Strategy and Organization Improving Organizational Learning

Jean-Claude Tarondeau

Abstract:

Living art organizations present a special interest in a research stressing cognitive processes and development of intangible resources like knowledge and capabilities. In living art organizations, production processes like rehearsals and tunings whose goals are to develop both tacit and tangible capabilities are readily observable and have undeniable effects on performance quality, revenues and costs. The observations of four opera houses support the conjecture that strategy and organizations could be preconditions for learning.

Keywords: Cognitive Process, Learning, Living Art Organization, Organization, Strategy

Résumé:

Les organisations d’art vivant ont un intérêt particulier dans les recherches traitant des processus cognitifs et du développement des ressources intangibles comme savoir et capacités. Dans les organisations d’art vivant, les processus de production, comme les répétitions et mises au point des spectacles, sont directement observables et ont des effets mesurables sur les revenus, les coûts et la qualité. Les observations de quatre maisons d’opéra tendent à confirmer la conjecture selon laquelle stratégie et organisation peuvent favoriser l’apprentissage.

Mots clés: Apprentissage, Art vivant, Organisation, Processus cognitif, Stratégie
From the resource-based view of the firm, strategy results from the effective deployment of a given portfolio of resources in a given environment at a given point in time (Barney, 1991). The competence perspective of the firm adds a dynamic dimension to this conception of strategic management (Morecroft, Sanchez & Heene, 2002, p. 222-3). The firm is viewed as an open system whose resources portfolio must adapt to, at least partially, unpredicted conditions. In this perspective, cognitive processes serve as adaptive mechanisms and intangible resources like knowledge and capabilities are needed to improve effectiveness in the implementation of tangible assets.

In both cases, strategic choices of the firm result from the matching of resources, including knowledge and capabilities, with environmental conditions considered as static in the first case or dynamic in the second.

The observations of several opera houses led me to consider strategy not as resulting from economic and cognitive processes but rather as preconditions for effective learning. This paper results from an ongoing research on lyric art as a global industry.

Intangible strategic assets are essentially unobservable and the roles they play in contribution to performance are problematic to investigate. Under these conditions it seems easier and more useful to investigate strategic processes than strategic assets (Lorino & Tarondeau, 2002). Living art organizations present a special interest in a research stressing cognitive processes and development of intangible resources like knowledge and capabilities. In living art organizations, production processes like rehearsals and tunings whose goals are to develop both tacit and tangible capabilities are readily observable and have undeniable effects on performance quality and costs. Their observations support the conjecture that strategy and organizations could be preconditions for learning.
**Process based strategic management**

In order to overcome the difficulties in observing strategic capabilities or competences, one can observe the value creating processes in which these resources are brought and developed into actions. The process concept involves (Lorino & Tarondeau, 2002):

- the way in which the value chain is organized and respond to competitive challenges;
- the actions in using resources that lead to capabilities, the framework in which organizational learning takes place and a firm’s competences develop;
- the socialization process through which dispersed elements of knowledge, often possessed by individuals, are combined in collective operations to create competences of an organization.

**Competence results from action.** What has been demonstrated at the individual level, particularly by Piaget (1947), becomes even more apparent at the organizational level. Capabilities or competences development implies organized action. An orchestra has to rehearse in order to acquire the necessary mastery of a piece of music. It is not sufficient for musicians to possess a musical score or even to practice part of the score individually. Successful interpretation requires coordinated group action generated by a rehearsal process and by the experience coming from past actions of the group. Process learning builds up organizational memory. **“Setting up routines represents the most important form of storage of operational knowledge specific to an organization”** (Nelson & winter, 1982).

**Strategic processes**

Because processes combines tangible, codified resources and capabilities which are not easily transmissible, and because they mobilize and generate specific competences and group learning, processes are more idiosyncratic than any of the resources they combine. Hence they can provide a sustainable competitive advantage. Nevertheless, to be strategic, a process must satisfy two conditions.

First, a strategic process must have a substantial impact on some aspect of strategic performance. It must play a role in taking advantage of an opportunity or warding off a threat. For example, a new product development process able to identify market needs and to respond to them effectively and quickly may provide a competitive advantage in terms of innovation and market share.
Second, a strategic process must generate a sustainable competitive advantage. It must be difficult to imitate and not be replaceable by another process accessible in an open market. A process to develop new products might be a source of sustainable advantages if it cannot be replaced by contracting with product engineering subcontractors who are also accessible to competitors. Strategic processes combine and develop core competences which accumulate in the internal memory of the firm. The opera production process results in capabilities which are stored in the orchestra and chorus memories. An opera house without its own orchestra or chorus would not benefit from it. At least in their most idiosyncratic components, strategic processes must be internalized.

The comparison between four Europeans opera houses shows that different strategies – in particular “stagione” vs. repertoire as we will see later on – may result into different types and intensity of organizational learning.

**Process based organization**

The concept of process was defined by many authors. It is the grouping together of activities organized in network, in a sequential or parallel way, combining and implementing multiple resources, capacities and competences, to produce a result or output having value for an external customer (Davenport & Shorts, 1990). Uncertainty and complexity offered by the companies’ environment made processes and projects to emerge as privileged forms of organizational actions (Tarondeau & Wright, 1995).

“Transversality”, or primacy of processes compared to specialized functions, appeared when lateral coordination needs were more important than general benefits generated by the specialization of functions and individuals. Process or transverse organizations developed in the field of quality and in the management of product flows before relating to innovation processes and, more generally, to all processes of adjustment to the complexity and uncertainty of the environment.

The evolution of quality management highlights the passage of a static and functional vision to a dynamic process oriented approach. Quality problems or defects frequently appear on interfaces between functions. In production, they result, for example, from bad interfaces between production and R&D.

The “lean production processes”, inherited from Ohno’s experiments, present characteristics that one can find, to differing degree, in the transverse organizations. The processes are formalized and assigned to multifunctional groups. Each group (or individual)
carries out the operations which are entrusted to him in respecting scrupulously the operational standards defining the process he has in charge. And he mobilizes its competences, its intelligence and its creativity to the process improvements. Thus, the productive system makes continuous progress in line with the objectives assigned by the company and in accordance with competences and values of the members of the organization. In the industrial sector, several observations have shown how this organization generates benefits in terms of quality, delivery and cost (Womack, Jones and Roos, 1990).

Innovation and new product development results from processes which need to be agile and quick to better adapt to rapidly changing market needs (Clark and Fujimoto, 1991; Brown, Schmied and Tarondeau, 2002). To reduce the duration of the innovation cycle, companies have created project organizations made up of autonomous multifunctional groups. The setting up of transverse organization goal is to intensify the exchanges of information between the project actors and to increase the effectiveness of the mechanisms of integration and coordination between specialists. The principle of “transversality” is put at the service of a better management of time as in lean industrial systems functioning in "Just-In-Time".

According to many authors, the learning organization is an open and flexible one (Garvin, 1993). A process organization presents these characteristics. Being directly coupled to an outside “customer” who receives its contribution, it is an open system. It is flexible because it presents overcapacities or organizational slack which result from individuals’ high qualification levels, the assignment of activities to multifunctional groups, and the sharing of information between all members of the organization (Nonaka, 1991).

A process based organization is designed to act and to learn from its actions. From this brief analysis I conjecture that a company willing to develop its learning capacity should organize its activities along its strategic processes. This conjecture will be supported by observations made in the Paris opera two theaters: the Bastille Opera and the Garnier Palace.

**Opera house strategy and organization as preconditions for learning**

I tried to support my conjectures on strategy and learning by comparing two strategy types: the repertory strategy exemplified by the Vienna and Munich Operas on one hand and the "stagione" strategy exemplified by the Metropolitan Opera of New York and the Paris Opera on the other hand. The first strategy stresses the maintenance of a high level of competences by frequent revivals (reruns) of a repertory. The second is based on less frequent reruns, more new productions and more numerous and long rehearsals. The two strategies
differ in the ways their production process is designed, controlled and organized. These choices do have consequences in terms of revenue, cost and quality.

On the organization side, I will compare, within the Paris Opera House, the organizations of its two theaters: the Garnier Palace, organization based on specialized job contents (a functional organization) and the Bastille Opera one based on the production process of opera to be presented to the public (a project or process organization). The first one stresses specialized functional competences whereas the second emphasizes combined competences related to a given work. The organizational choice seems to bear consequences in terms of quality, safety and time management.

**Background information about the opera “industry”**

Opera is a very special case of the performing arts. “It often absorbs the lion’s share of government subsidy to them, though it is the least widely attended” (Towse, 2003, p. 342). It requires the resources of a performing company: principal singers, chorus and full-size orchestra, combined with those of a theater. The costs of an opera house can be broken down into the fixed cost of maintaining the house in good running conditions (in French: coût du théâtre en état de marche), the fixed costs of each new production (sets and costumes, rehearsal time) and the variable costs of each performance including the fees to guests artists and invited performers and technicians.

Most of the opera houses function on the basis established in the Italian opera of the 19th century (Bianconi and Pestelli, 1987). At this time, orchestral musicians and chorus singers were abundant and cheap and most theaters reached their economic equilibrium with capacity audiences between 600 and 1500. Nowadays, the repertoire remains quite the same; it is presented in theaters built for the 19th audience and the costs of labor, including artists, have spiraled according to the well known Baumol’s law (1966). Under these conditions, opera houses are more and more dependant on public funding, fund raisings, patronage or sponsorships to compensate for a lack of direct revenue from the box office.

The Italian opera operates under the strategy of “stagione” or season which means that a given work is given 6 to 10 times over several weeks followed by a rehearsal period for another opera during which the theater can be use for ballets or musicals. The principal performers are hired for the period of rehearsal and runs. To protect the voice of the soloist singers, only three to four performances are presented each week. Six to eight different operas are produced sequentially during the season.
The history of the German opera is quite different. Germany supports the larger number of opera houses. The German companies offer a broader repertoire and perform operetta and musicals with their own salaried singers. Most of the personnel, including the performers, are state or city civil servants. It should be noted that in other western countries, soloist singers, conductors, directors and set designers are working freelance with contracts that are specific to an operatic production.

The German opera operates under a repertory strategy like in most spoken theaters. Performances of several operas in the repertory alternate nightly. The overall number of performances offered in the season is higher; theater capacities are better used; fixed costs are shared on the larger number of performances.

Many opera companies operate on a mixed system of “stagione” and repertory. A given number of new productions enter the repertory each year – usually five to eight in large companies – and alternate during the season with revivals of productions introduced during preceding years. This calls for a greater use of invited artists and a careful planning of resources on a larger time horizon.

The opera industry is largely global. The same eighty most commonly performed operas are presented all over the world. Most of the principal artists offer their services on a free world market. So, being an international opera house means paying the same fees to the same international stars (Blaug, 1997).

From a study of five opera houses\(^1\) coming from different environments, Auvinen (2001) derives a general model of what he calls the artistic process of opera operations. This process goal is to assemble, combine, coordinate, and train all resources that are necessary to offer an opera performance to an audience. In line with Porter’s value chain, Preece (2005) suggests to distinguish primary and support activities, both of them needed to be coordinated for any performing arts event to take place. This primary process is composed of programming, personnel, promotion and production. In the following, I refer to this primary process and emphasize the programming and production activities – called production process – as the strategic one.

**Comparisons of four large opera houses**

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\(^1\) The Deutsch Oper Berlin, the English National Opera, the Finnish National Opera, the Glyndebourne Festival Opera and the Opéra national de Paris.
Comparisons between opera houses imply to identify the repertory of works offered to the public, the number of new productions and reruns presented in each season, the part of ballets and musicals, the number of representations along with the costs and revenues generated by these artistic activities.²

Several indicators testify to the success of the Paris Opera House between 1995 and 2004 during the mandate of Hugues Gall: the creation of a lyric repertory and continuation of an eclectic choreographic programming, the public attendance and the control of economic equilibrium. These results take more relief when compared with those of Metropolitan Opera of New York - the Met -, the Vienna Opera House - Wiener Staatsoper - and the Bayerische Staatsoper of Munich, houses of opera of comparable size and ambition.

**A slightly different repertory**

In 2004, the Paris Opera has a repertory of eighty lyric works. These eighty works belong to all the history of the Western opera since the 17th century, including contemporary creations. Among works of the 17 and 18th centuries, appear, in a close number, the operas baroques of Rameau, Handel and those of Mozart. Among those of 19th century, Italian operas, in particular those of Verdi and Puccini, are more numerous than German operas of Wagner and Richard Strauss, French or Russian works. Origins of the 20th century titles are varied, but creations, resulting from public orders, are all due to French musicians (Fénelon, Manoury and Dusapin).

<table>
<thead>
<tr>
<th></th>
<th>17/18th</th>
<th>19th</th>
<th>20th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paris Opera House</td>
<td>17,15</td>
<td>56,82</td>
<td>26,14</td>
</tr>
<tr>
<td>New York Met</td>
<td>11,48</td>
<td>65,57</td>
<td>22,95</td>
</tr>
<tr>
<td>Wiener Staatsoper</td>
<td>8,57</td>
<td>68,57</td>
<td>31,43</td>
</tr>
</tbody>
</table>

Table 1: Comparison of the repertories (in % of works available in repertory)

The repertory of the Paris Opera remains smaller than those of Metropolitan Opera of New York and the State Opera of Vienna. It draws more from baroque works of the 18th century and reserve a greater part to the contemporary operas than the Met. A very strong

² The comparisons which follow relate to data of costs, receipts and volume of production. The qualitative dimension of artistic activities is not taken into account. We leave to the reader the care to moderate the results of these comparisons by introducing its own appreciation of artistic quality of each one of these houses.
concentration of the Met is observed on Italian works of the 19th century and, in particular, on those of Verdi and Puccini whereas the Staatsoper of Vienna accommodates more liberally works of German and Austrian origin: Mozart for the 18th, Richard Wagner and Richard Strauss for the following centuries.

These reports are amplified if one turns to the exploitation of these repertories and compares the number of representations and the receipts generated by each work in repertory. The recent or contemporary operas are much less played than works of the previous centuries. They generate weaker receipts since they represent approximately the quarter of the repertory and only one eighth of the receipts from ticketing. Paris does not make exception: the same phenomenon is observable in New York where the number of representations of recent works is definitely lower than that of older works. It is marked even more in Vienna which presents the greatest number of recent works, but with the lowest number of representations.

<table>
<thead>
<tr>
<th></th>
<th>17/18th</th>
<th>19th</th>
<th>20th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paris Opera House</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% receipts</td>
<td>18,07</td>
<td>68,33</td>
<td>13,60</td>
</tr>
<tr>
<td>% representations</td>
<td>19,49</td>
<td>62,93</td>
<td>17,58</td>
</tr>
<tr>
<td>New York Met</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% representations</td>
<td>11,04</td>
<td>73,73</td>
<td>15,22</td>
</tr>
<tr>
<td>Wiener Staatsoper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% representations</td>
<td>15,16</td>
<td>74,97</td>
<td>8,76</td>
</tr>
</tbody>
</table>

Table 2: Exploitation of the repertories in % of representations and receipts generated by work

Six of the most played works, Bastille and Garnier together, generate 30% of receipts at the Paris Opera. It is, in decreasing order: Carmen, Tosca, la Bohème, il barbiere di Siviglia, the Magic Flute and Faust, all works of 18 and 19th centuries. With the Met, the situation is similar. Seven works account for 30% of the representations and, probably, a higher percentage of the receipts. One finds there in the order: la Bohème, Carmen, Turandot, Tosca, Aïda, Madama Butterfly and la Traviata, all works of second half of 19th century. In Vienna, German operas of Mozart, Offenbach, R. Strauss and Wagner share the favours of the public with those of the Italian composers of 19th century: Verdi and Puccini. Seven works the most represented: the Magic Flute, la Bohème, the Knight with the rose, Tosca, Hoffmann Tales, Tristan and Isolde and Aïda represent 30% of the spectacles, proportions comparable with those from New York and Paris.
Bizet, Puccini and Mozart reign in Paris. Puccini; Bizet and Verdi are the Masters in New York; Mozart, Richard Strauss and Puccini the most played in Vienna.

The Paris Opera repertory, like the two other places, is composed with the most popular works but appears less centered on only the 19th Italian and German century. In short, these three opera houses are drawing in the same universal repertory of lyric works with just a touch of local differentiation.

*A different spreading out of activities*

The annual number of new lyric productions, purchases and co productions included, is slightly higher in Paris than in New York and Vienna. In recent years, the number of different lyric works presented per season is appreciably the same one in Paris (24) and New York (26). Vienna, on the other hand, presents more than 50 different works each year.

The number of works presented in each season and the number of representations of each work clearly differentiate the Paris Opera and the New York Metropolitan, which practice the mixed stagione/repertory strategy, from the Operas of Munich and Vienna, operas which conform more to the model of pure repertory.

<table>
<thead>
<tr>
<th>Average activities by season</th>
<th>Paris Opera House</th>
<th>Metropolitan Opera New York</th>
<th>Staats Oper Vienna</th>
<th>Bayerische Oper Munich</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of lyric works</td>
<td>24</td>
<td>26</td>
<td>53</td>
<td>41</td>
</tr>
<tr>
<td>News lyric productions</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Number of lyric representations</td>
<td>183</td>
<td>217</td>
<td>250</td>
<td>211</td>
</tr>
<tr>
<td>Number of representations by work</td>
<td>8</td>
<td>8</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Number of ballets</td>
<td>161</td>
<td>76</td>
<td>50</td>
<td>73</td>
</tr>
<tr>
<td>Total number of representations</td>
<td>344</td>
<td>293</td>
<td>300</td>
<td>284</td>
</tr>
</tbody>
</table>

Table 3: Comparison of the lyric activities and choreographic

The number of lyric representations is weaker in Paris than in the three others houses. On the other hand the number of ballets is higher there. As the potential of receipts by representation is twice higher for the lyric spectacles than for the ballets, this distribution of activities penalizes the Paris Opera compared to the other houses.

On the whole of its activities, the Opera of Paris does not take advantage of its two theatres to offer a number of spectacles twice than the other houses having only one room.

*Different levels of cost and revenue*
At the Paris Opera House, the variable cost by representation, which includes the costs of settings, costumes and accessories, plus the costs of distribution, figuration and royalties, remain appreciably constant between 1998 and 2003 at 137 000 €\(^3\) whereas the receipts by representation are in light increase. The average ticket price remains stable for the dance and increases by 10\% for the lyric spectacles on six last years. In total costs except investments, each spectacle proposed by the Paris Opera, lyric and ballet included, costs in average 389 000 €, cost which grows at the rate of the total payroll increase. The cost by ticket sold moves in the same way. Receipts generated by the activities approximately cover one third of the complete costs.

<table>
<thead>
<tr>
<th></th>
<th>Opera of Paris</th>
<th>Metropolitan Opera de New York</th>
<th>Staats Oper Vienna</th>
<th>Bayerische Oper of Munich</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual total costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in millions of € 2002</td>
<td>142</td>
<td>158</td>
<td>78</td>
<td>77</td>
</tr>
<tr>
<td>Cost per representation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in millions of € 2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>variable fixed total</td>
<td>137</td>
<td>252</td>
<td>498</td>
<td>259</td>
</tr>
<tr>
<td>Total cost per ticket</td>
<td>196</td>
<td>162</td>
<td>156</td>
<td>134</td>
</tr>
<tr>
<td>sold in € 2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Box office d’€ 2002</td>
<td>48</td>
<td>82</td>
<td>35</td>
<td>23</td>
</tr>
<tr>
<td>in millions of € 2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Comparison of financial data

How these data are compared with those of Metropolitan Opera of New York, of Staats Oper of Vienna and Bayerische Oper of Munich?

Cost comparison

Out investments and fund raising costs, the total cost by representation is established at 498 000 € in New York instead of 389 000 € in Paris. But the share of the lyric spectacles, definitely more expensive to produce that the choreographic spectacles, is stronger in New York than in Paris. With an identical structure of activity, the total cost by representation would be appreciably equivalent in New York and Paris. The total cost by ticket sold is respectively 162 € for the Met and 196 € in Paris. The difference can be explained by differences in the number of theatres and seating capacities.

At the State Opera of Vienna, lyric spectacles account for 80\% of the representations, level equivalent to that of the Met. The average total cost by representation is established at

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\(^3\) Unless otherwise indicated, he monetary unit is constant 2002 Euro.
259 000 € which is much lower than in New York and Paris. This is remarkable since the number of different works offered in each season in Vienna is twice the number of works presented by the Met and the Paris Opera. Another opera of repertory, the Bayerische Staatsoper of Munich is comparable with the Staatsoper of Vienna with total costs by representation still lower.

Annual total costs (except investments and fund raising costs) are close to twice higher in New York and Paris than in Munich or Vienna for a number of representations only 15% superior. By combining the effects of a lower volume of activities and one higher operational budget, the Opera of Paris is most expensive by ticket sold.

On the cost side, the four opera houses can be spread into two quite homogeneous groups: New York and Paris on one hand, Vienna and Munich on the other. We will later see that these groups differ in terms of organizational learning.

Revenue comparison

On the revenue side, the receipts of the Met are of 303 000 € per lyric spectacle and of 91 000 € per ballet. In fact, the lyric spectacles record the strongest differences in receipts per representation compared to Paris: 303 000 € in New York instead of 151 000 € in the Bastille Opera and 106 000 € in the Garnier Palace. Explanations of these differences hold, with appreciably equal shares, to differences in size rooms, differences in average ticket price: 89 € at New York for 59 € at the Bastille Opera and 65 € at the Garnier Palace. It is necessary to add the effect of the respective numbers of lyric representations, 217 at the Met for 183 in Paris to explain the total box office of each one of the two institutions.

<table>
<thead>
<tr>
<th></th>
<th>In € 2002</th>
<th>Ticket price</th>
<th>Receipt/spectacle</th>
<th>Ticket price</th>
<th>Receipt/spectacle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bastille</td>
<td>59</td>
<td>151 000</td>
<td>35</td>
<td>86 000</td>
<td></td>
</tr>
<tr>
<td>Garnier</td>
<td>65</td>
<td>106 000</td>
<td>35</td>
<td>54 000</td>
<td></td>
</tr>
<tr>
<td>Met</td>
<td>89</td>
<td>303 000</td>
<td>28</td>
<td>91 000</td>
<td></td>
</tr>
<tr>
<td>Vienna</td>
<td>48</td>
<td>96 000</td>
<td>33</td>
<td>63 000</td>
<td></td>
</tr>
<tr>
<td>Munich</td>
<td>44</td>
<td>84 000</td>
<td>25</td>
<td>41 000</td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Comparisons of price of place and receipts of spectacle

Vienna is an opera of repertory "à l’allemande" who presents 300 spectacles and more than 50 works per annum in only one theatre. The capacity of the Opera of Vienna is close to
that of the Garnier Palace in seated places but the standing up places have not to be neglected since 2000 tickets are sold on average by representation, all categories confused. The receipts are respectively at 96 000 and 63 000 € per lyric representation or ballet. Differences with the Paris Opera and the Munich Opera are mainly due to the differences in prices for lyric spectacles.

What conclusions can be drawn from these comparisons? All four houses present the same more popular works with the same concentration on less than ten universally acclaimed ones. Their differences in revenue coming directly from their artistic activities can be explained by their seating capacities, the number of representations and the distribution between lyrics and ballets. There exists a significant difference in terms of costs between New York and Paris compared to Munich and Vienna. To explain this difference we must go back to strategy and organizational learning.

**Production processes, organizational learning, and performances**

To simplify the presentation, I will only compare Vienna and Paris which are representatives of two different strategies: repertory and mixed stagione/repertory. In both cases, two processes must be distinguished. The new production process consists of all operations which are necessary to put a lyric title on stage starting from scratch. The revival production process is a shorter one consisting of using available settings, costumes, accessories to rerun a spectacle still living in the chorus, orchestra, artistic and technical personnel memories.

A new production process: « Norma » at the Paris Opera House

| At the beginning of 1994 : Hugues Gall decides to program Norma for 1996. | pianist) Gounod room. |
| Spring 1994 : distribution (conductor and singers) is decided. | May 13 : first musical (conductor, pianist and soloists). |
| September 1995 : partitions of Norma are bought. | May 15 : first reading of the orchestra, Ravel room. |
| January 1996 : beginning of work in the settings and costumes workshops; first series of readings of the choral. | May 26 : installation of the decor on the stage. |
| April 15 : preassembling of the decors in the workshops. | May 28 : first piano scene in the main room; opening of the booking at the cash desks. |
| April 30 : opening of the booking by telephone. | May 31 : first rehearsal with orchestra. |
| June 2 : first light rehearsal. | June 4 : general rehearsal with piano |
| June 5 : pre-general rehearsal with orchestra. | |
The Norma example shows the main steps of the overall production process for a “new production”. The entire process takes about two years and half. In the last two months of it, it implies all artistic and technical personnel assigned to the setting up of the spectacle. In the first part of the process, the performance is designed along with settings, costumes and accessories. The second part is a process of learning by doing where all artistic and technical actors acquire or refresh their knowledge and capabilities in line with the choices made by the director. For the “Walkyrie” in Vienna, it requires 27 services\(^4\) for artistic rehearsal and 26 services for technical setting ups. The theater must be closed to the public during four days. In Paris, it would require a comparable number of “services” but the theater must be closed longer.

The new production process is about the same in all the opera houses which produce their spectacles using, besides invited artists, their own resources. However, they differ mainly in the way they organize the short process of rehearsal which ends up the production process. These differences have an impact on receipts, costs and on quality of learning.

**Differences in revenue**

In Vienna, quality rests on the performed works, the orchestra, the singers and the chorus. Each title in repertory is taken again at least every two years over long periods. A Tosca produced in 1958 is currently in its 440\(^{th}\) representation or so. The accumulated experience is such that the recoveries are not repeated. The theatre closes only four days to prepare for a new production. In Paris, the quality of the lyric spectacle rests on the scenery, the sets, costumes an accessories. The sophistication of the performance design multiplies the need for repetition. The Bastille Opera closes six days in preparation of a new production and three in case of a revival. The shut down days are twice in the Garnier Palace: twelve days for a new production and five days for a rerun. An opportunity cost results from this lack of revenue. It can be computed from the average annual number of new productions and reruns in each theatre (table 3) multiply by the average receipt from a performance (table 5).

\(^4\) The concept of «service» is specific to opera houses. It represents half a day or four hours of working time for a team composed of a number of people which varies according to the operations to be done and to the title to be prepared.
The difference in opportunity cost or lack of revenue generated by each new production can be attributed to several factors: a better organization of the operations, a more effective learning process and a better memorization in Vienna compared to Paris. It comes also from differences in storage space and rehearsal rooms which are too small or missing in the Garnier 19th century opera.

<table>
<thead>
<tr>
<th></th>
<th>Number of New productions</th>
<th>Number of reruns</th>
<th>New production opportunity costs</th>
<th>Rerun opportunity costs</th>
<th>Total lack of receipts Million € 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bastille Opera</td>
<td>5</td>
<td>14</td>
<td>4,55</td>
<td>6,35</td>
<td>10,9</td>
</tr>
<tr>
<td>Garnier Palace</td>
<td>2</td>
<td>4</td>
<td>2,6</td>
<td>2,1</td>
<td>4,7</td>
</tr>
<tr>
<td>Paris Opera total</td>
<td>7</td>
<td>18</td>
<td>7,15</td>
<td>8,45</td>
<td>15,6</td>
</tr>
<tr>
<td>Staats Oper Vienna</td>
<td>7</td>
<td>46</td>
<td>2,7</td>
<td>0</td>
<td>2,7</td>
</tr>
</tbody>
</table>

Table 6: Comparisons of lack of receipt due to theatre closures

For reruns, the explanations of the huge difference in opportunity costs are coming from differences in strategy. The accumulation of experience resulting from the frequency of each title rerun is a substitute to numerous repetitions deemed necessary in the Paris Opera which presents the same title less frequently.

**Difference in costs**

Besides the opportunity costs of theatre closures, the learning by doing process is shorter and less costly in Vienna than in Paris. On the average it needs 34 so called services in Paris compared to 27 in Vienna to prepare for a new production. A rerun consumes 18 services in Paris compared to no service at all in Vienna. On a season, the total number of services, new productions and reruns together, is three times higher in Paris than in Vienna (Cf. table 7). The cost of the personnel directly engaged in performances could differ in the same proportion.

<table>
<thead>
<tr>
<th></th>
<th>Number of new productions</th>
<th>Number of reruns</th>
<th>Total number of services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paris Opera</td>
<td>7</td>
<td>18</td>
<td>562</td>
</tr>
<tr>
<td>Vienna Staats Oper</td>
<td>7</td>
<td>46</td>
<td>189</td>
</tr>
</tbody>
</table>

Table 7: Comparisons of direct costs of Paris and Vienna production processes
This organization has side effects on the availability of permanent artistic personnel, especially orchestra and choir that are less busy in rehearsal sessions and therefore can perform more frequently in front of an audience.

The availability of artistic personnel combined with the availability of the main stage explains why the Vienna Opera offers a number of lyric representations higher than the Paris Opera. Like heavy industries, operas have very high fixed costs and the total cost of their products is very sensitive to the production volume, in that case the number of representations. As expected, the differences in total cost per representation between Paris and Vienna can be entirely explained by the number of representations as shown on table 8.

<table>
<thead>
<tr>
<th>In € 2002</th>
<th>Total cost/ representation</th>
<th>Number of representations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paris Opera House</td>
<td>389 000</td>
<td>183</td>
</tr>
<tr>
<td>Staats Oper Vienna</td>
<td>259 000</td>
<td>250</td>
</tr>
<tr>
<td>Differences Paris/ Vienna in %</td>
<td>-33,4 %</td>
<td>+36,6 %</td>
</tr>
</tbody>
</table>

Table 8: Comparisons of unit cost and volume

**Differences in quality**

At this point in this research, I have no formal data on the level of artistic quality in the four opera houses under investigation. The collection of such data will be done lately. Nevertheless, all four houses are considered top level in terms of quality even if it is on different criteria: musical quality for Munich and Vienna, staging and settings quality for New York and Paris. It will not be too hazardous to consider that the economic advantage conferred to Munich and Vienna are not paid in terms of a worst quality of performance.

Different learning strategies, indeed, produce different amount of revenue, different operating costs which are reflected in the budgets of the four opera houses under study and perhaps different quality levels. A strategy designed to improve learning and memorization seems to provide better results on all the three dimensions.
An organization designed for learning

The Garnier organization was historically a functional one where each specialized group contributes to the production process as needed but reports to a functional manager. At the Bastille Opera, a project organization is built around each spectacle. It is conceived to make the ephemeral production of the living spectacle more effective, surer, and more stimulating for those which serve it. Since the programming of a new production to the end of the last representation, all specialized resources and competences are represented within a single cell in charge of this production. This mode of organization creates new relationships between the technical staff of the Bastille Opera and the designers of the spectacle: director, decorator, costumier and lighting engineer, and “a proximity which supports a more creative climate, more individualized relationships, more motivated and responsible people, creating a more cordial environment: one works for Billy Budd or Francesca Zambello, for Wozzeck or Pierre Strosser”.

To all and to each one, it gives a common sense of its mission aimed to public satisfaction. This organization is transverse because it cuts the functional vertical lines. It deals with a project, the new production of Carmen for example, since the first vision of the director and the set designer since the end of the last performance more than two years later. It ensures the continuity of the trainings. Whereas in the Garnier Opera, a spectacle could be prepared by a technical team different from that which ensured the representations, in the Bastille Opera today, the same people apply during the performance the lessons drawn from the rehearsals. It is an open organization since its mission is defined by the contribution it must offer to the external partner which is the public. For all these reasons, it must be sufficiently flexible to take account of the schedule irregularities and spots generated by the tight coupling between operations and spectacles. The modulation of time worked and the development of versatility in the basic technical specialties serve this need for flexibility. Transverse, opened and flexible organization, the Bastille opera organization has all the characteristics of the learning organization as defined in the literature.

Indeed, it “induced a greater safety in the control of mechanics of stage, a better knowledge and reproduction of the technical effects of the spectacle, it enriches the human and professional experience of employees”.

Although any estimate is difficult, this organization generates learning effects.

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7 Bieisse, Michel, quoted article, p. 6
which reduce the costs of new production or rerun processes and improve the performance level of quality.

**Discussion of results**

As stated before, this paper presents the first step of a research which will be extended to a larger sample of opera houses with a deeper investigation of production processes and organizations. But as imperfect as it is, this first step made to emerge three points that I want to briefly summarize.

The first point stresses cultural institutions like opera houses, theaters and orchestras as good settings for empirical research on competence based strategy and organization. Obviously, these organization performances rest on competencies developed by their members during the learning by doing process of rehearsal. Even if tacit knowledge remains difficult to identify, such processes can be observed, the number of people engaged in them and even their working time can be measured. A “quantity of learning” variable can be designed from these observations and then used to compare different strategies and organizations. What has been done in this paper to compare Vienna and Paris Opera strategies or Garnier and Bastille organizations can be done on larger samples and result in formalized hypotheses testing.

The second point is on the generalizations of these results that could be extended to other fields and other processes. Innovation processes come directly to mind. Vienna and Munich opera house production processes could be compared to an innovation process design and control to innovate continuously under the kaizen philosophy. Paris and New York production processes look like these innovation processes that tend to produce radical innovations from scratch. In opera houses like in innovation processes, differences in performances should be explained by differences in competence deployment in learning by doing organizations.

The third point concerns strategic processes as points of focus to implement a business strategy and to design an organization. Most of differences between Paris and Vienna Operas seem to be explainable from differences in their production process and especially from their relative effectiveness in terms of competence deployment.
Bibliography


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