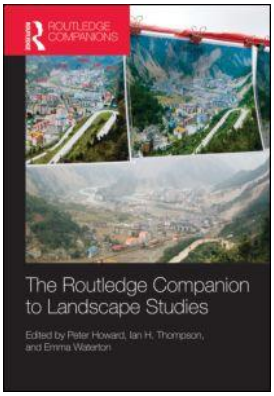

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Researching the economics of landscape

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Researching the economics of landscape

Colin Price

Landscape economics as a field of research

Economics is about satisfying competing human wants, within the limits set by scarce resources. The wants, ranging from physiological necessities to transient psychological desires, are embodied in demand – a relationship between amounts consumed and price willingly paid. The limited resources determine supply – a relationship between offered price and amounts willingly provided. Demand and supply interact in markets, which tend towards an equilibrium in which amounts provided and consumed are roughly equal. However, because of landscape's nature as a publicly provided and involuntarily experienced service, demand and supply also interact in alternative means of allocating scarce resources, such as political debate, pressuring and trade-off.

This is the perspective from which economists see the creation, destruction, enhancement, degradation and preservation of landscape. All these processes affect landscape *understood as territory* – as a tract of land, which itself is a potential resource for other forms of production. The processes also require, or alleviate requirements for, other *factors of production*: labour, raw materials, capital (productive machinery, buildings, infrastructure etc.) and enterprise. The processes have the purpose of, or substantial effects upon, availability of landscape *understood as a source of aesthetic experience*.

Such a perspective on the interaction of resources and human perceptions accords with the European Landscape Convention's definition of landscape as: 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (Council of Europe 2000). Economics, then, is not a discipline straying outside its normal or proper limits when applied to landscape: on the contrary, the discipline is deeply embedded in thoughts on *what to do* about landscape. Once landscape debates move beyond appreciation of what *is*, to contention about what *might* and what *should be*, economics is implicitly involved. Even discussion about how, in the past, landscape *came to be* properly refers to the forces of supply and demand, and their playing out in conflicts concerning the balance between them.

The economics of landscape – in the aesthetic sense – ought not to include the economics of all that happens in the landscape – in the territorial sense. But in practice it does so, because of

possible sacrifice of competing value of alternative, *less* aesthetic land uses (what economists term the opportunity cost of land: that is, loss of productive potential imposed by pro-landscape activity).

The origins of landscape economics

Implicit applications of economics to landscape date from when the productive potential of land was first forgone or other resources were expended to modify that land, in order to create aesthetic delight or stimulus, whether for private self-indulgence (the Hanging Gardens of Babylon) or in public ritual or symbolic landscapes (stone circles and chalk downland figures). While a formal discipline of landscape economics only emerged much later, undoubtedly the landscaping enterprises of Versailles, Stourhead, Branitz and such would – must – have been subject to formal costing (Figure 27.1).

Recent engagement of economists in the UK National Ecosystem Assessment (Watson and Albon 2011) and associated enterprises has promoted a view of landscape economics as a sub-discipline, recently emerged within environmental or even ecological economics. In this supply-orientated view, landscape is just one ecosystem service (usually included under 'cultural services'), often catalogued and sometimes evaluated as a rationale for protecting natural or semi-natural environments. With other services, it has been discussed under the fashionable headline of 'payment for environmental services'. This has reinforced a public misperception, that economists care for things only if part of a cash transaction.

However, the formal discipline of landscape economics had existed for some decades (Price 1978, 2008), derived from interest in human demands upon landscape for its aesthetic pleasures.

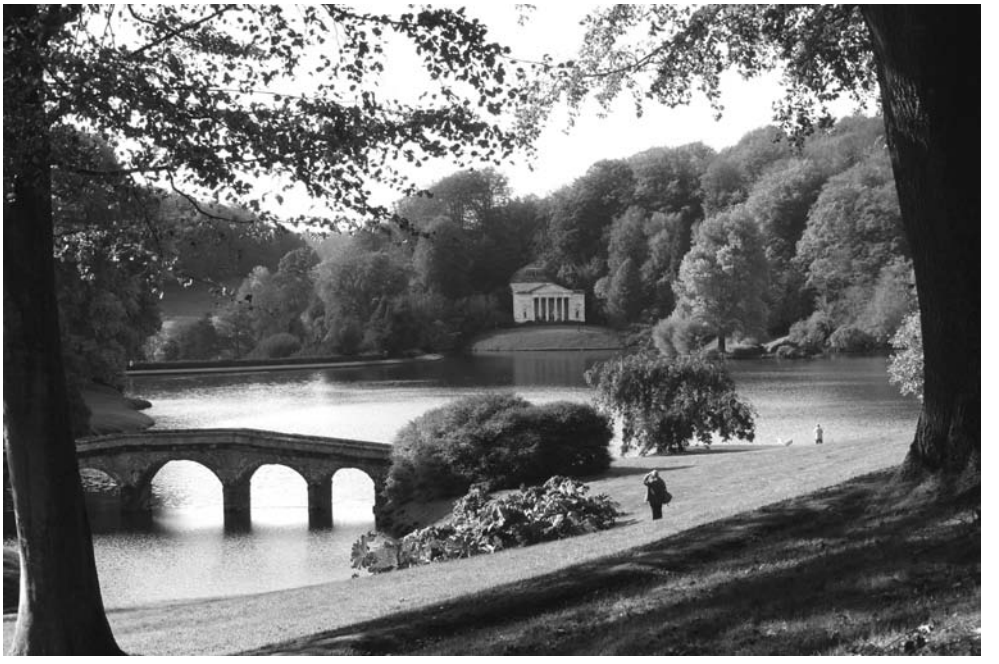

Figure 27.1 Not as nature intended: Stourhead, wrought with much labour and loss of potential production.

In this perspective, landscape economics is characterized by several focuses: landscape as a public good, a by-product of other productive processes, and an externality to the market system; the importance of space, place and durability through time; a grounding in perceptual values and a complex set of wants satisfied by its provision (Price et al., forthcoming). There was never any presumption that landscape services have interest, importance and value only when transacted in markets.

Costing landscape

In debating particular land use changes, objectors may argue that the developers' case is flawed, even in conventional economics terms. The development, it is often claimed, lacks financial justification, being driven by misguided or outdated subsidy (such as agricultural support within the European Union (Bowers and Cheshire 1983)), or by vested interests promoting public actions, at public expense, but to public detriment. When this is agreed, public decision-making is easy, since no trade-off is needed between financial and aesthetic desiderata. To this mix of detrimental effects may be added – described or quantified, in physical units or monetized – other environmental disadvantages and advantages. The current UK controversy over wind turbines thus embraces not only raw financial appraisal, but wider effects: on carbon balance and hence climate; on depletion of non-renewable resources; on landscape; and on wildlife as through bird strikes. Given such controversies, skills in critical economic re-analysis inform the competence desirable in landscape economists. This would require ability to scrutinize monetary evaluations of other environmental impacts, and to include a bouquet of material, environmental and social effects within cost–benefit analysis. Much written within the broad ambit of landscape economics does in fact concern itself with what is sacrificed when landscape is protected or created (e.g. Whitby et al. 1998).

In other respects, landscape creation and improvement schemes are ordinary financial investments, with direct costs for the usual factors of production, plus oncosts and overheads. Budgets and accounts are needed, to track the financial health of the undertaking. Available publications facilitate a recipe-book approach to such project costing (Langdon 2009).

The onus for further research in these areas should not lie with landscape economists, though they need to keep abreast of developments in the relevant fields. In practice, however, research by sectoral experts may show either an optimistic bias, or a tendency to ignore aspects contrary to sectoral interests. Thus debate may be opened, and the conventional wisdom challenged, by economists working in favour of landscape. Continuing and unbiased academic investigation is needed of the economics of land use and land use change, not dependent for finance on private interests.

Valuing the consequences of landscape quality

The most characteristic element of landscape economics – what most frequently defines the activity of those called landscape economists – is monetary valuation of landscape. Of the papers submitted to International Conferences on Landscape Economics in Vienna (2009) and Padova (2011), nearly half were valuation studies.

Deriving demand, as economists understand it, is one end-point of a process generally called 'landscape assessment' (Countryside Commission, 1987): description, analysis, classification, evaluation (in aesthetic terms), and valuation (in cash terms). Designating protected landscapes has further clear economic overtones: how valuable should a landscape be, to justify special treatment or absolute protection?

Some valuation methods focus on downstream economic consequences of aesthetic conditions. Landscape may for example affect the productivity of other human systems: through a pleasant work environment, it might be said (though I know of no published evidence) that 'a happy worker is a productive worker'; reduced psychological disorder and absenteeism might also be expected. There is famous evidence (Ulrich 1984) that aesthetically pleasing hospital environs speed recovery from surgery, thus returning workers rapidly to the work force, while saving health service resources. The quality of intimate landscape also benefits mental health (Grahn and Stigsdotter 2003) and has a socializing influence (Sullivan 2001), with saved social costs via improved civil behaviour, reduced crime and lower opportunity costs resulting from disaffection.

Much has been made of the benefits of green infrastructure – planned areas of trees and other vegetation – in promoting inward investment, thus generating jobs and local tax revenue (Ecotec 2007). Similarly, protecting, maintaining and enhancing holiday landscapes boosts tourism earnings.

One should not, however, claim too much for such fiscal and financial effects. Some may be secondary results of benefits already measured directly, and thus represent double-counting. Moreover, attracting industry, business, residents and visitors into one area will divert their attendant benefits from competing areas, or encourage strategic games among adjoining municipalities (Choumert and Salanié 2008). Additionality – the *net* advantage – is what matters, and arguably this is better measured by more direct methods of assessing actual benefits (Anthon et al. 2005).

Activities detrimental to landscape may entail financial cost in subsequent *restoration* of aesthetic quality, as in reinstatement of mineral extraction sites. Sometimes permanent loss of good landscape, as by motorway development, may be compensated through its *replacement*: creating, or creating access to, landscape at another location (Bowers and Hopkinson 1996). At a micro-scale, the system of Council of Tree and Landscape Appraisers (1983, with frequent revisions; Scott and Betters 2000) for valuing amenity trees is based on the cost of replacing them – ones lost to development, disease, etc. A particular difficulty for all replacement and restoration involving trees is the time lapse required to achieve a mature effect. This needs consideration of the different profiles through time of landscape quality, with and without such intervention.

An entirely different line of argument derives from the assumed rationality of having incurred *past* costs in order to protect landscape. Thus, during the catastrophic outbreak of Dutch elm disease in Britain in the 1970s, some county councils injected trees with fungicide, incurring expenditure equivalent to £1350 (at 2007 prices) as the long-term cost of saving each tree (Price 2007a). This would have been rational only if the value each tree contributed to the landscape exceeded £1350.

A problem is inherent, however, in assuming that future costs are inevitably incurred, or that benefit inevitably exceeds past costs. For example, whatever the *legal* position, there is no *logical* necessity to restore landscapes after mineral working: from an economic perspective, it should only be done if benefits exceed costs. Nonetheless, given the legal position, such restoration costs *are* inevitable. Thus these are genuinely economic losses associated with degrading landscape; the opportunity costs of the required resources really are a net loss to society. The assumed rationality of past costs is more tenuous: how did those spending public money to preserve their own conception of valued landscape *know* that this expenditure was worthwhile? And, given that the imputed benefit of any action would, under this philosophy, always equal or exceed its cost, each action favouring landscape would have net value *at least equal to zero*. So how would expenditure priorities be set?

Assessing aesthetic benefits

Because of these logical shortcomings, and because it seems anyway useful, several other approaches aim to assess directly the benefit of good landscape – or of better or worse landscape. Each approach has accreted its own dialectical body of theory, in which the approach is proposed, critiques developed, and identified weaknesses addressed.

To repeat: economic assessment of benefits makes no inherent assumption that a market price should be paid for landscape services. In cost–benefit analysis, value is indicated, not necessarily by actual payment, but by *willingness* to pay, possibly (in social cost–benefit analysis) modified according to beneficiaries' *ability* to pay. Willingness to pay is interpreted as a subjective valuation, of whatever it is that landscape provides, in relation to whatever would be provided by alternative purchases, or by goods and services for which willingness to purchase might be expressed or elicited. That such valuations differ among individuals is no problem for economists: so it is with all the goods and services that people buy to satisfy their various wants. The real distinction is that market goods have a relatively uniform price at which small changes in purchases may be made: for public goods change in availability may be on a large scale within a local context, affecting those with both large and small willingness to pay. Welfare economics theory (Little 1957) establishes a firm connection between price and willingness to pay on one hand, and value to individuals on the other. Without this connection, the case for cost–benefit analysis – not just for landscape economics – lacks credibility.

The approaches to valuation discussed below constitute an exhaustive list of those generally deployed, and even perhaps those logically possible.

Market analogies

An indicative value for landscape generally, or for particular landscapes, might be set by analogy with the price of comparable but marketed aesthetic goods; at the coarsest level, admission fees to art galleries, botanical gardens or arboreta (Price 2007a): as a closer parallel, enclosed cliff-tops (Figure 27.2) or waterfalls (Price 1994).

The evident problem lies in finding sufficiently similar experiences, accruing to similar populations, especially as charging in itself filters the beneficiary population. This approach is little developed, and hence little criticized.

Free-will payments

Voluntary subscriptions may be made to causes or campaigns favouring the desired state of landscape or outcome of land use controversy. The National Trust in England and Wales maintains collection boxes on some open-access properties, while campaign fund-raising is a widespread if intermittent activity. The standard critique is that these provide at best a lower-bound value, since beneficiaries of good landscape may free-ride on contributions to its upkeep or preservation made by others. Marwell and Ames (1981) challenge this view of self-interested rationality. Nonetheless, plausible evidence exists for it: for example, previous levels of voluntary donation were greatly exceeded, when financial exigency obliged cathedrals to charge for admission (Price, 1994). Again, the approach is little developed.

Professional assessment

Expert judgement may, by consensus, gravitate towards a 'reasonable' value for landscapes embodying specified characteristics. The best-developed example is Helliwell's (1967) system

Figure 27.2 Landscape for sale: admission to Rügen's cliff-tops costs €2.

for valuing amenity trees – possibly the first attempt to place monetary value on aesthetic effects. It is easy to criticize the approach's lack of foundations in economic theory, or reference to real cash transactions. Nonetheless, it provides consistency and authenticity through repeated expert discussion in a structured framework. Its frequent use in practical applications, particularly compensation claims, evinces professional confidence.

Contingent valuation

Since willingness to pay is sought – for some environmental or social condition or some change in it – the directest approach is through willingness-to-pay questionnaires (Mitchell and Carson, 1989; Arrow et al., 1993). Of all the approaches, this so-called contingent valuation has attracted the greatest and highest-prestige efforts. Contingent valuation has been much developed in relation to nature conservation, but landscape applications abound too, for example: to open-cast mining (Randall et al., 1978), land use in national parks (Willis and Garrod, 1993), forests (Tyrväinen and Väänänen, 1998) and electricity transmission lines (Navrud et al., 2008). This most widely applied approach is also the most vehemently criticized, both within the economics profession (Kahneman and Knetsch 1992) and outside it (Sagoff 1988). Some general and recurring issues are:

- whether respondents understand what willingness-to-pay questions mean (Clark et al. 2000);
- non-response bias – particularly through protest bids of zero, contending that the question is not meaningful or relevant (Edwards and Anderson 1987; Ovaskainen and Kniivilä 2005);
- strategic bias, resulting from attempts to secure provision of a public amenity, or avoid paying for it (Brookshire et al. 1976);

- start-point bias, whereby respondents to an unfamiliar form of question seek cues from monetary sums suggested by the interviewer (Boyle et al. 1985);
- whether answers embody a large symbolic content (Blamey 1996; Price 2001). Part–whole bias exists when willingness to pay for a particular landscape expresses willingness to pay for all similar landscapes. Information bias occurs when willingness-to-pay questionnaires headline a particular landscape, usually one subject to current controversy, thus focusing respondents' wider concerns onto that landscape (Bishop and Welsh 1993; Price 1999).
- whether individuals answering questions which treat them as 'purchasing consumers in an environmental supermarket' respond like they would as citizens of a polity (Sagoff 1988). A variant of contingent valuation addressing this problem is contingent referendum: respondents are asked whether they would vote for a pro-environment policy (for example), if that was associated with a given tax increase. Imputed 'citizen' values typically exceed those derived from contingent valuation (Ovaskainen and Kniivilä 2005). Why, however, would people vote for something that compromises their best interest (Price 2006)? This 'citizen's' value might simply be a less biased consumer's value.

Value revealed by behaviour

Much scepticism among economists about contingent valuation and its variants results from their being based on a stated willingness to pay unconfirmed by behaviour. It is natural to prefer willingness to pay revealed by actually 'putting money where one's mouth is'. Purchase of some market goods gives access to non-market goods (for example, houses commanding good views, or recreation trips offering high quality landscape). Hedonic pricing (Griliches 1971) deploys statistical techniques by which house prices or recreation trip costs are decomposed into fractions attributable to landscape quality or (more usually) to its measurable constituents, as well as to aspects of the 'package' such as size of house or scope for physical recreation respectively. One theoretical advantage would be allowing an aesthetic value to be compiled for a particular landscape or change of landscape, simply by summing the values attributed to each constituent. House prices offer rich and serviceable data sets (Garrod and Willis 1992), on whose basis values have been attributed to woodland views (Willis and Garrod 1992); water bodies (Luttik 2000); agricultural land (Fleischer and Tsur 2009); and greenspace (Choumert and Travers 2010). Nonetheless, important questions exist concerning what price differentials mean: for example good view premia may be confounded with good neighbourhood premia arising because wealthy residents have *ability to pay* for the good view; the differential may thus partly represent the *negative* aspects of living in an alternative, bad, neighbourhood (Price 1995). By contrast, recreational visits often entail different bundles of destinations, each offering a wide range of aesthetic and recreational experiences. Hanley and Ruffell (1993) have described results for forest characteristics as 'disappointing' by comparison with those of contingent valuation, and the problems have perhaps dissuaded more widespread application.

Choice experiments

Recently choice experiments – sometimes called stated preference approaches (Adamowicz 1995) – have gained popularity. Potentially, they combine the powers of hedonic pricing and contingent valuation, but also share their shortcomings. Respondents choose between packages of experience which embody both different amounts of several environmental characteristics and different sums of money. For example, Nielsen et al. (2007) investigated forest characteristics, while Grammatikopoulou et al. (2011) included buildings and presence of grazing animals

in agricultural landscapes. This approach avoids headlining a particular issue, and – since both environment and money are embodied in every package – avoids the stark polarization which contingent valuation creates between money (with negative symbolic connotations) and environment (with positive ones). In landscape applications, the approach shares with hedonic pricing the problem of separating the effects of aesthetic elements which in reality interact, as discussed below.

Environmental branding

'Environmental quasi-markets' may be developed through premium prices for landscape-tagged goods such as regional foods (Boatto et al. 2011). Although ethical premia are commonly associated with socially just (fair trade foods) and ecologically sustainable (certified timber) modes of production, they may also represent the landscape in which they are produced. Because academic researchers cannot control the image and text denoting product provenance, there are severe problems in determining what collection of factors the image represents in consumers' minds. Moreover, consumers are unlikely to relate a quantum of product to the amount of environmental, social and economic space in which it was produced. Thus willingness to pay remains symbolic: in these quasi-markets are purchased not particular environmental and social gains, but warm glows and moral satisfactions, which relate only tenuously to aesthetic reality (Price et al. 2008). This problem of interpreting the meaning of ethical purchases remains unsolved and largely unresearched.

The last three approaches raise questions over whether an entire landscape's value is meaningfully decomposable into fixed values for its individual components, such as steepness of topography, proportions of land cover, and presence of water or built intrusions. Which aesthetic components are relevant? In what units should they be measured? Above all, how is *composition* incorporated in a consistent mathematical *interaction* between variables (Price 2012)? None of these has been so addressed as to satisfy an aesthetic professional. An alternative philosophy of hedonic pricing bases the overall value of views and visited destinations on house prices and travel costs, then apportions their value by explicit consultation. Benson and Willis (1992) asked respondents in a travel cost survey to allocate ten tokens among the trip's components. House prices have been related to subjectively but expertly judged view quality (Henry 1994, 1999); and travel costs, to overall aesthetic quality of the visited area (Bergin and Price 1994; Thomas and Price 1999).

Contingent valuation and related approaches avoid the decomposition problem, by assessing landscape as a complete entity, to be valued as seen, or in relation to a specified change. This, however, brings another problem: each case must be treated from scratch. Individual assessment is costly and time-consuming, in a context needing quick decisions. Alternatively, a judgement must be made, that the benefits of good landscape here are similar to those experienced elsewhere generally, or in some particular elsewhere – sufficiently similar that monetary valuations can be transferred among locations. This benefit transfer problem – often applied to other values (Zandersen et al. 2007) – is particularly acute for landscape applications of contingent valuation, because of the individual character – the *genius loci* – of each place, and of the population experiencing it. Attempting to compile a value on the basis of values for landscapes with similar components but different composition reintroduces the decomposition problem. Once again, the best basis for benefit transfer would be comparison with landscapes of similar overall aesthetic quality, before and after the specified change.

In all this, recall that much literature is concerned with *defects* of the methods described; and that the literature dealing with *remedies* of defects has not done so to the satisfaction of all

parties. It is, moreover, easy to be beguiled, by the possibility of doing something that had seemed impossible to do *at all*, into actually doing it without considering the improbability of being able to do it *well*. Landscape economics tackles a necessary valuation task, but that task is fraught with difficulties (for example, in distinguishing the variety of wants met by landscape, and dealing with cultural and social associations): it needs all the *support* it can get from related disciplines, and it must not become embattled, as though existing as a free-standing valuation *alternative* to these disciplines. They, in turn, should accept the legitimacy of the economic approach, rather than maintaining an aloof practical uselessness.

Time, discounting and sustainability

For all but the most ephemeral open-space art installations, investments in landscape improvement – or those entailing landscape deterioration, or ones required to prevent adverse change – all involve assessing not only present human response to a landscape, but how that response, and the landscape itself, may evolve through time.

Without any human intervention trees grow and garden designs mature; asbestos roofs soften visually (Figure 27.3) and concrete walls become offensively drab. Economic forces bring obsolescence or displacement to housing, extractive workings, factories and infrastructure, with subsequent removal or dilapidation. Demographic changes affect how many humans experience a landscape, and the frequency of that experience.

Meanwhile human tastes alter. This may express a long-term social shift in aesthetic fashion, as from formal to scenic to ecological aesthetics (Sheppard and Harshaw 2001). There is also personal adaptation of behaviour and accustomization in the face of aesthetic affronts (Price 1993, Chapter 14).

Figure 27.3 Time changes these things built with hands, in fact and in the pliant mind, stark asbestos roof becomes ecosystem.

Such processes have economic implications, but inform a wider aesthetic discourse. A further crucial process, having financial origins though also reflecting human psychology, is that of *discounting the future*: that is, successively reducing the importance ascribed to future events and conditions, merely because of their futurity. At first sight this seems an extraordinary thing, at diametric odds with sustainability – which implies treating future generations' interests at parity with present ones. Some justifications offered – for example, the potential productivity of money and resources if made available early in time – are irrelevant to aesthetic experience. Others, such as apparent human preference for immediate rather than delayed gratification, have questionable normative validity (Price 1993, Chapter 7). Different approaches to landscape valuation may match different rationales for discounting (Price 2007b), and different discount rates for aesthetic and for material values can be defended. To accommodate the unease which discounting has provoked, a recent stratagem tapers discount rates for long-term evaluations (HM Treasury, n.d.). Even this insufficiently emphasizes sustainability, and may not change the actual outcome of decisions (Price 2005).

Whatever view is taken, choice of discounting protocol and rate may affect the value attributed to landscape more than does the approach used for imputing an annual value. A low discount rate may also have unexpected consequences, sometimes reducing the importance of aesthetic values relative to material ones (Price 2010).

Research methodologies for this topic run from analysis of financial markets to interpretation of psychological propensities. Again, while landscape economists cannot claim these as their particular preserve, their concern with psychic values, non-market experiences, and enduring preferences may give them a radically different perspective on discounting, which they should bring to the wider debate. Fuller accounts of these processes and how they affect economic valuation are given in Price (1993, 2007b).

Transacting landscape: the market and institutions of exchange

Because the most distinctive economic characteristic of landscape is its public goods nature, spontaneous markets where supply and demand interact are patchy. This is why landscape economics is so concerned with finding an *equivalent* of market prices. The current ethos of 'payment for environmental services' is dangerous if adopted ideologically: some things, of their nature, are just not efficient to market, because excluding non-payers entails heavy costs. Moreover, because enjoyment of landscape by one individual does not prevent its enjoyment by another, maximum benefit is achieved by free access. Thus public and charitable subvention is – and should be so expected – the major source of financial input to publicly available and publicly enjoyed landscape.

This fiscal support might, in a narrow financial perspective, be set against positive macroeconomic effects. Although not captured in markets by its providers, the expenditure associated with high quality landscape and greenspace nonetheless generates local income and regional development. Improved landscape may also have distributional effects, supporting financially impoverished regions, but in turn requiring support if it is to improve equality of aesthetic opportunity in urban localities. Distributional issues presently exhibit a low profile in economic thinking, but they never vanish, and become more important, the more they are ignored.

There are also policy issues to do with portfolios of landscape. Why and how do protected landscapes become so (Price, 1977)? What contribution does a particular landscape or landscape type make to the aesthetic experiences open to a population that – financial, resource and environmental crises notwithstanding – sees international travel in pursuit of pleasure as a basic human right?

Figure 27.4 Street hanging baskets: private pleasure in giving public pleasure is a subtle economic value and motivator.

Mechanisms for landscape enhancement may embody some political trading, as in planning gain which requires improved public landscape as a condition of permitted private development. But its being worthwhile for a developer to make concessions to landscape does not prove that the concessions are worthwhile in a wider perspective: just that a planner believes them worth extracting if it can be done at negligible public cost. This quasi-market mechanism requires, once again, justification through independent non-market valuation.

To these provision mechanisms may be added the genuine goodwill and sense of obligation of those who delight in providing pleasure to others, by enhancing, on private land, what is publicly visible: whether by sympathetic design of forest coupes, or placement of hanging baskets on urban streets (Figure 27.4).

This mixed bag of mechanisms supporting good landscape *might* promote appropriate provision, but one cannot assume that it inevitably does so. Landscape economists, through their balanced treatment of various costs and benefits, have a potentially valuable input to the political processes which determine the balance of factors.

Interdisciplinary concourse: conflicts and collaborations in future research

Economists bring a different though – in a widespread misperception – alien perspective to landscape studies. For many commentators, a stark choice exists between the aesthetic and the material; the immaculate and the tarnished; the pure and the compromised; things of the spirit and those of animal survival. These are mistaken dichotomies. It is only *by association* that economists are identified as working for materialism. In fact their forebears include many

philanthropic thinkers whose dearest wish was humankind's betterment. Their habits of thought deal even-handedly with demands of many kinds, along the spectrum from nutritional requirements to gastronomic pleasure to visual appreciation of formal art to aesthetic joy in still-natural landscape. Their perspective and expertise should not be execrated by other landscape professionals.

At the same time economists must not regard themselves as an objective and intellectual elite, standing above the subjective and intuitive disputations of those seeing landscape with aesthetic, psychological, political or sociological perspectives. Questionnaire design, interpretation of decisions to purchase houses or to travel, the influence of local landscape on civil behaviour: these are three obvious areas where the perspectives of other disciplines could enrich economists' deliberations. Profounder explorations may also be made, of what it is that people seek from landscape experience. It is not just aesthetic quality, but conformity with cultural norms, familiar backgrounds to living, visual stability in a world made threatening by too-rapid change, matching of need for diversity and individual predisposition. Economists have the capacity – not as far as I know yet deployed – to impute a value to such segregated aspects of benefit; their insights allow them to speculate constructively about how such values might change through time. But they need the collaboration – the respectful collaboration – of other professionals in identifying and authenticating these components. In such collaborations lies the greatest potential for constructive development of landscape economics in the coming decades.

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