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*A Comparative Institutional Analysis in the
Arts: The Theater*

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Institutions From The Economic Point of View

Art, and theater in particular, is not solely the result of the creativity of specially gifted individuals. Rather, what is produced and becomes art is strongly determined by the *institutional setting* in which individuals act. This chapter is devoted to showing that the choice of institutions has a predictable impact on the quantity and quality of theatrical performances, as well as on the type and method of their production. The emphasis lies on the supply of art. Compared to the demand for art, which has been the subject of many inquiries within sociology, the supply side has been neglected.

Cultural institutions are analyzed using the economic approach which has two distinctive characteristics: First, individuals are the actors. They pursue their own goals and their behavior is confined by various constraints. The most important constraints are due to income and prices for goods and services, but besides these physical, psychic, and material factors can restrict the possibility set. The wishes (preferences) of the actors are strictly separated from the constraints and are independent from these (except in particular cases like self-imposed restrictions). Changes in behavior are attributed to changes in the constraints, as these are easier to operationalize. Explanations based on changes in prefer-

ences are countenanced only when those based on changes in constraints are empirically unsatisfactory or appear to be false. Explaining changes in behavior by means of constraints has a further important advantage. The empirically well-founded rule of relative price effects can be used: a good which becomes comparatively more expensive to buy or an activity which becomes more costly to undertake will be demanded less.

This model of human behavior is not only used by economists (see, in particular, Becker, 1976; Stigler and Becker, 1977), but also increasingly by political scientists (e.g., Riker and Ordeshook, 1973; Hibbs, 1987) and sociologists (e.g., Coleman, 1964; Opp, 1972, 1979; Lindenberg, 1983, 1984). By no means does it conflict with the psychological model of human behavior (see Stroebe and Frey, 1980; Frey and Foppa, 1986).

The second fundamental point of the economic analysis of cultural institutions consists of the comparative view. Institutions are not analyzed or evaluated individually, but are always contrasted with existing alternatives. There is no point in comparing real-world institutions, with all their shortcomings, to utopian fantasies that have never seen the light of day (see Alchian and Demsetz, 1972).

The goal of this chapter is to explain the origin and the behavior, and therewith the effects, of different institutions in the arts. In order to set forth as clearly as possible the characteristics, as well as the advantages and disadvantages of this approach in connection with a concrete problem, the analysis is confined to the area of the stage and music theater.¹

The economics of the arts² has developed greatly in the past few years and has led to an understanding of this field which differs markedly from the traditional view of art historians and sociologists. In the sociology of the arts (e.g., Weber, 1958; Silbermann, 1963, 1973; Wick and Wick-Knoch, 1979) the major emphasis lies on an analysis of, and the motives for, participation in a cultural activity on the basis of the sociological model of human behavior. In contrast, the economics of the arts stresses that the behavior of those attending a cultural activity is not only determined by preferences (particularly class-specified art access), but also that income, prices, and, above all, the amount of time available are also of great importance. Further, the economics of the arts analyzes the behavior of suppliers with the help of the theory of the firm. Finally, demand and supply are explicitly related to each other by investigating the role of the market.

Theater can take the form of a cooperative organization. The next section sets forth the conditions for the existence of this institutional form. It discusses why the cooperative theater, when successful, must nearly always be abandoned and replaced either by a profit-oriented or a government-supported institution. The following two sections are

concerned with the characteristics and effects of these two forms, which at present dominate theater institutions.

Cooperative Theater

In the theater labor often hires capital, instead of capital hiring labor, as is the rule in most other areas of society. The typical instance is a small "cooperative" group of persons (say four to five actors) with equal voting rights who look for capital in order to realize a particular commonly-held idea. Often such groups are highly informal and management tasks are shared.

In such performing arts groups, joint production by a team is efficient. The monitoring problem relating effort and remuneration (Alchian and Demsetz, 1972) is solved by mutual control. This set-up is efficient because much or all information is "impacted" within the team (Williamson, 1975, 1980): the input of effort is supervised in a decentralized and informal way, and any unevenness is dealt with amicably. A centralized monitoring arrangement would be more costly: information would have to be gathered and this would have negative effects on productivity and output, since formal monitoring would be resented by the members of the group. A calculative environment is not conducive to high artistic achievement. Accordingly, the profit, if any, is distributed among the group members without problem.

Such an "idyllic" institutional form of theater may exist for a long time. As a rule, however, the purely cooperative form is usually taken over by a more hierarchical set-up in which one member takes a leading (managerial and artistic) role. The main reason for this institutional change is that the monitoring problem becomes more serious when the cooperative performing arts group gets larger. Remuneration is no longer automatically fixed because the input becomes more differentiated (the artistic, technical, and administrative tasks become separated). Group members are no longer able to easily evaluate what effort is put in by each, and a split emerges between those who directly reap the artistic success of the production and those who do the less rewarding auxiliary back-stage technical and administrative work. For both reasons, it is no longer easy to organize the theater in a way that is satisfactory to all group members. Accordingly, with increasing size, tensions increase due to different preferences and work inputs. The result is that cooperation weakens, efficiency drops, and financial losses accumulate. The problems connected with increasing size may be overcome in three different ways:

1. The cooperative group dissolves, and the more enterprising members possibly form new small (cooperative) theater groups.
2. The actors hire a manager whose task is to monitor the effort of individual members (see Putterman, 1984). If each group member retains his voting rights, there is an insufficient incentive to monitor the manager because of the public good problem. This allows the manager to pursue his own goals (one of which is to earn a higher income) which are not necessarily identical, and are possibly in conflict, with the actors' goals. A more definite solution to the monitoring problem is the establishment of a classical capitalist firm in which the group members are the share owners and distribute the residual among themselves. In that case, the manager's behavior (and perhaps discretionary leeway) is also monitored by the (financial) market (Jensen and Meckling, 1979; Grossman and Hart, 1980).
3. A third solution for the survival of a cooperative theater is to gain government funds. This may take many different forms, with specific effects on the behavior of the performing arts institutions it supports.

Which of the three institutional forms will be adopted depends on the politicoeconomic and legal conditions. The first type of institution, theater as a cooperative team, will not be treated further, as it is limited to small organizations. The members of an expanding theater must decide whether they wish to expose themselves mainly to the market or to political and administrative influences. As will be shown in the two following sections, both of these institutional forms have advantages and disadvantages. When an expanding cooperative team wishes to receive public support, early efforts must be made to procure this from the administrative and political decision-makers. This rent-seeking (see Buchanan, Tollison, and Tullock, 1980; Tollison, 1982) is inevitably combined with the rise of a hierarchy, since the public administration, in accordance with the general governmental rules and regulation, is neither prepared nor able to heap subsidies on an ill-defined team as a whole. A responsible discussion partner and a juristically clearly defined corporate body is demanded. A decision in favor of striving for government subsidies always means that an artistic body working on a voluntary basis fundamentally changes its character after restructure—which many subsidized, one-time cooperative theaters only discover later.

When a basic decision to engage in market-oriented theater has been made, adjustments to the legal conditions (e.g., share rights) become necessary. This goes hand-in-hand with the emergence of a hierarchy,

for then someone must be designated to assume responsibility for the theater management.

It will be clear from these observations that a transition from a cooperative to a profit-oriented or a subsidized theater always means that the team character will be destroyed, and that a hierarchy will take its place. The following section deals with the behavior of the capitalist, profit-oriented theater institutions.

Profit-Oriented Theater

Conditions for Survival

Profitable production is possible for theaters, although this is not always recognized (see, e.g., DiMaggio, 1986). Indeed, in various areas of theatrical production the following conditions obtain:

1. *Fixed costs are small.* Traveling stage companies have relatively low fixed costs because they eschew the (high) fixed cost of keeping up a house and its technical outfit. Moreover, they often can use the technical and administrative staff of the hosting theater. A higher use of capacity makes it possible to benefit from decreasing average cost.
2. *Audiences are large.* Many spectators can be attracted by performing the same play *en suite* rather than having a broad repertoire. Obviously, large audiences can be reached in large cities. A large audience can also be gained by visiting the potential spectators; that is the solution taken by the touring companies.
3. *Prices are discriminated.* A downward sloping demand curve is a reasonable assumption, for the performing arts presumably have an element of monopoly. Since secondary markets are of minor importance, audiences with a high willingness to pay can be charged a high price. In this way, consumer surplus may be transformed into revenue to a degree sufficient for recovering the total cost.
4. *Other income is gained.* The artistic production may be used as a means to earn income in addition to the box office receipts. An important and promising possibility is the selling of performances to the media, such as to radio, television, video, or to the film. Modern media can reach a huge audience by historical standards. The showing of *Hamlet* on American television (even if viewed by only a small share of all television owners) assembles

an audience that is larger than that which has seen the play since 1601. The main difficulty is that television and film may produce their own versions of the plays and operas³ so that the theaters have a limited possibility of generating much revenue in this manner.

The four conditions of profitability in the performing arts were and are satisfied in many countries and periods in the past. In England, private theaters have always been of great importance. This applies not only to popular theaters, but also to those producing the (undisputed) highest quality of "serious" plays such as those by Shakespeare. During the reign of Elizabeth I (1558–1603) the first regular playhouses were built in London, including the Globe, Swan, and Red Bull. Operating licences were normally granted to an entrepreneur whose management aimed at making a profit. At present, private theaters still exist in England. One of the reasons are the long runs of successful plays such as Agatha Christie's *Mousetrap*, which has been continually on stage since 1952.

In the United States, private performing arts institutions have been the rule until World War II. Today, Broadway theaters may still be profitable without receiving public support, but profitability varies a great deal. Similarly, most Off-Broadway productions, summer, dinner, and road theaters are commercially viable (Netzer, 1978:188).

On the European Continent, "Boulevard" and "Tournée" theaters are still able to attract sufficiently large audiences to be profitable. They play *en suite* and choose popular plays, mostly comedies. In large cities such as Berlin, the profitable theaters perform in their own houses, but more often stage companies tour the country and attract the audiences by some star known from television or the films.

Behavior

Profit-maximizing theaters choose the quantity, quality, and technology of production so as to meet the marginal conditions; they consider the effects of incremental changes in these variables on revenue and cost. The necessary and sufficient conditions are easy to state formally and are, of course, the same as in any other profit-maximizing firm. What is of interest here are the special and possibly unique features of quantity, quality, and technology in the performing arts.

Quantity

The number of spectators and/or of performances offered to the public within a year constitutes the major quantitative aspect of the theater.

The same attendance can be achieved by various combinations of the number of repeated performances of a particular play, the number of different plays per season, and the repertoire consisting of the plays that may be activated for performance.

The choice among these aspects depends on the particular cost and demand characteristics. As already noted, profit-oriented theaters only have a restricted repertoire and often perform merely one play per season, keeping a particular play on stage as long as there is sufficient demand for it. Historically, this happened when city populations grew large enough for stock companies to keep one play running for a very long time. The number of plays that receive very many performances has strongly increased in recent times. In the season 1927–1928 only 3 out of 156 plays on Broadway attained more than 400 performances. More recently, producers have adjusted to the changed cost situation by either closing a production after a very short period (sometimes after one or two evenings), or letting them run for a very long time. In the 1957–1958 season, for example, 14 out of the 116 Broadway plays had over 400 performances. These figures also document that over this period the producers chose to perform a smaller number of plays (Moore, 1968:10-11). Even more demand can be activated by having the same theater company performing in two locations (mostly towns that share the cost). Equally, guest performances can be given in towns having no theater. American producers used to launch shows on Broadway, where they hoped to cover their production cost; the profits they expected would come from the road company (Moore, 1968:xiv).

Quality

In the theater, the qualitative aspect is of overriding importance. Even a "difficult" play or opera considered to be of high quality by (part of) the potential audience (and therefore willing to pay high entrance prices) may be financially successful.

But what is the "quality" of the performing arts output? While it is difficult to evaluate, quality is determined by rather diffuse processes in the "art world" composed of insiders, namely directors, performing artists, other artistic personnel, and, of course, the professional art critics of local and national newspapers. This assessment of "quality" is the one accepted and produced by an enlightened elite. Economists, however, use another yardstick: the willingness to pay. This individualistic evaluation, while probably not independent of the enlightened elite's one, is certainly not identical with it. The economic approach does not attempt to determine the *content* of "art" or its "quality."

Technology of Production

The production function relating inputs to the quality of performance is insufficiently known and contains strong random elements. The difficulty that spectators, and even members of the "art world," have in evaluating quality may even lead them to measure it by the subjectively perceived quality of the inputs – in particular, the fame of the actors and of the stage director. Consequently, "technology" in the performing arts is not restricted to technical aspects (such as in traditional production functions), but contains aspects of subjective evaluations of demanders.⁴

More is known about the production function relating factor inputs to the quantity of output. A production function for 33 symphony orchestras and 27 theaters in Canada 1971–1972 has revealed strongly increasing economies of scale (Globerman and Book, 1974). For 42 theaters in the United Kingdom (1968–1969) and for 34 theaters in Australia (1971–1974), the estimates of long-run cost functions show decreasing average cost up to a level of output around 150,000 attendances per year in the United Kingdom and 100,000 in Australia. Thereafter, unit costs are found to increase sharply. For opera, ballet, and music companies, at least in Australia, scale economies are even more pronounced over a wide range of company sizes; the minimum of long-run average cost is attained at an attendance of 260,000 per year (Throsby and Withers, 1979:93 *et seq.*).

It is often thought that the performing arts production is characterized by fixed coefficients, and, therefore, that changes in relative factor costs have no effect on input mix. There are obvious limits to substitution for a *given* play. Most performances require an exactly determined number and type of actors, singers, musicians, and time. But there are exceptions even here: In the royal dramas by Shakespeare, which sometimes require large crowds, one actor has been used who holds up a table indicating that the spectator should imagine a crowd of people. Moreover, one actor may perform various roles in the same play.

Additional substitution possibilities arise as soon as the choice between plays is considered. One effect of the relative rise of the cost of labor (actors) relative to capital may be that an increasing number of plays having few actors are chosen. The Experimental Traverse Theatre in Edinburgh cut the average size of its cast from 8.1 (1975–1976) to 4.3 (1980–1981) (Peacock, 1984:206). Recently, in the United States, there seems to be a tendency to substitute less expensive chamber music for more costly symphonies (see Reineccius, 1984). Relative price effects may also have had an effect on playwrights who see a better chance of having their work staged if the cast is small. Other substitution possi-

bilities exist in the preparation of a production, in particular with rehearsals and the use of the stage.

Profit-maximizing performing arts institutions have an incentive to seek revenue from lines of activity that are only indirectly related to art production. While attracting commercial sponsors, selling attractive programs, and running profitable bars and restaurants is an obvious possibility, selling performances to the media may create a problem, because the (future) demand for the particular productions may be reduced. This would have little effect on the decision of an individual company provided its share of the market is small, because then the fall in demand is a public bad. In the performing arts, a supplier may thereby effectively spoil the market. On the other hand, showing a performance in the media (especially on television) increases exposure to the public, thus increasing demand for the live performance. An "addiction" to the arts might be created among the television viewers and radio listeners (see Stigler and Becker, 1977). Again, there is a public good element, because the rise in future demand not only benefits the theater concerned, but all performing arts institutions. The main effect, however, should still fall on the theater presenting the particular performance.

In addition to these possibilities for raising revenue from other sources, profit-oriented theaters have also made a determined effort at facilitating the acquisition of tickets: reservations may be made by telephone and immediately paid by credit card. A centralized ticket office has been instituted for all commercial Broadway theaters. Price discrimination has been introduced by offering unsold tickets on the day of the performance at half the regular price. This experiment resulting in a considerable increase of attendance, turned out to be a financial success. (Baumol, 1979; Cheskin, 1984:79 *et seq.*)

Government-Supported Theaters

The development of a profit-oriented institutional arrangement for theaters is only one—and historically a less important—mode of organization. The dominating institutional form of performing arts has been the establishment in a hierarchical setting by the Church, later by princes and kings, partly emerging from cooperative companies. In Germany, after World War I, these theaters were taken over by governments in the form of the Regietheater. They became part of public administration; their budget is accordingly part of the public household of the Länder, or the municipalities (Herterich, 1937; Jonas, 1972:7 *et seq.*; Wahl-Zieger, 1978). In other European countries, especially in Italy,

France, and Austria with their old and prestigious performing arts traditions, the important institutions have also been public.

In public theaters in Germany, the income from ticket sales dramatically dropped from 63% before World War I to 11% in 1984–1985. Private support has always been low, and is now practically zero. In contrast, government subsidies by the Länder and municipalities increased their share from 27% in 1911 to 84% in 1984–1985. This illustrates the dominant importance of direct monetary government support for German nonprofit public theaters; quite a similar situation exists in most other countries of Continental Western Europe.

Influence of the Type of Government Support on Behavior

Public support has important incentive effects, changing behavior in the performing arts considerably. It brings about a different type of theater with a different content. Public support has an effect on the quantity and quality of the works performed, the prices of admission charged, the technology of production used, the nonticket receipts, and on the internal organization of the theater, including factor payments.

The differences in behavioral modification depend on the particular form of public support that is provided. Three types will be discussed here: lump sum subsidy, ticket subsidies, and deficit coverage. (For a formal analysis of some aspects see Hansmann, 1981 and Le Pen, 1982.)

Lump Sum Government Subsidy

A subsidy is given to a performing arts institution on the sole basis of its *existence* but unrelated to its output, input, or prices. The amount granted cannot be influenced by the receiving organization through its output decision. Such a lump sum subsidy may (at least in the short run) facilitate the survival of a performing arts institution which otherwise would have to close down for commercial reasons. Normally, the subsidy is withheld (or has to be refunded) if there are positive profits. This fact has strong incentive effects on the subsidy recipient. Profits generate a cost to the theater managers in the form of a loss of the subsidy, and, therefore, the incentives to earn profits are strongly diminished. In consequence, a theater policy is chosen in which no financial profits (or at least no visible ones) appear. This is often accomplished by improving quality above the level desired by the audience, distributing rents to employees, concentrating on the "artistic" side and disregarding other possible sources of revenue.

Subsidies and Taxes on Tickets

The public support of the performing arts may take the form of giving a fixed subsidy per admission (independent of the price charged) or, giving a variable subsidy matching total ticket receipts, using a fixed factor.⁵ This type of subsidy is uncommon. But its negative counterpart is widespread, namely, a sales tax imposed on box office receipts. Often this negative subsidy not only applies to commercial but also to public performing arts institutions. The change in relative prices induced works against enlarging the size of the audience and in favor of other goals such as raising artistic quality.

Deficit Coverage

Many Continental European theaters are subject to public administration. These theaters have to observe cameralistic budget principles. One principle is that of "specificity" with respect to content and time: the various items of the budget may neither be substituted nor transferred over time. Even more important is the principle of *nonaffectation*, which states that a surplus due to higher receipts and/or lower costs may not be used by the institution for its own purposes. These funds have to flow back to the general public treasury.

The subsidy is granted on the basis of a projected deficit. The likely deficit is not "given" but is the result of a process of bargaining between the particular performing arts institution and the responsible ministry of culture (and the ministry of finance in the case of a substantial deficit). The bargaining process takes place in the context of an information asymmetry in favor of the subsidy-seeking institution (see Dupuis, 1983). On the one hand, cost increases are easy to document because they are in good measure due to the fact that the institution is part of the public administration. Most important, the technical and administrative staff are either public employees or personnel whose wages increase in line with those of public employees. On the other hand, the ministry finds it difficult to demonstrate convincingly that reductions in the projected deficit are feasible. Corresponding suggestions are easily shown to affect the "artistic quality" by the theater managers, and therefore they pertain to an area for which the directorate of the performing arts institution claims exclusive authority. Public officials in the ministries concerned accept this claim because of their lack of competence, but even more because they have little incentive to interfere. They gain more by having an amicable relationship with the theater people, who, in turn, acknowledge this by accepting them in the "art world" (e.g., by

providing them with tickets for opening nights, and inviting them to social events).

Given asymmetric information (and incentives), bargaining rules have been established to facilitate the process. Past deficits and subsidies are taken as the cornerstone for projecting the new deficit. Foreseeable cost changes are added. The general financial situation of the public purse represents a countervailing force which also affects the theater. If, for instance, public expenditures have to be reduced across the board, theater subsidies are not exempt.

A direct consequence of linking current subsidies to past deficits is that reducing its deficit has a double cost to the management of the performing arts institution. Achieving a surplus or decreasing a deficit does not benefit the theater; the implicit tax rate applied is 100%. Moreover, future subsidies are reduced.

Therefore, the directors of a public theater have a strong incentive *not* to reduce the deficit, but rather to increase it above the projected level. The sanctions against doing so are low. Sometimes, the unbudgeted deficit is simply covered at the end of the year, and there is a good chance of getting a higher deficit budgeted in the future. Only under unfortunate circumstances is the unbudgeted current deficit (partly) subtracted from the future subsidy. Such a reaction, however, is not in line with the standard budget practices of a public administration. Only if the director of a public theater consistently overruns the budgeted deficit by sizable amounts does he run a risk of being reprimanded and possibly not being reappointed when his contract runs out. Nevertheless, such behavior would endanger the friendly relationship with the money-giving public administrators and may not pay in the longer run.

Subsidies covering deficits have marked effects on the behavior of managers of performing arts institutions. Managers have a low regard for "market efficiency" and can indulge in the pursuit of other goals in their utility function, such as attaining prestige in the "art world," performance excellence, monetary income (mainly indirectly through the use of additional income sources such as directing plays in other theaters, and participating in festivals), and a good atmosphere in the theater (beyond the efficient amount) consisting in satisfied co-workers and employees. For managers, a restricted workload and the possibility of earning outside income are particularly important goals.

An illustrative example of deficit coverage strongly shaping behavior is provided by the *Salzburger Festspiele*. This festival is organized by the "Salzburger Festspielfonds," consisting of four directors and a president (for institutional details see Kaut, 1982 and Wimberger, 1983). According to a law passed in 1950, the federal government, the state, and the city of Salzburg are *required* to cover any deficit of the Festspiele. The budget

constraint the organizers must observe is extremely weak, since all the expenditures have to be covered by law irrespective of costs. An effective constraint on the size of the deficit exists only in so far as the organizers must not demand subsidies so high that the financial capacities of the institutions covering the deficit are overtaxed, and consequently the law is changed.

The institutional conditions under which the directorate acts lead the Salzburger Festspiele to enact a redistributive policy. (For a more elaborate analysis with detailed empirical evidence see Frey, 1986.) The Austrian taxpayers are burdened by the subsidies while the gains are shared by the directorate, the staff, and a portion of the spectators. This redistribution is not purposeful from the taxpayers' point of view, but rather is the unintended consequence of institutionalized behavior. The observed behavior is not the result of the directors' personal preferences; indeed, they would act quite differently if the form of subsidy were different.

Concluding Remarks

The central idea of this chapter is that institutional differences affect the behavior of the management of performing arts institutions significantly and systematically. The theoretical analysis of the effect of institutional arrangements on the incentive structure of individuals allows us to derive testable hypotheses about the differences between profit-oriented and publicly run performing arts institutions. Theaters behave differently with respect to output, inputs, and the production process depending on whether they are cooperative, profit-oriented and private, or nonprofit-oriented and public. The type of government subsidy theaters receive also affects their behavior.

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Notes

1. For the area of the museum, see especially Pommerehne and Frey (1980), or Frey and Pommerehne (1980).
2. Baumol and Bowen, 1966; Blaug, 1976; Peacock, 1984; Throsby and Withers, 1979; for recent surveys see Throsby, 1982; Pommerehne and Frey, 1985.

3. Recent examples are *Amadeus* by Shaffer, or *Carmen* which has been produced by Saura, or the *Zauberflöte* by Bergman.
4. In this context, see the discussion of the phenomenon of "superstars" by Rosen (1981) and Adler (1985).
5. It may be shown that in the case of a quality maximizing performing arts supplier subject to a budgetary constraint a ticket subsidy leads to a smaller increase in audience size than would an equivalent lump sum subsidy. In the case of an audience maximizing supplier it may be shown that a ticket subsidy leads to a larger increase in quality than will an equivalent lump sum subsidy (Hansmann, 1981:359).

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