

ECONOMIC ASPECTS OF PUBLIC SPACE IN CITIES

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INTRODUCTION AND PROBLEM

Public space in cities² is an economic good. Its supply requires input of capital and labor, the uses of it are demanded and many parts of it are, relative to the demand, quite scarce, at least in certain periods of the day, of the week, of the month and/or of the year. The various kinds of uses happen often simultaneously and are exerting positive or negative influence to each other. Its size is in many cases limited by certain of its specific functions, especially through the necessity of users' spatial proximity to certain objects and to each other. The spatial density of the users and uses may have technical, economic or social reasons. In other cases its functions would be more easily fulfilled by enlargement, which may be, however, quite limited. In existing parts of cities it is only expandable in exceptional cases in which sacrifices of edifices are feasible and appropriate investment affordable.

Various amounts of working time and capital for construction and maintenance are necessary for its provision, depending upon the degree to which its planning, equipment and formation exceed its natural spatial basis and the immediate functional requirements of neighbouring edifices. In the minimum it is subordinate complementary space beside or between structures. Here it contains as the most important thing merely traffic facilities and facilities for other services to the bordering edifices. But apparently public space has here no more than a shadow existence. In many cases, however, it is used for various functions that much transcend this. Great tasks pose themselves when the public space is to be so conceived that its potential for the creation of goods and services and living quality of the inhabitants can be fully tapped. Many kinds of the use of public space belong to processes of production, others to processes of consumption, leisure and recreation.

In the course of time people change their claims on the use of public space as well as technologies change. It must be adjusted to meet new demands yielded by city development. Hence, a dynamic optimisation of public space as a multi-functional

good is a concern. This usually requires complex processes of adaptation in existing structures. New plans are hardly less complex. In this contribution several production-, investment- and consumption-related aspects of public space are briefly illuminated. This can serve as a help for analyses belonging to real estate and urban economics, social geography, architecture and others.

FUNCTIONAL DEMANDS ON PUBLIC SPACE

Public space as a whole is many things at once, many of its chief functions are extremely different: field of communication, place of action for the composition and cultivation of social relations and for the release of emotions, room for rest and recreation, promotional space for trade and commerce, market place of commercial transactions, necessary but annoying traffic space, operating space for the shady and the criminal, forum for the social integration of marginal groups, public display of the aesthetic, political promotion and agitation etc.

Public space can itself under certain preconditions give impulses for development that would otherwise not at all, or only with great difficulty, come to pass. Under standing public space as a particular kind of "instrument" of city- or neighbourhood development is a challenge that has been often successfully used in recent decades in other parts of cities, though, not seldom a challenge yet to be taken up.

The basic task of open space policy is (a) to enable very different activities partly synergetic and partly in conflict to each other which in general help to create economic, social, emotional and aesthetic values (b) happening in a space to which everybody has simultaneous access controlled best by rules and other means restricting individual behaviour as little as possible and (c) offering the freedom for individuals and firms to act in a more private or public way as the like. This poses the question of the appropriation of those values created with the help of public space and the role of compensation and reward by prices, fees and taxes as instruments of control and financing.

In individual areas of the city, not augmentation but avoiding the *destruction* or values through effects resulting from a distorted use of public space is a central issue, in extreme cases through depletion as an effect of sometimes antisocial or criminal usurpation of public places by aggressive or violent groups.

The elimination of past and the enabling of new functions of parts of the public space is a common topic of city development discussion. New priorities with regard to certain functions and their qualities are to be discussed, harmonised with each other and finally identified. Often the shifting of activities between different parts of the public space is at issue. Thereafter the main concern is the new priorities' proclamation, and technical and administrative realisation. This leads to the question of relevant characteristics of public space and its uses and later on of the instruments for realising the according concepts and plans.

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² Only public space outside of edifices is addressed here.

ECONOMICALLY RELEVANT CHARACTERISTICS OF PUBLIC SPACE AND ITS USE

Public space is a good of a special sort. Both it and its use exhibit several special characteristics. What economically relevant characteristics of public space and its utilisation require attention? The first essential characteristic of this good becomes visible when it is compared with conventional goods. Material goods are, as a rule, produced physical objects whose functional suitability and whose aesthetic appearances allow for special utility-yielding uses on the part of consumers respectively for income generating uses on the part of producers having invested capital in such a good as a means of production. Services are activities of producers that yield immediate utility for consumers, or which are used by producers as inputs in the production process.

Public space as a good differs from both of these in that it appears purely physically as space above, between or underneath physical objects, like sealed or unsealed ground, buildings, diverse accessories as well as trees, bushes, and the like. Public space rests upon natural spatial fundamentals (ground) and, depending upon the density of constructed edifices in the surrounding area, is fenced off by the constructed environment (buildings and other physical structures) on one or more sides, in extreme cases being completely surrounded (physical characteristic).

Public space makes possible that human activities (production, consumption, or other free time activities) can be executed within it. Public space provides space for immediate (i. e. from person to person directly and personally perceptible) individual doing, specifically together and simultaneously with other persons, anonymous and/or familiar, intended or coincidentally present. Thus, public space provides a place for *people's immediate individual doing and thus an object causing utility, from using it in relative public within a collective of other humans who, in immediate spatial proximity, also act, or interact (usage characteristic no. 1)*. The corresponding human behaviour can therefore be subjected to a micro-economic analysis. This allows, for example, the evaluation of spending time in concrete public places for the purpose of leisure and recreation by determining the individual willingness to pay for it.

When the individual leaves his private sphere, he or she can usually approach this collective partially, or at least marginally, via individual route and time selections; he can or must, at the same time, count on hoped for, un-hoped for, even feared immediate encounters with others. Hence, potentially value-generating ("positive") or -destroying ("negative") *neighbourhood effects* are yielded (usage characteristic no. 2).

Persons' immediate, individual doing in public space is, under certain circumstances, functionally homogeneous, and appears in large quantities (e. g. commuters during the morning rush). But usually a temporal and spatial differentiation between peak and off-peak demands for the use of public space can be observed. Or it is heterogeneous (e.g. skinheads encounter hurrying store customers or a class of girls from the country, or two contrary groups of away supporters meet after a football game). This diversity of activity ends raises the

potential for value-generating or -destroying "neighbourhood effects" immense! more precisely described as effects resulting from spatial and temporal coincident of activities.

To what extent are these processes of value-generation or -destruction to be regarded as transactions controlled by market forces? A market controlled transaction basically an exchange of value (e. g. advertisements on billboards, short-ten parking zones, gastronomic services in the sidewalk café, etc.) and counter-value the form of a paid market price. Such an exchange presupposes, first of all, that a good in question be identified indubitably with respect to proprietary law at secondly, that autonomous, self-responsible economic subjects are the legal owner of the objects of transaction (merchandise or service; money).

If legal ownership is not defined beyond a reasonable doubt, or not at all, or if right to disposal, either the owner's or those of a third party (e. g. in the case of release, licence, or the like), are not enforceable, then the aforementioned processes value generation and -destruction necessarily are no market controlled transaction but *external effects* (positive or negative). Here one-sided or mutual interferences different kinds of using the public space, and hence of the agents' utility, can arise and may happen without specific compensatory payments on a decentralised voluntary (market led) basis. The value changes are thus executed outside of a framework of the individual calculation of the *originator* of these effects. This usually termed as positive and negative external effects of production, consumption or other activities.

Notwithstanding, these effects are of great significance for the individual concerned. If the effects are positive, then their externality provokes that they are executed on a smaller scale than the socially optimal level because the originator not fully rewarded for what he has caused. If they are negative, then it is just opposite. It is no trivial task to find out the optimum amount of activities having those effects with respect to society as a whole. And to realise in practice what has been recognised (or at least conjectured) to be the optimum degree of activities is, more difficult, effective means being rare and having often undesired side effects.

External effects immediately between natural persons (positive and negative external effects type A) usually have no (notable) influence upon material goods in property of these agents. Their effects are restricted to changes in the *external value* in the immediate use of public space, or upon the value of *options* for immediate use of public space (*option value* of the use of public space). Nevertheless, these effects can be perceived as quite significant.

Diverse activities in public space provoke or prevent the use of *buildings near* and thus also the gain or utility of the owner or charterer to be had from it, and *versa* (external effects type B). A distinction must be drawn here between neighbourhood effects of activities of certain (groups of) individuals in public space proprietors or users of real estate on the one hand (external effects type B1)³ and

³ E. g., Schwedenplatz in Vienna's first district has developed in recent years, much to the annoyance of the area's inhabitants, into a social and security-related problem milieu. It supposedly migrated from the area around Schottentor to Schwedenplatz. Why? What effects does this have? What character...

on the other hand the effects of buildings' forms as well as the activities carried out within them on the uses of the public space that lies before them. Such effects can be *vivifying* or *detering* (real estate-induced external effects, or external effects type B2). It is a chief task of the public authorities (policy for organising and developing public space) to affect both types of real estate-related neighbourhood effects.

To regulate these external effects is no easy task, nor is it a primary task of *economic* system control. Prerequisites for this are rather necessary that are chiefly to be provided by private parties, such as to respect basic values the freedom and dignity of all, and to be personally responsible for one's own action. Public authorities, however, can in many ways exert an influence on the degree of the bindingness of these values among private parties. Public authorities can strive for this in the context of one of their four types of responsibility for the provision of services, namely their responsibility (a) for setting the general norms of economic behaviour by *legislation*, (b) for achievement as producer of public services⁴, (c) for achievement as *warrantor* of certain standards of goods or services appointed by public hands but produced privately and (d) for achievement as *regulator* only of the competitive framework of private production in specific branches, e. g. telecommunication.

The so-called *internalisation* of (positive and negative) external effects consists in that their benefits are accredited to and their costs imputed to their originators. In many cases this would raise the level of welfare irrespective of who the winners are. This is the question of the so-called *allocational policy* (*allocational efficiency* of the use of input goods), which is to be distinguished from the question of which (groups of) agents shall benefit from what degree of this welfare increase. Here the question of *redistributive policy* (*distributional equity* or *political acceptance* of who uses what amount the output goods) is spoken of. Always to make this distinction clear furthers a better understanding of the tasks and instrumental possibilities and necessities of an efficient open space policy.

PUBLIC SPACE: FOUR TYPES OF GOODS

In order further to describe the economic peculiarities of individual parts of public space as a good, it is useful fundamentally to distinguish between two types of goods according to whether the demanders have a price to pay before their use or not: *individual* or *collective goods*. It pays to keep in mind as a second measure are possible, and what are required? This questions can only be answered by a detailed multi-study.

⁴ The Viennese public transportation company sets a risky example of how to deal with such responsibility, an example that grossly misleads the public with its advertising slogan "The City Belongs to You" (untranslatable posters in 2006 and 2007).

Apparently to the contrary, but similarly misleading is the political slogan that covers innumerable house walls in Caracas, the capital of Venezuela: ["This Land Belongs to Us All"] (Stadtportrait Caracas, Austrian Broadcasting Corporation 01, 18.08.2007). While the latter about that collectivism which is a precursor of totalitarianism, the former suggests an unlimited individualism almost in the sense of Max Stirner: "Eigener von Allen" [proprietor of everything]. Both slogans come from a quite superficial populism that has nothing to do with correct proprietary law, nor with rights to disposal, in a constitutional republic.

distinguishing characteristic whether there is *rivalry* between the users of a good or not. With an individual good there is *per definitionem* user rivalry: If it is used by a demander, then it is not available to others.

With *collective goods*, contrarily, different manifestations of the second characteristic are possible. If a collective good is offered to a great extent relative demand (or number of demanders), user rivalry does not occur. This is usually the case with *collective goods* whose supply is not divisible, and with which it is immaterial how many demanders use them. No one's use is interfered with, even if another user is added. From the perspective of the supplier, then, the costs of providing the good to other users is nil. In this case, it would be harmful for people's welfare to charge a price, because some of them wouldn't consume the good anymore and, consequently, would lose the benefit from it without saving costs of producing it.

If no price is charged for the use of a good and if there is no user rivalry, a *pure collective good* can be spoken of. Large portions of public space in a given city are *pure collective goods*, e. g. sidewalks or streets in outer districts with only low demand for its use.

However, there are also two other types of *collective goods*. On the one hand then are those for which, in spite of non-rivalry, each user must pay a price. These are called *club collective goods* (based upon the circumstance that the demanders form a sort of club of the use-privileged through the paying of a price). A less frequent museum or cable television are examples of this. Even the offered services of the Viennese public transportation system at off-peak times belong to this category of goods. (They are also called toll goods, which, however, refers to the area of street to which they are by no means restricted).

On the other hand, there are *collective goods* for which user rivalry is given, and for whose use no price is charged. Such goods is called *common good* ("Allmendegut"). The term comes from the Middle High German term originating in the High Middle Ages "al(ge)meinde" (i. e. "almene" or "Gemeinde[flur]"). (The term also used for this, "quasi-collective good" is not illuminating, as neither the superlatives for club collective and common good, "mixed goods"). Often user rivalry exists for the very reason that there is no price barrier, and the good can hence also be used by users for whom it provides only little utility.

Accordingly, the following fourfold classification of goods has been used for decades to provide an overview:

Table 1 - Fourfold classification of goods

	Non-rivalry	User rivalry
Price to pay	Individual goods	Club collective goods
No price to pay	Common goods (quasi-collective goods)	Pure collective goods

Source: H. Berg, D. Cassel, K.-H. Harwig, 2003, p. 198 (slightly modified)

Instead of the pair of terms, individual and collective goods, though, literature or public finance often uses the alternative terms private and public goods. The tradi-

thus cited is quite different from the trait "exclusion-" or "non-exclusion of demanders unwilling to pay" used above.

First of all, private and public are often associated with the legal status of the proprietor of the firm offering the good: does the good offered belong to a private or a public owner? This, however, is immaterial for the classification of goods depicted here, even if it is essential for other aspects.

The parking sites in short-term parking zones for which a price has to be paid are individual goods, even though the proprietor may be a public authority, i. e. the municipality. It is important to realise that the level of welfare attainable from a parking site depends primarily on *how access is organised* in combination with the *degree of scarcity* of parking sites. If, on the one hand (say at the periphery) there is no user rivalry the asking for a price (making park sites to a club collective good) would *lower* the level of welfare in the city because parking which generates utility (measured in money terms) lower than the price but higher than nil would be abandoned without lowering the costs of supplying parking sites at an amount previously fixed. Free access there would *increase* the level of welfare (provided there are no negative external costs of using the additional cars in the city) because utility from additional parking is realised without an increase in costs. This implies a net welfare gain. If, on the other hand (say in the centre of the city), there is relevant user rivalry (i. e. scarcity of the good), the asking for a price (making park sites to individual goods) would *increase* the level of welfare in the city because parking sites would be used by those appreciating them most. The important issue is that a price (or fee) leads each individual demander to reflect upon whether the expected personal utility from the utilisation of the good is greater than the price (which to a greater or lesser degree reflects the costs of provision) *which is essential if there is scarcity of the good*. If there is no scarcity the price would again exclude those from using the parking sites whose personal utility from parking is lower than the price but this would not lower the costs of supplying the sites. This implies a net welfare loss. Even public legal entities are today required by law to bring about user decisions based not only on utility but also on price by levying user fees (even if these do not necessarily cover all costs) on their own responsibility.

Secondly, private/public is a fundamental legal category relevant to observation and control of citizens by the state. For citizens it is important that much of what they do in public only be subjected to *state control* (which often never becomes public) under strict conditions. This complex requires the fastidious illumination of the criterion "private vs. public", without its being diluted with the superfluous ambiguity of homonymous criteria in the classification of goods.

Thirdly, the notion "public" is necessary to express an important characteristic of most activities being carried out in the public space, namely that they will be *noticed* by many other people. To take notice of something in the public space is particularly important for sales promotion and political propaganda but also for individual profiling in social networks and at public places belonging to 'vanity fairs'. This is different from carrying out activities *collectively*, i. e. carried out by many individuals at the same time.

Usually no price is charged for the demand for common goods, because the cost exclusion of users who are unwilling to pay is prohibitively high per user or because it is simply not accepted by the user community. Consequences of this are yet more overuse (overload) of the capacity. An example of this is the sidewalk of a shopping mall during the pre-Christmas shopping frenzy or the traffic lanes of a central street during rush hour. In the former case, overuse cannot be reduced by the introduction of a user fee for technical reasons (the prices would be practically infinitely high), the latter case, the introduction of a price barrier would be both technically and economically feasible, but it is considered neither politically opportune, nor (y) appropriate with respect to traffic policy. In such cases other instruments of control than user tolls are put to use, e. g. the enforcement of a waiting list, user permit other means of rationing. Otherwise, the appreciation of the good wanes, or even disappears altogether.

Notably, each part of the seeming homogeneous public space belongs always to one of these four categories of good types. This inner differentiation becomes recognisable only through attention to the two most important economic categories at all: the degree of *scarcity* of the good desired (resulting in different degrees negative effect of the approach of a new user to the users already present) on the one hand, and the type of *excludability* of this good (individual or collective).

Temporary Non-Legitimate Exclusive Use of Parts of Public Space

The possibility is to be taken into account that a place belonging to the collective used space of the city be used by a group of users in such a way that other users are *displaced or endangered*. Such sub-socialised uses of parts of public space must be prevented, e.g. through guarding and sanctioning, if collective use is to go on undisturbed.

CONTROL INSTRUMENTS

The price is the most important indicator of the degree of scarcity of a good and, at the same time, source of sales proceeds. Furthermore, it is an information carrier capable of providing economic incentives. It constitutes the foundation for individual price-cost-calculations of suppliers of goods and price-utility-calculations of demanders. The price is the central instrument of control for the supply of and demand for **individual goods** as a part of public space, especially (a) rented spaces for gastronomic and other amusement industries' uses of public space (e. g. street cafés), (b) spaces trade activities and other services, (c) advertising spaces (commercial or old advertising), (d) zones for parking management ("scarcity pricing") and (e) streets with tolls that depend upon the degree of negative external effects of individual motor traffic carried out collectively at the same time ("congestion pricing").

For the provision of and demand for **collective goods** other instruments must be implemented by the authorities in order to solve the problem of scarcity. The most important instruments of control alternative to a missing market price are:

- Placing legal norms that justify permits or legitimise claims (e. g. legal planning regulations),
- Public fees (e. g. for the use of public ground, commercial taxes),
- Contractual agreements between the public authorities and private parties,

- Prohibitions,
- Enforcement of compulsory licences for activities (e. g. exclusive temporary use of part of the public space),
- Mandates (e. g. construction regulations, compulsory preservation of the facades of buildings under landmark protection),
- Collection of information by public authorities,
- Distribution of information by public authorities,
- Setting incentives for negotiations with the aim of contractual agreements between private parties (without direct influence by the public authorities),
- Coordination of different instruments by the public authorities.

QUESTIONS ON THE WAY TO EFFICIENT PUBLIC SPACE POLICY

- a. In what areas of public space are currently the greatest deficiencies?
- b. In which areas of public space (functional subcategories, areas) are the greatest long-term changes (within a perspective of 25 years) to be expected?
- c. In which subcategories of public space is the utilisation of capacity, or its overutilisation currently / in the no-measure-case in 25 years expected to be / the greatest? Where is there currently / in the no-measure-case in 25 years expected to be / the greatest need for quantitative expansion of capacities of certain categories of public space?
- d. What kinds of the use of public space should be expanded (and where), what kinds of use can be restricted or substituted (and where)?
- e. In what consist the most important opportunities for qualitative improvement of public space?
- f. In which parts of public space is the character of common goods given? In which is the overuse the greatest disturbance for the city's inhabitants / for the economy? Through which other instruments than a price can the overuse be reduced there? For which of these common goods are investments in capacity expansion worthy of consideration? What kinds of expanding the capacity of public space are technically feasible? What are the costs? What are the expected benefit-cost-ratios?
- g. Are there parts of public space with capacity overuse for which the access of demanders can be regulated by the introduction of a price, if capacity expansion is impossible or undesirable?
- h. For which parts of public space with fluctuating character as club collective- and common goods is the degree of overuse sometimes so diverse that a price differentiation between peak and off-peak periods is worthy of consideration?
- i. For which parts of public space with fluctuating character as club collective- and common goods is the degree of overuse regionally so diverse that a price differentiation between peak and off-peak zones is worthy of consideration?
- j. Wherein would the economic advantages and disadvantages of such price differentiations consist? What legal regulations or political ideas (goals) conflict with such price differentiations?
- k. What intermittently non-legitimate exclusive uses of parts of public space exist, and with what instruments can they be returned to a state of normal collective use?

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