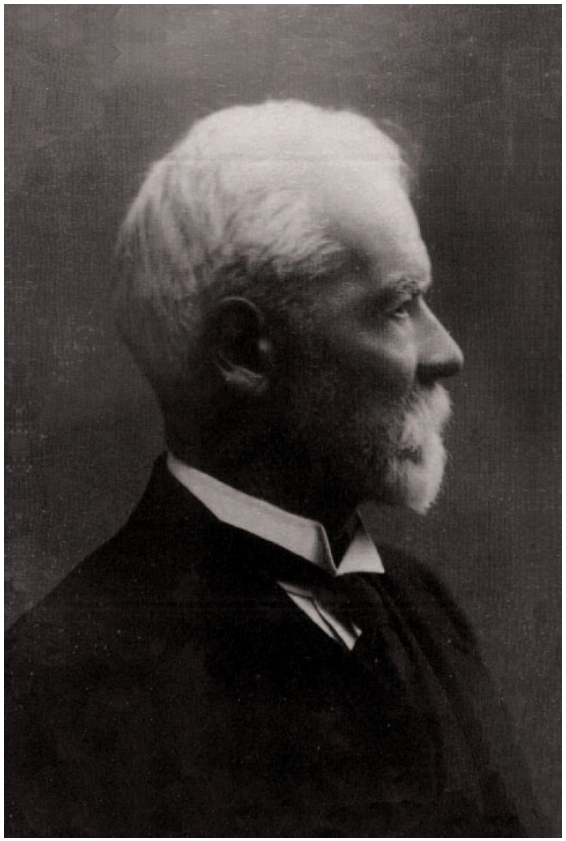
1. Division of labor into tasks
2. Coordination of tasks

The set of parameters used by an organization to meet these objectives is called **structure**

The task of setting parameters is called **design**

Classical argument

There is one best way to design organizations



Counterargument

There is more than one best way

Structures must be tailored to internal and external factors:

- Age and size
- Technical system
- Environment
- Power balance

Designers must find structures appropriate to these factors

Organizational parts

- Operating core
  - Production, sales
- Strategic apex
  - Board, CEO
- Middle line
  - VPs, area managers
- Technostructure
  - Accounting, logistics
- Support staff
  - Legal counsel, PR

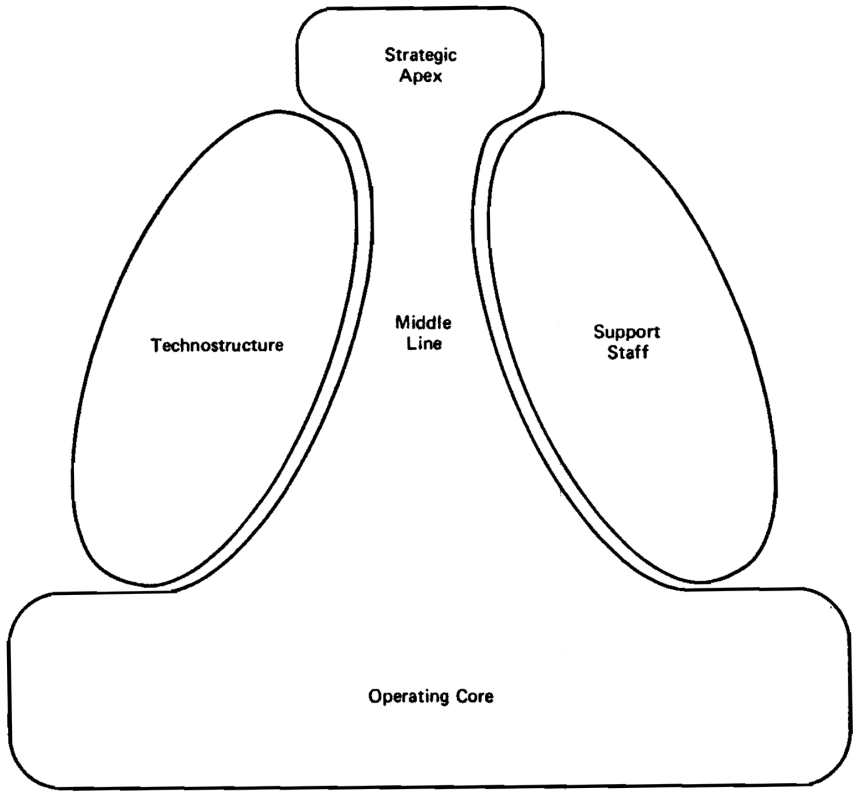


Figure 2-1. *The Five Basic Parts of Organizations*

Coordination mechanisms

Mutual adjustment

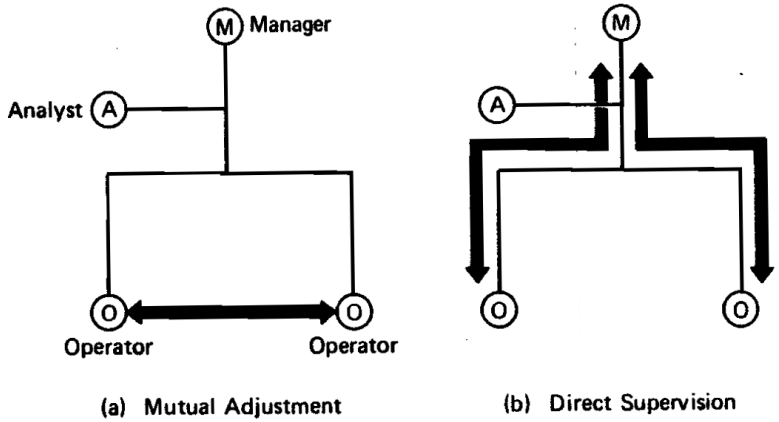
Talking to each other to find ad-hoc solutions to problems

Direct supervision

Reporting to a manager who specifies solutions for problems

Standardization

Using procedures and rules to prevent problems from arising



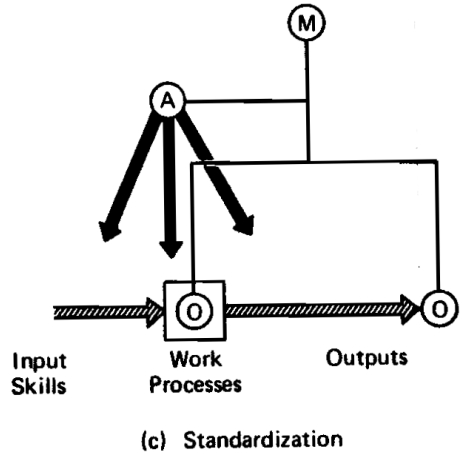


Figure 1-1. *The Five Coordinating Mechanisms*

Coordination and complexity

Administrative school

- Henri Fayol (1841–1925)
  - French industrialist and consultant
- Managers' purpose is getting things done
  - Providing direct supervision
  - Increasing efficiency
- Emphasis on forecasting and planning

Popular concepts

Unity of command: subordinates have one superior
Scalar chain: line of command from top to bottom
Span of control: a superior's number of subordinates

Fayol's principles

Applicable at all levels of management

1. Specialization
2. Authority of managers
3. Discipline of workers
4. Unity of command
5. Unity of direction
6. Primacy of organization
7. Fair remuneration
8. Centralization
9. Scalar chain
10. Order
11. Equity/fairness
12. Secure employment
13. Initiative
14. Esprit de corps

Managerial functions

Planning

Forecasting events and setting a course of action

Organizing

Ensuring access to resources needed to carry out the plan

Commanding

Directly supervising the plan's implementation

Coordinating

Maintaining internal consistency of design parameters

Controlling

Evaluating progress toward organizational objectives

Scientific management

- Frederick Taylor (1856–1915)
  - American industrial engineer
  - Worked at Midvale Steel
- Managers' purpose is optimizing production
  - Standardizing work processes
  - Increasing efficiency
- Emphasis on the scientific method

"Taylorism"

Popularized work studies, assembly lines, quality control; contributed to birth of operations research

Causes of inefficiency

The fallacy, almost universal among workmen, that a material increase in the output of men or machines would throw a large number of men out of work

The defective systems of management in use, which make it necessary for each workman to "soldier," or work slowly, in order to protect his interests

The inefficient rule-of-thumb methods, which are still widespread in all trades, and in practicing which workmen waste a large part of their effort

Taylor, *Principles of Scientific Management*, 1911

Taylor's principles

Scientific approach

Work must be designed according to cause-effect relationships

Selection and development

Workers must be picked and trained to accomplish tasks

Alignment of interests

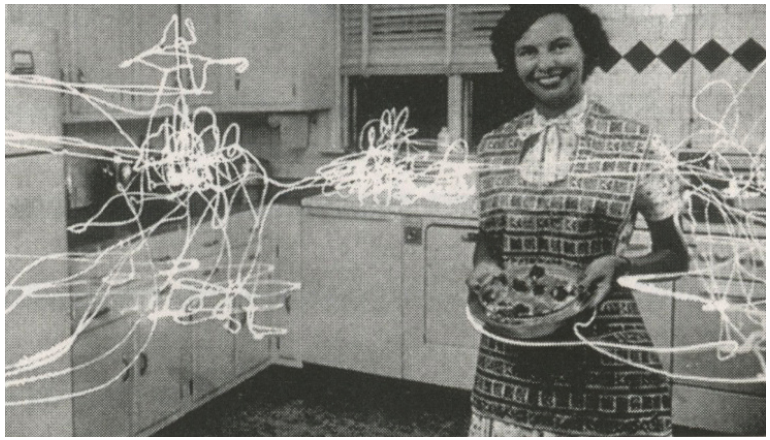
Managers and workers are elements of the same system

Division of responsibilities

Managers design tasks and workers execute them

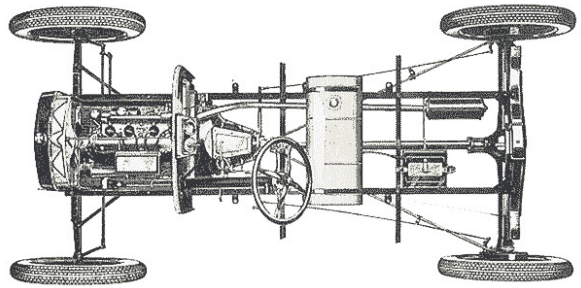
Time and motion studies

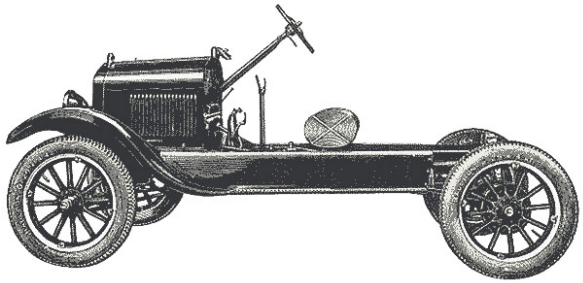
- Different sets of instructions
  - Two workers independently place and fasten bolts
  - One worker places bolts while another fastens
- Productivity measured with stopwatch
- Multiple iterations to maximize productivity

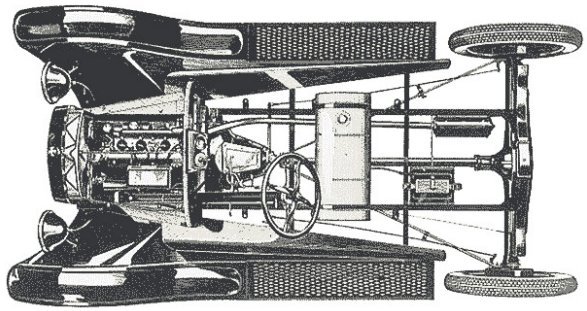


Applications to industry

- American manufacturing
  - Raised productivity by 300–500%
- Example: Ford Motor Company
  - Extensive use of the assembly line
    - Raised wages to $5 per day
  - Production of the Model T
    - Sold for $850 in 1909
    - Down to for $300 in 1926







"Any customer can have a car painted any color that he wants so long as it is black"

Bureaucracy

- Max Weber (1864–1920)
  - German economic and political historian
- Managers' purpose is simplifying decisions
  - Standardizing outputs and skills
  - Increasing efficiency
- Emphasis on rules and procedures

Weber's study of society

Three preconditions for the rise of bureaucracies: monetary economy, literacy, colonization

(Stinchcombe later added: other bureaucracies)

Weber's principles

Bureaucracies are based on a kind of formal authority called **rational-legal authority**

Ideal bureaucracies are based on:

- Clearly defined division of labor
- Hierarchical chain of command
- Written documents (for consistency)
- Separation of home and office
- Meritocratic hiring and promotion

The iron cage

Rational-legal authority will crush the human spirit

Society will become a machine where “not only the Kaiser but also the proletarian has lost his rights”

Humanity will enter “a polar night of icy darkness”

Legacy of classical theories

- Design exists to increase efficiency
  - One best way to do this, regardless of context
- Job satisfaction is irrelevant
  - People are rational and will "soldier" if they can
- Work is a set of supervised/standardized tasks
  - No mutual adjustment
  - No informal authority

…Until the Hawthorne studies

Then attention shifted to informal structure, job satisfaction, care for employees as social beings

Human relations school

- Elton Mayo (1880–1949)
  - Australian psychologist and industrial researcher
  - Field research at Western Electric Hawthorne
- Purpose of manager is maximizing well-being
  - Facilitating mutual adjustment
  - Increasing satisfaction
- Emphasis on social relationships
  - Personal ties over scalar chain
  - Two-way communication
  - Rest and relaxation moments
- Part of larger movement called “behaviorism”

Hawthorne studies (I)

- Illumination study (1924)
  - Testing effects of lighting on productivity
  - Evidence of Hawthorne effect
    - Productivity increased also for control group
    - Continued to increase when light was reduced
- Relay assembly test room study (1927–1932)
  - Timing assembly of telephone relays
  - Choice of coworkers, hours, breaks
  - Close observation over long period
  - Evidence of mutual adjustment
    - Productivity increased compared to factory floor
    - Increased even after restoring normal conditions

Hawthorne studies (II)

- Interviewing program (1928–1930)
  - Studying effects of supervision on morale
  - Workers asked to talk about anything
  - Over 20,000 interviews of 20–120 min each
  - Evidence that workers like upward communication
    - View of managers became more positive in time
    - Complaints were symptoms of dissatisfaction
- Bank wiring room study (1931–1932)
  - Timing assembly of terminal banks
  - Pay proportional to speed of work
  - Evidence of non-monetary motivation
    - Faster workers slowed down to protect colleagues

Key conclusions

- Monitoring changes behavior
- Job satisfaction increases productivity
  - Hearing reasons behind managerial decisions
  - Setting some work conditions
  - Keeping open lines of communication
- Informal ties motivate workers
  - Factory as a social rather than techno-economic unit

"We'd go dancing together, you know, we're still good friends… The friendliness was a very important factor, it got to be a joy to go to work…We were compatible"

End of classical theories

"So long as commerce specializes in business methods which take no account of human nature and social motives, so long may we expect strikes and sabotage to be the ordinary accompaniment of industry"

Contrast with:

- Administrative school
- Scientific management
- Ideal bureaucracy

Contingency factors

Organizations differ in size, technical system, etc.
Why should they be designed the same way?

Age and size

- Organizations have a life cycle
  - Size increases with age
  - Size leads to coordination costs
  - Coordination costs lead to formalization
  - Age leads to even more formalization
- Flexibility vs reliability

Relation with design

Specialization: need for different skills within a unit
Differentiation: greater division of labor across units
Interdependence: connections between labor of units

Technical systems

- Unit production
  - Ad-hoc adjustment between workers
  - Examples: craft brewing, consulting
- Mass production
  - Routine, unskilled, highly formalized work
  - Standardized outputs and processes
  - Examples: car manufacturing, meat packing
- Process production
  - Automation of the operating core
  - Standardized skills (mainly in R&D)
  - Examples: oil extraction, power generation

Environmental features

Speed

Slower change in customer preferences means demand is predictable and responses can be scripted → Formalization

Complexity

Decisions that require deeper domain knowledge must be delegated to unsupervised specialists → Decentralization

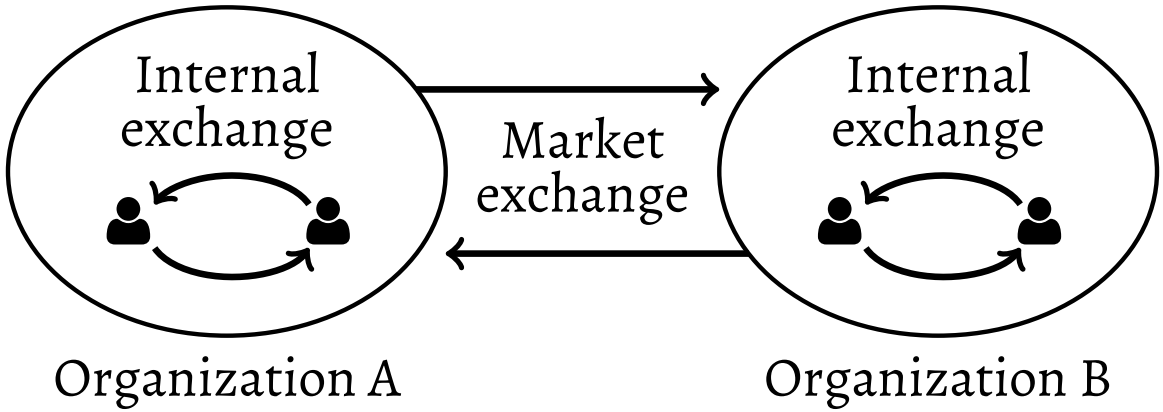
- Organic vs bureaucratic structures
- Machine vs professional bureaucracies

Organizations as open systems

- Systems are sets of interacting components
- Interaction implies interdependence
  - Low interdependence can be more efficient
    - Additive effects on system performance
    - Easier to mix and match components
  - High interdependence can be more effective
    - Multiplicative effects on system performance
    - Harder to mix and match components
- Systems are open, if subject to outside influence
  - Dynamic, if they change over time
  - Complex, if cause-effect relations are unclear
  - Adaptive, if they change based on feedback

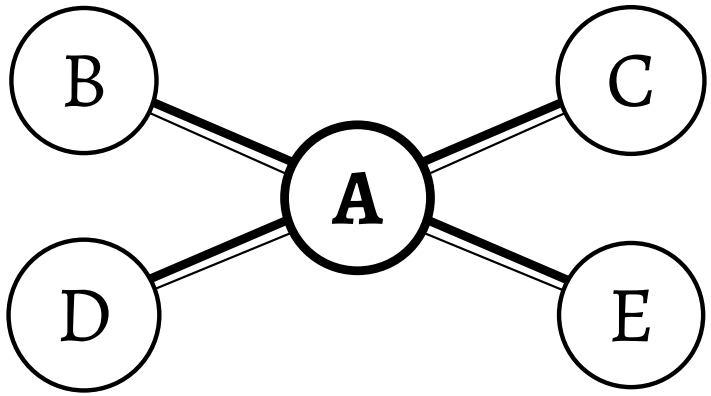
Transaction cost theory

- Markets generate transaction costs
  - Finding partners
  - Negotiating terms
  - Enforcing terms
- Organizations generate coordination costs
  - Setting rules and incentives
  - Preventing agency problems



Resource dependence theory

- Organizations are nodes in a network
  - Consume resources to survive
  - Unable to generate resources internally
  - Enter relations (*dependencies*) to acquire resources
- Security vs autonomy
- Power as determinant of structure



Power-related strategies

Autonomous:

Buffering Absorbing changes in resource flows
Smoothing Directly shaping resource flows
Forecasting Monitoring flows and adapting
Rationing Limiting production quantities

Interorganizational:

Bargaining Negotiating contracts, trading favors
Co-opting Interlocking boards and trustees
Coalition building Making alliances, JVs, cartels
Merging Integrating vertically or horizontally

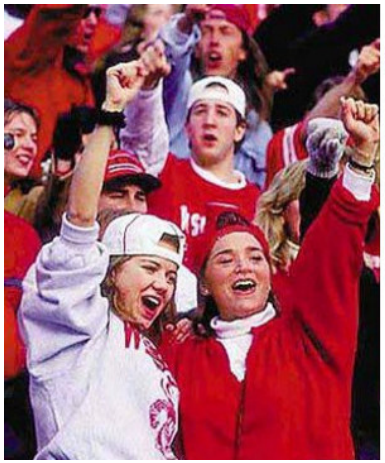
Institutional theory

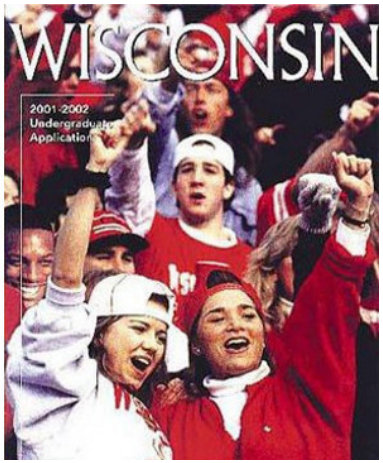
- Practices can become norms (*institutionalization*)
  - Six Sigma methods in manufacturing
  - Teaching and learning centers in universities
  - Competitions in creative industries
- Adhering to norms confers legitimacy
  - Access to resources
  - Greater chances of survival

"Rationalized myths"

People assume others' behavior is purposeful and objective, so there are efficiency reasons for norms

Examples of myths

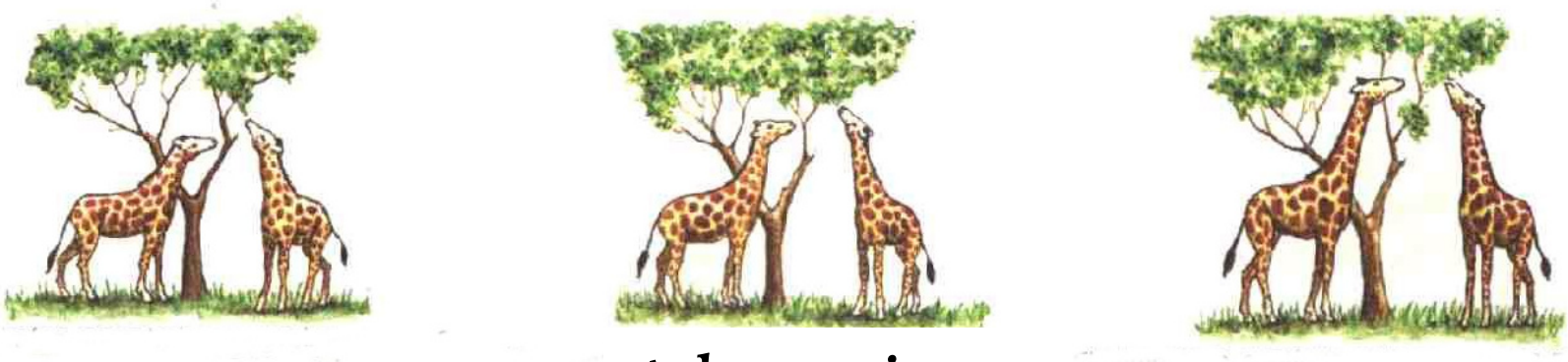




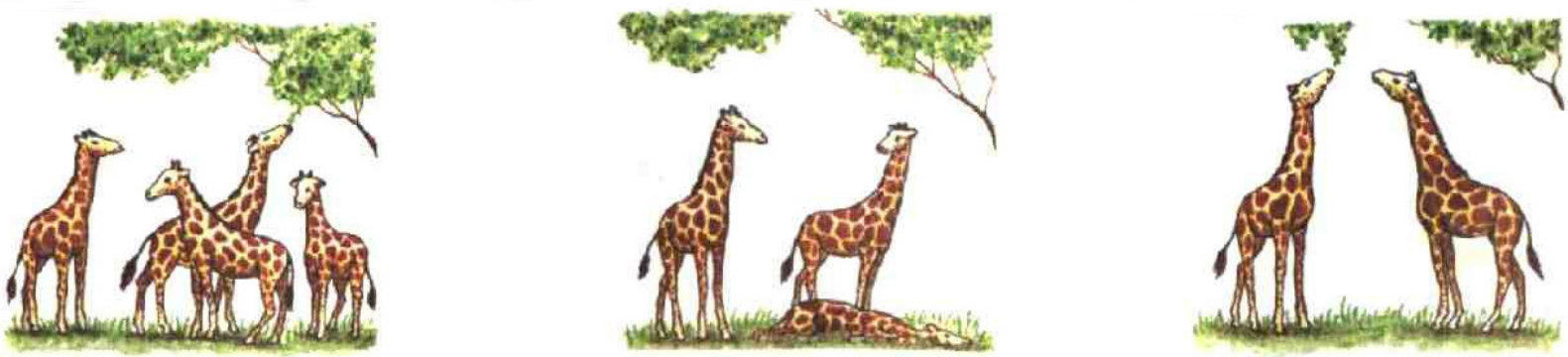
Organizational ecology

- Organizations are subject to *inertia*
  - Formalization
  - Internal coalitions
  - Imprinting
- Organizations fail
  - Survival depends on design parameters
  - Changing parameters becomes more costly
- Populations of organizations evolve
  - Some born with new features
  - Those with best features survive
  - Survivors pass on their features

Explanations for change



Adaptation →



Variation → Selection → Retention

Readings

Tolbert & Hall 2009, ch. 2–3 and 8–9