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PROGRAMME INNOVATIONS AND NETWORK OF FRENCH PUBLIC THEATRES

DANIEL URRUTIAGUER

Abstract :

Manager-ruled organisations are supposed to be less innovative than artist-ruled ones. However, in France from 1995 to 1997, the managers of “scènes nationales” (SN), who are not usually directors, are more open to lively playwrights than the “managers-cum-directors” of national theatres and drama centres (TN, CDN). Since audiences’ risk aversion for contemporary authors is similar in all types of theatre, we may infer that SN are more innovative than TN and CDN. Nevertheless, internal observations on uniformed criteria of selection qualify this view. Multidimensional scaling of similarities in selling performances partly supports the assumption on status-oriented trade in theatre.

Keywords: Innovation, network, theatre, repertoire, status

1. INTRODUCTION

Uncertainty about the results of artistic production can restrict its level if the artists and their patrons mostly share risk aversion. This can legitimate public subsidies, which encourage artists to increase their creations and may develop their taste for research. Hence, one of the main goals of public support for the arts is to enhance artistic innovations in order to stimulate the emergence of new forms that might interest people later.

However, in the fifties, the French project of theatrical decentralisation focused primarily on the diffusion of classics that new dramatic centres put on stage. The managers of these centres were directors belonging to or influenced by the *Cartel*¹ and believed this programme choice to be a necessary way of favouring access to theatre (Goubert, 1992: 100; Robin, 1992: 112). Contemporary playwrights were limited to well-known plays that the *Cartel* had discovered before, like Giraudoux or Pirandello. At the same time, a new generation of playwrights emerged with Genet, Adamov, Beckett, and Ionesco through small Parisian theatres on the *rive gauche*. Directors with a taste for risk committed themselves to diffusing these unknown authors' plays. (Corvin, 1989: 415)

Thus, the link between subsidies and innovations depends on the nature of artistic projects. Tension can mount between support for avant-garde movements and the equity considerations that democratic governments refer to, mainly to explain their involvement in the arts, as Throsby and Withers (1979: 193) noted. On the one hand, according to Musgrave's merit-good view (1959), the Ministry of Culture has boosted the institutionalisation of a territorial network of French theatrical organisations recognised as bearing a national mission. State and local authorities subsidise them, accounting for about 70% of their resources. On the other hand, in the eighties Jack Lang as Minister of Culture favoured the appointment of directors to the post of manager in the main theatrical institutions so that their prestigious creations could catch the media's attention (Patriat, 1998: 129).

The conceptualisation of artistic innovations raises some problems of definition. What is the threshold of newness that must be perceived to consider an artwork as an artistic innovation? According to Becker (1982), conventions are the framework to co-ordinate the different members of an art world. Unconventional artists can create new shows, which may lead to radical innovations if they shift the existing conventions from a central role to the fringe. The impulse can also come from institutional positions.

For instance, in France a new generation of directors rose to the management of national dramatic centres in the seventies. They moved away from the priority for classical

performances outside of Paris, throughout the rest of the country, and succeeded in shifting the interest of the public theatre world towards aesthetic originality. Since innovations can be minor, we may wonder how innovative new offers are perceived as regards playwrights, directing, acting, scenery and lighting.

In their survey on the determinants of artistic innovation, Castañer and Campos (2002) show that organisational variables are often more satisfactory than environmental perspectives to understand innovative processes. In agreement with them, I address the question here of the influence of the status of French public theatres on innovations through their managers' programme choices regarding selected authors and directors.

My investigation raises questions on some usual assumptions among cultural economists and sociologists, such as the more innovative behaviour of artists compared to managers, the effects of resource availability, or the network barriers to exchanging performances with theatrical institutions that have a higher status.

The national network has a hierarchical structure with four kinds of organisation².

The most prestigious status is acknowledged for the five national theatres (TN), which benefited only from state subsidies and an average annual budget of 13.3 million euros in 1997. Hence, the perceived quality of their programmed plays is supposed to be better than competitors' shows. Following them are the 27 national dramatic centres (CDN), which are mainly subsidised by the state, with an average budget of 3.2 million euros. The six national dramatic centres specialised in children's theatre (CDNEJ) and the nine regional dramatic centres (CDR) are close in their average budget (about 15 million euros) and more or less equal subsidies from the state and local authorities. A manager who directs shows and buys outside programming heads each of these types of establishment. To simplify, I call this actor a "director-cum-manager".

Finally, the 57 "*scènes nationales*" (SN) share the lowest status because they are mainly subsidised by local authorities and their manager is not usually a director. They stand out owing to their multi-field programming, though mainly composed of theatrical plays. In 1997 their average budget was about 2.3 million euros.

I used data from 1995 to 1997 that I collected myself from reports summarising the activities of these 104 public theatres, centralised by the Ministry of Culture. They detail, for each programmed show, the director's name, the title of the play, the number of performances and the number of paying visitors.

Heilbrun and Gray (1993) associate artistic innovation with the programming of contemporary works, like most cultural economists. I first discuss this relation, before presenting the methodology to measure categories of repertoire (§ 2). Choices of repertoires, according to the status and size of public theatres, are then measured and compared to the preferences of paying audiences. The results are then discussed on the basis of a qualitative report written by two SN managers (§ 3). The directors' status may be an important selection criterion, so that only theatrical organisations with an equivalent status are likely to programme them. This hypothesis about this curb on innovation is tested through the exchanges of shows between the categories of theatrical organisations according to their status and size (§ 4).

2. INNOVATIONS AND CONTEMPORARY PLAYWRIGHTS

This part of the paper is organised as follows. Section 2.1 discusses the relation between the programming of contemporary playwrights and the concept of theatrical innovation. Section 2.2. presents the methodology used to measure the structure of performances and paying attendance according to the categories of repertoire.

2.1 Are contemporary plays innovative?

Whereas technological innovation refers to competitors' methods and products, Castañer and Campos (2002, p. 31) note that the referent in evaluating the newness of artistic outputs is vague. The reference can be all other organisations either throughout the world or locally but can also be the focal organisation's own past.

The self-referential approach can be useful to analyse a director's artistic path but is somewhat inappropriate for comparing organisations since each creation differs from preceding shows. Furthermore, each performance of the same show is singular as audience listening necessarily influences the rhythm and way of acting. Mervant-Roux (1998) compares the performances of the same show in 17 cases, from 1986 to 1995, to prove this point.

She distinguishes three types of audience intervention in the process of performance. Firstly, audiences can feel involved in the central subject of the show, so that the director may refine her/his scenic writing around this theme with great potential. Secondly, the audience can spontaneously underline one of the components of the show. The acting and the meaning of

the directing may be transformed, especially during the first performances. Thirdly, the social and cultural context of the moment colours spectators' perceptions, so that a local audience may either approve or reject one component of a show on tour. For instance, in 1989 French audiences and drama critics were keenly interested in Hamlet's loneliness in Patrice Chéreau's direction of the play, whereas Russian audiences in Moscow were more sensitive to the social derision behind the characters of spy buffoons and Hamlet's troupe of comedians.

The comparison of the degrees of innovative production for theatrical organisations should refer to the existing conventions in the local or international art world. Since audiences' risk aversion induces their preference for well-known classical plays, the importance of contemporary playwrights in the programme can be an indicator of innovation when the manager takes the risk of moving away from audience expectations. Most cultural economists adopt this approach.

Nevertheless, contemporary playwrights are not necessarily innovative. They can use a conventional style or propose only some variations within an existing artistic convention. Furthermore, the direction of a classical play can be innovative through a bold reading of its meanings or new interpretation of characters. A statistical approach to the repertoire structure should therefore be completed with experts' judgements on whether theatrical production is conventionalist or not.

DiMaggio and Stenberg (1985) proposed an index of conformity to study the degree of repertoire standardisation. It records the average number of times a show produced by one company is produced by all companies in the group. Its computation for each theatre can be expressed as $CI = \sum_{i=1}^n p_i / n$ where p_i is the number of times each production i was programmed in all theatres and n is the total number of productions in this theatre programme. This index is thus proportional to the degree of conformity.

Nevertheless, the conformity index is more an indicator of programmers' imitative behaviours, which depend on the perception of cultural and artistic fashions. Their meaning is ambiguous since programming the same plays as some other theatres can be a conservative practice but may also enable certain unknown playwrights to become known when their artistic legitimacy starts growing.

Comparing the repartition of performances and of paying audiences according to categories of repertoire is a more precise and adequate approach to measure the degree of innovation in programme choices.

2.2 Measuring repertoire structure

Unlike the available data of the Arts Council of England for the theatre sector, the data of the French Ministry of Culture are not limited to the number of programmed productions only; they also give details on the number of performances. Information on the length of run per production is useful to study the differences in innovative processes through the programmers' behaviour and audiences' reactions.

Because of missing data on attendance, 15 "scènes nationales" have been excluded from the study which therefore concerns 89 public theatres. Selecting only programmed plays raises the problem of the boundary between theatre and other artistic disciplines such as dance, one-man shows, music or song. Since directors' originality is highly valued, the definition of this borderline is far from being clear-cut.

Attendance had to be adjusted to account for the effect of tours. Both producers and theatrical institutions that purchase the rights to a performance take into account the same paying audiences. I chose to count the audiences in the theatre where the show was performed. I therefore amended statements concerning producers' tours by deleting performances and their audiences when other theatrical institutions had also counted them.

In 1995, in these public theatres, 11,158 performances attracted 2,814,264 paying visitors, compared to 10,860 and 2,609,303 respectively in 1996 and 10,682 and 2,676,133 in 1997.

Jenkins and Austen-Smith (1987) and Krebs and Pommerehne (1995) use a broad categorisation of repertoire with "highbrow" plays which are opposed to the "lowbrow" or popular shows. However, this criterion of classification is imprecise and appeals to the researcher's subjective appreciation. For instance, Krebs and Pommerehne (1995: 25) could not find a better proxy for the lowbrow shows than a threshold, which is at least 75 performances more than the seasonal average length of run in the theatre sector, even though they are aware of the uncertainty of a production success.

The analysis of repertoire choices is more precise if we base it on categories according to the period and language of the writing. We can then measure the importance of each category in the programmed performances and compare it to the repartition of audiences.

I chose to divide the repertoire into four categories:

- A for "classics" whose author died before the twentieth century;
- B for plays written before 1980 by an author who died in the twentieth century;

- C for plays written in French by an author who is still alive, and those written in French by an author now dead, but published after 1980;
- D for plays written in a foreign language by an author belonging to the contemporary category. (Urrutiaguer, 2002: 189)

3. PROGRAMMERS AND CATEGORIES OF REPERTOIRE

Section 3.1 compares, for the period 1995-1997, the repertoire strategies according to theatre status and the extent of audiences' risk aversion as regards contemporary authors. Section 3.2 analyses the degree of differentiation linked to theatre size. Finally, Section 3.3 raises a question on the innovative production of *scènes nationales* using internal observations.

3.1 Repertoire and theatre status

DiMaggio and Stenberg (1985) assume that manager-ruled arts organisations are less innovative than artist-ruled ones. Castañer and Campos (2002: 44) refine this hypothesis with the proposal that decision-makers with only a managerial background are less innovative than those with an artistic background or with both an artistic and a managerial background. According to this assumption, the “directors-cum-managers” of TN and CDN should be more open to contemporary playwrights than the SN managers.

Table 1: Structure of performances (P) and attendance (V) according to repertoire and status (in %)

	<i>P(A)</i>	<i>V(A)</i>	<i>P(B)</i>	<i>V(B)</i>	<i>P(C)</i>	<i>V(C)</i>	<i>P(D)</i>	<i>V(D)</i>
TN 1995	30.10	42.14	30.22	27.80	25.15	21.23	14.55	08.83
TN 1996	41.56	59.26	20.21	19.51	22.31	14.03	15.84	07.19
TN 1997	39.78	51.80	17.74	24.97	28.87	16.14	13.61	07.09
CDN 1995	28.35	34.72	26.06	30.49	31.31	26.40	14.28	08.39
CDN 1996	35.66	50.13	20.36	19.21	32.53	23.23	11.46	07.44
CDN 1997	37.52	52.64	23.54	19.62	32.13	23.36	06.77	04.44
CDR-J 1995	12.19	18.12	17.21	24.61	52.68	45.27	17.93	12.00
CDR-J 1996	23.84	27.71	10.01	16.42	46.30	41.91	19.84	13.96
CDR-J 1997	19.88	26.61	08.72	13.19	57.16	47.61	14.23	12.48
SN 1995	24.64	31.48	15.15	20.12	45.72	38.19	14.48	10.22
SN 1996	21.01	30.31	17.45	21.83	50.75	38.35	10.80	09.51
SN 1997	17.93	28.68	12.22	15.00	59.52	50.44	09.99	06.56

Table 1 gives the structure for the number of performances (P) and paying visitors (V) for each category of repertory (A, B, C, D) according to status. Four groups are built, with TN for national theatres, CDN for national dramatic centres, CDR-J for regional dramatic centres and national dramatic centres for youth, and SN for “scènes nationales”.

Unlike DiMaggio and Stenberg's hypothesis, “directors-*cum*-managers” focus more on classical plays, because of the risks involved in production under their budgetary constraints. As classical authors are better known and are supposed to have a greater recognised quality, their plays are really likely to draw bigger audiences.

By contrast, SN managers, who are not usually directors, are more innovative than TN and CDN “directors-*cum*-managers” in their programme choice, and select more contemporary plays. Two organisational variables can explain this feature. On the one hand, the risks involved in programming contemporary playwrights are lower when managers are only buying performances and not producing the show. On the other hand, a multidisciplinary artistic programming, characteristic of SN, transforms diversity into a norm and lessens the risks associated with contemporary plays since successes in other disciplines, like light music or comedy, may counterbalance some failures in theatre.

However, the regional dramatic centres (CDR) and theatres for youth (CDNEJ) share the advantage that SN give to living authors.

From 1995 to 1996, the average number of paying attendants per performance dropped by 5.1%. In this context of recession with increased risks in production, “directors-*cum*-managers” preferred to produce more classical shows. **Table 1** shows a shift in repertory from 20th century plays to classical ones for TN and CDN while their part of contemporary plays decreased slightly. The programme structure of CDR and CDNEJ shifted from categories B and C to classical plays. By contrast, SN managers decreased the proportion of classical plays but also that of foreign contemporary authors.

Between 1996 and 1997, the average number of paying attendants per performance increased by 4.3%. This context of economic recovery eased the pressure to “play it safe” with a classical repertoire. The proportion of French contemporary authors increased at the expense of the other categories in the programme for TN, CDR and CDNEJ, as for SN. However, CDN “directors-*cum*-managers” still increased the proportion of classical plays at the expense of foreign contemporary authors’ plays.

The observation of these trends gives some evidence that the gap in repertoire choices between TN and CDN “directors-*cum*-managers” and SN managers is essentially structural.

Table 2 gives the audience-performance ratios r in each category of repertory³, according to the theatre status, from 1995 to 1997. The more the paying audience prefers a class of repertory, the greater this ratio will be ($r > 1$). The more it dislikes a type of author, the smaller the ratio will be ($r < 1$).

Table 2: Ratios r between audience structure and repertoire, according to theatre status

<i>Status</i> <i>Repertory</i>	<i>TN</i>	<i>TN</i>	<i>TN</i>	<i>CDN</i>	<i>CDN</i>	<i>CDN</i>	<i>CDRJ</i>	<i>CDRJ</i>	<i>CDRJ</i>	<i>SN</i>	<i>SN</i>	<i>SN</i>
	1995	1996	1997	1995	1996	1997	1995	1996	1997	1995	1996	1997
A	1.40	1.43	1.30	1.22	1.40	1.40	1.49	1.16	1.34	1.28	1.44	1.57
B	0.92	0.97	1.41	1.17	0.94	0.83	1.43	1.64	1.51	1.33	1.25	1.23
C	0.81	0.63	0.56	0.84	0.71	0.72	0.86	0.90	0.83	0.86	0.76	0.84
D	0.61	0.45	0.52	0.61	0.65	0.66	0.67	0.70	0.88	0.71	0.88	0.64

Table 2 shows that in TN and CDN, directors-*cum*-managers' reservations about the production of contemporary plays correspond to their audience's dislike for less known contemporary playwrights, especially when they write in a foreign language. The strongest preference concerns classical plays except for TN in 1997 with an increased interest in 20th century plays. The audience of CDR and CDNEJ stands out with the highest preference for modern authors.

Table 2 also shows that the contemporary-oriented programme in SN comes up against audiences' risk aversion. Theatre-goers' preference for classical plays increased greatly and was at its peak in 1996 and 1997 compared to other types of theatre. Ratio r is regularly greater than 1 for modern plays and is second behind CDR and CDNEJ. The dislike for French contemporary plays is not substantially less than in TN and CDN and is equal to CDN for foreign playwrights in 1997.

Since most audiences do not share the interest of SN programmers in contemporary playwrights, we can infer that the "scènes nationales" are more innovative than other institutions which both produce shows and purchase performances.

3.2 Repertoire and theatre size

We may wonder if a smaller size could explain the innovative nature of the SN. DiMaggio and Stenberg (1985) and Neligan (2002) assume that large performing arts organisations are less innovative than smaller ones because they fear any change that could negatively affect them. These authors provide empirical evidence for their size hypothesis. However, Pierce

(2000) assumes that the resources of large organisations could afford an opportunity for experimentation but he does not find a statistically significant relation.

Thus, the link between size and innovative behaviour may be somewhat ambiguous, depending on the equilibrium between the forces of inertia and the available resources for creation.

I divided the CDN into two groups depending on whether their budget is higher than average or not. I applied the same process to the SN. There are 12 CDN and 17 SN with a bigger budget in the groups “CDN >” and “SN >”. The lower budget groups “CDN <” and “SN <” include 15 CDN and 25 SN, respectively.

Table 3: Structure of performances (P) and attendance (V) according to repertoire and size for CDN and SN (in %)

	<i>P(A)</i>	<i>V(A)</i>	<i>P(B)</i>	<i>V(B)</i>	<i>P(C)</i>	<i>V(C)</i>	<i>P(D)</i>	<i>V(D)</i>
CDN > 1995	30.01	38.40	23.13	19.30	34.00	32.70	12.90	09.60
CDN > 1996	30.38	45.18	22.63	20.03	34.96	26.64	12.03	08.15
CDN > 1997	37.90	52.21	17.47	16.26	37.09	26.52	07.50	05.01
CDN < 1995	26.43	29.40	29.45	46.50	28.20	17.40	15.90	06.70
CDN < 1996	42.25	57.83	17.56	17.92	29.54	17.93	10.75	06.33
CDN < 1997	36.57	57.58	31.48	27.09	25.75	16.15	05.80	03.17
SN > 1995	30.49	34.69	14.34	18.99	40.19	34.33	14.97	11.99
SN > 1996	22.86	33.54	18.93	21.11	47.90	35.65	10.31	09.70
SN > 1997	18.87	28.99	14.23	15.77	56.93	50.1	9.96	5.17
SN < 1995	17.74	27.06	16.11	21.66	52.25	43.48	13.90	07.79
SN < 1996	18.87	25.13	15.74	22.98	54.03	42.68	11.35	09.21
SN < 1997	16.74	26.37	09.72	13.46	63.66	50.27	09.88	08.31

Table 3 gives the structure of the number of performances (P) and paying visitors (V) for each category of repertoire (A, B, C, D) according to the four groups of status and size.

It shows that for each status, the theatre size has some influence on programme structure. Among CDN, the biggest theatres are the most open to French contemporary authors. For the “CDN <” group, the programme share is only higher for classical playwrights in 1996 and for modern plays in 1995 and 1997. Ratios r reveal that the audience’s preference for classical plays is similar in the two groups and increased from 1995 to 1997. The dislike for contemporary authors is greater in the “CDN <” group, except in 1997 for the category C for

which r is almost equal. Accordingly, more caution by a programmer corresponds to greater risk aversion of spectators in the smallest CDN.

Among the SN, differences in programme structure are more regular during these years. Unlike the CDN, the smallest SN are the most open to French contemporary plays. The biggest theatres programmed a larger proportion of classical plays, which was close to the CDN choices in 1995 but decreased in 1996 and 1997. Ratios r give information on the gap between the audiences' risk aversion and the programmers' strategy regarding repertory. Audiences' preference for classical plays is highest in the "SN <" group, where the proportion of category A in programming is lowest. However, ratio r increases in the biggest SN and is similar to the other groups in 1997. The dislike for contemporary authors is a little stronger in the "SN <" group, except for foreign authors in 1996 and 1997.

Thus, theatre size does not affect the programme structure in the same way. Programmers who are more open to French contemporary plays manage both the biggest CDN and the smallest SN. Compared to the "CDN >" group, audiences' dislike for these authors is stronger in the "SN <" group but is at its peak in the smallest CDN, in which the proportion of classical authors is greatest.

As the effect of size on artistic innovation is probably unclear, Castañer and Campos (2002: 45) prefer to refer to the concept of slack resources that Cyert and March (1963) introduced. Nevertheless, the annual variation of the average budget does not show a clear impact of budgetary growth on the weight of contemporary playwrights in programmes.

Average budgetary increases were in fact better for the "CDN <" group, less open to contemporary works, than the "CDN >" group from 1994 to 1996, while the approximately 5% drop was similar between 1996 and 1997. Budgetary growth was better for the "SN >" group than for the "SN <" group from 1995 to 1996 while the trend was inverted between 1996 and 1997. However, compared to the entire CDN group, the most innovative group of SN experienced a greater increase in their resources.

3.3 Is programming contemporary playwrights innovative in itself?

From a quantitative point of view, the data clearly show that the "scènes nationales" are most open to contemporary playwrights while size and very limited resources do not have a linear impact. Nevertheless, it is not enough to infer that they are more innovative.

In 1998 the French Ministry of Culture appointed two managers of SN, Alain Grasset and Francis Peduzzi, to write a report on the overall situation of the "scènes nationales". They

visited ten establishments and proposed an analysis based on their own observations and staffs' answers to questions about their artistic project, practical experience and frustrations.

From the programmes of the ten SN, Grasset and Peduzzi (1998: 37) infer an artistic standardisation around technical criteria. Programmers expect a professional quality on the stage which is based on a style of lighting, certain types of acting, and a few conceptions of space, scenery and costumes. Furthermore, the purchase of foreign shows is based on norms. This uniform good taste has spread throughout city theatres during the last 15 years.

The SN were traditionally involved in co-productions but are now turning into long-term residences for some artistic teams which create their shows there. This role in production also plays a part in aesthetic standardisation since the same projects are moving around, especially as most national drama centres no longer have a permanent artistic team.

Thus, Grasset and Peduzzi's qualitative observations on the selection of productions give a much more conservative view of the SN whose managers refer to the same criteria of technical excellence for their convergent choices. The public constraint of budget equilibrium may explain these imitative practices in programming. An efficient short-term strategy to draw audiences is to adapt the programme to regular attendees' expectations while meeting standards of professional quality, even if the show is popular or the playwright's style razor sharp. Hence, the network of SN could, like the CDN, raise a barrier to the entry of directors or playwrights who are fed up with this new academicism.

It could be useful at this point to get more precision on the extent to which Grasset and Peduzzi's qualitative observations on standardised quality apply to the choice of programmed directors in the network of French public theatres.

4. PROGRAMMERS AND NETWORK OF DIRECTORS

We could infer a stratification based on closed exchanges between organisations which belong to the same network. This assumption is a major preoccupation for Podolny. In his "status-based model" of market competition, Podolny (1993) analyses the loose linkage between producers' status positions and the perceived quality of their products. On a "macro" level, the market is compared to a status order which gives a signal of quality on which consumers can rely in making decisions. Thus, a producer's relations with others in the market are supposed to create inertial tendencies, depending on the status of those to whom she/he is tied. Podolny (1994) assumes that as uncertainty increases, organisations will engage

more in transactions with those sharing a similar status. It follows that each programmer tends to rely on directors' status to infer the quality of their shows. Their own status is contingent on the status of their affiliates.

I will now explain the method for multidimensional scaling to test this assumption about similarities in the selling of performances between the groups of public theatres and troupes according to their status and size (Section 4.1). I then analyse similarities (Section 4.2).

4.1 *The method for multidimensional scaling*

Structural equivalence defines the groups of actors who have similar relationships with the others. This concept is useful to draw the links between positions in a network and status. Lazega (1998: 57-69) shows that sociometric literature distinguishes three ways to measure structural equivalence.

White, Boorman and Breiger's CONCOR algorithm (1976) repeats the calculation of correlation coefficients between the rows and/or columns of the matrix with their permutation until there is a partition of blocks that are only made up of +1 and -1. However, this algorithm can give random partitions, depending on the initial division into two groups.

Burt's method (1982) is based on the Euclidean distance of intensities z_{ij} ⁴ in relations between actors and has the advantage of testing the reliability of the assumptions on structural equivalence for blocks of individuals.

As the network density is low for the exchanges between public theatres, I chose "Multidimensional scaling" (MDS) to determine the similarity profiles in selling performances for the groups of theatres, according to their status and size.

The proximity data allocate a value to the number of performances that a group of theatres i sold to another group of theatres j . Base on this matrix, MDS locates the public theatres on a spatial configuration of points which reflect the degree of similarity in selling strategy in terms of the Euclidean distances from one point to other.

The 27 CDN and the 42 SN are divided into four categories according to their budget. If \bar{B} is the average budget for each group, σ the standard deviation for the group distribution and B the theatre budget, I chose the following partition:

- CDN1 or SN1 when $B \geq \bar{B} + 0,3\sigma$
- CDN2 or SN2 if $\bar{B} - 0,3\sigma \leq B < \bar{B} + 0,3\sigma$
- CDN3 or SN3 when $\bar{B} - 0,7\sigma \leq B < \bar{B} - 0,3\sigma$

- CDN4 or SN4 if $B < \bar{B} - 0,7\sigma$

I divided the troupes into four categories according to their status as acknowledged by the Ministry of Culture. The best status is the three-year convention which defines minima duties and regular subsidies for this period (“Company 1”). Ranked second are the subsidies that are revised each year (“Company 2”). Then follow companies receiving only subsidies for a “creation plan” (“Company 3”) and, finally, the troupes without state subsidies rank the lowest (“Company 4”).

The groups TN, CDNEJ and CDR remained on their own. I added two specific categories for foreign directors (“Foreigner”) and the shows that private theatres produced. The latter sell their productions in public networks only in the case of certain successes.

A matrix of the exchanges of performances between these 17 categories is constructed for the three years 1995, 1996 and 1997. The profile proximity measure is derived from the computation of correlation coefficients between rows of the matrix, which reveal the importance of similarities in the volume and destination of the performances that are sold to other public theatres.

Stress is respectively 0.21, 0.24 and 0.2 in 1995, 1996 and 1997 in a two-dimensional configuration, and drops to 0.13, 0.09 and 0.1 with three axes and to 0.07, 0.06 and 0.05 with four. A three-dimensional figure is therefore appropriate.

4.2 Similarities in selling performances according to status

Figures 1, 2 and 3 represent, respectively, the selling data of theatres on the map with the two first axes of MDS in 1995, 1996 and 1997. The most significant correlation coefficients are shown with links between theatres. The line is plain when coefficients are more than 0.75 and discontinuous if they are between 0.5 and 0.75. The clusters of selling similarities, which I infer from a Tabu search⁵, are given on the figures.

Figure 1: The similarities in selling performances according to groups of status and size in 1995

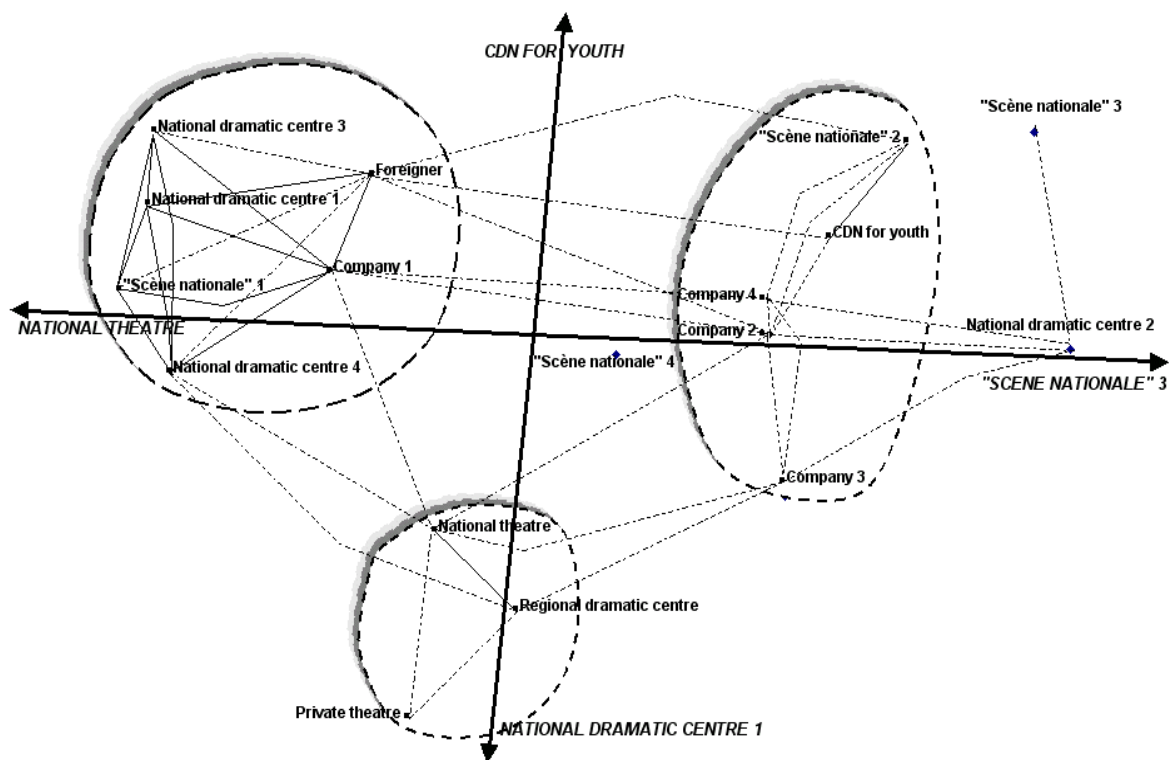


Figure 2: The similarities in selling performances according to groups of status and size in 1996

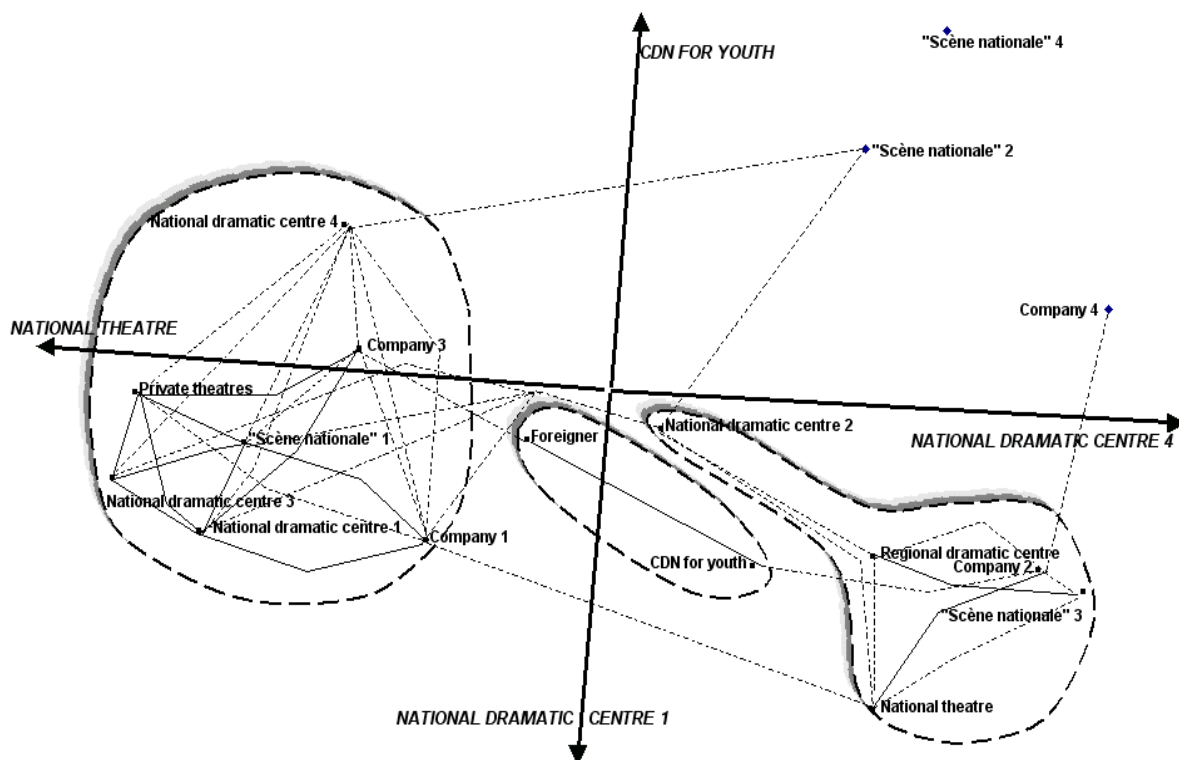
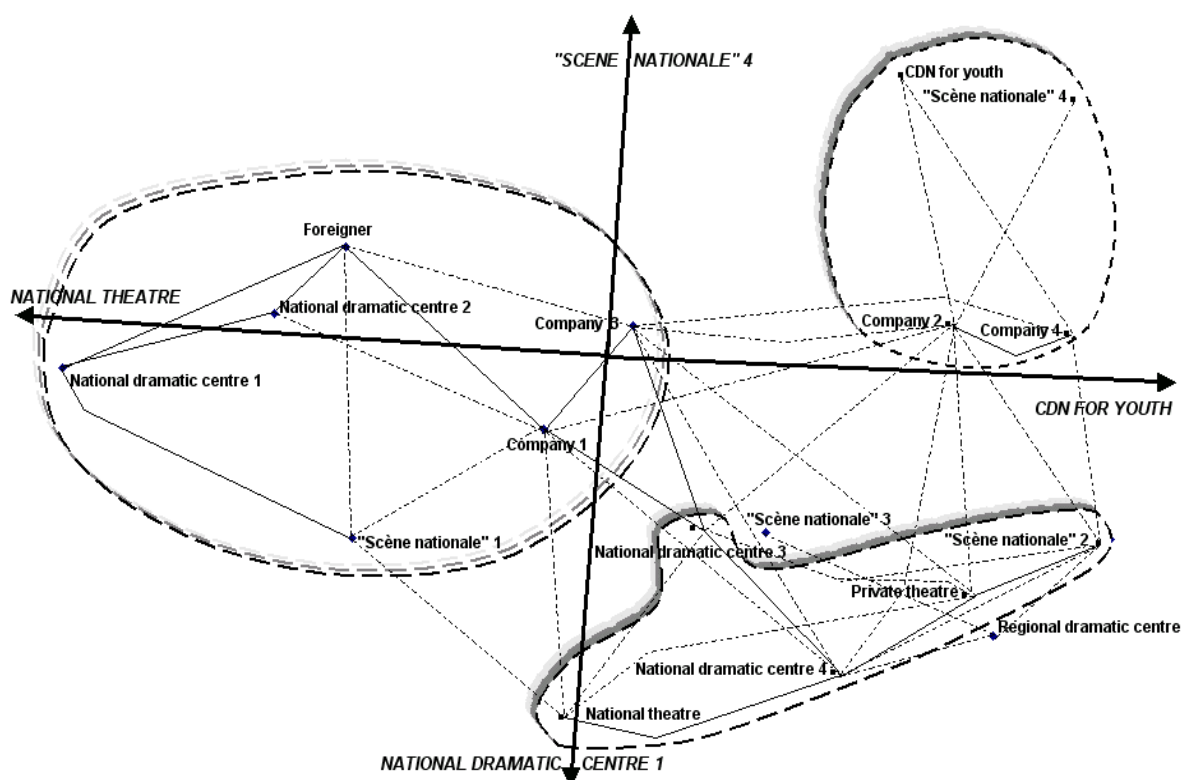


Figure 3: The similarities in selling performances according to groups of status and size in 1997



The meaning of the axes, represented by bold lines, is based on the categories that represent a bigger part in the sales of performances for the different groups. In both figures, the western axis includes the groups for which the weight of national theatres (TN) is much larger than others. The southern axis concerns the groups that interest mainly the programmers of the biggest national dramatic centres (CDN1). The northern axis differentiates the groups for which the CDNEJ in 1995 and 1996 or the smallest “scènes nationales” (SN4) in 1997 are an important market. The eastern axis is shaped around more different reference groups, which are nevertheless similar in size. The biggest weight in the selling structure concerned small “scènes nationales” (SN3) in 1995, the smallest national drama centres (CDN4) in 1996 and the national dramatic centres for youth (CDNEJ) in 1997.

The figures thus reveal that the networks of selling performances are close to Podolny’s assumption since we can infer from the plan an essentially structural opposition during the period. Whereas a part of the plan stands out with the national theatres and biggest national drama centres as a main market, the opposite region is defined by a greater weight of the CDNEJ and the smallest “scènes nationales” or CDN in the selling structure.

The main cluster regularly contains the biggest national drama centres (CDN1), the biggest SN (SN1), which play an important role in co-production, the highest status companies (Company 1). The national theatres (TN), which belong to a second block, are always linked

to this cluster. The TN programmers are a main group of buyers for their productions. In return, the TN regularly sell a large part of their performances on tour to the CDN1 and SN1 but also supply the regional dramatic centres (CDR).

Four groups belong to this main cluster for two years on three. The foreigner directors are inside in 1995 and 1997 but are a fringe group in 1996, which is, however, strongly connected to the national dramatic centres for youth (CDNEJ). They are usually involved in exchanges of shows with some foreign youth theatres. The smallest CDN, CDN3 and CDN4, are inside from 1995 to 1996 and in a more intermediate position in 1997 owing to some directors who succeeded in touring their shows. Depending on their creation plans, grant-aided companies (Company 3) are inside from 1996 to 1997 and in a more intermediate position in 1995.

The smaller “scènes nationales” (SN2, SN3, SN4) are more on the fringe during the period. However, there are some exceptions since co-productions were more active for the SN3 in 1996 and the SN2 in 1997.

The regional dramatic centres (CDR) evolved from the second cluster with the TN in 1995 and 1996, and to the fringe in 1997, while the CDN2 group followed the opposite path and was integrated into the main cluster in 1997. Whereas the private theatres were included in the main cluster in 1996, they were rather similar to the TN in the second nucleus in other years.

The companies with annual subsidies (Company 2) and troupes without state assistance (Company 4) belonged to a third cluster with the CDNEJ in 1995 and 1997. They had both a link to the main nucleus, through the other companies, and to some groups of theatrical institutions which are on the fringes. The lowest status companies were more on the fringes in 1996.

Thus, the multidimensional scaling analysis shows that there is, in a sense, a segmentation of the selling network according to status and size. The biggest and highest status organisations can have access more easily to the market of national theatres and CDN1 while most of the “scènes nationales” are on the fringes, especially when a director does not manage them. In spite of their lower status, the grant-aided companies, for some creation plans, sell more performances to the main theatres than the companies with annual subsidies, as if most programmers share the public recognition of the show.

The figures show a reproduction of this structural differentiation but certain trends cannot be neglected. Some groups can move around the main cluster, so that there is a degree of fluidity depending on whether the programmers perceive a potential interest or not for their audience in the shows that are produced at the time.

5. CONCLUSION

The analysis of the programme structure in the network of French public theatres from 1995 to 1997 illustrates how loose the link is between status and choice of playwrights and directors. Whereas audiences' risk-aversion for contemporary authors is a common feature, there is a surprising gap between “managers-*cum*-directors” of TN and CDN, who have a preference for classical plays, and SN managers, who are only programmers and show a greater interest in contemporary plays. The smaller size of the SN cannot explain this behaviour since the programmers are more open to French contemporary plays when they are managing the biggest CDN or the smallest SN. The data cannot clearly support the assumption of a positive impact of slack resources.

The lessened risk when buying performances for a multidisciplinary artistic programme instead of producing theatrical shows is probably the main cause. This feature is a strong argument in favour of decoupling production and diffusion in the network of public theatres, so that more contemporary plays should be created.

Nevertheless, in itself this organisational solution cannot guarantee artistic innovation, since they require a departure from existing conventions. In fact, budgetary constraints encourage managers to imitate the programme choices of others, using technical criteria of excellence as a reference.

Multi-dimensional scaling of the similarities in selling performances for groups of theatrical organisations according to their status and size show that the exchange structure is rather close to the assumption of status-oriented trade. The national theatres with the biggest CDN are the main market in the selling structure of the most active public theatres whereas the smallest “scènes nationales” stand on the fringes. However, some groups move around the main cluster during the period, as if the choice may sometimes depend more on the perceived interest of the show according to fashions than on the producer's reputation.

The programme structure gives an opportunity to study the network strategies of producers according to their perception of directors' status and audiences' interests. Since the factors of choice are rather complex, a statistical approach to aesthetic innovations necessarily requires qualitative observations on artistic production.

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NOTES

¹ The Cartel is a group of four directors, Baty, Dullin, Pitoëff and Jovet, who issued a manifesto in 1927 for professional cooperation, especially as regards contacts with audiences, as a reaction against the invasion of commercial theatre and drama critics' misuse of power. Copeau's aesthetics influenced them strongly.

² I excluded theatrical institutions located in the overseas French territories, due to their isolation. One CDR and two SN appeared only in 1997. Two other SN were removed: one in Reims, because the programme excludes theatre, and the other in Orleans, since the CDN located in the same town has the same theatrical programming for adults. In this case, the number of performances and visitors to its children's shows were added to the CDN.

³ In each category of the repertory, the audience-performance ratio r is:

$$r = \text{part in paying audience} / \text{part in performances}$$

⁴ Intensity is defined by $z_{ij} = 1$ if $i = j$, 0 if i cannot meet up with j and $1 - (f_{ij} / N_i)$ when it can. N_i is the number of individuals that i may meet up with and f_{ij} the maximum number of actors that i can join up with, with the minimum necessary steps to join j . (Lazega, 1998: 46)

⁵ Given a partition of the proximity matrix into four blocks here, the Tabu search procedure maximises the average similarity values within each cluster.