
Jay R. Galbraith: Master of Organization Design – Recognizing Patterns from Living, Breathing Organizations

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Sasha Galbraith

Abstract

Jay Galbraith was the leading scholar and practitioner in the field of organization design. His early work focused on the amount, type, and complexity of information that an organization needed to process in order to get work done. Galbraith's information-processing model of organization design was influential among academic circles and became widely used in the corporate arena. In addition, he developed key concepts such as organization design as a prescriptive model, equifinality, strategy implementation the Star Model™ framework of organization design, the front-back organization, and lateral forms of organization – all of which are used today in the organization change process. Galbraith was unique among his academic colleagues in that his research derived primarily from the clients he advised. His gift was a rare ability to synthesize information and distill it down to useful and repeatable solutions to complex organizational challenges.

Keywords

Organization design • Strategy and structure • Star model • Organization change • Information processing • Matrix organization • Front-back organization • Big data • Customer-centric organization • New organizational forms • Lateral organization • Equifinality

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Introduction

Jay R. Galbraith was a seminal researcher, theorist, author, and consultant in the field of organization design. He was best known in academic circles for his information-processing theory of organization design. That is, an organization is comprised of people who must deal with information – both predictable and unpredictable – in carrying out the tasks of producing the work. The greater the uncertainty of the task, the more information must be processed by decision-makers in executing the task. Galbraith identified a number of ways that organizations can develop the capacity to handle such variances in information flow. Galbraith’s Star Model™ is a practical framework that arose from his early research. It is used worldwide in companies large and small to guide managers who must keep their organizations nimble and profitable in response to strategic initiatives and environmental changes. A humble, insightful and affable man, Jay Galbraith’s impact on the academic and business worlds is significant and has stood the test of time.

Influences and Motivations: Clients Pushing the Envelope

Jay Galbraith was born in 1939 into a working class family in Cincinnati, Ohio. His father, Carl, was a clerk at the local General Motors plant who spent his days (and sometimes nights) chasing missing boxcars full of parts. Carl did not finish high school but relished the fact that his son was academically talented. Galbraith’s mother was a homemaker and dubious cook, who became known throughout the neighborhood as “Mrs. Campbell” for her skill at opening canned soups. Galbraith often quipped that as a management consultant, he was merely following his family’s

Scottish heritage since his forebears often ended up in the icehouse (jail) for stealing someone's sheep.

Jay Galbraith's grandfather, Jesse Galbraith, was a major influence in his life. Jesse told Jay to do well in school and major in Chemical Engineering so that he could go to work for Procter & Gamble where Jesse had worked. Galbraith did as his grandfather bid and graduated from the University of Cincinnati with a Bachelor of Science degree in Chemical Engineering. Galbraith was in the "work-study" program, which allowed students to work full-time during a semester each year to pay for their tuition during the rest of the year. His job was on a General Motors assembly line. The experience triggered Galbraith's early interest in how factories worked, why so much dysfunction existed within production organizations, and how much information needed to be gathered and balanced along the assembly line. Immediately following graduation, Galbraith embarked on Master and then Doctor of Business Administration degrees at Indiana University. Galbraith won a National Defense Education Fellowship grant in 1962 that paid him the sum of \$1,700 per year plus \$200 per child throughout his studies. His grandfather, Jesse, was less than thrilled asking him, "Are you going to work for a living or waste your life being a professor?"

During his studies at Indiana University, Galbraith focused on operations management. After passing his written exams in his third year at Indiana University, he changed course and spent the next 6 months reading all the available organization behavior literature. His primary, and arguably most important, influence was James D. Thompson, who taught a graduate class at Indiana University. Each of Thompson's lectures became a chapter in his seminal book, *Organizations in Action*. Thompson was a mentor and encouraged Galbraith's interest in studying organizations as a system, as well as his examination of information processing in organizations. Galbraith explained his intellectual debt to Thompson in the preface of his second book, *Organization Design* (Galbraith 1977).

He is the one responsible for my focusing on organizations rather than computers. I was extremely fortunate to be able to take his doctoral seminar as he was writing *Organizations in Action*. The class discussions of each new chapter gave me an appreciation of the man as well as the material. I was greatly impressed with both. After that experience I changed career orientations, and I am still grateful. For this reason, I would like to dedicate this book to him.

Through his readings, Galbraith's eyes were opened to the social and contingency side of business management, which influenced his later development of the Star Model™ framework for organization design. Herbert Simon, a Nobel Prize-winning economist, introduced the idea that there are limits to rational thinking in organizations (calling it "bounded" rationality) and that these limits have important consequences for economic theory. With James March, Simon developed the concept of slack resources in an organization to aid in information processing. Galbraith found Simon's contributions are particularly useful for two reasons. First, Simon spanned a number of disciplines (economics, political science, organization theory, computer

science, sociology, and psychology) all in the effort to understand human decision-making. This cross-disciplinary rigor became a hallmark of Galbraith's own research. Second, Simon developed a new approach to studying organizations that revolved around behaviors and how people make decisions. Galbraith wrote about his debt to Simon in the preface to his 1973 book, *Designing Complex Organizations*, "There are times when it seems to me that I have merely rewritten his thinking on the basis of the last ten years' empirical evidence. The footnotes do not give sufficient credit to [him]."

Alfred D. Chandler and his study of America's largest industrial firms helped Galbraith solidify the connection of an organization's strategy with its particular structural form. Although Galbraith doesn't specifically mention Chandler's influence on him, every one of his major writings cites the contributions of Chandler (1962).

Jay abandoned his research in operations management and pursued his new interest in organization behavior. He changed thesis advisors and asked Larry Cummings to supervise his dissertation. Six months later, on June 29, 1966, Galbraith had completed his doctoral thesis, "Motivational Determinants of Job Performance."

Victor Vroom's motivational model (Vroom 1964) provided the theoretical basis for Galbraith's empirical research. Whereas the prevailing industrial research at the time studied how workers' abilities limited efficiency gains (Simon 1957), Galbraith sought to understand how decision-making limitations and motivation impacted efficiency in workers. Using questionnaires, he polled workers at a Cummins Engine plant in Indiana. He wanted to test a theoretical model that could explain productivity differences among factory workers.

If such a model can explain a significant portion of the variation and also identify the organizationally controllable variables, it can serve as a basis for removing the decision-making limits of efficiency. (Galbraith 1966)

What Galbraith found was that among all the variables he studied (wage increases, bonuses, fringe benefits, promotions, supervisor and peer group relationships), the most significant impact on increased performance was supportive behavior of the supervisor. At the time, this was an important finding since industrial engineers had always used wage increases to motivate workers.

At 27 years old and a newly minted Doctor of Business Administration, Jay Galbraith joined the Sloan School of Management faculty at MIT. He was terrified. He had uprooted his young wife and two small children (with a third on the way) to move from a sleepy town in Indiana to Boston. For Jay, this was his first and most extreme experience with culture shock. His fellow faculty members were well known and famous for having developed groundbreaking academic theories. At the time, Galbraith felt a bit of the imposter syndrome: unsure of what mistake led him to being installed at one of the top universities in the country.

But everything changed when Galbraith won first prize in the McKinsey Foundation Doctoral Thesis Awards for his dissertation. His colleagues at MIT treated him with newly found respect. And he learned that "they all put their pants on one

leg at a time.” In June 1967, during Galbraith’s first summer at MIT, the department head was looking around for faculty who could lead a research project out in Seattle. President Kennedy’s challenge to the aerospace community to put a man on the moon by the end of the decade left many military contractors scrambling. Boeing needed help organizing their simultaneous efforts in building commercial aircraft as well as delivering on their military and space projects. The problem at MIT was that none of the senior faculty was interested in spending the summer on the other side of the country. Don Carroll, the principal investigator on the Boeing MIT Research Project, appointed Galbraith as the on-site faculty member. For Jay, this was a huge opportunity and he took it on with gusto.

The Boeing study was instrumental for four reasons. First, he was able to test and verify many of the concepts proposed by Thompson (1967) and Lawrence and Lorsch (1967). It was during the Boeing project that he developed his theory on information processing as a critical factor in the design of an organization. Second, it helped him synthesize his emerging view of an organization as a collection of interrelated policies that management can manipulate. For Boeing, this observation was key since management’s goal was to implement a change management program inside the company. Third, it gave him a front row seat to observe how matrix organizations work (or don’t). Boeing had implemented a matrix organization to tackle the twin demands of producing technically excellent products for the space program as well as meeting commercial airline customer delivery demands for the 727, 737, and 747 aircraft in an extremely competitive environment. And finally, the fact that Galbraith spent 2 months interviewing and consulting with a variety of people at different levels within Boeing’s manufacturing facilities taught him that clear, concise, logical, and well-framed ideas are the most effective way to communicate his observations and analyses. This talent served him well as he went on to define many of the concepts he is now known for.

In 1972, Jay took a leave of absence from MIT to join the European Institute of Advanced Studies in Management in Brussels, Belgium. This was driven in part by a desire to refocus on his family, which had paid a price for his academic commitments and frequent travel. During his 2-year tenure as professor there, he wrote his first book, *Designing Complex Organizations*, which, among other things, expanded the research he had published in a 1971 article on matrix organizations.

Galbraith returned to the States in 1974, and Don Carroll, then Dean of the Wharton School, hired him as a fully tenured professor. One of the courses Galbraith taught was on matrix organizations. At the time, Wharton was taking its course offerings to executive audiences around the country. Galbraith was tapped to teach a course on organization design with an emphasis on matrix organizations. He loved it. He was traveling frequently and became known as an expert in matrix organizations and organization change. He started consulting with companies on their organizational issues and discovered that many of them were coming up with new and unique solutions to thorny problems. In 1978 Galbraith resigned his tenured position at Wharton and embarked on a full-time career as a management consultant. Many, if not all, of his colleagues thought he had lost his mind.

For the next 8 years, Galbraith consulted extensively with companies large and small. Procter and Gamble was an early client, and their evolution at the time into a three-dimensional matrix organization challenged him to help them manage it and the requisite organization changes. He later developed the front-back organization concept as a result of work at P&G. At Intel he worked with Andy Grove and his team to refine their organizational response to rapid product and material advances in the semiconductor industry. Intel became a classic example of a balanced matrix with various levels of integrator roles and hierarchical teams. Andy Grove was a unique leader with many talents, but what Jay learned most from Grove was how he navigated, managed, and even embraced the numerous conflicts inherent in a matrix organization. Hewlett-Packard was a frequent client where the HR and organization development groups appreciated his no-nonsense prescriptions for integrating the various hardware units – but where senior management systematically ignored his advice. According to Jay, every time an HP unit got too big, the senior leadership team effectively put the management challenge into the “too hard pile” and split the group apart. Jay learned about innovation and start-ups through his work with Exxon Enterprises and 3M. Motorola, Shell, and Honeywell taught him about cross-border expansion and how to handle country managers in product- or service-driven organizations.

Galbraith’s consulting work took him throughout the United States, Europe, Asia, and South Africa. He loved the travel, but he found he missed the intellectual stimulation from his colleagues in academia. So he contacted Ed Lawler and in 1986 joined Lawler’s Center for Effective Organizations at the University of Southern California. It seemed to be the perfect match since the Center’s mandate was to do “useful research” in organization design, change, and management. Galbraith and Lawler collaborated on a number of research and consulting projects and produced two books and a number of articles. The partnership between Galbraith and Lawler grew from mutual respect and admiration of the other’s work and turned into a personal friendship that spanned decades.

Jay Galbraith’s research methods were somewhat unorthodox. His primary source of information came from the business press (*Financial Times*, *Wall Street Journal*, *The Economist*, *Businessweek*, *Fortune*), which he combined with extensive knowledge of, and communication with, executives at leading companies. He also consulted the academic literature and corporate white papers for current studies on topics that interested him. For example, when researching the impact of data analytics (“Big Data”) for his last book (Galbraith 2014a), he collected articles on IBM, Nike, Procter & Gamble, GE, Bosch, and many of the large banks. He consumed any and all publicly available information on those and other companies as well as recent research on data analytics. (Galbraith had an ability to construct a surprisingly accurate organization chart based on his reading of a company’s annual report and other public data.) He contacted executives at Analog Devices, P&G, IBM, and others who could provide clarification on how their companies handled processes related to data acquisition and use. The products of that research were several chapters in his last book and an article on the impact of Big Data on organizations (Galbraith 2014b).

However, much of Jay's most prescient research was inspired from his consulting work with clients. During his 45 years of consulting, Jay's client list reads like a "who's who" of the global business world. He often said that he learned more from what cutting-edge companies were doing organizationally than from any academic publication. And as consultant to many senior managers, he was able to provide a series of road maps to help them implement organization change.

In the mid-1970s, as a result of his work with Shell and British Petroleum, Jay produced an article on how multinationals manage their talent. He specifically addressed how rotational assignments across borders built personal networks and shaped the culture of the organizations. Twenty years later, after a number of consulting assignments with IBM, UBS, Asea Brown Boveri, Nestlé, Nokia, 3M, and others, Jay wrote a book on organizing global corporations (Galbraith 2000). It incorporates much of what he learned during an 18-month project in Indonesia studying joint ventures. It also discusses how global companies run their businesses in regions, like China, that have very active host governments. And finally, it shows how companies handle the complexity of five-dimensional matrix organizations spanning multiple regions in the world. All of those topics (and their solutions) were prompted from Galbraith's work with clients.

Some observers have wondered who was the source of many creative organizational solutions: the client companies or Galbraith's advice to them. Citigroup, for example, had pioneered global customer accounts in the late 1980s. When paired with its extraordinarily detailed accounting and information system, Citibank could run reports on customer, product, and service profitability across any number of segments (industries, geographies, sales channels, and account representatives to name a few). Cisco used hierarchical teams and councils to manage multi-dimensional profit centers across diverse geographies. Analog Devices was struggling with how to respond to customer demands to provide more than just a handful of products and integrate them with diverse software and competitor product offerings into "solutions." These examples found their way into several of Jay's writings.

In 1995 Jay moved back to Europe, but this time to Switzerland where his second wife, Sasha, was born. He joined the faculty of IMD (the International Institute of Management Development) in Lausanne, which was under the direction of Peter Lorange. For the next 3 years, he taught a full load of courses to the mostly European executive audience. It was a difficult time for Jay, as he felt underappreciated by both the faculty and students. Students criticized him for being "too academic" or offering too many American examples (and not enough European/Russian/Asian examples). Many of the faculty disdained anyone with a perceived "guru" status, which was somewhat paradoxical since Jay was widely praised for his humility. But around the middle of 1999, Nathaniel Foote, the Organization Design Practice Manager at McKinsey & Co., asked Jay if he wanted to work with a group of practitioner/academics to study best practices in organization design. This project invigorated Jay. It was everything he loved: working with cutting-edge companies that were pushing new limits on organizational complexity and collaborating with intelligent, thoughtful, and creative colleagues to analyze and publish the research. In mid-2000 Jay moved back to the United States where most of the project work was taking

place. That study culminated in Jay's book on customer-centric organizations (Galbraith 2005).

In 2005, Don Robert and Chris Callero, CEO and COO, respectively, of Experian, the large consumer data and credit reporting company, contacted Galbraith. The industry was growing rapidly, and they were experiencing growing pains in managing the disparate business groups in the company. This began a 5-year partnership wherein Galbraith helped them design and install a matrix organization as well as sort through the various country/region/business manager roles as Experian expanded internationally. What was notable here was that matrix, having long been banished as an organization form that "doesn't work," was coming back into the management lexicon. Managers realized that a matrix organization was the only way to meet customer demands to produce high-quality products and/or services, deliver them around the globe with localized specifications, and do so at the lowest cost with minimal lead times. Experian and several other clients were all wrestling with the dilemma of how to manage a matrix organization. This led Galbraith to write a book on the topic (Galbraith 2009). In addition, Experian, with its treasure trove of consumer data, showed Galbraith how it was manipulating that information to create new products, services, and entirely new lines of business. The Experian projects were what sparked Galbraith's interest in studying "Big Data" as an emergent dimension in organizations.

Key Contributions: Practical, Useful Prescriptions for Change

Jay Galbraith was arguably the pioneer, leader, and father of modern organization design (Obel and Snow 2014). He spurred a new domain in management theory (organization design) by viewing organizations under a normative lens combining organization theory with organization behavior.

Jay Galbraith was an odd bird in the sense that he straddled the two, somewhat mutually exclusive, worlds of academia and corporate management. And each world cites two significant contributions (as well as a few corollary contributions) that Jay has made. It is fitting, then, that he was honored in 2011 by the Academy of Management with the Distinguished Scholar-Practitioner Award. It's an award given to the few academics in management who have successfully applied theory in practice and whose scholarly works have substantively affected the practice of management. One of his colleagues, Richard Burton, said of Jay, "As an academic, he spoke to practitioners. As a practitioner, he spoke to academics" (Obel and Snow 2014).

Information-Processing Theory

Galbraith's first and most important academic contribution was that organizational complexity is a result of task uncertainty (Galbraith 1968, 1973, 1977). The concept

is also often cited as Galbraith’s “information-processing theory of organizations” and resulted from a research project at Boeing.

The greater the uncertainty of the task, the greater the amount of information that has to be processed between decision-makers during the execution of the task. To reduce task uncertainty one has to either reduce the amount of information required or increase the amount of information processed. In order to achieve one or the other, the organization has four organization design strategies it can pursue:

1. Create slack resources (increase lead time, inventory, or manpower).
2. Create self-contained tasks that are predictable and rules driven (thus requiring less management oversight).
3. Invest in vertical information systems (bring the information down to the decision-makers, automate routine decisions, match decision frequency with the need).
4. Create lateral relationships (enable joint decision processes across lines of authority).

Under each of the four design strategies, Galbraith further developed specific options that the designer can choose from. Each option has an organizational cost in management time and financial and/or human resources. Galbraith made it clear that a cost-benefit analysis had to be considered before implementing any design change. This “information processing” view of managing task uncertainty became a key problem in the field of project management and especially matrix organizations.

Equifinality

A second important, and often overlooked, concept proposed by Galbraith is the notion of equifinality. That is, an organization designer has several, equally feasible, design choices in solving for a given organizational problem. There is no one best solution. But each choice carries a cost. For example, an organization facing increased uncertainty in the information it must process, it can either respond by centralizing decision-making and investing in technology that will increase the capacity of information processing, or it can decentralize decision-making and create lateral information processes at lower levels in the organization. Both choices can be equally effective options. (See Drazin and Van de Ven 1985, for further discussion.)

Organization Design as a Prescriptive Field

Galbraith’s third contribution was a strong corollary that emerged from his first two contributions: the notion that organizations can and should be actively designed. Furthermore, organizations can and should be easily reconfigurable in answer to environmental and/or strategic changes. Organization change, according to Galbraith, is common and normal, and managers must learn how to lead those changes.

Jay often said, “A good organization is one that lasts until you get your next one.” In his 1973 book, *Designing Complex Organizations*, Galbraith delved deeper into his prescriptions for managing task uncertainty by giving concrete examples of how a number of organization change decisions were implemented in several manufacturing organizations. That book is still assigned reading in many graduate level, organization theory courses. Moreover, the concepts he presented are very relevant to organization designers and change managers at large companies today.

His philosophy on organizations held three tenets:

- Different organizational strategies will lead to different structures.
- Organization is more than just structure.
- Alignment among the five policy areas of the Star Model (described below) will bring organizational effectiveness.

But Jay’s thinking was never dogmatic. He disdained the “flavor of the month” fads of organization design. He would often press clients to articulate exactly why they felt the need to, for example, install a matrix organization. (And frequently the answer was, “because our competitor is doing it.”) Writing in the preface to his book, *Designing the Global Corporation*, Galbraith explained his guiding philosophy:

I am an agnostic concerning the design of organizations. Despite the fact that I wrote a book entitled *Designing Complex Organizations*, I have always tried to present the dual options of either simplifying the complexity or building the capacity to manage the complexity; both options have costs and benefits. My advice has always been to articulate both the good news and the bad news; if proponents of an option can articulate the bad news of that option, they will make an informed choice.

This view of organization change also points to another subtlety in Jay’s thinking. He saw virtually all organization design decisions on a continuum rather than as a discrete set of on/off nominal choices.

The Star Model™

Jay Galbraith’s most enduring contribution to the field of organization change and organization development has been his Star Model™ framework for analyzing organizations, shown in Fig. 1. He was the first scholar to map organization strategy against structures, information-processing functions, reward systems, and people practices. The model was first published in his 1977 book, *Organization Design*.

The Star Model™ has stood the test of time and is used today in numerous corporations and organizations worldwide. The fact that it has been adapted and modified by scholars and practitioners (McKinsey’s Seven-S, Mintzberg’s Pentagon, Nadler & Tushman’s Congruence Model, etc.) is a testament to its inherent value.

At its core, the Star Model™ is a prescriptive framework comprising five “levers” or design policies – strategy, structure, processes, rewards, and people. Each policy

Fig. 1 The Star Model™
 (Reproduced with permission
 from Jay R. Galbraith Marital
 Trust)



area can be changed and manipulated by the organization designer. The idea stems from Jay’s fundamental belief that organizations are collections of individuals who process information in order to get the work of an organization done. Thus, managers can shape employee behavior and culture by changing how power is held and manifested in an organization structure; how information is processed and moves through the organization; how people are motivated, measured, and compensated; and what kind of people sit in particular roles and get promoted. Maximum organizational effectiveness is achieved when all of the “levers” are aligned with the strategy and with one another.

Strategy is at the top and is where any organization change project must start. It defines the company’s direction – what the organization is to produce, where it will play and be active in the market, and how it will be profitable. Structure defines the locus of power and where decisions are made. Key design choices are the hierarchical shape of the organization, the degree of specialization in jobs, the distribution of power (centralized versus decentralized), and the amount of departmentalization at each level of the structure. Processes embody the flow of information. Vertical processes, such as business planning, resource allocation, and budgeting, define how decisions to move up and down the hierarchy. Lateral processes, such as new product development and order fulfillment, utilize information generated from cross-functional, cross-unit, and cross-regional groups to enable rapid decision-making. Reward systems work surprisingly well, but they are not always well designed. A good reward system aligns the goals of the employee with the goals of the organization and motivates the employee to perform at his or her best. The final policy area, people, encompasses how human talent is recruited, selected, trained, developed, and moved through the organization. The strategy and structure of the organization will define the types of skills and mind-sets required to implement the organization’s goals.

Jay represented the framework graphically as a star, with interconnecting lines joining the five levers, to stress that the five policy areas are interdependent and must be aligned. He was one of the first scholars to propose that the notion of fit or congruence among all the levers is key to an organization’s top performance.

Strategy Implementation

In the late 1970s, the field of strategic management was emerging as an accepted area of research. Chuck Hofer and Dan Schendel organized a conference and published the proceedings in 1977. Jay authored a chapter with Dan Nathanson on the topic of strategy implementation, which became his 1978 book, *Strategy Implementation*, coauthored with Nathanson. The approach, still widely used today, was the first strategic approach to organization design. Jay's information-processing model used the primary tasks of the organization as the prime contingency for design choices. Thus, the design is responsive to task uncertainty, diversity, and interdependence. But Jay was a careful student of others who looked at external factors' effects on design (mostly structure). These included Perrow (technology), Chandler (growth strategy), Lawrence and Lorsch (personality type and tolerance for uncertainty), and others who argued the role of environment. Jay was the first scholar to specifically make strategy the key driver for design choices and any organization change project. Thus, the starting point for strategy implementation was to develop the alignment of the entire organization (not just structure) to the strategy. Jay was also the first to propose a prescriptive and comprehensive model for strategy implementation that incorporated the notion of "fit" or congruence among all organization dimensions. This is a major contribution to the strategy discipline.

Lateral Organization Processes

By the mid-1980s when matrix organization was widely believed to be unworkable, Galbraith's clients would complain about the complexity in their organizations and ask him to help them simplify their lives. His response was always that complex strategies required complex organizations and that organizations must be as simple or complex as their strategy dictates. But he also believed that organizations should try to "keep it simple" for customers and frontline employees. However, that meant that the challenge of managing complexity sits squarely on the shoulders of managers. Galbraith's many books sought to help management tackle this complexity and create opportunities where competitors have failed. According to Jay, "You get no competitive advantage from doing simple things; by definition, anyone can do them. Firms create competitive advantages by surmounting challenges that their competitors cannot" (Galbraith 2000).

One of the primary ways that management can deal with such complexity is to develop extraordinary skills at lateral processes. Such processes include facilitating voluntary networks, colocating employees at crucial interfaces, connecting important groups electronically, and progressively ramping up the power and influence of people and teams who are responsible for coordinating disparate subtasks in the organization. All of these processes involved increasing degrees of information flow and communication paths. And all of these processes are built upon a solid foundation of social capital. The concept is shown graphically in Fig. 2.

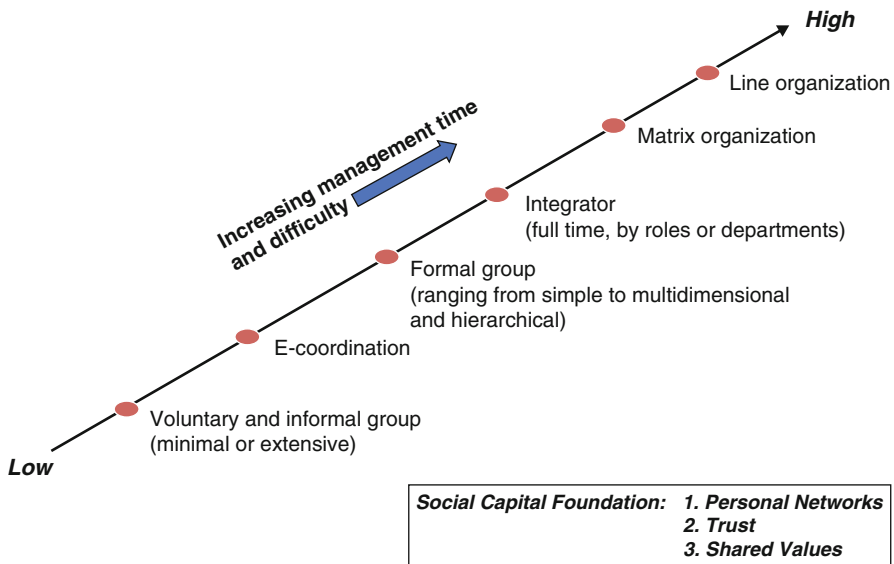


Fig. 2 Types of lateral forms (Reproduced with permission from Jay R. Galbraith Marital Trust)

Galbraith depicted the types of lateral processes on a “ramp” to make it clear that each step up the ramp required building upon the skills and infrastructure put in place for the preceding lateral process. The cost of implementing more formal processes is management’s time and effort. Thus, the organization designer must balance the level of lateral processes required with the concurrent cost to management. The choice of lateral processes underpinned much of what Galbraith discussed when proposing solutions to organizational challenges at client companies. Clients often wanted to “install the new organization” instantly, without going through the change process to build the lateral capabilities necessary for running more complex organizations. Galbraith’s “Ramp,” as it became known, was crucial in explaining to managers why the social capital foundations were so important. He published a book that dealt specifically with lateral processes (Galbraith 1994).

The Front-Back Organization

Galbraith’s work with clients led him to define a new organizational form, the front-back organization that was a kind of “matrix-lite” organization. The “front” of the organization faced the customer and was organized around customer segments, channels, services, and/or geographies. The “back” was organized around products, functions, and/or technologies. At the time, Citigroup and Procter & Gamble used this type of organization. The challenge fell to management to ensure that the products/technologies produced in the back were what the sales teams in the front

could profitably sell to customers. The front-back organization required intensive communication and coordination between the two ends of the structure. It also required sophisticated management skills in allocating resources, setting priorities, and resolving inevitable conflicts that naturally arise as a result of the often diametrically opposed goals between product- and customer-focused organizations. Well-designed lateral processes were key to resolving many of those challenges. As with his early work on information processing, Jay's view of the front-back organization, and, indeed, most lateral processes, encompassed decisions about the type, intensity, and location of information within the organization that are required to get the task(s) done. And as most of his client work involved organization change projects, he frequently used the front-back model to steer clients away from implementing a full-fledged matrix organization.

Customer-Centric Organization and Strategy Locator

The late 1990s and early 2000s saw the rise of customer power, and many companies struggled to meet the challenge. Stand-alone products and services proliferated, but the best ones commoditized rapidly because they were easy to copy. Customers became fed up with trying to integrate the vast array of product, service, and software offerings and demanded that companies provide integrated packages or "solutions" when, where, and how they desired. Most companies responded by "putting the customer first" and tried to satisfy demands from their most vocal customers. In Jay Galbraith's view, these efforts amounted to little more than cosmetic changes in how their organizations operated. He argued that most companies, while they thought they were customer centric, were still very much product centric.

In order to be truly customer centric, Galbraith said that companies must do two things. First, they needed to truly understand the complete mind-shift required to organize around the customer. It means embracing a strategy of finding the best solution for the customer and customizing a package – including products and/or services from a competitor if necessary – that provides the best value for the customer. It means structuring the organization around customer segments, customer teams, and customer P&Ls rather than product or business units. It means prioritizing customer relationship management processes rather than new product development processes. It means measuring and rewarding people based on the customer "share of wallet" and degree to which they delight and retain the most profitable and loyal customers. It means giving power to the people who have the most in-depth knowledge of a customer's business rather than the best product engineers. The second, and often most difficult, thing companies needed to do to be truly customer centric was to recognize that they were, in fact, still product centric albeit "customer focused."

Galbraith argued with many clients about how customer centric they were (or weren't). He recognized that not all companies needed to be 100% customer centric. For example, most pharmaceutical companies could exist quite well as a customer-focused but product-centric organization. As was typical for Jay, he saw

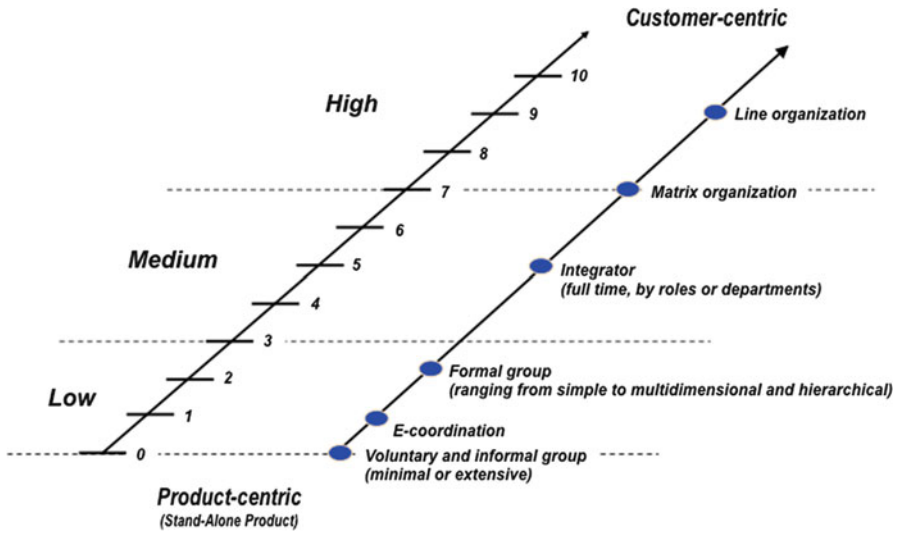


Fig. 3 Matching solutions strategy location to lateral coordination requirements (Reproduced with permission from Jay R. Galbraith Marital Trust)

the customer-centric strategy along a continuum with corresponding degrees of customer centricity that an organization had to adopt. So in order to assist his clients in sorting out where they sat on this strategic continuum, he developed a “strategy locator” that suggested low, medium, or high customer centricity. This is shown graphically in Fig. 3.

The degree of customer-centric strategy depends on four factors: the number of products and/or services a company sells to a particular customer and how different the products and/or services are from one another (scale and scope), how much the company’s customers require those products/services to work together (integration), whether the integrated products and services can be sold across a wide variety of industries (horizontal solutions) or if they are industry specific (vertical solutions), and the percentage of total company revenue that comes from the integrated solutions. A company that sells less than five products/services that are mostly the same and require minimal integration in order for them to work properly is pursuing a “low” customer-centric strategy. The large multinational food and beverage producer, Nestlé, falls into this category. By contrast, IBM falls into the “high” customer-centric strategy level of the continuum. IBM sells many different products and services (computer hardware, software, cloud computing, storage capacity, consulting, systems integration, training, technical support, financing, security services, an advanced medical diagnostic assistant, and so on) to thousands of global clients in virtually every industry. Moreover, each customer wants to do business with IBM in a number of different ways. Some, like Mitsubishi, want to purchase an entire trading floor for operations in six global locations. Others only want to purchase a mainframe computer.

For each level of complexity in the solution strategy that is required, Galbraith prescribed a corresponding level of customer-centric structure, lateral coordination processes, reward policies, and people practices, following the Star Model™ framework. As always, there is a cost to implementing more intensive customer-centric steps. Thus, an organization needed to implement only as much as was necessary to satisfy the complexity required by the customer solution strategy. Managers could then use Galbraith's Star Model™ as a road map to ensure that the organization's structure, information processes, reward systems, and people decisions were aligned with the requisite strategy.

New Insights: Change Management and the Star Model Applied to a Multitude of Organizations

Jay Galbraith's writings have inspired countless scholars and practitioners to probe deeper into the concepts that he pioneered. Of the many researchers whose ideas have been rooted in the information-processing model, two in particular stand out. William Joyce's empirical study of matrix management is the only controlled field experiment that has been conducted on this important type of organization. This study was directly informed by Jay's first book, *Designing Complex Organizations*. Jay was the first to write systematically about these forms, and Joyce's research was the first to present rigorous evidence assessing their impact. Jay and Bill became friends as a result of this mutual interest, and Bill joined Jay in teaching organizational design at Wharton following the completion of his doctoral degree. They remained close friends and colleagues for the next 35 years. Jay's influence also stimulated Joyce to write his book *Implementing Strategy*, in which the information-processing framework was directly applied and extended within the strategic management field.

Galbraith and Joyce had the good fortune of having Robert Kazanjian as a doctoral student at Wharton. Rob was quick to appreciate the importance of Jay's thinking, and together with Jay he revised Jay's book, *Strategy Implementation*. Galbraith, Joyce, and Kazanjian pursued these mutual interests throughout their careers, consulting and teaching together regularly, while each continued to extend Jay's pioneering ideas and prescriptions.

Others also extended the information-processing perspective. Using Galbraith's insights on information shortfalls ("exceptions") during task execution, Ray Levitt at Stanford led a research project to develop the Virtual Design Team simulation of project organizations. According to Levitt, the research team "quantified the magnitude of exceptions in typical engineering organizations and implemented a discrete event simulation of information processing and flow through an organization required to carry out direct work, supervision and coordination" (Levitt quoted (p. 63) in Obel and Snow 2014).

The Star Model™ has provided numerous scholars an opportunity to further develop the concept of fit in organizations. One example is a paper published in

1985 by Jay’s colleagues, Andy Van de Ven and Robert Drazin, which examined the fit issue in an empirical study. In addition, a Brazilian consulting firm developed a “matrix index” using the Star Model as a foundation to quantify the type of matrix organization present in various research firms.

Galbraith’s Star Model™ continues to be used as a framework for analysis in numerous corporations worldwide. Diane Downey took an early interest in the Star Model during her work with Citibank in the early 1990s. She found ways to operationalize it and develop tools to bring it alive for managers. This led to collaboration with Jay, which resulted in a workbook (Galbraith et al. 2002). In addition, many public entities such as police departments, nongovernmental organizations and even the US Department of Homeland Security, Consumer Financial Protection Bureau, CIA, and National Reconnaissance Organization also rely on the Star Model™ to help them change and align their organizations with changes in strategy.

From my own perspective, I had always been interested in how women progress up the corporate ladder and why so many of them seemed to opt out at the prime of their careers. Many of these former corporate executives left their companies to start their own businesses. In fact, one study (Buttner and Moore 1997) suggested that the main reason women left their high-powered corporate jobs was because the environment and culture did not reflect their own values. It led me to wonder whether Jay’s Star Model applied differently to female-designed organizations. That question became the basis for my doctoral research and dissertation in 2004. (To Jay’s surprise, I did find several differences in how women organize their companies, particularly in the areas of communication and knowledge transfer processes, reward systems, and people practices.)

Legacies and Unfinished Business: Information Processing Meets Big Data

Jay Galbraith always had yet another book up his sleeve. In 2009, he had started writing a book about the corporate center and how large, multidimensional companies manage their portfolio of businesses. Book writing for Jay was usually relegated to times when the consulting business ebbed. During his last years, Jay’s consulting business was booming, so his corporate center book suffered and was never finished. But he then became fascinated by how many companies were using “Big Data” to not only run their businesses but learn more about their customers. This allowed them to provide more innovative products and services – including some that the customers themselves didn’t know they needed or wanted (iPad anyone? Fitbit? Running shoes with sensors?).

Given his enthusiasm over how certain companies (Disney, Experian, and Nike) were handling data, Jay’s next book would almost certainly have been on the impact of data analytics on organizations and how organizations should structure

themselves to capture the best of what data technology has to offer. One can read a preview in his last published article, “Organization Design Challenges Resulting from Big Data” (Galbraith 2014b). He believed that data analytics would become the next major dimension in organization design. A digital data function would be equivalent in power and importance to an organization’s existing function, geography, product, customer, channel, and/or category structure. Galbraith foresaw a “chief data officer” on the leadership team who would oversee an organization built around capturing various types of data in real time to make rapid business decisions and drive profitability.

In order to harness the power of Big Data, Jay identified three key hurdles an organization needed to address. First, he saw the power of data analytics as bringing on new strategic opportunities, but also causing friction in the existing organization’s power structure. At issue is whether the addition of a sophisticated data analytics capability is competence enhancing or competence destroying to the organization’s current competitive advantage. Nike was able to use data gathered from its NikePlus running community to quickly design better running shoes as well as develop the world’s largest online collection of trail running maps. Nike’s embrace of data is competence enhancing. In contrast, Hewlett-Packard had relied on its superior relationships with resellers and retailers to develop and market its products, so Big Data and e-commerce were competence-destroying innovations. Thus, a company that’s aspiring to use data analytics in real time had to match the power of the new digital division to where it currently sat on the competence enhancing-destroying spectrum. The newer and more challenging the data analytics capacity is to an organization, the more horsepower (in terms of title, experience, reporting relationships, budget, etc.) the data manager has to own.

Second, a data savvy company needs to develop information and decision processes to support the digital strategy and structure. Today, credit card companies can use data captured in real time to influence events and their outcomes. A fraudulent transaction can be detected while it’s in progress, and the perpetrator could potentially be apprehended in the act. But in order to achieve this, the organization needs to have nimble processes in place that can identify when a stolen credit card is being used and then immediately transmit the appropriate instructions to the retailer or merchant in real time. This requires an organization to significantly increase its own clock speed (ability to move in real time).

And finally, to gain the most advantage from Big Data, Jay believed that an organization had to invest in digital resources (in the form of people and technology) to build data analytic capabilities across the organization and develop new revenue sources. This could start as a small digital division that might eventually grow into an entire business unit or strategic dimension that’s matrixed across the organization. Several companies have found that sophisticated analysis of Big Data can spur entire new business opportunities. Bosch’s Software Innovation group collects and analyzes information from the sensors it places in various automobile components to sell insights to drivers about safety and maintenance. J.P. Morgan and Wells Fargo

sell reports on consumer trends based on information they gather from their credit card and banking customers. Citibank, with operations in 100 countries, says it can identify the next “silk roads” in commerce based on data it analyzes. It sells these insights to retailers like Zara and H&M.

Rob Kazanjian has postulated that Galbraith’s work on lateral processes, and the social capital required to make them work properly will find a new home in the burgeoning field of network theory. Galbraith has often written about the importance of social capital (personal ties), networks, and formal and informal lateral processes in a well-functioning matrix organization. Kazanjian believes that with the reduced power of hierarchies and formal structures, we will see an increase in the power of other levers, such as lateral processes and networks, in organization design.

To some degree, Jay Galbraith lamented the fact that the field of management did not operate like other professions such as Law or Medicine, where academic research was useful in that it advanced the field and, indeed, was embraced by the practitioners. Bill Joyce summarized it best:

Jay provided an elaborate and convincing argument that academics were not advancing the field of organizational design. In his opinion, it was managers who were innovating new organizational forms, and he believed that academics must look to those innovations as a source for advancing the field. The search for new organizational forms dominated his career as both an academic and a consultant... Jay’s humility and interest in practice resulted in the greatest contributions to the field of organizational design of any scholar to date. Jay studied new organizational forms that emerged with their roots firmly in practice, but did it in a way that made fundamental and enduring contributions to theory. He always worked from practice to theory and not the reverse. (Joyce quoted (pp. 60–61) in Obel and Snow 2014)

Conclusion

Jay Galbraith became known as the founding father and premier expert in organization design. He had a passion for analyzing how information moves through various organization types and studying the bottlenecks that arose. He is most well known in the academic community for his information-processing model of organization design. In the corporate world, he is very well known for his Star Model™ framework of organization design. He also developed a number of other practical tools useful to the organization change manager, such as the front-back organization, the customer-centric strategy locator, and the lateral process “ramp.” Galbraith’s work is still used today by many companies worldwide.

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