Non-hierarchical emergent structure: a case study in alternative management

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NON-HIERARCHICAL EMERGENT STRUCTURE: A CASE STUDY IN ALTERNATIVE MANAGEMENT

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Abstract: *Most well established organizations beyond a certain size adopt a hierarchical structure and accompanying bureaucracy as a means to organize and coordinate the work of the organization. This case study describes a medium-sized family-run organization in the US, with 600 employees and $2 billion in sales turnover, which functions without formal management structures or titles. Data collected through personal observation and interviews reveal emergent structures, partly in response to the alternative management approach. The paper describes these alternative management methods, the advantages and disadvantages, as well as the conditions that make this approach possible. The paper concludes by discussing the transferability and suitability of these methods to organizations in general.*

Introduction

Many new organizations, especially start-ups, begin life with a rudimentary structure, with the owner-manager directly supervising a small number of employees, often working alongside with them to produce the goods and services that define the organization. Greiner (1998) refers to this phase in the organization's life as the creativity phase, where the focus is on producing and creating a market for the good or service based on a new idea. The founders, often themselves exiles from large corporations, deemphasize managerial or bureaucratic processes. They favor informal, direct communication with employees, and paperwork or documentation for its own sake is negligible. Mintzberg (1979) has referred to the structure of such organizations as the simple structure, where the owner-manager directly supervises and makes all important decisions. As the organization grows, however, full-time managers must typically be hired to manage and motivate the much larger workforce. Larger operations would need to be formally coordinated and formal controls, both financial and non-financial, would need to be instituted. Over time, most medium and large organizations mature into well structured bureaucracies with formal titles and reporting relationships,

technical specialists and professionals managing various operations, a hierarchical structure with many layers offering career progression, professional human resource management, and formal communications, paperwork, and documentation. Typically, this relatively stable structure evolves as the organization responds to periodic and often opposing demands for formalization and standardization, unit level autonomy, and coordination of disparate units, which naturally accompany growth (Greiner 1998). At the level of the individual job, a detailed job description forms the basis for hiring, training, compensation, and performance appraisals. Individual performance is managed through a system of intrinsic and extrinsic incentives with formal, written annual performance reviews.

There are many advantages to the relatively stable, albeit bureaucratic structure. The formal hierarchical structure with titles signifying authority and function provide an organizing framework for the work of the organization. The structure formalizes the necessary division of labor needed in a large organization, while simultaneously serving as a coordinating mechanism which ties together the various tasks of the organization into a coherent whole. Responsibility, authority, and communication lines are clarified ideally resulting in an efficient, well oiled machine described by Max Weber (1921). It serves to bring order to a large group of people with rules and procedures. Formal written communication and documentation creates institutional memory and helps with continuity and renewal. The formalization and standardization helps to separate positions from incumbents, lessening abuses of power and arbitrary decisions. All in all, the formal structure and accompanying bureaucracy provides an efficient, rational, and legally defensible method for managing complex organizations.

Despite these advantages, formal structures and bureaucracies are more often than not faulted for being overly formalized and bureaucratic to the point of adversely affecting organizational effectiveness (Shaw & Schneier 1993). Procedures and paperwork can slow down decision making and response time. Overemphasis on adherence to procedure may come at the detriment of action and results, and creativity may be stifled. The formal division of labor and departmentalization with accompanying unit- or departmental-level performance measures could lead managers to pursue departmental goals at the expense of overall organizational goals, encouraging turf battles rather than collaboration. At the individual level, detailed job descriptions can lead to the 'not my job' syndrome, where employees limit their contribution only to activities that are formally sanctioned, measured, and rewarded.

Thus, while the typical organization structure and work arrangements have obvious advantages, it is a mixed blessing. In the absence of deliberate intervention, most organizations will evolve into some variation of the structure described above. The challenge in modern organizations has been to adopt designs that minimize the weaknesses of these traditional bureaucratic structures, while retaining the advantages. According to Nadler & Tushman (1999),

organizations will have to meet the dual challenge of responding to the changing environment in a flexible manner while being strategically integrated and coherent. There is need for both controllability and responsiveness (Graetz & Smith 2005). Increasing flexibility and speed of response requires an accompanying reduction in bureaucracy and red tape as well as redesign around processes for customer deliverables. Typical approaches include flattening the organizations by eliminating hierarchical layers; minimizing paperwork and streamlining procedures; increased professionalism and training of employers; breaking up large organizations into more manageable units; performance management through cultural norms and expectations rather than rules and sanctions; and using team based structures.

While these measures help reduce some of the problems associated with excessive bureaucracy, they do not eliminate them. This is to be expected, as in most organizations there is a limit to which bureaucracy can be reduced. This paper describes an organization that has pushed this process to the extreme. In this unique organization with more than 600 employees, most have no job titles or job descriptions. Officially, there are just two levels – senior management and employees. There are no formally scheduled meetings or formally scheduled evaluations. There is no separate HR department and minimal internal paperwork. Communication is mainly by phone or e-mail. This is not a typical organization, but its workings provide insights that can be potentially applied in other settings. This paper is essentially a case study of this organization describing its unique structure, culture, and operations. It represents an alternative approach to management and organization. The paper evaluates the design represented by this organization in terms of the conditions that make it possible and its generalizability to organizations at large.

Medical Distributors, Inc.[1]

Medical Distributors, Inc. is an independent, family owned regional distributor of pharmaceutical and medical products, in business for more than 150 years in the southern United States. Till about 1980, it had only about 60 employees and maintained a close-knit family atmosphere. When the pharmaceutical distribution industry began to consolidate and large national distributors emerged, Medical Distributors (hereafter referred to as MD) had to grow rapidly to avoid takeover and stay competitive. New customers and employees were added at a rapid rate and by the turn of the century, MD had grown into a medium-sized company. At the time of this writing, the company operates out of a brand-new, expansive warehouse with the latest custom-built automation, employing over 600 employees and grossing more than $2 billion in sales, putting it within striking dis-

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1   Actual name withheld at the company's request.

tance of the Fortune 500 list of largest companies in the US by sales volume. This phenomenal transformation has been mainly through internal growth. Employees are well paid and to date there has been no attempt at unionization.

What makes this company an interesting case study is that the organization has managed to stay relatively free of the formalized structure and bureaucracy that typically accompanies growth. It has managed to retain many elements of an informal family atmosphere, despite a 10 fold increase in workforce. As mentioned before, most employees do not have titles or written job descriptions. Following an overview of operations, these and other alternative management elements are described and discussed below.

Operations overview

The company is essentially a warehousing and distributing operation. It distributes over 40,000 product items that include prescription drugs, over the counter medications, and health and beauty products, to hospitals, independent and chain pharmacies, and nursing homes. The service coverage area extends over eight southern states within overnight driving distance. All deliveries are by truck making it one of the largest trucking operations in the state of operation, logging more than 7000 miles per day.

Figure 1   Operations overview
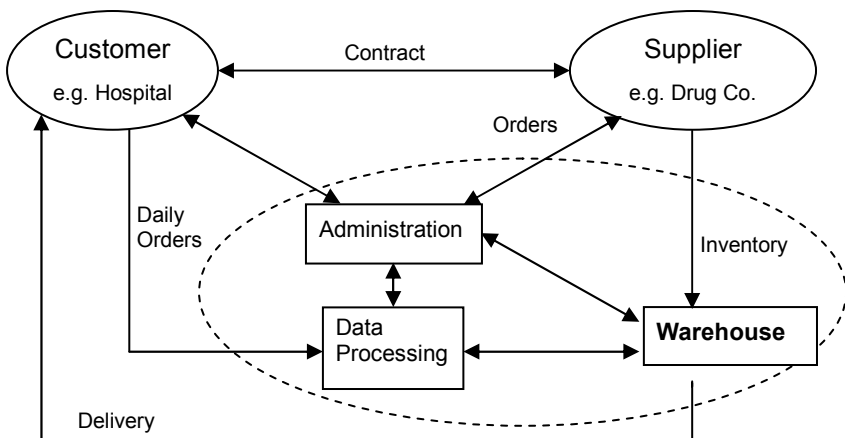
A schematic view of the operations is provided in Figure 1. A large customer with a daily need for a variety of pharmaceutical products typically negotiates contracts with individual manufacturers or suppliers for delivery at a certain price. The actual quantities needed vary from day to day. The manufacturers or suppliers send supplies in bulk to the distributor, MD, which in turn delivers them in the quantities needed every day. Customers place orders everyday and receive deliveries from MD the following day. MD procures stock from suppliers at a discounted price and delivers to customers at the negotiated contract price.

As can be seen in Figure 1, internally, there are three main operational units. The administration unit is at the center of the network. It negotiates price and delivery terms for inventory with suppliers, manages the relationships with customers including billing and customer service, and oversees the operation of the data-processing unit and the warehouse. It also handles accounting, payroll, and human-resource activities such as recruitment and selection. There is also a sales operation in charge of signing up new customers and retaining existing ones. The data-processing unit is a vital part of the operations. Typically, customers place daily orders directly with data processing electronically through special devices installed at the customer location. Custom software then converts these orders into retrieval and shipping instructions for the warehouse. Data processing maintains inventory and operations data including performance data (e.g. error rates), in addition to vendor, customer, and employee records. The warehouse performs the typical operations of receiving inventory, stocking, retrieval, and order fulfillment, culminating in shipping and delivery to customers. There is one main warehouse and several small depots in outlying regions.

Workflow and scheduling

In the warehouse, the first shift workers arrive between 6 and 8 am. There is no fixed time for the start of the shift. The main activity at this time is to receive incoming inventory and finish up with any early morning local deliveries. As the morning progresses, the focus shifts to stocking the inventory and by early afternoon retrieval and order-fulfillment activities commence. Second-shift workers, who are mainly responsible for assembling individual orders and the bulk of the shipping, are expected to be in around 2 pm, but may arrive as early as 12 pm and help the first-shift workers who are finishing up with the stocking. As delivery time at the destination is fixed (early morning), shipping is sequenced according to distance, with the trucks traveling farthest leaving first around 8 pm, and local deliveries leaving only the following morning. This in turn means that customers farther away have earlier deadlines to place their last orders. The bulk of the order fulfillment and shipping takes place between 5 pm and 10 pm. Second-shift workers do not leave until all orders are fulfilled which could be as late as 1 am on busy days. Third-shift employees start arriving at 8 pm and are all in by 10 pm. They help the second

shift finish up and then do maintenance and clean-up activities. Early in the morning inventories start arriving and they start receiving operations till about 6 am when first-shift workers begin arriving. Thus, there is considerable overlap between shifts and workers are not confined to a particular task.

Administration and most data-processing staff work normal work hours from 8 to 5 pm in a separate building. Some data-processing employees are available during the second and third shifts to handle technical issues that may arise.

Technology

Operations are highly automated. Imported custom-built retrieval systems automatically 'pick orders', i.e., fulfill a customer order by retrieving required items and assembling them in a carton for shipping. Most customer orders are transmitted electronically and update a database in data processing. Custom software verifies the order and transmits it to the warehouse computer. The computer sequences orders and activates the automatic retrieval system and prints out labels for each order with barcodes for customer and product information, route, number of boxes, etc. A system of conveyors helps in moving customer cartons from the starting point of assembly operations to the shipping point passing by all stations, with the barcodes activating the needed retrieval. For regular customers the system suggests replenishment orders based on usage patterns. The system maintains inventory records and updates automatically upon retrieval. All units including outlying depots can view inventory in real time. Some smaller custom orders are picked manually, and some retrieval machines have to be stocked manually. All orders are verified by checkers who scan the picked items to cross-check against the customer order.

In addition to customer inventory and customer data processing, the system also tracks employee performance. Any time an item is handled or an operation is commenced, the employee number is also scanned in. Thus, each employee's 'production' can be tracked in terms of number of items handled, boxes loaded, etc. Errors can be tracked to the individual employee who handled the item or performed the action.

Organizational structure

There are only 3 formal titles in the entire company! Top management consists of the President and two Vice Presidents, one in charge of operations and the other in charge of sales and marketing. No other employees have formal titles. Technically (for legal purposes), all the employees report to and in theory are directly supervised by the two vice presidents. With the employment-at-will system in the US, this arrangement protects the company from potential lawsuits by employees, especially since there are no job descriptions or formal performance

appraisals. In practice, there is a layer of middle management that oversees the day to day operations of the company. Though there are no formal titles, there is a production manager, sales managers, and a transportation manager. Employees refer to them as such. Junior management consists of shift supervisors and team leaders, again without formal titles.

Administration is split up into several areas such as contracts, customer service, accounts receivable, accounts payable, and marketing. Again there are no formal titles or separation into departments. There is no separate human-resources department. Payroll is handled by accounting and other HR tasks like recruitment and selection or performance management come under the purview of operations. Staff is kept to a minimum and no one except the top management has support staff like secretaries.

Emergent structure

In any group of people, structure emerges even when not formally sanctioned and MD is no exception. Though individuals lack formal position power, they accrue other bases of power such as expert, referent, reward, and coercive; the latter two being informal and non-monetary. Individuals with longer tenure and /or expertise gain expert and referent power. In each area, typically, a senior person gains nominal authority to direct work activities. For example, in accounts receivable, a senior person who has been with the company for 25 years directs the work of one other employee with 10 years experience and a trainee with less than six months tenure on the job.

In the warehouse, the workflow determines groupings of employees. As described earlier, the basic activities are receiving, stocking, order picking, verifying, and shipping. In each of these areas there are team leaders who emerge not only due to their expertise in their particular area but also due to their understanding of operations as a whole. The entire operation is tightly linked and delays, errors or breakdowns in one area can affect the entire process. Those who understand these linkages have a broader perspective and emerge as leaders. Over time, with experience, a team leader might begin to coordinate more than one area and emerge as a shift supervisor. This is not automatic. For example, currently the first shift has no shift supervisor but has a number of team leaders. The second shift on the other hand has a supervisor and team leaders. Again, no one has formal titles. The production manager is in charge of overall warehouse operations as well as issues such as employee evaluations, disciplinary measures, and miscellaneous tasks such as facility tours. In addition to these recognized positions, there are informal leaders and resource persons. In most areas there are veteran employees who prefer to work in line positions rather than assume leadership responsibilities, but nonetheless exert moral authority by virtue of their experience. These senior employees set standards for workplace behavior and performance. They model the

work ethic the company expects and often mentor new employees. An individual may also emerge as a resource person by virtue of particular interests or expertise. For example, a person who likes working with machines might get involved in maintenance activities and may emerge as the troubleshooter for a set of machines.

Thus, despite the lack of formal titles on paper, there is a definite structure to the entire organization. But because nothing is formalized, the structure is very fluid. As there are no rigidly defined areas of responsibilities, roles emerge as needed. For example, an individual who was hired for his expertise in transportation contributed to software development as he had prior experience and interest in that area. Personnel can also be moved at a moment's notice from one area to another. For example, employees who are stocking may be called upon to finish up receiving. Third-shift employees may start their shift helping with shipping, then switch to maintenance and clean up, and then switch to receiving.

Work culture

The predominant orientation is to 'get the job done', which mostly means timely, error-free order fulfillment. Given the nature of the shipment (many life-saving drugs and supplies that must be delivered on time), all energies are focused on 'getting the shipment out the door'. Second-shift workers typically cannot leave till the last major order is shipped, even if it means staying past midnight. The environment can also be described as a 'heads down', where each employee knows what needs to be done and does it.

While most tasks are individual, there is a natural incentive to collaborate and help each other, as you cannot leave without getting the job done. Workers are paid by the hour, so if one's task is finished, one looks for other tasks to do without overt prompting by the team leader. This is partly because employees want to assure themselves of a minimum and steady amount of income by working a set number of hours; and partly because all employee actions are tracked by the system. As described earlier, each time an item is handled, the system also records who performs the action. There is also peer pressure from coworkers, particularly the veterans. Employees wishing to earn more can come up to 2 hours earlier than the scheduled time of their shift and can stay as late as they wish. Excessive overtime is not encouraged, however.

Collaboration and cross training is encouraged. This is facilitated by the lack of formal job titles, job descriptions, and departmentalization. The system discourages 'not my job' syndrome. Workers are encouraged to take initiative and go to tasks. In the absence of defined job assignments, one cannot claim that a particular task is 'not my job'. Leaders regularly remind workers that if they spot a problem, 'they own it', meaning it is their responsibility to successfully resolve it by personally taking care of it or contacting the right people in person or on the phone. No sending a memo or e-mail and forgetting about it.

Overall, the atmosphere is relaxed. Sweet roles are passed out in the morning and there is a fresh fruit basket in the break area as well as free coffee and beverages. Subsidized gym membership is available for all employees. There is no dress code and no requirement to punch in by a certain time. President and most administrative staff leave at 5 pm. Customer service people usually stay till 6 pm when the telephone system is closed. Office personnel work late if needed, but people are discouraged from working excessive hours and, in general, there is no work on weekends, except for those who come in on Sunday night to start the next week. Tenure and loyalty are encouraged. Veteran employees get special privileges such as working the shift and job of their choice and being first in line for food at the Christmas dinner. Senior office employees can also briefly excuse themselves during the day to run personal errands. Management encourages a family atmosphere and will support employee recreational initiative like a fishing tournament. Many employees also meet socially outside work hours.

Alternative Management Methods

In most organizations with a turnover of $2 billion, an established HR department will be in charge of maintaining job descriptions and coordinating recruitment and selection based on those descriptions. Hiring will be for specific positions and specific skills will be sought. Managers will engage in planning, will have meetings for coordination and decision making, and will have formal performance evaluation meetings with their subordinates. At MD, none of these conditions hold true as described below.

Recruitment and selection

As there are no formal titles or job descriptions, employees are hired for their attitude, general aptitude for learning, and character. Being a workplace that handles controlled substances, all employees have to pass a polygraph test administered in house. In the warehouse, unskilled recruits are usually high-school graduates. Many of the older employees have military experience. There is a chronic shortage of staff as many applicants through traditional channels (e.g. print media advertising) do not pass the drug test. The company relies heavily on word of mouth and employee referrals, particularly of friends and acquaintances who have been laid off elsewhere due to business downturns. Employees may bring in their children or relatives for a summer internship and many stay on. As employees are hired into the organization and not to any particular job, they can be assigned to meet specific needs and reassigned as needed.

At the administrative or middle management levels, there is a philosophy of hiring 'good people' and finding a job that fits the person. In one extreme example, an experienced

individual who was laid off by his former employer was hired without a formal assignment or job position. As this individual familiarized himself with the operations he discovered a more efficient way to manage supplier relationships. He developed the system and is now responsible for that task.

The absence of job-based hiring gives the organization a lot of flexibility. Individuals can be moved in and out of roles without barriers and can gravitate toward activities that interest them. The emphasis is on attitude and willingness rather than specific roles. Except for junior unskilled workers, top management meets all recruits and personally conveys to them the values, work ethics, and expectations of the company.

No job descriptions and titles

The absence of job titles and descriptions is a deliberate policy to increase flexibility. Job descriptions and titles are considered limiting and ultimately a barrier to organizational effectiveness. Many job descriptions become obsolete quickly and often do not reflect accurately what employees actually do. The prevailing philosophy at MD is that people should be willing to work wherever the need arises. At all times, the goal of customer order fulfillment and satisfaction should be uppermost, and individuals should be prepared to 'get up and do something totally different if needed'. Supervisors can work the line if needed. As mentioned earlier, absence of job descriptions and titles facilitates movement of personnel on a daily basis. Though people on a given shift have a primary work area, they move around from task to task as needed. The overlapping shifts arrangement mentioned earlier is made efficient due to the flexibility provided by the absence of job descriptions and specific job titles for each person.

Absence of job titles also facilitates communication. Any one in any part of the organization can pick up the phone and contact anybody else without worrying about formal lines of communication and status in the hierarchy. The trainee in the accounting department can directly call the production manager and ask for a clarification regarding a customer order.

Not having job descriptions can also encourage initiative and innovative behavior. As the ultimate objective (customer order fulfillment) is clear and non-negotiable and there are no limits to what any individual can or cannot do, employees can take necessary action to resolve issues without the bureaucratic barriers in most organizations.

Aptitude based career progression

All new warehouse employees regardless of prior experience start out manually picking orders to understand the basic operation. They may then be moved to other areas based on aptitude and performance. For example, those prone to careless mistakes are not assigned to

tasks requiring accuracy like verifying orders. As employees perform a variety of tasks on a daily basis, the new hire has the opportunity to cross train and be multi-skilled fairly quickly. Those who show interest and initiative are entrusted with more and more responsibilities based on demonstrated competence. The absence of job descriptions and titles means that responsibilities can be added at any time and individuals can progress without having to wait one's turn for promotion. The absence of formal titles also means that individuals do not have formal authority over their coworkers. This in turn means that they have to earn the respect of their coworkers in order to be effective. Many do not wish to take on additional responsibilities and will eventually find a niche that they are most comfortable in.

There are no formal annual performance appraisals. Individuals receive ongoing feedback and are observed by team leaders and supervisors. An annual increase in pay signals formal organizational approval. As the system records most aspects of employee performance and yields objective measures (e.g. items handled, error rates) feedback is mostly accurate and data based. High-potential employees can be spotted by any team leader or supervisor, even someone from a different area or shift who has had an interaction with the employee. The employee is then tested with additional responsibilities, and depending on demonstrated competence, moves to a higher responsibility level.

No formal meetings

In a typical organization, many managers spend a lot of time in meetings. At MD, formal meetings are actively discouraged. Direct one on one communication is the norm. Without titles, no body has the authority to call meetings! There are no routine, start of the day or end of the day meetings or regularly scheduled meetings, except for top management who meet once a month. Top management may also call meetings with concerned individuals for special projects such as replacing an expensive piece of equipment. However, meetings may evolve informally around issues. One person may contact another regarding an issue and soon all people concerned may meet to resolve it. The production manager, supervisor, and team leaders may meet informally in the break room to discuss bottlenecks that may arise in the day's operations. As there are no scheduled meetings, one cannot wait for a proper forum to bring up issues. As a result, issues tend to get resolved right away. There is no need for formal performance-appraisal meetings as feedback is ongoing.

As can be seen above, the fundamental innovation is the deliberate absence of job titles, job descriptions, formal departmentalization, and defined hierarchical levels. This non-hierarchical, flexible arrangement allows lateral communication and ease of problem solving, discourages turf battles, and encourages creative contribution regardless of age or tenure. For example, a junior employee can participate in a major decision with more senior persons if he or she is considered a valuable resource. Responsibilities can be added at any

time and high potential employees can be fast tracked to positions of responsibility. In addition to the obvious flexibility in hiring and job assignments, it forces a tremendous amount of civility. You cannot order anybody to do anything – you have to request actions. It forces leaders to rely on earned respect rather than formal authority to get things done. It also encourages cooperation. Compliance with a current request might facilitate a reciprocal request in the future – I will listen to you today, as I might need something from you tomorrow.

Potential problems

Externally, the foremost problem seems to be that 'nobody understands'. Customers and suppliers alike are confused and turned off by the lack of titles, which they associate with authority and seniority. Large institutional customers expect negotiations to be conducted by someone in authority. Similarly vendors selling expensive, multi-million dollar equipment expect to deal with senior decision makers as commonly identified by a title. Faced with this reality, the company was forced to allow those dealing with customers and vendors to use titles when needed.

Internally, the unique culture makes it hard to recruit and integrate personnel at anything but the lowest level. Those with experience in the typical hierarchical organization often find it difficult to adjust to the 'lack of structure' and quit. Only those who are comfortable operating in this environment will stay. The lack of defined lines of authority can also lead to confusion and insubordination. For example, employees can refuse to comply with a team leader's request to switch tasks. The team leader has no authority to reprimand or otherwise discipline the employee. Often these and other such conflicts cannot be resolved except by top management and this is an inefficient method to resolve conflicts.

Transferability to other settings

There are a number of factors that allow this company to function in the unique manner that it does. First, being a tightly controlled family-owned company, it is easier to make and enforce decisions that support the philosophy. Second, top management is physically present on site to monitor operations at all times as needed. This limits the geographic expansion of the model. In fact, managers hired at the outlying locations soon recreated the traditional hierarchical model they were used to in other organizations. Third, the organization's task environment is simple and relatively stable. There are a limited number of variables to deal with and the tasks are fairly predictable from day to day. The high degree of automation further reduces variability. As the price to the customer is independently fixed and costs cannot be passed on to the customer, profit is a function of increased efficiency and reduced costs. Thus automation to the extent possible is a competitive necessity. Fourth, the standardization of the work process via automation and electronic tracking of employee efforts makes it easier to function without titles and descriptions. The lack of a union also helps.

The benefit from this case study of such a unique organization is akin to studying exceptions to better understand underlying principles. The fundamental innovation is the deliberate attempt to minimize artificial barriers to efficiency through avoiding defined job titles, job descriptions, and a hierarchical structure. The tremendous flexibility that accrues to organizations is worth attempting to emulate. As a first step, organizations can organize into smaller units such that each of those units can operate with minimal hierarchical levels. For example, Johnson and Johnson (180 units) as well as Asea Brown Boveri (5000 units) have made deliberate attempts to evolve into a collection of smaller units rather than a large, centralized operation. In all organizations, job descriptions can be broadened in scope or redefined in terms of processes and outcomes rather than tasks. Switching to horizontal team-based structures is another route to a non-hierarchical structure. The emphasis on getting the job done is a guiding principle that could potentially be applied to all organizations.

It should also be recognized, however, that delayering for its own sake could be counterproductive. Traditional career structures with their proven motivational value suffer and employees can become anxious and overwhelmed by the ambiguity and lack of role definition (Littler, Wiesner & Dunford 2003), and flatter is not always better. Organizations should primarily be seeking ways to increase flexibility rather than be wedded to a particular form or prescription such as 'no job titles or description'. One should keep in mind, regardless of the philosophy and structure adopted, the work still has to be carried out by human beings with individual needs and aspirations, who will make their own individual and collective adaptations to the organizational environment.

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