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Welfare Economics and Public Subsidies to the Arts[1]

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1. Introduction

Subsidizing the Arts involves the same kind of issues as subsidizing particular industries or services in the economy, however distasteful this may seem to those who are conditioned to think in terms of a moral hierarchy in the ordering of consumption expenditure. In this analysis, attention is confined to two arguments for subsidization which are derived from the existence of 'market failure', i.e. the recognition that the strict Paretian assumptions of divisibility of goods and absence of externalities of production and consumption are not met with in practical life. A particular aspect of the problem of indivisibility which is relevant to the subsidization of the Arts is the taking account of the welfare of future generations, that is to say the welfare of those whose interests cannot be directly expressed at present through the exercise of their own preferences in the market.

It is assumed that we are not interested in the contribution of Arts to stabilization or growth. Full employment of resources is given and we ignore the possibility that subsidizing the Arts might be a possible way of inducing people to work harder and more efficiently than if cultural activities were left solely to the judgement of the market. Cultural paternalism which might be justified on the grounds that the community does not know what is good for it, is ruled out. Apart from any predisposition of the author to oppose paternalism, the assertion of imposed value judgements is too easy a way of deriving support for public intervention designed to give the public not what it wants but what it ought to have!

Before we can proceed to answer the question, should we subsidize the Arts, and how it might be done, we need information on two matters. The first is the scope of the 'industry'. Here I shall consider only the performing arts, although much of the argument could be applied to the visual arts. I shall also assume that

* Reprinted from Manchester School of Economics and Social Studies, December 1969, pp. 323–35 with the permission of Basil Blackwell Ltd. Professor Sir Alan Peacock (born 1922) has a distinguished career as an academic economist and public servant, chairing, among other things, the Arts Council Enquiry on Orchestral Resources 1969–70, the Committee on Financing the British Broadcasting Corporation (BBC) 1985–86; and the Scottish Arts Council 1986–92. He has written widely on cultural economics, including *The Composer in the Marketplace* (with Ronald Weir, 1975) and his autobiographical *Paying the Piper* (1993) reviewed in this *Journal* 18(1), 1994. He has been a member of the Editorial Board of the *Journal of Cultural Economics* since its inception. Reprinting this article is a tribute to his long and much valued involvement in our field.

we are interested not only in the playing and performing of 'classics', but also the problems associated with ensuring continuous 'creation'. The second matter is that we should have some idea of the present nature of the industry, and will want to know in particular why so many artists and critics talk about 'Art in the Red' or 'Art in Jeopardy'. As their worries are shared by no less an authority than William Baumol, a useful point of departure is Baumol's analysis of the arts as the victims of the unbalanced growth problem.

2.'Baumol's Disease'[2]

Let us assume that the economy is divided into two sectors. In sector 1, productivity of labour is constant, and in the other it grows at a constant rate of increase. r. Writing outputs as Y_{1t} and Y_{2t}, and quantities employed in the two sectors as L_{1t} and L_{2t}, then their value in time t will be:

$$Y_1 t = aL_{1t} \tag{1}$$

$$Y_{2t} = bL_{2t}(1+r)^t \tag{2}$$

For simplicity, let us call $(1+r)^t, K$.

Let it be further assumed that wages per unit of labour are the same in each sector, fixed at W_t shillings, and that W_t grows at the same rate as output in the 'progressive' sector, so that:

$$W_T = W.K(W \quad \text{being some constant}) \tag{3}$$

From these two assumptions we find that labour costs per unit of output (C_1, C_2) will grow without limit in sector 1 and remain constant in sector 2. This follows because:

$$C_1 = \frac{W_t.L_{1t}}{Y_{1t}} = \frac{W.K.L_{1t}}{aL_{1t}} = \frac{WK}{a} \tag{4}$$

$$C_2 = \frac{W_t.L_{2t}}{Y_{2t}} = \frac{W.K.L_{2t}}{b.L_{2t}.K} = \frac{W}{B} \tag{5}$$

A corollary to this proposition is that we would expect that market demand for the output of sector 1 would decline relative to that of sector 2. A simple example is given by the assumption that relative outlays on the two commodities remain constant and that prices (P_1, P_2) are proportional to labour costs, i.e.

$$\frac{P_1Y_1}{P_2Y_2} = \frac{C_1Y_1}{C_2Y_2}$$

Thus:

$$\frac{P_1Y_1}{P_2Y_2} = \frac{C_1Y_1}{C_2Y_2} = \frac{W.K.L._{1t}}{W.K.L._{2t}} = \frac{L_{1t}}{L_{2t}} = A \quad \text{(constant)}$$

from which it follows that the output ratio of the two sectors3 would be:

$$\frac{Y_1}{Y_2} = \frac{aL_{1t}}{bL_{2t}K} = a.A/b.(1+r)^t$$
$$Y_1/Y_2 \to 0 \quad \text{as } t \to \infty \tag{6}$$

Now suppose the above demand conditions obtain in the market, meaning that the constant productivity sector would suffer a relative decline, and that government policy requires that the relative outputs are to be maintained. (This is an extreme, but useful simplifying assumption.) Then the condition must hold that:

$$\frac{Y_1}{Y_2} = aL_{1t}/bL_{2t}.K$$

or

$$(b/a).Y_1/Y_2 = \frac{L_{1t}}{L_{2t}.K} = B \quad \text{(constant)}$$

Now let $L = L_1 + L_2$ be the total labour supply. Then

$$L_1 = (L - L_2)B.K \quad \text{or} L_1 = \frac{L.B.(1+r)^t}{[1+b.(1+r)^t]}$$

and

$$L_2 = L - L_1 = \frac{L}{[1+B(1+r)^t]}$$

Thus if the ratio of the outputs of the two sectors is to remain constant

$$L_1 \to 1, L_2 \to 0, \quad \text{as } t \to \infty$$

The corollary of this proposition must be that the percentage rate of growth of the economy will approach zero, as t increases.

Removing Judge Brack from the cast of *Hedda Gabler* would certainly reduce labour input to Ibsen's masterpiece, but it would also destroy the product. Nor could one increase the productivity of the cast by performing the play at twice the speed. Anyone who doubts this proposition should try playing modern long-playing discs at 78 revolutions per minute. But are these sorts of examples persuasive?

3. Has Contagion Set In?

The description of the disease has been described by Baumol in rather dramatic terms, possibly deliberately, which is readily explicable in terms of his concern for the Arts.[4]. However, we must consider a number of points before we can accept the diagnosis and estimate the degree of contagion.

(*a*) The first assumption of importance is that of the relative productivity of the Performing Arts and other services. Within broad limits, even casual empiricism would suggest that Baumol is right, which means that the substitution of capital for labour is strictly limited in the Performing Arts. We might question whether this will remain so in the foreseeable future. One has at least the impression that, albeit unconsciously, modern composers, for example write more tand more for small ensembles, and employ all kinds of devices which vary capital intensity. Peter Maxwell Davies, for example, uses an ancient gramophone and pre-recorded tapes in his new composition *L'Homme Armé*. The casts of many modern plays, notably in Pinter, Becket and Wesker, are small in number, but it is a moot point how far the wage bill is a linear function of the number of the cast! It could also be argued that value as well as physical productivity depends on the number of players and labour intensity. In other words, fewer players and more machines on the stage may not be a complete substitute for a large orchestra in tuxedos. Performance is a visual as well as an aural entertainment.

However, even if Baumol is right, we must be careful how we define 'performance', and, as we shall see, definition is a vital matter when it comes to the issue of subsidies. Audience access to the product is no longer limited to the concert hall and theatre, with the development of the new media of radio, television and gramophone. There is an interesting parallel here with other activities in which the degree of consumer participation in production of services has moved into the household in recent years. The decline in the availability of domestic servants and wages which households are willing to pay has been matched by extensive use of durable household equipment. An even better example, perhaps, is shaving.[5]. The invention of the safety razor turned the barber's shop into a hairdresser. In order to listen to music, it is now only necessary to switch on the radio or the phonograph. Even if it is claimed that 'there is no real substitute for live performance', the relevant comparison for the individual is between the costs of a theatre or concert ticket, plus other on-costs, such as transport and meals out, as against investing in more capital intensity in the form of stereo equipment and TV, coupled with a much lower variable cost of input. Whether the 'packaged evening' out or in will offer the same enjoyment is a matter of judgement.

(*b*) The strong assumption that wage rates are the same in the progressive and unprogressive sector obviously requires further investigation. One's instinct as an economist is to explore in detail the supply elasticities of labour in the performing arts and with little or no empirical data, one might postulate that it is likely to be ineleastic in the short-run and elastic in the long. This is the economic counterpart to the dedication of the artist coupled with the strong personal satisfaction associated with performance. Baumol and Bowen[6] argue that even if money wages of artists rise at a slower rate than the general rise in wages, this is sufficient to price the Arts out of the market, because every wage increase increases variable costs, i.e.

there are no offsetting productivity gains. As argued above, this may be implausible when one broadens the definition of performance to include the new media.

(*c*) It will be recalled from equation (6) above that the conclusion Y_1/Y_2 would diminish through time rests on the assumption that $P_1Y_1/P_2Y_2 = A$, i.e. relative outlays in the two sectors would remain constant. However, we can infer nothing about the value productivity of the unprogressive sector from the physical productivity assumptions. Productivity gains may be zero in that sector and labour costs may rise in line with those in the progressive sector, but producers of services may still be able to increase relative prices. Negative substitution effects resulting from growing costs to the consumer of services could be offset by positive income effects, for growing real incomes in the economy as a whole may encourage a shift of demand from the products of the progressive to those of the unprogressive (services) sector. In broad terms this is what appears to have happened in the last three decades, judging from the increase in the net output share of GNP of services.

The difficulty is that we do not have sufficient data to establish trends in the performing arts of a form which would make it reasonable to offer predictions. The prevailing view is that 'Baumol's Disease' is spreading in the performing arts to the extent that their survival depends in part on finance other than from the direct sales of services,[7] and in the absence of evidence to the contrary, we assume this in the rest of the paper.

In addition, it is assumed that the community interest lies in the preservation of live performance, not only of established works but of new musical works and plays and other 'happenings'. Associated with this is the assumption that these activities also determine the stock of domestic creative and artistic talent.

4. The Welfare Economics of Subsidization*

As stated earlier, the argument for subsidization must be based on some form of 'spillover' from cultural activities, granted that we have ruled out objectives other than pursuit of consumer sovereignty. What I propose to do in this section is to consider common arguments used for subsidization and to reduce them to familiar categories in welfare economics discussion.

The first set of arguments relates to the spillovers received by other producers from the existence of performing arts. Thus, leaving aside other reasons for running Arts Festivals, which are considered later, it is claimed that we can use performing arts as a kind of loss-leader in this kind of situation. An extension of this argument is found in the view that one can increase the range of choice of factors of production in the form of professional skills by creating the right kind of cultural ambience, particularly in areas at present regarded as cultural deserts.

Assuming a closed economy, it is plausible to argue that the spillover is purely a pecuniary one. Expansion in demand, if it occurs, in Festival towns is at the cost of reduction of demand elsewhere, assuming no area differences in the marginal propensity to consume. However, clearly the distinction between technological spillovers and pecuniary spillovers is difficult to make, even in this case. Movements must take place along the production functions of industries as a result of demand re-allocation, and it is difficult to determine how far the degree of market imperfection is altered as a result of successful 'festival' advertising.

If benefits can be regarded as mainly pecuniary, there is no case for national public action, unless we introduce inter-personal or possibly inter-regional comparisons of utility. If we confine our universe of decision-makers to a particular region, then the benefits may not be solely pecuniary, although here again if the initial regional position is one of full employment of resources, the effect of an increase in 'foreign' demand may be to raise prices, at least temporarily, as well as real incomes within the region. Even then, one has to prove that cultural inputs, however provided, are more 'productive' than any alternative way of attracting visitors using the same amount of resources. It is only when we assume that given inputs to culture *are* the most efficient method that we arrive at a possible reason for regional government subsidization. This is because the benefits provided by the loss leader are not easy to assign to, for example, individual shopkeepers and hoteliers so that they may not have an incentive to promote the cultural activity, or at least find it difficult to negotiate voluntarily on the division of its costs. A case is then made for a public subsidy, financed by some local form of taxation.[9]

The regional case can be applied to the international situation. If culture attracts foreign tourists, then, given full employment of resources, prices rise, and do so foreign exchange receipts (*less*, of course, any increase in imports, e.g. payments to foreign artists). One must trade off the changes in present real income against the changes in foreign earnings, which may increase future real income. Even then, assuming that we wish to maximize foreign exchange earnings, subject to some constraint on the adverse reactions on domestic real income, it has to be proved that at the margin 'culture' is the best method of achieving this result.

The second set of arguments concentrates on the alleged external economies of consumption derived from the Arts. Writing of the Arts, Lionel Robbins argues that 'the benefit is *not* merely discriminate . . . the positive effects of the fostering of art and learning and the preservation of culture are not restricted to those immediately prepared to pay cash but diffuse themselves to the benefit of much wider sections of the community in much the same way as the benefits of the appartus of public hygiene or of a well-planned urban landscape'.[10] While being sympathetic with his general point of view, the author finds it difficult to trace the way in which spillovers from the 'culture vultures' attending live performances to others is supposed to take place. It would be interesting to poll the public at large in order to confirm whether they derived an uncovenanted benefit from the attendance at publicly-subsidized symphony concerts or modern plays by those whose median income is almost twice that of the employed population. There is possibly something to be said for the more limited argument used by the Arts Council[11] that the community derives a satisfaction which they cannot be excluded from enjoying as a result of the international prestige of the Royal Opera and Ballet and the National Theatre

Company. Reports of rave reviews in *Pravda, Le Monde, Die Welt* and the *New York Times* may be very welcome, but at the same time, one has to face the difficulty that if the resources used to support Performing Arts have alternative uses which produce the same result, what then? How do we compare, say, subsidizing the Arts with the subsidizing of Concorde, or, say, the fares of Leeds United to play Milan? One cannot make a case on grounds of externality in absolute terms alone, however much one shares the value judgements of its proponents.[12]

The final argument is that of the satisfaction derived by the present community of economic decision-makers from conferring benefits on future generations. Even those who do not understand and appreciate music and drama may be glad to contribute towards making available their fruits to those who do, and particularly to those whose tastes are not yet formed. Present generations may derive positive satisfaction from preserving live performance safe in the knowledge that they do not risk being accused of narrowing the range of choice of cultural activities for future generations through allowing the Arts to die.

The argument suggests an analogy with the conservation of natural resources. It is true that if we destroy areas of natural beauty today, there is no resource-using activity which can bring about their future restoration. Is the same true of the Performing Arts? I agree with Baumol and Bowen that it is not necessarily true that if the Performing Arts languish, they need necessarily disappear for ever, although it may take long enough for the re-creation of a cultural tradition. I would add the point that if the object is to preserve a *national* culture rather than a transplanted one, the analogy with natural resources conservation may be a closer one. One can always revive opera by importing Italian companies, but it may be a different matter agreeing a price at which they will be willing to revive Gilbert and Sullivan – and in English!

The crucial question is whether 'a program to preserve the arts for the nation's posterity is a case of indiscriminate benefit par excellence'.[13] This view may be persuasive and may partially account for the growth of support, in principle at least, for public subsidies to cultural efforts. At the same time, if consumption externality is to be derived from cultural investment, our attitude to its amount and form clearly depends on who is to benefit and who, in consequence, will make the sacrifices. This point has been made forcefully by Tullock in connection with the choice of a social rate of discount.[14] An increase in public investment which redistributes income to future generations from the present one, given present rates of economic growth, may represent a transfer of consumption benefits to those whose average *per capita* income will be higher than that of the present generation. As Tullock argues, are we willing to give a bounty to future generations rather than, say, to the underprivileged of the present generation? Put in such general terms, Tullock's point suggests that any government which took into account the wishes of a community which preferred to help today's poor rather than tomorrow's rich would not use a 'low' social time preference rate. The point therefore arises, is the 'future generations' argument in respect of the Arts less persuasive than it looks at first sight, because future generations are likely to be richer on average?

The answer is: not necessarily. The community in this instance is not being asked to approve generalised support for future generations through increased investment, but the selective support for one item to be made available for future consumption. Therefore, it is perfectly rational for a community to adopt a social discount rate which is 'high', so that there is no general encouragement to investment to benefit future generations but to offer a particular and continuing subsidy designed to support the performing arts.

Nevertheless, Tullock's argument suggests a restriction which might have to be placed on the *form* of subsidy, if the community is to be persuaded to give continuing support to the Arts. If the system of support, as at present, simply provides a subsidy to a cultural minority in the upper income groups, why should present generations be interested in giving support to the *rich* of a future generation which may be richer anyway? If resources are diverted from other uses, including helping today's poor, in order to preserve our cultural heritage, the future generations argument will surely have more appeal if the benefits we hope they will derive from this diversion are much more widely distributed than they are at present. How this might be done is the main subject of the next section of this paper.

5. Policy Issues

In order to understand the policy issues and how they might be resolved with reference to our conclusions from welfare economics, one should consider the present characteristics of government support for the Arts. I shall concentrate on central government support via the Arts Council for England and Wales.

There are three characteristics of this support of relevance to this analysis. The first is that it is heavily concentrated on music, and particularly opera. Of the £5.75 mn. net expenditure by the Arts Council in fiscal year 1967/68, £3.3 mn. represented grants to music, £1.3 mn alone supporting Covent Garden Opera. Drama received £1.7 mn. and the remainder went to support Art, particularly Art exhibitions. The second is that expenditure is heavily concentrated in the London area, 80% of expenditure on music finds its way to opera, ballet and orchestral societies, nearly 40% of expenditure on drama, all in London. The third characteristic is that financial support is almost entirely given to the institution responsible for performance, as a device for lowering the price of admission.

Were this pattern of support to continue, it follows that, unless London-based orchestras, theatre companies, opera and ballet were willing to travel much more than they do at present,[15] the benefits will accrue, via subsidized prices, largely to the upper income groups in the area with te highest *per capita* regional income. Even then, the general policy of subsidizing seats, even if companies travelled more, is not likely to encourage a wide diffusion of benefits by income group. The present policy, therefore, is not only 'unjust', but also sows the seeds of its own demise, for it is difficult to imagine that a major expansion will be sanctioned in expenditure in the Arts if the present policy continues. It is only fair to mention that the Arts Council is well aware of the problem of regional concentration of the benefits of expenditure and is doing what it can to change the existing pattern.

So far as the balance of expenditure is concerned between one performing art and another, it is difficult to offer any specific observations as an economist. Aesthetic judgements are value judgements and cannot be proved right or wrong. In line with the doctrine of consumer sovereignty, while one may be willing to be guided by practitioners in the performing and creative arts about the direction of public support, we must be protected from cultural monopoly. As I have suggested elsewhere (see n. 8), the same kind of problems arise in the allocation of public funds for research in the social and natural sciences. The best means of protection seems to be a rapid circulation in the membership of the grant-giving bodies so that all shades of cultural opinion can be reflected in the allocation of funds through time.

The major question, however, is how the benefits of live performance can be diffused so that the poor of today and tomorrow are both able and willing to have access to them and are not to be asked to support the rich today and the sons of the rich tomorrow, and in the richest areas of the country. In principle, there are two solutions: a short-term and a long-term one. The short-term one requires that support is moved away from the subsidizing of producers of cultural activities towards the subsidizing of individuals. The long-term one is to devise a means of altering the preference functions of future generations so that Baumol's disease may be counteracted through the market as well as through the political mechanism which offers state support.

Those familiar with the author's writings will not be surprised to find that he would be in favour of a voucher system. In general terms, this would require that theatres and concert halls would charge commercial prices and a certain proportion of seats would be available to some defined group of persons, the vouchers then being exchangeable for cash disbursed by the grant-aiding body. Alternatively, the grant-aiding body or bodies might agree to buy a certain proportion of seats and to offer these free or at reduced prices to the relevant groups.

There are, however, a number of snags about this system which would have to be overcome. First, the attraction of such a scheme in, say, educational provision is that the relevant group to be subsidized selects itself, i.e. school children of a certain age group, and the fact that education is compulsory ensures that those whom the voucher is meant to benefit cannot be marketed. At the same time, the system assumes that the voucher is available for a range of alternative sources of supply of education, state or private.[16] 'Self-selection' by relevant groups is not nearly such an easy matter for one has to identify not only the relatively poor but those of their number who have an actual or potential interest in serious music or drama. It would also be difficult to guarantee that recipients of vouchers would not sell them to those better able to afford tickets at commercial prices,[17] which would be an interesting, if peculiar method of redistributing income. Even if these difficulties were overcome, it is inconceivable that there would be sufficient alternative and continuous sources of supply of serious music and drama to make it worth while to use the voucher scheme as an incentive device to increase the supply of live performance.

Perhaps the best that can be done is for the Regional Arts Associations to be more closely involved with the subsidization process. They would have more direct knowledge of the various drama and music organizations and schools whose members merit support. One might be able to circumvent the problem of voucher re-sale by a block-booking system for subsidized seats, so that no voucher was assignable to a particular individual.

Second, a formidable problem arises from the fact that it is claimed that opera companies and orchestras, like certain local wines, cannot travel and maintain their quality. We all know of cases where we have been led to believe that such organizations on tour will have certain artists appearing, but who somehow or other remember other more pressing (and possibly more lucrative) engagements. Again, some experimentation in pricing needs investigation. For example, Covent Garden could raise its prices somewhat and a proportion of the seats be filled with an eager 'provincial' audience whose vouchers covered their train fares, in whole or in part, as well as the price of seats. No doubt richer and better nurtured (in the cultural sense) Londoners would claim to suffer external diseconomies of consumption because such an audience might clap in the wrong place! At least, some experimentation is called for in the interim period so as to bring in being a cultural demonstration effect which might encourage other parts of the country to build their own opera houses and so be able to compete more effectively with London for public money.

In the longer run, the diffusion of benefits might best be brought about by directing a large part of any increase in funds for the Arts through the education system. Apart from the possibility that such support may serve to alter the preference functions of future generations to create receptivity to the benefits of culture and so help to combat Baumol's disease, there is another important reason for the use of this channel. Developments in the creation of new music and theatre seem much more likely to appeal to those who have direct experience in composing and playing music and in performing and writing plays. If I am right in this, the earlier in life we start to encourage this form of creative activity the better for the survival of the performing arts.

Notes

1. This paper is a revised version of one delivered to the Staff Economic Seminar, University of York, and to the Conference of the Association of University Teachers of Economics held at the University of Essex, April 1969. I am grateful to both audiences for their comments and criticisms. In particular, I must thank Alan Prest for editorial comments and Gordon Mills, the

discussant of the paper at the AUTE meeting. The article was completed before the author became Chairman of the Arts Council National Enquiry into Orchestral Resources.

2. This section summarizes the argument presented in W.J. Baumol, 'The Macroeconomics of Unbalanced Growth', *American Economic Review*, June 1967. For the application of the analysis to the performing arts, see William J. Baumol and William G. Bowen, *Performing Arts: The Economic Dilemma* Part II, Twentieth Century Fund, 1966.
3. Later in this article (see note 2) on p. 421, Baumol suggests that his mathematical analysis points towards the demise of sector 1 activities, including the theatre. It will be noted that all (6) can demonstrate is that output in sector 2 will expand relative to sector 1. Stronger assumptions are needed in order to produce a demise of the unprogressive sector, viz. a relative fall in outlays or a faster rate of growth in labour costs in sector 1. For example, using the same assumptions as embodied in (6), with the exception that:
$$C_1Y_1/C_2Y_2 = \frac{(1+r_1)^t.W.L._{1t}}{(1+r_2)^t.W.L._{2t}} = A$$
it follows that if $r_1 > r_2$, then as $t \to \infty$, $L_{1t}/L_{2t} \to 0$. As before Y_1/Y_2 will also diminish, but at a faster rate than in (6).
4. See Baumol and Bowen, *loc. cit.*
5. This useful example is used by Carolyn Bell in her critique of the Baumol thesis. See C.S. Bell, 'The Macro-Economics of Unbalanced Growth: Comment', *American Economic Review*, September, 1968.
6. *Op. cit.*, Chapter VII.
7. For recent evidence, see *Grants for the Arts*, Eighth Report of the Estimates Committee, Session 1967/68, House of Commons Paper 443. It is also worth noting that Professor Claus Moser, as one of the Covent Garden Governors giving evidence to the Committee, drew their attention to the Baumol/Bowen thesis. See page 122 of the Report.
8. A preliminary canter through these arguments is to be found in my article 'Public Patronage and Music, an Economist's View', *Three Banks Review*, March 1968.
9. It is beyond the scope of the present analysis to investigate the appropriate form of tax. Assuming that the object was to find an ear-marked tax which reflected as far as possible, benefits accruing to producers of tourists' services, some form of selective sales tax would have to be found. At the same time, such a tax might result in a loss of economic efficiency. Awkward problems also arise in attempting to determine the incidence of such a tax.
10. See Lord Robbins, *Politics and Economics, Papers in Political Economy* 1963, p. 58.
11. See Arts Council, 22nd Annual Report and Accounts, Year Ended 31st March 1967.
12. This I believe to be main weakness in the analyses of Lionel Robbins, *loc. cit.*, and Baumol and Bowen, *op. cit.*, Chapter XVI, 'On the Rationale of Public Support'.
13. Baumol and Bowen, *op. cit.*, p. 385.
14. See, Gordon Tullock, 'The Social Rate of Discount and the Optimal Rate of Investment', *Quarterly Journal of Economics*, May 1964.
15. It could be argued that TV and radio relays of performance reduce the weight of this proposition, but this is at least debatable, and, in any case, it is presumably the rich who largely own or rent the best forms of reproduction: for example, colour TV. Furthermore, these forms of relaying live performances are freely available to *all* regions and not simply to those deprived or subsidized ones. Finally, it is not without interest to note that historically the first areas to receive 'cultural' TV programmes through BBC Channel 2 were those with the greatest access to subsidized theatre and opera!
16. On this point, see A.T. Peacock and J. Wiseman, *Education for Democrats*, Institute of Economic Affairs, 1964.
17. Similar problems arose when pensioners were able to obtain vouchers for cheap tobacco. Non-smoking pensioners could then buy tobacco at lower prices than the rest of smoking public but could not be prevented from re-selling it.