

**WHO GETS TO THE TOP:
GENERALISTS VERSUS SPECIALISTS IN MANAGERIAL ORGANIZATIONS**

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OVERVIEW

- Who occupies which position in an organization? Numerous factors determine this. Many are random. Here we examine some central aspects that are systematic.
- For now, a generalist knows a little about many things. A specialist knows more about fewer things. More detailed descriptions later.
- We are the first to define various kinds of generalists and specialists. E.g., people whose expertise differ in content and in breadth. Also the first to formalize the communication across individuals with different types of expertise.
- This research is conceptual and theoretical. We make predictions about efficient organizational structures. These are consistent with empirical observations, or they are potentially testable.
- Our analysis also helps understand how organizational structures may change due to changes in the external environment, such as technologies of communication, increasing conglomeration, and increasing internationalization of corporations.

SOME MOTIVATIONS FROM THE BUSINESS WORLD

- More MBAs head large business corporations than individuals with any other background. This is so even for companies with relatively narrow lines of business.

This pattern is superficially less common in Japan than in the other OECDs. The substance is the same.

- Those who have worked for many years as specialists (e.g., as engineers and accountants) try, on their way to the top, to reeducate and repackage themselves as generalists.
- Such patterns have become more pronounced since the rise of large business corporations, beginning roughly in the 18th century. Even more pronounced since the rise of multinational corporations, beginning roughly in the 19th century.
- The more general phenomenon is that of the rise of managerialism. E.g., hired managers, instead of family and clan members, organized in hierarchies.

SOME MOTIVATIONS FROM CLASSICAL LITERATURES

- Classical Chinese bureaucracy. Systematic articulation begins roughly with the Western Han dynasty. The key prescription: higher the position, more of a generalist should occupy it.

Jin Shi: The Presented Scholar

The reasons for this prescription, or for its possible alternatives, were not articulated.

- Ancient Greece and Rome. The issue virtually not taken up.
- Max Weber and other European thinkers. Practically no discussion.

SOME MOTIVATIONS FROM ECONOMICS AND MANAGEMENT LITERATURE

- Perhaps the most directly relevant paradigm is that of my late colleague Sherwin Rosen: Greater the talent, higher is the position.

This paradigm is appealing. It has some problems. For example, Nobel Prize winners rarely head large organizations. When they do, they are rarely successful. Similar patterns are seen in other walks of life.

- Similar problems arise if we replace the phrase "talent" by phrases such as ambition, drive, and motivation.
- The concept of leadership is prominent in management literature. Often the focus here is on ex-post successful outcomes. Not on what explains these outcomes. This is a serious limitation.

SOME MOTIVATIONS FROM EMPIRICAL PSYCHOLOGY

- Psychologists have studied, using data and a variety of empirical methods, the centrality of and the problems of human communications.
- Compelling evidence that individuals who have expertise in different areas find it difficult to communicate among themselves.

“Inadequate communication and insufficient translation; i.e., people do not communicate well in general and they fail to realize the additional problems of translating across differentiated specialists.”

- Aspects of communication have also been studied across age groups, genders, social classes, ethnic groups, ideological groups, and societies. A popular example is the book *Men are from Mars, Women are from Venus*.
- A fundamental difference between the perspectives of economists and psychologists on the roles that pecuniary interests versus communications play in human interactions.

A SIMPLE FRAMEWORK OF EXPERTISE

- There are n areas of expertise: $i = 1$ to n .
- At one extreme there are superspecialists. E.g., a person with expertise only in area i is a superspecialist in that area.
- At the other extreme is the supergeneralist. He/She has expertise in all n areas.
- In between, there are individuals with $(2^n - n - 2)$ different combinations of expertise.
- *Expertise breadth* is the number of areas in which the individual has expertise.

E.g., The expertise breadth of the superspecialist is one. The expertise breadth of a supergeneralist is n . In between, there are individuals with expertise breadths 2, 3, ..., $n - 1$.

Thus two individuals with the same expertise breadth can have different combinations of expertise. This is why expertise breadth is a partial description of an individual.

- *Expertise gap* between two individuals is the difference between their expertise breadths.

E.g., the largest expertise gap is between a superspecialist and a supergeneralist.

A SIMPLE FRAMEWORK OF COMMUNICATIONS

- Any communication between any two individuals is inherently problematic. Why?
- One part of the problem depends on the nature of organization. E.g., a multinational generally faces more unpredictable communication environment than an organization based solely in one location.
- Another part of the problem arises in every kind of organization, depending on who reports to whom and on what.
- When two individuals communicate on an activity related to a particular area of expertise:
 - The communication is nearly useless if neither has any expertise in that area.
 - The noise is greater if their expertise gap is larger.
 - The noise is smaller if they share more areas of expertise.

VERY GENERAL ORGANIZATIONAL STRUCTURES

The structures of the organizations under consideration can be entirely general.

- Multiple levels.
- Each level can have different numbers of individuals.
- Each of these individuals can be specialists or generalists of various kinds.
- There is a large number of different possible ways to organize who reports to whom on what, even if there are only a few relevant areas as of expertise.

INFORMATION AND DECISIONS WITHIN AN ORGANIZATION

- Some individuals collect or receive initial information, say on various attributes of a project under consideration.
- They report what they best can to others. The latter report it to yet others, and so on.
- At each stage, noises of different kinds get added.
- The decision-maker receives the information from those reporting to him. He makes the decision with the largest expected payoff, based on all of the information that he receives.
- We identify some properties of efficient organizational structures.

KEY ECONOMIC FORCES

- The main tension is between the depth of expertise and communication.
- A superspecialist is better than anyone else in his own area of expertise. He has the greatest difficulty in communicating with anyone with significant expertise breadth.
- A supergeneralist can communicate with everyone. The noise is greater if he communicates with someone with smaller expertise breadth.
- Different kinds of problems arise depending on who is communicating with whom on what.
- The work of large business corporations usually requires specialists as well as generalists. For example, an integrated multinational energy company typically has experts in geology, drilling, offshore oil rigs, pipelines, shipping, refining, marketing, hedging and trading, and so on.
- A role of an organization is to efficiently combine various kinds of specialists and generalists at different levels of the organizational hierarchy to better achieve the overall organizational objective.

SOME RESULTS

- An organization's leader has broader expertise if:
 - It is more complex.
 - It faces more unpredictability.
 - If communication technologies improve
- Those higher in hierarchies have broader expertise.
- Under reasonable circumstances, an organization will be pyramidal. That is, a larger number of individuals will report to a smaller number of individuals.
- Improved communication technologies, and management education (for public or private sector), should tend to flatten hierarchies.
- Any one-dimensional concept (e.g., talent) cannot explain the assignment of different individuals to different levels in hierarchies.
- Explanation of the results.....