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that work:
Lessons from the P&G case**

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International School of Management Paris

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DESIGNING MATRIX ORGANIZATIONS THAT WORK LESSONS FROM THE P&G CASE

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Designing matrix organizations that work: Lessons from the P&G case

ABSTRACT

The purpose of this paper is to illustrate why companies adopted the matrix, what problems they had, the solutions for these problems based on Galbraith (2009) and other authors like Davis & Lawrence (1977), and the state of the art of matrix structure design today like the P&G front-back hybrid matrix organization. The matrix organization concept emerged from the US aerospace industry in the 1960s and was adopted by many companies in the early 1970s. In the late 1970s and early 1980s many companies were experiencing trouble with its operation and many argued like Peters & Waterman in their bestseller *In search of excellence* in 1982 (p. 306) that the matrix was too complex to work properly. Galbraith (2009, p. 10-14) explains that the reason for the problems were that the matrix in these organizations was wrongly adopted, hastily installed, and inappropriately implemented. He explains that adopting a matrix structure requires a collaborative organization form, proper power, and accountability distribution, complementing changes to the information systems, planning and budgeting process, the performance evaluation and bonus system, and so on. To illustrate the historical evolution of organization structure to the simple matrix and then to more complex matrix organizations we used the P&G case (Piskorski & Spadini 2007).

Keywords: Matrix organization, organization structure design, front-back hybrid matrix organization.

Designing matrix organizations that work: Lessons from the P&G case

INTRODUCTION

“Matrix organization is one of those management concepts, like Total Quality Management (TQM) or reengineering, that became very popular and then went through the management fashion cycle” writes Galbraith (2009, p.10). He continues explaining that the matrix became popular in the 1970s and early 1980s and was wrongly adopted, hastily installed and inappropriately implemented by many organizations. Therefore, word spread that the matrix does not work. In 1982, Peters and Waterman wrote the death sentence to the matrix: *Our favorite candidate for the wrong kind of complex response is the matrix organization structure* (p.306). They explain that the matrix organization is very confusing, people do not know to whom they should report to, and virtually none of the excellent companies they surveyed informed that they had formal matrix with the exception of project management companies like Boeing. Galbraith (2009, p.9) says that this assertion is not true. Besides Boeing, Intel, Digital Equipment, Fluor, and Bechtel used a matrix. This did not change the overall perception and managers avoided matrix. It was only in the late 1990s that the matrix concept became accepted again by managers due to the successful use by some companies.

The prejudice against the matrix lingered on and in 2005, Bryan and Joyce wrote: *...vertical oriented organizational structures, retrofitted with ad hoc and matrix overlays, nearly always make professional work more complex and inefficient* (p. 26). They go on saying that matrix structures, designed to accommodate the secondary management axes that cut across vertical silos, frequently burden professionals with two bosses so they have to go up the organization before they can go across it. Contrasting with this negative opinion on the matrix in the same year Neff wrote: *None did a better job overall of marketing brands in 2005 than Procter & Gamble Co (P&G)...In the US last year sales rose 7%, more than double the pace of P&G's categories. What really pushed the company to its third consecutive year of double-digit top-line growth, through, were developing markets,*

where P&G once lagged major rivals... Analysts say the clear key to P&G's success has been the matrix organization put in place in the late 1990s under then CEO Durk Jager, even if the pain of implementing it may have led to his early exit ... (2005, Abstract p. S2). Why is the matrix too complex and confusing to some and the reason of success to others like P&G?

The P&G case (Piskorski & Spaldini, 2007) is ideally suited to answer this question and demonstrate the pitfalls and benefits of the matrix. Today the matrix is the preferred organizational concept used by most large multinational, multi-brand, consumer-products companies that have to perform well in at least three dimensions such as products, functions, and regions. By using the P&G history, we can trace a parallel by the evolution of its organization and the schools of thought in organization structure design and the matrix organizations in particular. Besides the change in leadership at P&G from Durk Jager to A. G. Lafley is an opportunity to analyze their strategies, leadership profile and the human resource, rewards, information and process policies required to manage such a complex multidimensional matrix organization.

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P&G ORGANIZATION EVOLVED FROM OWNER ADMINISTERED PRODUCTION IN 1837 TO MULTIDIVISIONAL STRUCTURE IN THE US IN 1954 AND IN EUROPE IN THE EARLY 1980S

P&G is an American multinational company based in Cincinnati, Ohio, that manufactures wide range of consumer goods with net sales of USD 83 billion in 2008. 24 of its brands have more than a billion dollars in net annual sales, and another 20 have sales between USD 500 million and USD 1 billion (P&G Annual Report 2008). It is the 18th largest US company by profit (Fortune 500, 2007), and the 10th most admired (Fortune Most Admired Companies 2007). The company was created in 1837 by William Procter, a candle maker, and James Gamble, a soap maker, who had settled in Cincinnati and married sisters, Olivia and Elisabeth Norris, whose father convinced his son-in-laws to become business partners (P&G Heritage Brochure 2009).

Early history

The P&G organization evolved from a simple informal owner administered production in 1937 to a professional managed line and staff structure and after 1954 multidivisional organization in the US. Probably incorporating over the years ideas from the scientific management school initiated by Frederic Winslow Taylor (1911), administrative theorists like Henri Fayol (1949) and the bureaucratic school initiated by Max Weber (1946). These classic administrative theorists represented what can be called the mechanical school of organization theory because they treat the organization like a machine. They characterized organizations in terms of centralized authority, clear lines of command from top to bottom, division of labor, specialization and expertise, rules and regulations, and

- 1837 Soap and candle manufacturer
- 1850 Differentiation by large factory
 - National reputation and brand recognition
- 1879 Developed Ivory
 - Transformed soap- and candle making from an art to a science
 - Ivory transformed the company into a branded-goods producer
- 1882 Ivory was first marketed national
- 1887 Mass-scale production of Ivory in an enormous new plant
- 1887 First profit-sharing program for its workforce
- 1890 Started paying dividends and continued ever since
- 1890 First centralized R&D labs in industry
 - R&D led to diversification into many other chemistry-based consumer industries
- 1919 Established direct sales force
 - Insight into retail customers allowed better coordination between production and demand
 - Brand managers were encouraged to be entrepreneurial
- 1920 Stopped manufacturing candles
- 1924 One of the first marked research departments
- 1931 Brand management was institutionalized
 - Organization started forming around product lines
- 1933 Invented the soap opera
- 1943 Created first product-category division, the drug-products department
 - Strong centralized functions were retained such as R&D and Manufacturing
- 1946 Tide was developed by R&D
- 1948 First international sales division
 - US and foreign operations led to two different organizations
 - ✓ US with a large homogeneous market developed into nationwide brand and product division organization
 - ✓ Western Europe watch a heterogeneous market adopted a decentralized hub-and-spoke organization along three dimensions: country, function and brand
- 1954 US created individual operating divisions to manage product lines
 - Division had two key dimensions brands and functions
- 1955 Invention of fluoride toothpaste
 - Corporate basic-research connecting across divisions lead to the invention of Tide
- 1961 Pamper was launched in the US
 - Only 1973 in Germany and 1978 in France
- 1963 European Technical Center was established
 - European R&D and process engineering was centralized
 - Early 1980s Europe restructured around product categories
- 1987 US introduced the matrix organization

Figure 1 P&G Timeline from 1837 to 1987
Source: Piskorski & Spaldini 2007

clear separation of staff from line functions.

As individual ethic was giving way to social ethic in the early twentieth century, the human relations school started to emerge with Mary Parker Follet (1924) and Leta 1903-1997 Barnard (1938). This school that influenced management from mid twentieth century onward characterized organizations in terms of the need to harmonize and coordinate group efforts, emphasizing people rather than machines, accommodations rather than machine-like precision. The focus shifted to the motivation of the individual and group, delegation of authority, employee autonomy, trust and openness, upward communication and authority, and leaders who function as a cohesive and motivational force.

The P&G historical timeline with the important business and organizational events from 1937 to 1987 before the matrix organization was introduced in the US is shown in Figure 1. The transition from the classic line staff organization started in 1943 with the creation of the first category-product division in 1943, the drug-products department. Nevertheless, it was only in 1954 that the US organization was organized into individual operating divisions to manage category-products with their own line and staff structures along two key dimensions: functions and brands.

Multidivisional-product structure

Chandler (1962, p. 383-396) analyzing the history of a sizable sample of large US industrial enterprises concluded that their strategy determined their organization structures and that the common denominator between strategy and structure was the application of company resources to anticipated market demand. He describes the four phases that can be discerned in the history of these large companies: the initial expansion and accumulation of resources; the rationalization of the use of resources; the expansion into new markets and product-lines to help assure the continuing full use of resources; and finally the development of a new structure to make possible continuing effective mobilization of resources to meet both changing short term market demands and long term market trend. He also points out that although each company had a distinct and unique history, nearly all followed along this general pattern. The reason being that all of

them operated within the same external environment and that the phases in the collective history of the industrial enterprise followed roughly the underlying changes in the over-all American economy.

P&G was part of Chandler's sample of companies (p. 6) and was with General Foods, General Mills, and Borden in the group that developed new products to use existing personnel and facilities more effectively and then to grow reorganized into multidivisional organization structures (p. 346). He explains that most US companies initially accumulated their resources in the years between the 1880s and First World War when P&G mass-marketed and mass-produced Ivory, and created the first centralized R&D department in the industry. During the first two decades of the twentieth century, these same firms build their initial administrative structures and P&G established its direct sales force, one of the first marked research departments, and institutionalized brand management. For some, continued expansion, largely through diversification, began in the 1920s but for most, it came after the depression of the 1930s. Although some pioneers of the new multidivisional structure to manage the expanded businesses began introduction in the 1920s, most enterprises like P&G carried out their reorganization in the 1940s and 1950s (p. 386). It also clearly shows that the companies in developing over time the ideas for the new structure clearly borrowed from each other (p. 324).

The survey conducted by Chandler showed that in the late 1950s the multidivisional structure was generally used by the largest US industrial companies. This organization a corporate office plans, coordinates and appraises the work of a number of operating divisions and allocates to them the necessary personnel, facilities, funds, and other resources. The divisions command most of the functions necessary for handling one major line of products or services over wide geographic area, and are responsible for their financial results and success in the market place (p. 2). It is interesting to note that in the list of the largest US industrial companies of 1909 (p. 5) P&G does not appear and in the Fortune 500 1959 list of the largest industrial corporations is already 48th.

The rapid expansion and accumulation of resources of the large US industries from the 1812 War to the Second World War can be explained by the large homogeneous American market, wars in Europe, and the protectionist US economic policies. Chan (2008, p. 50-51) explains that when the 1812 War broke out the US Congress immediately doubled import tariffs from the average of 12,5% to 25%. The war also made space for new industries in the US to emerge by interrupting the manufactured imports from Britain and the rest of Europe. The new industries that had arisen by substituting imports naturally wanted the protection to continue and in 1816 tariffs were raised further to an average of 35%. By 1820, the average tariff rose further to 40% firmly establishing the program developed by Hamilton (1789) to protect what he called infant industries. This program guided US economic policy until the end of Second World War and explains the rapid sales growth and success of P&G's Ivory soap, the first American soap comparable to fine European imports.

It was only after Second World War with its industrial supremacy unchallenged that the US economic policy changed away from protectionism and started championing the cause of free trade to open foreign markets for these industries. P&G followed the trend set by other large US companies and established in 1948 its first international sales division. The international expansion led to the development of two different organizations: the multidivisional structure in 1954 for the US with its large and homogeneous market; and a decentralized hub-and-spoke line and staff structure in Western Europe due to its heterogeneous market. By the early 1980s, P&G was operating in 27 countries and a quarter of its revenues derived from overseas operations.

Product-category divisions in Europe

To better appreciate the subsequent changes in the European organization we have to understand the series of initiatives toward regional integration started in Europe after the Second World War as an antidote to extreme nationalism that had caused so many devastating wars in the continent (European Union, 2009). Building on the success of the 1950 Coal and Steel Treaty, Belgium, France, Germany, Italy, Luxemburg and the

Netherlands expanded cooperation to other economic sectors. In 1957, they signed the Treaty of Rome creating the European Economic Community (EEC), or common market with the idea to allow people, goods, and services to move freely across borders. The custom duties on goods imported from each other were however only removed in 1968, allowing for the first time free cross-border trade between the six EEC countries. They also started applying the same duties on imports from outside countries. This created the world's biggest trading group. In 1973, the six become nine when Denmark, Ireland, and United Kingdom formally joined the EEC. In 1981, Greece becomes the 10th member followed by Spain and Portugal in 1986.

Although the custom barriers had been removed in 1968 trade did not flow freely across borders due to significant differences in national regulations. The Single European Act of 1986 launched a vast six-year program to sort these differences out. The EEC officially became the European Union (EU) in 1992 when the Treaty on European Union was signed in Maastricht. This treaty set clear rules for the future single currency as well as for foreign and security policy and closer cooperation in justice and home affairs. The Single Market and its four freedoms were established in 1993 - the free movement of goods, services, people, and money became a reality. In 1995, the Schengen Agreement was implemented for seven countries: Belgium, Germany, Spain, France, Luxemburg, the Netherlands, and Portugal. This agreement allows travelers of any nationality to travel between all these countries without any passport control at the frontiers. Other countries have since joined the passport-free Schengen area. Also in 1995 Austria, Finland, and Sweden joined the EU. The euro was established as the common currency to many EU countries in 2002. In 2004 the Czech Republic, Cyprus Estonia, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia, and Slovakia joined the EU followed in 2007 by Bulgaria and Rumania bringing the number of member states to 27.

With all these integration moves, the European market was gradually becoming more homogeneous and the P&G country functional structure was becoming cumbersome, expensive, and ineffective. Country manufacturing

operations were not standardized, lacked economy of scale and so were costly and unreliable. Products were adapted to local norms and regulations that added little value to the customers but significant costs and complexity to the supply chain. For this reason, European management started early 1980s to promote cross-border cooperation across functions and to shift focus from country management to product-category management. This effort was successful in overcoming the objections of country manager's arguing that the initiative would lead to the neglect of the local consumer preferences.

The European organization in the early 1980s was first split into three sub-regions whose leaders were given secondary responsibilities for coordinating particular product-categories across the entire continent. This organization was subsequently fully restructured around continent-wide divisional product-categories with profit-and-loss responsibilities and country product-category general managers that reported directly to the divisional vice president who reported to the President for Europe. The concept of product-category divisions introduced successfully in Europe in the early 1980s was later incorporated into the US matrix structure in 1987.

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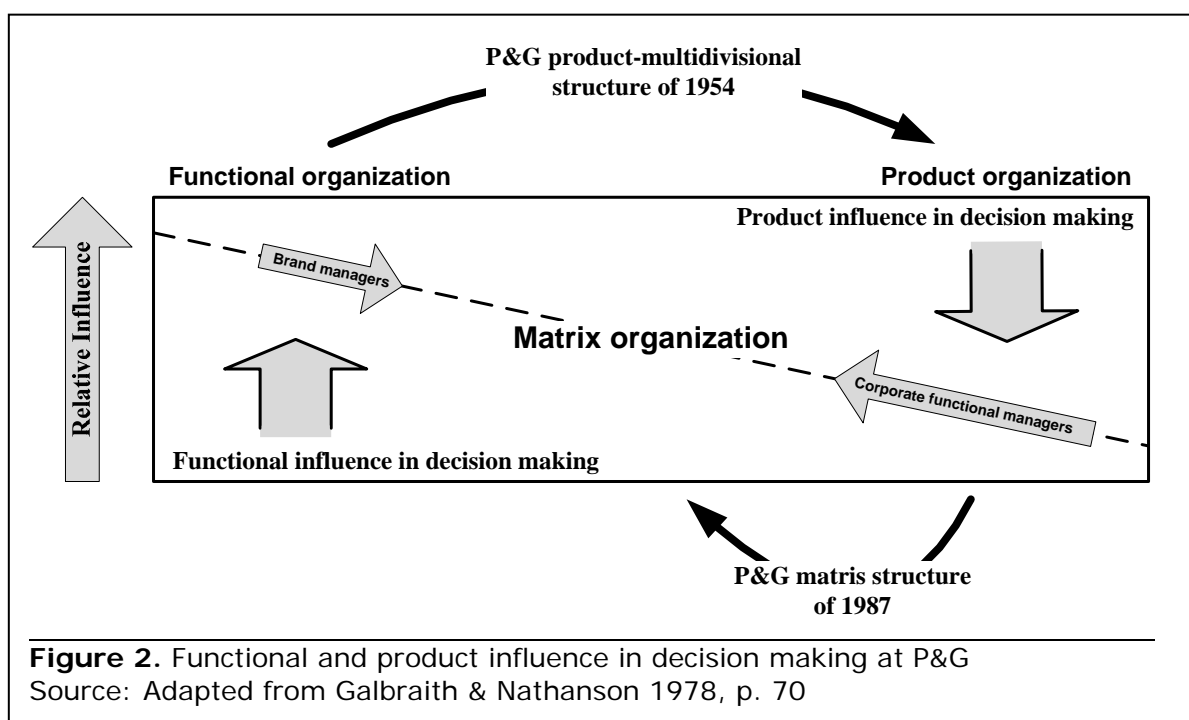
P&G ADOPTED THE MATRIX STRUCTURE IN THE US IN 1987 AND THE GLOBAL MATRIX IN 1995

The introduction of the matrix organization in the US in 1987 was a direct consequence of the shift from the early functional organization into the multidivisional product organization in 1954. The P&G started in its early years organized around activities and evolved borrowing from Taylors (1911) scientific management into a functional organization focused on mass-producing Ivory soap in the late 1880s and R&D in the 1890s to diversify into other chemistry-based consumer industries. Management was focused on economy of scale, specialization, and cost efficiency.

In the 1920s with the direct sales force, management felt the need to better coordinate the products across the functions and brand managers were introduced followed by a market-research department to understand customers and markets. This was the first shift away from the pure

functional influence in the management decision process of the company to a light product influence.

The need to effectively mobilize resources to meet growing and more complex market demands, as pointed out by Chandler (1962, p. 383-396), led to the multidivisional product structure in 1954, each with their own functions and brands, and some functional corporate coordination, particularly in R&D. Management decision process in the company was now firmly established with product influence and a light functional influence. This shift in influence in the management decision process is shown in Figure 2.



In the P&G US multidivisional-product organization established in 1954 was mainly focused in matching company strategy with product category market dynamics. Brand managers in the same product division competed in the market place but shared strong divisional functions. The divisional functions transferred best practices and talent across many brands, fostering leading-edge competencies in R&D, manufacturing, and market research in a rapidly developing consumer-product industry. Corporate R&D

promoted innovative connections across divisions, one of these led to the invention of fluoride toothpaste in 1955.

In 1987, the US organization reorganized into the product-category divisions introduced in Europe in the early 1980s. This was an historical shift away from the competitive brand-management system put in place in 1931. Brands would now be managed as components of 39 product-category portfolios by category divisional general managers, who also were responsible for the product-category functions. To strengthen functional influence, the matrix reporting structure was adopted and the divisional leaders reported directly to their divisional business leadership and had a dotted-line reporting relationship with their corporate functional leadership.

At this point, it is important to understand why the P&G US organization structure in 1987 adopted the matrix. The purpose was to balance better the product and the functional influence in the management decision process as illustrated in Figure 2. In the 1920s, the brand manager brought the product influence to bear in the decision process of the hierarchical functional organization structure and after 1954; it was the turn of corporate functional managers to bring the functional influence to bear on the hierarchical multidivisional-product structure. The matrix structure was the attempt to formally balance the two influences in the management decision process following the general trend in the industry. To better understand the matrix, the balance of the influence on the management decision process between two dimensions, and the problems and conflicts this generates we will give in a brief highlight how this organization structure came into being.

Emergence of the matrix

The matrix organization that emerged in the late 1960s from the aerospace industry, has its origins in the scientific management era of the early 1900s according to Galbraith (2009, p. 7). He explains that it was Taylor (1911) who suggested the benefits of having multiple bosses that he labeled functional foremanship: a schedule boss, a quality boss, a tool boss, an administrative boss, and so on. The idea did not catch on because of the

confusion of multiple bosses was to bring specialized skill directly to the workforce.

Galbraith goes on explaining that the acceptable position was articulated by Fayol (1949) in the line-and-staff structure model. The hierarchy was the line organization with specialist roles, called staff roles, bringing expertise to bear without formal authority. The staff specialists would provide advice and service when requested by the line managers in the hierarchy. This structure model preserved the unity-of-command principle yet allowed expert advice to be used.

According to Galbraith in the late 1960s, there simply were not enough resources for the US Government to fund the three big national programs: the space program with the man on the moon objective; the defense build up to support the Vietnam War; and the supersonic transport program. The result was that with scarce resources, cost and budgets became priorities. The change in strategic priorities from simply get the best technological performance to the additional objectives of cost and schedule resulted in changes in the aerospace companies organizations and they all adopted the matrix project management structure. The dual priorities meant that project managers responsible for costs and schedules and engineering managers responsible for technological development of the projects reported equally to the general managers.

The success of the US space program in beating the objective set by John Kennedy to put a man on moon by 1970 made the press pick up the matrix as the hot new management trend and books on the subject began to appear. One of the best books introducing the matrix organization in the late 1970s was Davis & Lawrence's *Matrix* (1977). The two authors reproduce in the book (p. 2) a text that appeared in the GE's Organization Planning Bulletin of September 1976 that states:

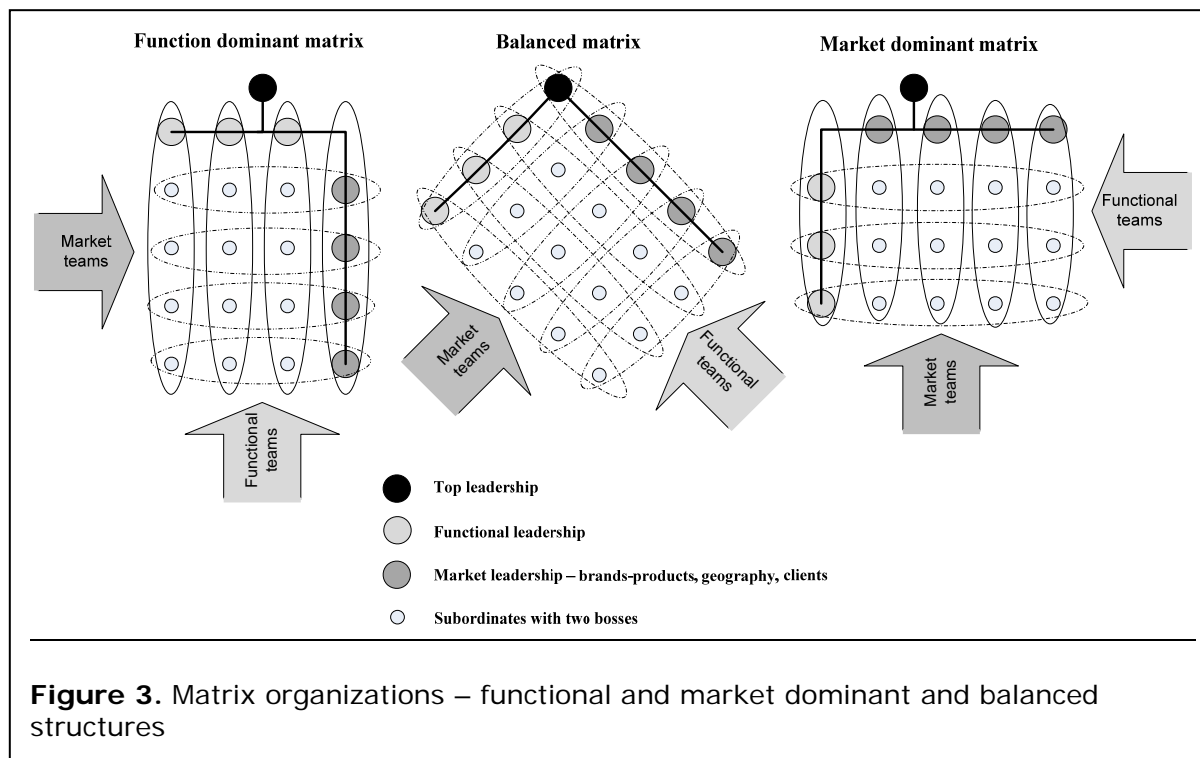
We have highlighted matrix organization... not because it is a bandwagon that we want you all to jump on, but rather that it is a complex, difficult, and sometimes-frustrating, form of organization to live with. It is also, however, a bellwether of things to come.

However, when implemented well, it does offer much of the best of both worlds. And all of us are going to have to learn how to utilize organization to prepare managers to increasingly deal with high levels of complexity and ambiguity in situations where they have to get results from people and components not under their direct control... Successful experience in operating under a matrix constitutes better preparation for individual to run a huge diversified institution like General Electric – where so many complex, conflicting interests must be balanced – than the product and functional modes which have been our hallmark over the past twenty years.

This extract from the GE bulleting explains very well the complexity of implementing the matrix structure and the need to abandon all precepts of the mechanical school of organization and the need to embrace the modern practices of the human relations school.

Originally, organization structures were functional following the mechanical school with the purpose of optimizing resource allocation, of work specialization and cost reduction. The strategy was to compete in the market by efficiency in producing products or delivering services. As the business world became more complex organization structures evolved in response to this complexity and started creating coordination mechanisms to manage additional dimensions like products, geography, and customers. Some of these coordinating mechanisms were brand-product managers and functional teams as shown in Figure 2.

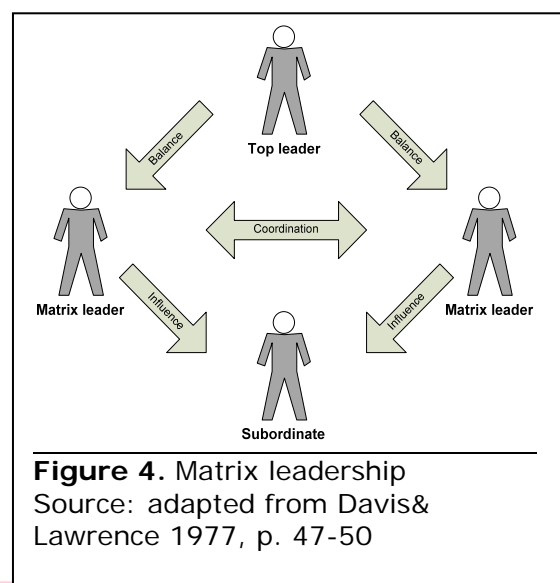
The need to be efficient in at least two dimensions led to the development of the matrix structure where the functional side is responsible for efficient resource allocation and the market side is responsible for the efficient response to client needs. The dual-strategy is now focused on functional and on market efficiency to obtain organization effectiveness. The relative weight given to each strategy varies between companies and can be inclined toward functions, markets or balanced as shown in Figure 3. The relative weight between the two dimensions is generally represented in the organization charts by the solid-line for the main hierarchical reporting line and dotted line for the lateral or secondary reporting line.



The conflicts in the matrix are commonly caused by the pursuit of the optimization of the overall strategy of the company that in many cases requires the sub-optimization of one or both of its dimensions. This need to eventually sub-optimize the dimensions in benefit of the whole is contrary to the mechanical organization school where success is measured by individuals work efficiency. Individuals in many cases do not understand or resist the idea of sacrificing their work efficiency in favor of another if the reward system and human resource policies do not take the need of sub-optimization in favor of the overall objective into account.

Galbraith (2009, p. 10-19) explains that the matrix organization is a collaborative organization. People must develop collaborative skills to share power in the organization. These are the skills that the modern human relations school promotes, like the harmonization and coordination of group efforts in organizations replacing the individual hero of the past. But to make this possible companies must ensure that their information and reward systems and human resource policies are aligned with the matrix organization structure and the overall strategy of the company and don't create biased behaviors distorting the cooperative behavior.

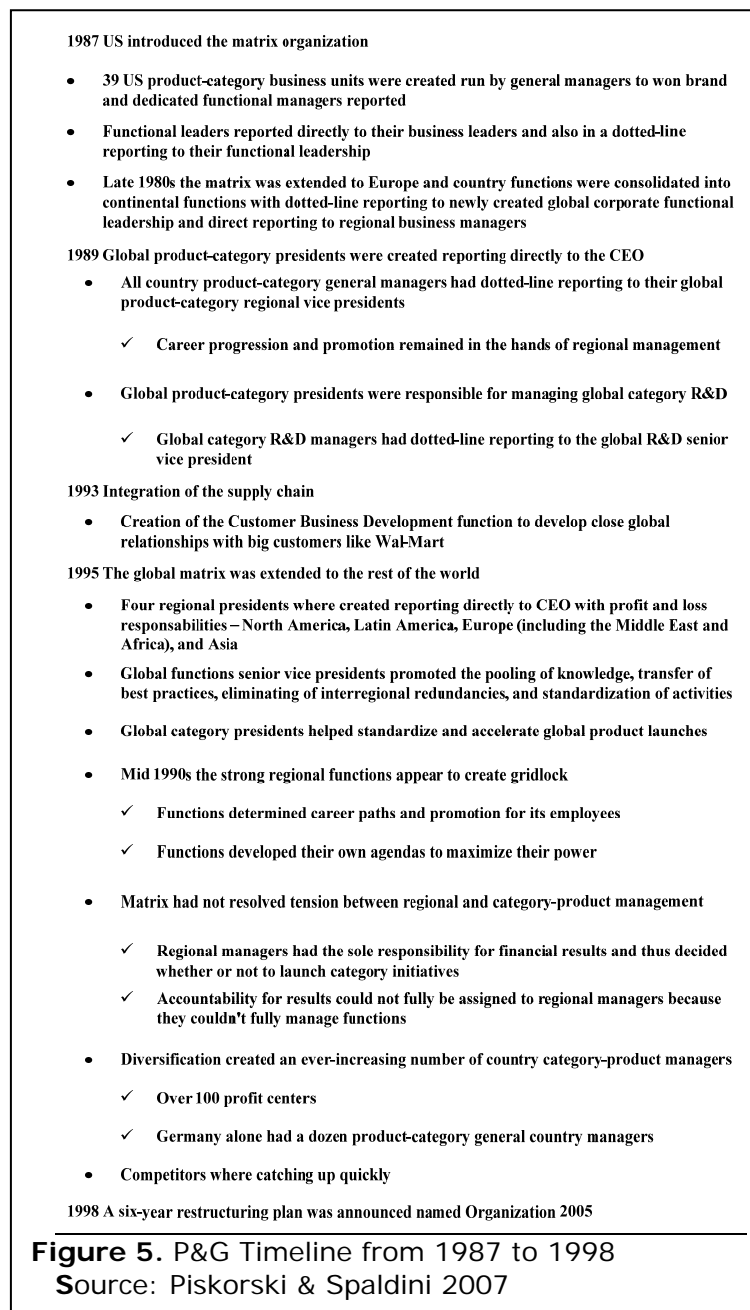
There are according to Davis & Lawrence (1977, p. 46-52) three key roles in the matrix: the top leadership, the matrix leaders that must share subordinates with other matrix leaders and the subordinates with two bosses. These roles are shown in Figure 4 with the matrix leaders divided into functional leaders and market leaders. What makes these leadership positions different from other leadership positions is the behavior required for them to be effective in the matrix structure.



The top leadership has to be outside the matrix overseeing its operating performance and solving eventual conflicts. With their behavior, they have to incorporate the need to collaborate, sell this need to the subordinates, coach, and oversee their functioning, and ensure the adequate balance of power between the two dimensions. To avoid biases the strategy has to be set above the matrix structure and the balance of power of the dimensions by the top leadership and then implemented top down to the lower levels of the organization.

According to Davis & Lawrence (1977, p. 48) one of the several paradoxes of the matrix is the requirement of a strong unity of command at the top to ensure balance of power at the next level down. This balancing of power of the top leadership requires a unique blend of autocratic and participative leadership. The top role will have to firmly and decisively arbitrate disputes that cannot be resolved along the dual lines, at the same

time promote collaborative decision making and ensure that both lines have approximately equal influence in the decision making process so as to guarantee the proper balance between the dimensions.



The matrix leaders are definitively in the matrix and share their subordinates with other matrix leaders. These leaders report in direct line to the top leadership but do not have a complete line of command to their subordinates. They have an unequal distribution of authority and

responsibility. They share authority with equals over the same subordinates to get their work done and are responsible to the top leadership for the performance of a function or a market dimension in the organization. This requires of them special leadership abilities to make things happen. They need to get results by the strength of their knowledge, abilities, arguments, and personalities rather than by their position in the hierarchy.

The subordinate with two bosses has to learn how to accommodate simultaneous and sometimes competing demands. This role is not different than that of the matrix and top leaders. All must pay heed to competing demands, evaluate alternatives, make trade-offs, try to convince others of their arguments, and manage conflicts that cannot be resolved. In this organization structure, the power to influence results derives directly from the person's acceptance by the team due to the quality and strength of its arguments and personality. Career success in a matrix derives more from getting things done by facilitating decisions than from making them. In this organization structure, there is no room for the egocentric individuals. The structure to be effective needs people that know how to work in teams, cooperate with each other, and take satisfaction from the team's success.

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Problems with the matrix

The P&G historical timeline from the introduction of the matrix organization in 1987 to the announcement of the reorganization plan named Organization 2005 in 1998 is shown in Figure 5. After adopting the matrix in 1987 with 39 US product-category business units in the later 1980s, the matrix was expanded to include Europe. Country functions were consolidated into continental functions with dotted-line reporting to the newly created global corporate functional leadership and direct reporting to regional product-category business managers.

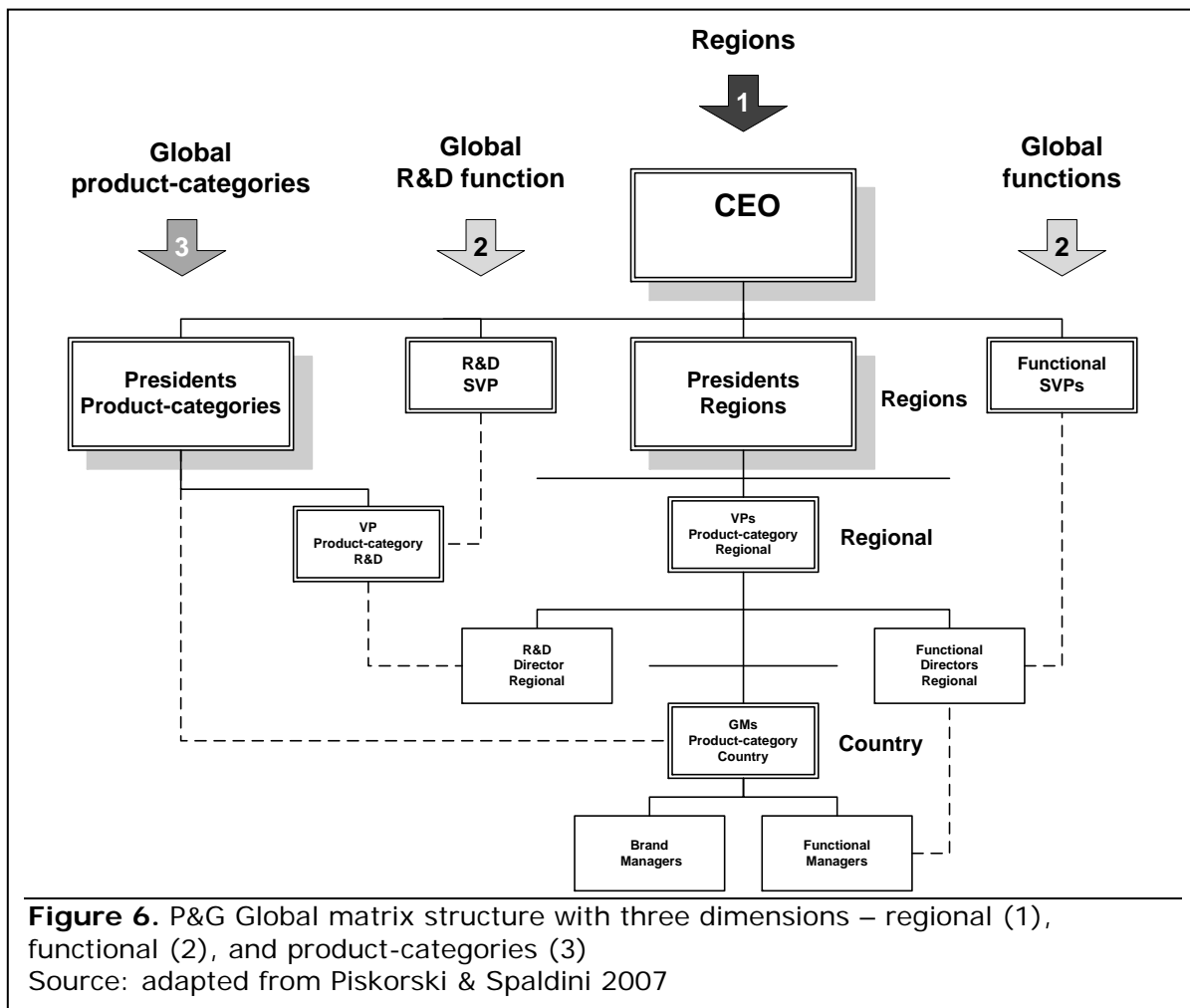
In 1989, global corporate product-category presidents reporting directly to the CEO were created to better coordinate product-categories and branding worldwide. The country product-category business general managers had dotted-line reporting to these global corporate product-category presidents located in Cincinnati and line reporting to the regional

product-category business vice presidents who were responsible for their career progression and promotion. The product-category presidents were also given direct responsibility for global R&D in their product-category, who in turn had a dotted-line responsibility to global corporate R&D.

The reason for P&G to slowly migrate to the global matrix organization in the late 1980s and early 1990s was the success of the cross-border cooperation across functions in Europe, that set an example for the rest of the world, and the attractive expansion opportunities in Japan and developing countries in the late 1980s and the need to respond to the new challenge of appealing to more diverse consumer tastes and income levels. In 1995 the structure was extended to the rest of the world through the creation of four regions – North America, Latin America, Europe (including Middle East and Africa), and Asia – each which a president reporting directly to the CEO and responsibility for profit and loss.

The P&G global matrix three dimensional organization chart is shown in Figure 6. The full-line reporting represents the profit and loss responsibility and the dotted line reporting represents the cross regional coordination or influence on the decision making process by the product category presidents and functional senior vice presidents.

The matrix organization structure facilitated top- and bottom-line improvements. Particularly, the creation of global functions permitted pooling of knowledge, transfer of best practices, elimination of redundancies, and standardization of activities. The creation of one product-supply function to manage the global supply chain allowed the consolidation of manufacturing facilities and distribution centers. At the same time, the global sales organization was transformed into the Customer Business Development function to develop global relationships with big customers like Wal-Mart. Global category management also generated benefits like by standardizing and accelerating global product launches.



The strong global and regional functions that had promoted extraordinary benefits appeared to create a strong imbalance in the matrix structure in detriment of the country product-category managers. The matrix structure was never intended to be balanced and was designed to be product-category dominant or market dominant as shown in Figure 3. This was a shift to the middle from the multidivisional-product organization of 1954 as shown in Figure 2. The intended dominant influence on the decision process of the regional product-category was clearly defined by the solid line reporting and their profit and loss responsibility as shown in Figure 6. The functional and the global product-category influence were intended to be secondary as demonstrates the dotted line reporting.

The reason for the reversal in the imbalance of the matrix from country-product-category managers in favor of the functional leadership seems to have been caused by the high degree of de-facto control they had on the country functional managers because they determined their career paths and promotions, and those of their subordinates. The functional managers trying to optimize their particular parameters in cases sub-optimized regional performance conflicted with the regional managers that were the sole responsible for the financial results. A similar conflict arose between the product-category global leadership and the country managers who were reluctant to implement initiatives that affect their short-term results even if this meant sacrificing future gains for the company. These unresolved conflicts made it difficult to make the regional profit centers fully accountable for their results.

The organizations inability to solve the classic conflicts between the functional overall cost optimization strategy, with the regional managers focused on local profit-and-loss, and the product-category leaders initiatives that increased short term cost to capture future profits raised serious doubts about the matrix structure and if it was the right organization for P&G. It became clear that each dimension was trying to optimize its parameters and that neither sought tradeoffs that would optimize the overall performance of the company. To make things worst competitors were catching up quickly in the market and sales growth was down to only 1.4 percent in 1987 from an average yearly growth of 8.5 percent in the 1980s. The problems with the matrix and the poor sales performance prompted P&G to announce in 1998 a six-year restructuring plan named Organization 2005.

Matrix pathologies

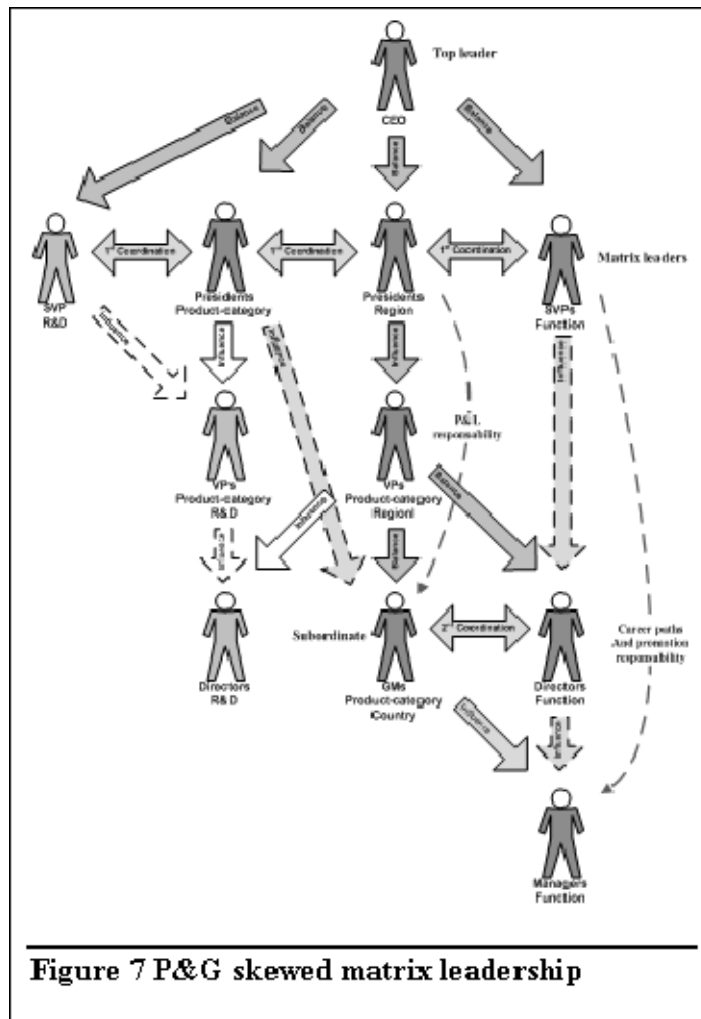
The pathologies of the matrix structure developed by P&G between 1987 and 1995 were probably properly diagnosed and corrected in the new Organization 2005. It is important to understand these errors to appreciate the new and successful matrix structure that is in place today. The same

mistakes were made by many organizations in the 1970s and early 1980s and led to the discredit of the matrix as explained in the introduction.

The first and most obvious problem is the need to abandon the mechanical school approach to managing an organization and create a culture of teams and collaboration. This is especially difficult for managers trained in business schools that stress individual class competition in business cases discussions instead of building consensus around a common goal. They have to abandon the idea of winning vis-à-vis others. The matrix operates in a balance of power model. The matrix leaders must understand that if they win the power struggle with other leaders absolutely the organization as a whole loses performance ultimately. They must understand that total victory in one of the dimensions only destroys the balance and the matrix. There are some examples of this type of pathology in the P&G matrix (Piskorski & Spaldini 2007, p. 7-8).

Top leadership must understand that a power struggle will always develop between the dimensions. What they have to ensure that the matrix leaders are worthy adversaries and that they understand the need to turn the conflict to constructive common end. For this to work the top leadership has to manage three important things: prevent that one side totally wins or loses, ensure that the matrix leaders always maintain an institutional point of view, and remove those that through inability are constantly losing and replace them with stronger managers.

Galbraith (2009, p. 10) stresses the need that the matrix organization form has to be implemented using a collaborative change process. He goes on saying that people should develop the collaborative skills they will need in their roles in the matrix structure during its implementation phase. The managers that were not properly prepared and simply ordered to collaborate usually faked it because they did not understand what it meant. Many ordered to share power did not and passively resist the matrix. When the expected benefits of power sharing were not achieved, these resisters were quit to suggest that the matrix structure did not work. For this reason, many poorly managed change processes resulted in failure, even when the matrix structure was the best solution for the business.



The second problem was the high number of management layers and the imbalance in the design of the matrix structure. The matrix to function properly must have the proper balance and coordination between the matrix leaders so that the subordinates can properly negotiate, accommodate, and optimize the conflicting demands as shown in Figure 4. The design of the P&G global matrix structure shown in Figure 6 clearly had serious design flaws accentuated by the many management layers that generated imbalance and conflicts between the three dimensions: global functions, regional product-categories, and global product-categories.

Applying to the Davis & Lawrence key roles to the P&G global matrix we can clearly identify the structural design flaws that created some of the operational problems that hindered its proper functioning. These design flaws are shown in Figure 7. The top leader had simply too many subordinates to be able to properly coordinate the performance and solve

conflicts with the matrix leaders at the region and country levels far down the organization.

The poor subordinated product-category-country general managers that were supposed to accommodate the competing demands were in a skewed position. They had a strong input from the regional-product-category vice presidents to whom they were accountable for profit and loss. The input from product-category president was weak because it came from far up in the organization hierarchy and bypassed their direct boss. The functional input bypassed them and went directly to their country functional managers. The regional vice presidents that were supposed to coordinate conflicts between country general managers and regional functional directors were skewed toward their regional president to whom they had profit and loss responsibility and did not balance properly the influence between region and country with the functions. The consequence of this distorted situation was that the country managers gave priority to financial results over product-category initiative and had a constant conflict with their functional managers.

The third problem was that the required complementary and reinforcing changes to the culture, the information and accountability system, the budgeting and planning process, and the performance, career and bonus system necessary to successfully implement the matrix structure had not been made. By keeping the processes and systems of the previous multidivisional organization structure P&G maintained the strong regional and functional silos that were co-responsible for its problems with the matrix structure.

The functional managers gave much more attention to the influence in the decision process to their functional leaders to whom they theoretically had only a dotted-line report in detriment to their regional and country leaders to whom they had full line reporting, This imbalance in the decision process was the consequence that the functional leaders determined their career paths and promotions of all the functional personal. The regional and country managers in their turn were responsible for profit and loss and complained about their lack of cooperation to reach their objectives of their

functional subordinates that were set on following functional agendas. They were in their turn reluctant to implement product-category initiatives that affected their short-term financial results and consequently bonuses.

The main problems that P&G matrix structure had – the lack of a proper collaborative culture, the excessive management levels, and profit centers, the skewed design of the structure, and the disaggregating effect of its processes and systems – motivated its management to restructuring program named Organization 2005.

So not to be unfair with P&G management that originally implemented the matrix in 1987 it is important to note that these problems were common to most early matrix structures implemented following the management fashion in the 1970s and early 1980s and motivated many of them to abandon it and spread that “the matrix doesn’t work”. This believe was widely accepted at the time, according to Galbraith (2009, p. 10), to the point that managers avoided the matrix, even in situation where it was appropriate. He continues explaining that because the matrix structures worked in some companies and benefit in certain situations the matrix concept was reinstated in the late 1990s and assumed its normal place in organization design theory.

P&G RESTRUCTURING PROGRAM

The objective of the restructuring program P&G announced in 1998 was to achieve \$900 million in annual after-tax cost savings by 2004 by voluntary separation of 15 thousand employees, of with 10.5 overseas, and eliminating six management layers, reducing the total from 13 to 7, at a cost of &1.9 billion over five years. The plan also called for the dismantling of the global matrix structure introduced in 1995 and replacing it with an amalgam of independent organizations: Global Business Units with primary responsibility for products, Market Development Organizations with primary responsibility for markets, and a Global Business Services unit responsible for managing internal business processes.

This new organization structure is now known as the front-back hybrid matrix according to Galbraith (2009, p. 115-127). This structure has two

parallel multifunctional line organizations: one focused on the customer-markets designated the front end, and a second focused on products designated the back end. The objective is to achieve simultaneously the customer focus and responsiveness and the global-scale economies. To effectively achieve these conflicting objectives the management challenge is to effectively link and balance the customer-market front end with the product back end in a matrix. The corporate functions form an additional matrix across the two parallel organizations.

The restructuring program

The implementation of the ambitious restructuring program started with the installation of Durk Jager as the new CEO by the P&G board January 1st of 1999 in substitution of John E. Pepper who had been Chairman and CEO from 1995 to 1998. Pepper who managed the company during the years that the matrix got into trouble and the planning of the restructuring program with Jager, the COO, stayed on as Chairman up to 2002. He announced his departure from P&G were started working in 1963 in the 1999 annual report (p. 10-11) but stayed on to 2002 because of the implementation problems of the restructuring program, the sudden departure of Jager, and his substitution by Alan G. Lefley as CEO in June 2000. When he left the company, Lefley became Chairman and CEO. The PG historical timeline from the announcement of the restructuring program in 1998, the success of the new matrix organization in 2005, and the continuing success up to 2007 is shown in Figure 8.

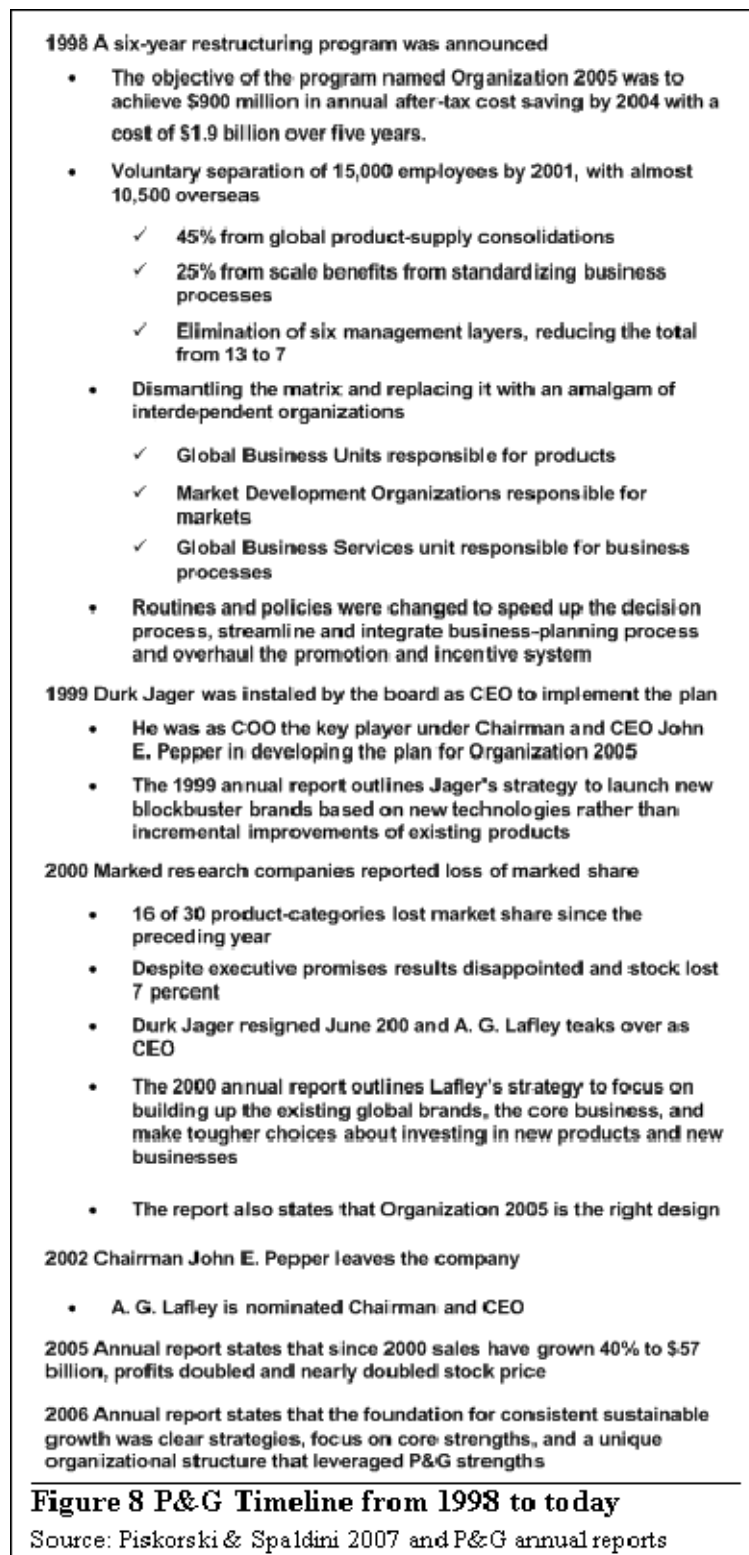
Jager in the P&G 1999 Annual Report (p. 3-5) explained his vision:

The first key to faster growth, greater business vitality, is increasing the pace of innovation at P&G. This has been true for us in the past and is just as true today. ...Our Innovation Leadership Team, which I chair, is fueling our growth in new product categories. It funds promising ideas that fall outside our businesses, from seed-level investment all the way through test market. Previously, these kinds of ideas would often go undeveloped. ... Today, we have tapped only a portion of our innovation capacity. With Organization 2005, we are making changes to unleash this capability and

capitalize on the new marketplace in which we compete. ... New Global Business Units (GBUs) leverage our scale. We will develop products and plans globally, to better utilize our technology and get products to the world faster. Focus on new business will increase our innovative output. Each GBU has a dedicated New Business Development unit to create new brands in related categories.

The vision Jager had is typical of an entrepreneurial manager. These managers according to Degen (2009, p. 359-366) are excellent in producing the needed change in companies that became bogged down in an administrative stalemate like apparently P&G was. He explains that these managers have the vision and the courage to make the necessary changes. However, they never stop to implement these changes and tend to continue making changes. They tend to have no patience for the detail required to execute the new strategy that they created. When this happens, they have to be substituted by administrative managers that are good implementers of changes. These managers are good executors but not entrepreneurial enough to make them. This seems to have been the case of P&G, where Jager made the entrepreneurial changes, created high expectation of immediate unrealistic results for such an ambitious restructuring program, and was substituted by Alan G. Lafley an excellent administrator and executor.

To better understand the personalities of Jager and Lafley and the context we reproduce some quotes from the press at the time. Before Jager became the CEO McLean wrote: *Is P&G all washed up?* (1997, p. 184). He cites an analyst that pointed out that the sales per share of P&G, Clorox, Colgate-Palmolive, and Kimberley-Clark that since the second quarter of 1993 have slipped more than 20 percent. What has driven the earnings gains are a number of onetime factors like sharply falling interest costs, slow growth in depreciation expenses, and lower effective tax rates. A year after Jager took over Brooker wrote: *"You have to create a revolution," he (Jager) declares coming into the job. Facing six consecutive quarters of stagnant sales, Jager vowed to snap the 163-year-old \$38 billion behemoth out of its stupor. He would whip bastions of stogy Proctoids into a sleek fighting force of nimble, entrepreneurial freethinkers and bigger risk takers.*

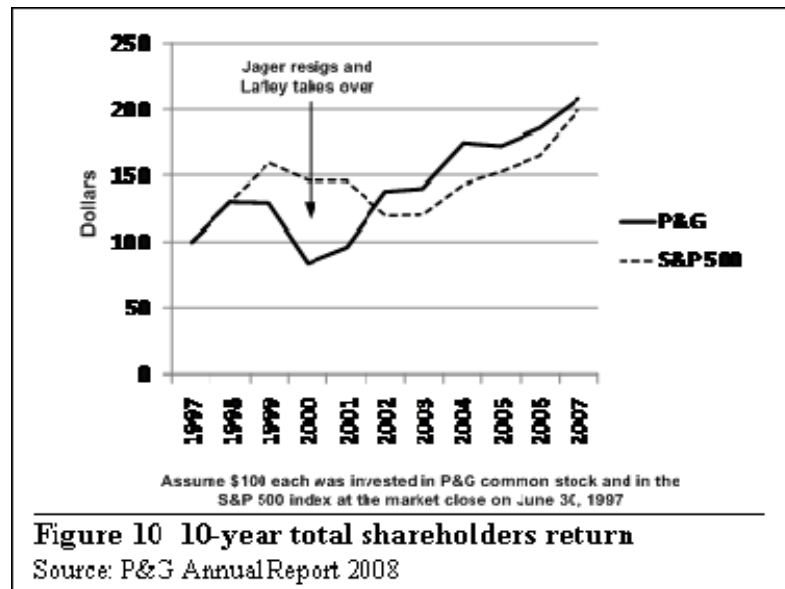


"Everybody is always worried about taking risks, because nobody likes to fail," he avowed at the time. "But you have to celebrate failure." For a company with a long history of playing it safe, this promised to be a real imbroglio. One year later Jager's revolution is in full swing. The company has overhauled its reporting lines. It started up an internet beauty site in

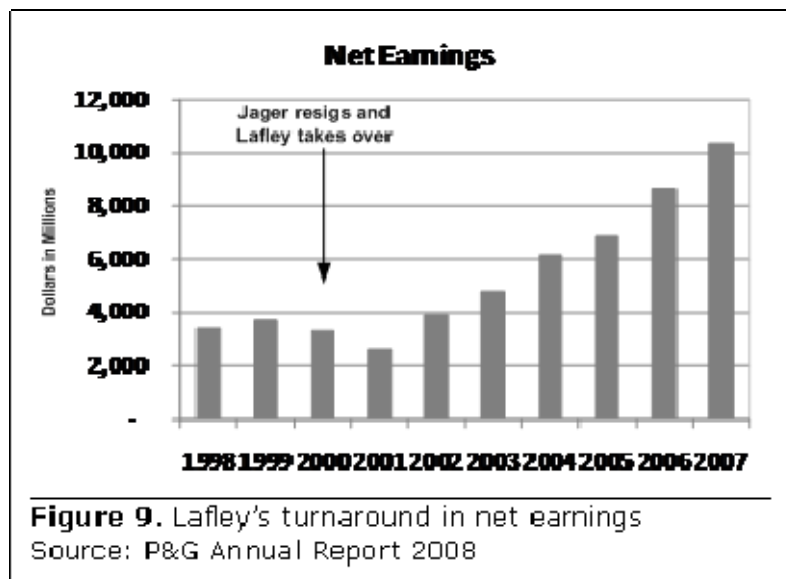
San Francisco. It bought a multibillion-dollar business, launched three new big product lines, and will introduce another five this year. All this from a place that has not delivered a blockbuster product since the introduction of Pampers in 1961. A new P&G, for sure, is emerging. However, the question is, is it improving? ... Jager's one-year report card is in. ... Jager's aggressive plans have hit earnings hard. This quarter, net income is down 1%. By contrast, a year ago it grew 11%. ... the year 2000 will determine whether Jager is the Mr. Clean that P&G so desperately needs (2000, p. 44-45). In June of 2000, Jager resigned and Lafley took over.

Little more than two years after Lafley took over as CEO, Brooker & Schlosser wrote: Lafley's predecessor, Jager, had been brought in – like Lafley – for a rescue mission. ... Jager had an aggressive plan: Launch a slew of new products in hopes of finding the next big billion-dollar product, like Tide or Pampers. Trouble was, he did not find it. ... At the same time, Jagers other ambitious initiatives backfired. ... As each initiative failed, the troops at P&G began to feel rudderless. ... When he came in, Lafley had to move fast. ... As he saw it, P&G did not need a radical makeover. What it needed was, well, to sell more Tide. In its rush for new products, P&G had neglected its older brands like Tide and Pampers. However, those billion-dollar blockbusters are, and have always been, the company's bread and butter. ... Therefore, Lafley refocused the company on its big brands. ... If the plan was shocking in anything, it was its simplicity. Everyone down the chain of command could understand it: Selling more Tide is less complicated than trying to invent the new Tide. ... As he got P&G's mighty brands on track, Lafley also had to get expenses in line. Under Jager costs had gotten out of control, ... To cut expenses Lafley began a massive round of layoffs eliminating some 9,600 jobs. He shut down skunk works projects and pulled flopped launches... He sold off ... units, which were not strategic fits. ... For a traditional dowry grande dame of a company, with 1002,000 employees in 80 countries, there was surprisingly little resistance to the transformation. Some credit Lafley's calm, unflappable focus, a directness that comes without an iota of bluster. Lafley credits the employees. ... he says. "In crisis, people accept change faster." ... Watching A. G. Lafley at work is a deceptively unimpressive sight. As far as CEOs go, it is fair to say

that the 55-year-old New Hampshire native does not have much dazzle or flair. Lafley has managed to pull off what neither his two predecessors could – turn around the global behemoth. In addition, did this in the midst of a world economic slowdown (2002, p. 88).



The implementation of the complex restructuring program required clear execution skills to manage the cost reduction objective, the radical change the organization structure, the voluntary separation of 15 thousand employees, the reduction from 13 to 7 management levels, the redesign of the internal processes and systems to the new structure and so on. Such a massive restructuring program normally creates all sorts of problems as middle management first resist and then adapts to the new structure. For this reason, results in the first years tend to suffer and the benefits only start appearing after some time as show for the P&G case in Figure 9 and 10. Jager, the entrepreneur, launched the restructuring program, was over optimistic, overpromised, and created the crisis. Lafley, the administrator, calmed the crisis, did not overpromise, focused the organization, and implemented the needed changes. The resulting new P&G organization, the front-back hybrid matrix structure is today an example of a successful organization design.



THE P&G FRONT-BACK HYBRID MATRIX ORGANIZATION

The key attribute of the matrix structure is the balance of power between the different dimensions of the company. One of the most direct ways to enhance the power of a dimension is to make it report higher up in the hierarchy. The business units in the P&G organization established in 1995, the product-category country units, reported to regional managers, who then reported to the CEO. In the new Organization 2005 two types of interdependent organization were created both reporting directly to the CEO, the customer focused or front-end organization called Market Development Organizations (MDOs), and the product-categories focused or back end business units called Global Business Units (GBUs). In order to give support to these two organizations the Global Business Services (GBS) organization was created focused on reducing costs. The basic corporate functions were kept centralized. Both the GBS and the corporate functions reported directly to the CEO.

The MDOs were led by a president who reported directly to the CEO were responsible and compensated for sales growth. Their mission was to focus on customer needs and adapt the company's global marketing and sales strategies and programs to these local needs. Each of the seven MBOs – North America, Western Europe, Central Europe (including Middle East and Africa), Latin America, Northeast Asia, China, and Asia (including

Australia and India) – had its own consumer market research, sales, in-store presence, and other support functions.

The GBUs operated autonomously each led by a president that reported directly to the CEO and was responsible for profit and loss of a product-category. Each of the seven GBUs – fabric and home care, healthcare, beauty care, snacks and beverages, tissue and towels, feminine protection, and baby care – had its own marketing, market research, R&D, manufacturing, purchasing, distribution and other support functions. The GBUs also managed their own new business development functions. To ensure that the GBUs shared technological innovations with each other, a technology council was created where all were represented.

The GBS led by a vice president that reported directly to the CEO and was responsible for standardizing, consolidating, streamlining, and ultimately strengthening business processes and IT platforms across GBUs and MDOs. GBS was organized into a cost center with three “follow-the-sun” service centers – Costa Rica, England, and the Philippines – to perform business-process work 24 hours a day.

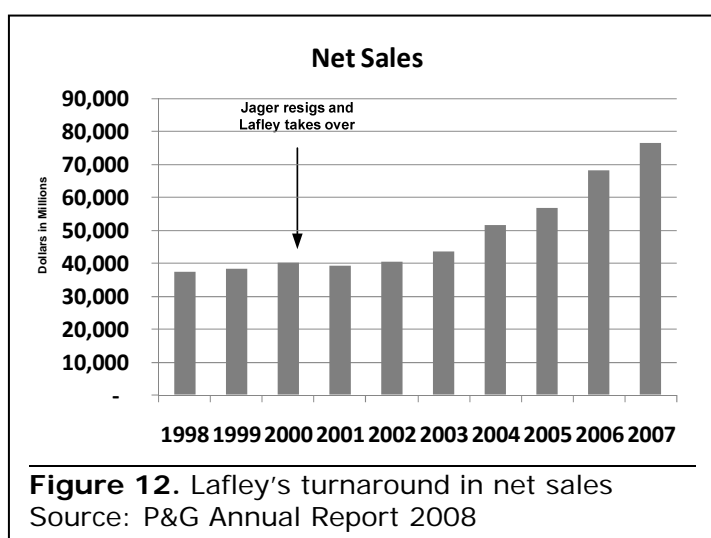
This new structure solved four problems of the old structure: first it created a clear balance between these two key dimensions – customer focus and product focus; second it presented a unified sales contact for customers that is focused on sales growth of all products; third the product-category business units with profit and loss responsibility have full control over their key functions; and fourth the service functions and corporate functions formed a third and fourth dimensions in matrix structures over the two key dimensions. The structure of Organization 2005 is a four-dimension front-back hybrid matrix with a top leader, a coordination council to define priorities and solve disputes, matrix leaders, and subordinates with the need to coordinate and balance four influences structure as shown in Figure11.

The routines and policies that had created problems to the proper functioning of the matrix organization also streamlined and adapted to the new structure. A single business-planning process was created whereby all budget elements could be reviewed and approved jointly by the various

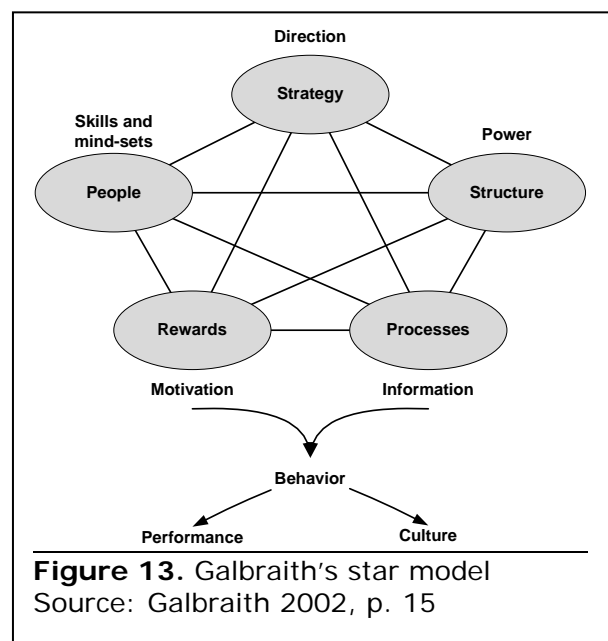
matrix leaders. The incentive system was also overhauled and adapted to the new organization, maintaining the promote-from-within policy. The performance-based portion of the compensation for upper-level executives increased from 20 percent to 80 percent, with 40 percent up or down of base pay. Stock-option compensation was extended from previously less than ten thousand employees to over hundred thousand.

Designing matrix structures that work

The success of the P&G clearly demonstrated by the growth of earnings in Figure 9 and the growth in net sales in Figure 12 was explained by Lafley: *We have clear strategies, with plenty of room for growth in each strategic focus area; core strengths in the competencies that matter most in our industries; and a unique organizational structure that enables P&G strategies and leverages P&G strengths. Strategy, strengths, and structure create capability and opportunity. I have written consistently about these factors for several years now. I reiterate them again this year because I remain confident these three factors will enable P&G to innovate better and faster, to operate even more productively, and to deliver consistent sales and earnings growth and cash productivity for the next five years* (P&G Annual Report 2006, p. 2). The reason for the contribution of the matrix organization structure to the P&G success as stated by Lafley can be explained by the star model framework developed by Galbraith (2002, p. 9-16) shown in Figure 13.



Using his star model framework for organization design Galbraith explains that there are five categories of interlocked organization design policies that are controllable by management in a company and influence employee behavior. The first is strategy, which determines the direction of the company. The second is structure, which determines the location and influence of the decision-making power. The third is processes, which determine the flow of information in the organization. The fourth is rewards, which influence the motivation of the employees' to perform and address organizational goals. The fifth are the people or human resource policies, which influence and frequently shape the employees' mind-set and skills.



The pathologies of the early P&G matrix structure highlights the need to align all the five categories and not only strategy and structure. Strategy required that P&G to be excellent simultaneously at two different dimensions of the company – customers and products. The front-back hybrid matrix structure gave the company the ability meet these two challenges with the MDOs and the GBUs and at the same time build strong and efficient lateral processes with the GSO and the corporate functions as shown in Figure 11. Only aligning strategy and structure was not enough to guarantee success. The reward and the process design policies had also to

be well aligned and balanced between the competing dimensions. Nevertheless, key to the proper functioning of the matrix structure are the people. Matrix is a collaborative organization form and people have to have the necessary collaborative skills to function properly.

Leadership in a matrix organization

Another key component of a successful matrix organization is a competent and collaborative leader at the top of the matrix. The top of the matrix is where the two, three, or four dimensions, as in the P&G case, come together. It is at this points that natural tensions between conflicting objectives come together and need to be resolved so that the overall objective of the organization prevails skewed dimension objectives. When these natural objectives are effectively and expediently resolved by collaboration between top and the matrix leaders, the matrix organization works well and is successful in all its dimensions. When the conflicts are not resolved, the organization suffers and in some cases becomes dysfunctional and paralyzed, as did the P&G organization before Organization 95 was introduced by Jager in 1999.

The top leader does not have to have the final word on all conflicts explains Galbraith (2009, p. 202). He must see that all conflicts are effectively resolved. To achieve this he must create a collaborative team culture, design the appropriate lateral teams to solve conflicts, and provide the team participants with the training and infrastructure to support their decision making. He must also give the example on how the consensus-driven conflict resolution process works.

One of the several paradoxes of the matrix, write Davis & Lawrence (1977, p.48), is that the matrix requires a strong unity of command at the top to ensure the proper balance of power down the organization and a same time strong subordinates participation in the decision process. This calls for a blend of autocratic and participative leadership styles.

This seems to have been exactly Lafley's style according to Brooker & Schlosser (2002, p. 88): *It is late afternoon, and a dozen of P&G top staffers have been huddled in a small conference room... Another clutch of*

executives begins arguing... There is one person (Lafley) in the room, however, who has not said much of anything. ...he is seated off to one side, hunched over a white legal pad, scribing notes. He looks like a college professor – fresh scrubbed, a bit nerdy. ...in a fleeting moment of quiet, he looks up and clears his throat. I do not want to bog us down,” he begins with a hint of apology... He does not finish the pitch but rather prods the others to continue the thought... an outside director... adds that it helped that the chief executive is also a tough nut. “He knows how to lay down the rules when he needs to”... This is the ideal leadership style for a complex matrix organization like the P&G matrix. It is the blend of low-key participative style with a strong autocratic leadership when needed.

The leadership style of Lafley contrasts crassly with the style of Jager as described by Brooker (1999, p. 146-152): *He’s (Jager) build like a linebacker and talks like Arnold Schwarzenegger. “If it isn’t broke, break it,” he likes to say. ...Jager will tell you himself the nasty things people say about him: “I break kneecaps. I make heads roll.” Once, in a meeting, an insider recalls, when a colleague droned for too long, Jager snapped: “What kind of shit are you trying to clutter my mind with here?” People call him all kinds of things behind his back, perhaps the most polite being “Crazy Man Durk.” ... “He is like General Patton arriving with the Third Army,” says... a managing director ... instead of an opposing army, what is under attack here is P&G itself. Jager is here to deliver Procter & gamble a serious kick in the pants. As explained before, this style is adequate to make changes but completely unsuited to manage the implementation of these changes and more so to manage a matrix organization where the right blend of autocratic and participative leadership styles is needed.*

CONCLUSION FROM THE P&G CASE

Business organizations have evolved since the start of the industrial revolution as “one boss” unitary command structures modeled according to what can be called the mechanical school of organization theory. This school characterized organizations in terms of centralized authority, clear lines of command from top to bottom, division of labor, and so on. The military and

the church are all institutions that believe in maintaining pyramid-like structures whose main feature is the unity of command. For them the authority of those higher in the hierarchy is a given. The multiple-boss model of the matrix was made possible by the general adoption of the human relations school in the 1970s and 1980s. This school characterized organizations in terms of the need to harmonize and coordinate group efforts. The focus shifted away from authority and unity of command to the motivation of the individual and group, delegation of authority, employee autonomy, and so on. The matrix organization to work properly needs managers than can move away from the absolute boss culture of the mechanical school to the collaborative team culture of the human behavior school.

The main drive for P&G to choose the matrix structure was the need to pursue a multiple-priority strategy – customers and market focus, product focus and functional efficiency – besides the sharing of expensive resources. The matrix pathologies developed during the 1980s and early 1990s. The first and most obvious problem was the need to abandon the mechanical school approach to managing an organization and create a culture of team and collaboration. The absolute boss behavior of the COO and later CEO Jager boosting: *I break kneecaps. I make heads roll* (Brooker 1999, p. 146-152) is absolutely contrary to what is needed to make a matrix organization work properly. The second and third problems was the high number of management layers and the imbalance in the design of the matrix structure, and that the required changes in the processes and systems necessary to implement the matrix structure had not been made.

These problems were common to most early matrix structures implemented following the management fashion in the 1970s and early 1980s and motivated many of them to abandon it. Authors like Peters & Waterman (1982, p. 306) argued against the use of the matrix based of these unsatisfactory experiences.

The sophisticated front-back hybrid matrix structure designed and implemented under Jager would have failed if Lafley with is autocratic and participative stile and above all his grasp of the many details needed to

make it work had not taken over in the right moment. This is again a demonstration that the CEO defines the strategy and culture of an organization. If he gets it right, the organization succeeds like P&G did.

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