

THE ORGANIZATION OF GOVERNMENT IN METROPOLITAN AREAS: A THEORETICAL INQUIRY

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Allusions to the "problem of metropolitan government" are often made in characterizing the difficulties supposed to arise because a metropolitan region is a legal non-entity. From this point of view, the people of a metropolitan region have no general instrumentality of government available to deal directly with the range of problems which they share in common. Rather there is a multiplicity of federal and state governmental agencies, counties, cities, and special districts that govern within a metropolitan region.

This view assumes that the multiplicity of political units in a metropolitan area is essentially a pathological phenomenon. The diagnosis asserts that there are too many governments and not enough government. The symptoms are described as "duplication of functions" and "overlapping jurisdictions." Autonomous units of government, acting in their own behalf, are considered incapable of resolving the diverse problems of the wider metropolitan community. The political topography of the metropolis is called a "crazy-quilt pattern" and its organization is said to be an "organized chaos." The prescription is reorganization into larger units—to provide "a general metropolitan framework" for gathering up the various functions of government. A political system with a single dominant center for making decisions is viewed as the ideal model for the organization of metropolitan government. "Gargantua" is one name for it.¹

The assumption that each unit of local government acts independently without regard for other public interests in the metropolitan community has only a limited validity. The traditional pattern of government in a metropolitan area with its multiplicity of political jurisdictions may more appropriately be conceived as a "polycentric political system."² "Polycentric" connotes many centers of decision-making which are formally independent of each other. Whether they actually function independently, or instead constitute an interdependent system of relations, is an empirical question in particular cases. To the extent that they take each other into account in competitive relationships, enter into various contractual and cooperative undertakings or have recourse to central mechanisms to resolve conflicts, the various political jurisdictions in a metropolitan area may function in a coherent manner with consistent and predictable patterns of interacting behavior. To the extent that this is so, they may be said to function as a "system."

The study of government in metropolitan areas conceived as a polycentric political system should precede any judgment that it is pathological. Both the structure and the behavior of the system need analysis before any reasonable estimate can be made of its performance in dealing with the various public problems arising in a metropolitan community. Better analysis of how a metropolitan area is

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¹ The term is taken from Robert C. Wood, "The New Metropolis: Green Belts, Grass Roots or Gargantua," this REVIEW, Vol. 52 (March, 1958), pp. 108-122. Wood defines gargantua as "the invention of a single metropolitan government or at least the establishment of a regional

superstructure which points in that direction." We do not argue the case for big units *vs.* small units as Wood does in his discussion of gargantua *vs.* grass roots. Rather, we argue that various scales of organization may be appropriate for different public services in a metropolitan area.

² We use this term for want of a better one. An alternative term might be "multinucleated political system." We do not use "pluralism" because it has been preempted as a broader term referring to society generally and not to a political system in particular.

Polycentric political systems are not limited to the field of metropolitan government. The concept is equally applicable to regional administration of water resources, regional administration of international affairs, and to a variety of other situations.

governed can lead in turn to more appropriate measures of reorganization and reform.³

This paper is an initial effort to explore some of the potentialities of a polycentric political system in providing for the government of metropolitan areas. We view the "business" of governments in metropolitan areas as providing "public goods and services." The first section of the paper will examine the special character of these public goods and services.

We shall then turn to an analysis of the problems of scale in constituting the public organizations which provide them. This discussion seems relevant to an analysis of any political structure in a metropolitan area, and equally applicable to gargantua or to a polycentric political system. A brief reference will then be made to the problems of public organization in gargantua. Finally, patterns of organization in a polycentric political system will be analyzed with particular regard to the experience of the Los Angeles metropolitan area.

I. THE NATURE OF PUBLIC GOODS AND SERVICES

The conditions which give rise to public rather than private provision of certain goods and services are examined in this section. Three views of these conditions can usefully be distinguished: (1) public goods arising from efforts to control indirect consequences, externalities or spillover effects; (2) public goods provided because some goods and services cannot be packaged; and (3) public goods consisting of the maintenance of preferred states of community affairs.

The Control of Indirect Consequences as

³ By analogy, the formal units of government in a metropolitan area might be viewed as organizations similar to individual firms in an industry. Individual firms may constitute the basic legal entities in an industry, but their conduct in relation to one another may be conceived as having a particular structure and behavior as an industry. Collaboration among the separate units of local government may be such that their activities supplement or complement each other, as in the automobile industry's patent pool. Competition among them may produce desirable self-regulating tendencies similar in effect to the "invisible hand" of the market. Collaboration and competition among governmental units may also, of course, have detrimental effects, and require some form of central decision-making to consider the interests of the area as a whole. For a comprehensive review of the theory of industrial organization see Joe S. Bain, *Industrial Organization* (New York, 1959).

Public Goods. The basic criterion traditionally offered for distinguishing between public and private affairs was formulated some years ago by John Dewey: "... the line between private and public is to be drawn on the basis of the extent and scope of the consequences of acts which are so important as to need control whether by inhibition or by promotion."⁴ The indirect consequences of a transaction, which affect others than those directly concerned, can also be described as "externalities" or "spillover effects." Those indirectly affected are viewed as being external to the immediate transaction. Some externalities are of a favorable or beneficial nature; others are adverse or detrimental.

Favorable externalities can frequently be recaptured by the economic unit that creates them. The builder of a large supermarket, for example, may create externalities for the location of a nearby drugstore. If the builder of the supermarket also controls the adjacent land, he can capture the externalities accruing to the drugstore through higher rents or by common ownership of the two enterprises. From the builder's point of view he has "internalized"⁵ the externalities.⁶

Where favorable externalities cannot be internalized by private parties, a sufficient mechanism to proceed may be lacking, and public agencies may be called upon to provide a good or service. A privately owned park, even with an admission charge, may not be able to cover costs. If the externalities in the form of the dollar value of a better neighborhood could be captured, such a park might be profitable.

Unfavorable spillovers or externalities are another matter. The management of a refinery which belches out smoke has little incentive to install costly equipment to eliminate the smoke. Control or internalization of diseconomies usually falls upon public agencies. A function of government, then, is to internalize the externalities—positive and negative—for

⁴ John Dewey, *The Public and Its Problems* (New York, 1927), p. 15.


⁵ John V. Krutilla and Otto Eckstein, *Multiple Purpose River Development: Studies in Applied Economic Analysis* (Baltimore: The Johns Hopkins Press, 1958), p. 69 ff. Krutilla and Eckstein develop the concept of "internalizing" external economies as a criterion for determining scale of a management unit in the administration of water resources.

⁶ In practice, shopping centers may also give favorable rents to large supermarkets as "traffic generators." This recognizes the externalities they create.



those goods which the producers and consumers are unable or unwilling to internalize for themselves, and this process of internalization is identified with the "public goods."

Not all public goods are of the same scale. Scale implies both the geographic domain and the intensity or weight of the externality. A playground creates externalities which are neighborhoodwide in scope, while national defense activities benefit a whole nation—and affect many outside it. Thus, for each public good there corresponds some "public." As John Dewey has formulated the definition, "the public consists of all those who are affected by the indirect consequences of transactions to such an extent that it is deemed necessary to have those consequences systematically provided for."⁷ The concept of the public is important to later considerations in determining the criteria of scale appropriate to public organizations.

 *Packageability.* Public goods and services and, in turn, the functions of governments in metropolitan areas can be distinguished from private goods by a criterion commonly used by economists. A private good must be "packageable", i.e., susceptible of being differentiated as a commodity or service before it can be readily purchased and sold in the private market. Those who do not pay for a private good can then be excluded from enjoying its benefits. This notion is formulated by economists as the "exclusion principle."⁸ In contrast with Dewey's formulation of the nature of public goods, the exclusion principle focuses attention on the practicability of denying benefits. National defense, for example, will not be provided by private firms because, among other reasons, the citizen who did not pay would still enjoy the benefits. Furthermore, if citizens understate their preferences for defense—as by failing to build bomb shelters—on the assumption that it will be paid for by others, the result will be an inadequate provision for defense.


Most municipal public goods such as fire and police protection, or the abatement of air pollution, are not easily packageable, either; they cannot be sold only to those individuals who are willing to pay.⁹ This suggests two problems for public organizations.

First, private goods, because they are easily packageable, are readily subject to measure-

ment and quantification. Public goods, by contrast, are generally not so measurable. If more police are added to the force, output will presumably increase. But how much, is a question without an exact answer. Moreover, when factors of production can be quantified in measurable units of output, the production process can be subject to more rigorous controls. A more rational pricing policy is also possible. With quantifiable data about both input and output, any production process can be analyzed and the performance of different modes of production can be compared for their efficiency. Rational control over the production and provision of public goods and services therefore depends, among other things, upon the development of effective standards of measurement; this gets into the allocation of joint costs as well as of joint benefits.

A second, closely related, problem arises in the assessment of costs upon persons who can benefit without paying directly for the good. Only public agencies with their taxing powers can seek to apportion the costs of public goods among the various beneficiaries. The scale criterion of political representation, discussed below, takes account of how this difference between private and public goods affects the organization of public agencies.

Public Goods as the Maintenance of Preferred States of Community Affairs. The exclusion principle provides a criterion for distinguishing most public goods from private, but it does not, as commonly stated, clarify or specify the conditions which determine the patterns of organization in the public service economy. However, by viewing public goods as "the maintenance of preferred states of community affairs," we may introduce a modified concept of packageability, one that is amenable to some measurement and quantification, and that therefore may be more helpful in clarifying criteria for the organization of public services in metropolitan areas. The modification consists in extending the exclusion principle from an individual consumer to all the inhabitants of an area within designated boundaries.

 The concept can be illustrated on a small scale in the operation of a household heating system which uses conveniently measurable units of inputs. However, the household temperature it maintains is a joint benefit to the family and a marginal change in family size will have no material effect upon the costs of maintaining this public good for the family. Yet since the family good derived from it is effectively confined to the household, outsiders are excluded and there are no substantial spillover effects or externalities for them. The

⁷ John Dewey, *op. cit.*, pp. 15–16.

⁸ Richard Musgrave, *The Theory of Public Finance* (New York, 1959), esp. ch. 1.

⁹ Charles M. Tiebout, "A Pure Theory of Local Expenditures," *Journal of Political Economy*, Vol. 64 (October, 1956), pp. 416–24.

family good is not a public good in the larger community. So household heating is treated as a private good in most communities. Similarly, a public good on a neighborhood or community scale can be viewed as "packaged" within appropriate boundaries so that others outside the boundaries may be excluded from its use. In this way, in some communities adjacent to New York City, for example, the use of parks and beaches is restricted to local residents whose taxes presumably support these recreation facilities.

Wherever this is practicable, the analogy of a household as a "package" for an atmosphere with a controlled temperature may be generalized and applied to the maintenance of a desired state of affairs within particular local government boundaries. Just as the temperature and the cost of heating can be measured, so it may be possible to develop direct or closely approximate measures both of a given state of community affairs resulting from the production of many public goods and services and also of the costs of furnishing them. An air pollution abatement program, for example, may be measured by an index of quantities of various pollutants found in air samples. Given costs of abatement, some preferred tolerance levels may then be specified.

Similarly, any community has a "fire loss potential," defined as the losses to be expected if no provision for fire protection is made. The difference between this potential and the actual fire losses is then the output or "production" of the fire protection service, and the net fire loss can be termed the "state of affairs" in that community with respect to fire losses. Fire protection, of course, does not eliminate but only reduces fire losses. Any effort at complete elimination would probably be so expensive that the costs would greatly exceed the benefits. The "preferred" state of affairs is some optimal level of performance where benefits exceed costs. The provision of a community fire department as a public good can thus be viewed as the maintenance of a preferred state of affairs in fire protection for that community, and the benefits can ordinarily be confined to its residents.

Police protection can be regarded in the same way. The traffic patrol, for example, operates to optimize the flow of traffic while reducing the losses to property and injury to persons. Even if perfect control were possible, the costs would be so great that the preferred state of affairs in police protection would be something less.

It must be acknowledged, however, that in

the case of police protection and many other public services, in contrast, say, with garbage collection or air pollution abatement, the performance level or net payoff is much more difficult to measure and to quantify. Proximate measures such as the gross number of arrests for different types of offenses per month or per 10,000 population annually have little meaning unless considered in relation to various conditions existing in the community. Decision-makers consequently may be forced, for want of better measurements, to assume that the preferred state of affairs is defined as a balance between the demands for public services and the complaints from taxpayers.

While the output of a public good may not be packaged this does not of course mean that its material inputs cannot be. The preferred state of affairs produced by mosquito spraying is enjoyed by the whole community, while spraying supplies and equipment are readily packageable. Mosquito spraying, that is to say, can be produced by a private vendor under contract to a public agency.

This illustrates an important point, that the *production* of goods and services needs to be distinguished from their *provision* at public expense. Government provision need not involve public production—indeed, at some stage in the sequence from raw materials to finished products virtually every public good, not already a natural resource, is of private origin. So, a public agency by contractual arrangements with private firms—or with other public agencies—can provide the local community with public services without going into the business of producing them itself.

When the desired performance level or the net payoff can be specified by a measurable index, an element of rigor can be introduced to assure substantial production controls in providing a public good, even where the production itself is the function of a separate agency or entrepreneur. The producer can be held accountable for maintaining affairs within certain tolerances, and the agency responsible for providing the service can ascertain the adequacy of performance. Advances in the measurement and quantification of performance levels in the public service economy will consequently permit much greater flexibility in the patterns of organization for the production and provision of public goods and services.

If Dewey's definition is extended to include "events" generally rather than being limited to "acts" or to "transactions" among actors, his formulation is consistent with the conception of public goods as the maintenance of preferred

states of affairs.¹⁰ Public control seeks to internalize those events, viewed as consequences which impinge directly and indirectly upon diverse elements in a community, in such a way that adverse consequences will be inhibited and favorable consequences will be promoted.

In the final analysis, distinctions between private and public goods cannot be as sharply made in the world of human experience as this analysis might imply. In part, the technical character of specific goods influences the degree of differentiation or isolability that characterizes their distribution and utilization. Vegetables and landscapes cannot be handled in the same way. Many private goods have spillover effects such that other members of the community bear some portion of the benefits and losses, whatever the degree of public regulation. In every large community most people philosophically accept some of the costs of bigness—air pollution, traffic congestion, noise, and a variety of inconveniences—on the assumption that these are inevitable concomitants of the benefits that derive from living in a metropolitan area.

II. SCALE PROBLEMS IN PUBLIC ORGANIZATION

Viewing the boundaries of a local unit of government as the “package” in which its public goods are provided,¹¹ so that those outside the boundaries are excluded from their use, we may say that where a public good is adequately packaged within appropriate boundaries, it has been successfully internalized. Where externalities spill over upon neighboring communities, the public good has not been fully internalized.

In designing the appropriate “package” for the production and provision of public goods several criteria should be considered. Among these are control, efficiency, political representation and self-determination. Needless to say, they are sometimes in conflict.

The Criterion of Control. The first standard applicable to the scale of public organization for the production of public services requires

¹⁰ *Op. cit.*, pp. 4–5. Dewey’s use of the terms “acts” and “transactions” implies that only social behavior is contemplated in public action. But physical events, e.g., floods, may also become objects of public control.

¹¹ See the discussion of “district boundaries and the incidence of benefits” in Stephen C. Smith, “Problems in the Use of the Public District for Ground Water Management,” *Land Economics*, Vol. 32 (August, 1956), pp. 259–269.

that the boundary conditions¹² of a political jurisdiction include the relevant set of events to be controlled. Events are not uniformly distributed in space; rather, they occur as sets under conditions such that boundaries can be defined with more or less precision. Rivers flow in watershed basins, for example. Patterns of social interaction are also differentially distributed in space and boundaries can generally be defined for them too. In other words, all phenomena can be described in relation to specifiable boundary conditions and the criterion of control requires that these be taken into account in determining the scale of a public organization. Otherwise the public agency is disabled in regulating a set of events in order to realize some preferred state of affairs. If the boundaries cannot be suitably adjusted, the likely result is a transfer of the governmental function to a unit scaled to meet the criterion of control more adequately.

Pasadena, for example, is subject to severe smog attacks, but the city’s boundary conditions do not cover an area sufficient to assure effective control of the appropriate meteorological and social space that would include the essential variables constituting the “smogisphere” of Southern California. None of the separate cities of southern California, in fact, can encompass the problem. Instead, county air pollution control districts were organized for the Los Angeles metropolitan community. The failure even of these counties to meet adequately the criterion of effective control has led the California state government to assume an increasingly important role in smog control.

The Criterion of Efficiency. The most efficient solution would require the modification of boundary conditions so as to assure a producer of public goods and services the most favorable economy of scale, as well as effective control. Two streams with different hydrologic characteristics, for example, might be effectively controlled separately; but, by being managed together, the potentialities of one may complement the other. This has certainly been the case in Los Angeles’ joint management of the Owens River and the Los Angeles River by making one the tributary of the other through the 300-mile Los Angeles Aqueduct, skirting the Sierras. Joint management permits a greater

¹² The boundary conditions of a local unit of government are not limited to the legally determined physical boundaries but should include reference to extra-territorial powers, joint powers, etc.

joint payoff in recreational facilities and water and power production.

Other factors such as technological developments and the skill or proficiency of a labor force can bear upon efficiency as a criterion of the scale of organization needed. If machinery for painting center stripes on city streets can only be efficiently used on a large scale, special arrangements may be required to enable several small cities to act jointly in providing such a service. The same may be true in the utilization of uncommon and expensive professional skills; and it accounts for the fact that mental institutions and prisons are apt to be state rather than municipal undertakings.

The Criterion of Political Representation. Another criterion for the scale of public organization requires the inclusion of the appropriate political interests within its decision-making arrangements. The direct participants in a transaction are apt to negotiate only their own interests, leaving the indirect consequences or spillover effects to impinge upon others. Third-party interests may be ignored. Public organizations seek to take account of third-party effects by internalizing the various interests in rendering public decisions and in controlling public affairs. Specification of the boundary or scale conditions of any political jurisdiction is important in determining the set of interests which are to be internalized within the organization.

In considering the political design of a public organization three elements of scale require consideration. The *scale of formal organization* indicates the size of the governmental unit which provides a public good. The *public*, as noted above, consists of those who are affected by its provision. The *political community* can be defined as those who are actually taken into account in deciding whether and how to provide it. Those who are affected by such a decision may be different from those who influence its making. An ideal solution, assuming criteria of responsibility and accountability consonant with democratic theory, would require that these three boundaries be coterminous. Where in fact the boundary conditions differ, scale problems arise.

If both the direct and indirect beneficiaries of a public transaction are included within the domain of a public organization, the means are in principle available for assessment of the cost of public control upon the beneficiaries. Except where a re-distribution of income is sought as a matter of public policy, an efficient allocation of economic resources is assured by the capacity to charge the costs of providing public goods

and services to the beneficiaries.¹³

The public implicated in different sets of transactions varies with each set: the relevant public for one set is confined to a neighborhood, while for another the relevant public may be most of the population of the globe. Between these two extremes are a vast number of potential scales of public organizations. Given certain levels of information, technology, communication, and certain patterns of identification, a scheme might be imagined which had an appropriate scale of public organization for each different public good. As these conditions and circumstances change, the scale of the public for any set of transactions should be altered correspondingly. If it is not, what then?

Where the political community does not contain the whole public, some interests may be disregarded. A city, for instance, may decide to discharge its sewage below its boundaries, and the affected public there may have no voice in the decision. On the other hand, where the political community contains the whole public and, in addition, people unaffected by a transaction, the unaffected are given a voice when none may be desired. Capricious actions can result. The total political community in a city of three million population may not be an appropriate decision-making mechanism in planning a local playground.

Nevertheless, the statement that a government is "too large (or too small) to deal with a problem" often overlooks the possibility that the scale of the public and the political community need not coincide with that of the formal boundaries of a public organization. Informal arrangements between public organizations may create a political community large enough to deal with any particular public's problem. Similarly, a public organization may also be able to constitute political communities within its boundaries to deal with problems which affect only a subset of the population. It would be a mistake to conclude that public organizations are of an inappropriate size until the informal mechanisms, which might permit larger or smaller political communities, are investigated.

Seen in relation to the political community, the scale of formal public organizations merely specifies the formal boundaries. Since the feasible number of governmental units is

¹³ This factor might be separately characterized as a criterion of equitable distribution of costs and benefits, but we have chosen to consider it here in the context of political representation.

limited when compared to the number of public goods to be provided, a one-to-one mapping of the public, the political community and the formal public organization is impracticable. Moreover, the relevant public changes. Even if, at one time, formal public organizations, political communities and the publics were coterminous, over time they would become dislocated. As a result, public organizations may (1) reconstitute themselves, (2) voluntarily cooperate, or, failing cooperation, (3) turn to other levels of government in a quest for an appropriate fit among the interests affecting and affected by public transactions.

The Criterion of Local Self-Determination. The criteria of effective control, of efficiency and of the inclusion of appropriate political interests, can be formulated on general theoretical grounds, but their application in any political system depends upon the particular institutions empowered to decide questions of scale. The conditions attending the organization of local governments in the United States usually require that these criteria be controlled by the decisions of the citizenry in the local community, *i.e.*, subordinated to considerations of self-determination.

The patterns of local self-determination manifest in incorporation proceedings usually require a petition of local citizens to institute incorporation proceedings and an affirmative vote of the local electorate to approve. Commitments to local consent and local control may also involve substantial home rule in determining which interests of the community its local officials will attend to and how these officials will be organized and held responsible for their discharge of public functions.

Local self-government of municipal affairs assumes that public goods can be successfully internalized. The purely "municipal" affairs of a local jurisdiction, presumably, do not create problems for other political communities. Where internalization is not possible and where control consequently, cannot be maintained, the local unit of government becomes another "interest" group in quest of public goods or potential public goods that spill over upon others beyond its borders.

The choice of local public services implicit in any system of self-government presumes that substantial variety will exist in patterns of public organization and in the public goods provided among the different local communities in a metropolis. Patterns of local autonomy and home rule constitute substantial commitments to a polycentric system.

III. PUBLIC ORGANIZATION IN GARGANTUA

Since all patterns of organization are less than perfectly efficient, responsive or representative, some consideration should be given to the problem of organizing for different types of public services in gargantua, in contrast to the problems in a polycentric political system. This brief discussion will only touch on theoretical considerations involved in organizing diverse public services in the big system.

Gargantua unquestionably provides an appropriate scale of organization for many huge public services. The provision of harbor and airport facilities, mass transit, sanitary facilities and imported water supplies may be most appropriately organized in gargantua. By definition, gargantua should be best able to deal with metropolitan-wide problems at the metropolitan level.

However, gargantua with its single dominant center of decision-making, is apt to become a victim of the complexity of its own hierarchical or bureaucratic structure. Its complex channels of communication may make its administration unresponsive to many of the more localized public interests in the community. The costs of maintaining control in gargantua's public service may be so great that its production of public goods becomes grossly inefficient.

Gargantua, as a result, may become insensitive and clumsy in meeting the demands of local citizens for the public goods required in their daily life. Two to three years may be required to secure street or sidewalk improvements, for example, even where local residents bear the cost of the improvement. Modifications in traffic control at a local intersection may take an unconscionable amount of time. Some decision-makers will be more successful in pursuing their interests than others. The lack of effective organization for these others may result in policies with highly predictable biases. Bureaucratic unresponsiveness in gargantua may produce frustration and cynicism on the part of the local citizen who finds no point of access for remedying local problems of a public character. Municipal reform may become simply a matter of "throwing the rascals out." The citizen may not have access to sufficient information to render an informed judgment at the polls. Lack of effective communication in the large public organization may indeed lead to the eclipse of the public and to the blight of the community.

The problem of gargantua, then, is to recognize the variety of smaller sets of publics that may exist within its boundaries. Many of the

interests of smaller publics might be properly negotiated within the confines of a smaller political community without requiring the attention of centralized decision-makers concerned with the big system. This task of recognizing the smaller publics is a problem of "field" or "area" organization. The persistence of bureaucratic unresponsiveness in the big system, however, indicates it is not easily resolved. Large-scale, metropolitan-wide organization is unquestionably appropriate for a limited number of public services, but it is not the most appropriate scale of organization for the provision of all public services required in a metropolis.

IV. PUBLIC ORGANIZATION IN A POLYCENTRIC POLITICAL SYSTEM

No *a priori* judgment can be made about the adequacy of a polycentric system of government as against the single jurisdiction. The multiplicity of interests in various public goods sought by people in a metropolitan region can only be handled in the context of many different levels of organization. The polycentric system is confronted with the problem of realizing the needs of wider community interests or publics beyond the functional or territorial bounds of each of the formal entities within the broader metropolitan region. The single jurisdiction, in turn, confronts the problem of recognizing and organizing the various subsidiary sets of interests within the big system. It is doubtful that sub-optimization in gargantua is any easier to accomplish than supra-optimization in a polycentric political system.

The performance of a polycentric political system can only be understood and evaluated by reference to the patterns of cooperation, competition and conflict that may exist among its various units. Cooperative arrangements pose no difficulty when joint activities produce a greater return to all parties concerned, if the appropriate set of public interests are adequately represented among the negotiators. A contractual arrangement will suffice. As a result, this discussion of the behavior of a polycentric political system will focus upon the more difficult problems of competition, of conflict and its resolution. If a polycentric political system can resolve conflict and maintain competition within appropriate bounds it can be a viable arrangement for dealing with a variety of public problems in a metropolitan area.

*Competition.*¹⁴ Where the provision of public

goods and services has been successfully internalized within a public jurisdiction, there are no substantial spill-over effects, by definition. In such circumstances there need be no detrimental consequences from competition in the municipal services economy. Patterns of competition among producers of public services in a metropolitan area, just as among firms in the market, may produce substantial benefits by inducing self-regulating tendencies with pressure for the more efficient solution in the operation of the whole system.

Variety in service levels among various independent local government agencies within a larger metropolitan community may give rise to a quasi-market choice for local residents in permitting them to select the particular community in the metropolitan area that most closely approximates the public service levels they desire. Public service agencies then may be forced to compete over the service levels offered in relation to the taxes charged. Such competition, however, would only be appropriate for those public goods which are adequately internalized within the boundaries of a given political jurisdiction.

Conditions amenable to competition normally exist among local units of government where a number of units are located in close proximity to each other and where information about each other's performance is publicly available. Information can lead to comparison and comparison can lead to pressure for performances to approximate the operations of the more efficient units. Where more than one public jurisdiction is capable of rendering service in a single area, further competitive tendencies may develop. Contractual arrangements among public jurisdictions for the provision of specific public services have long provided a competitive alternative to each jurisdiction which might otherwise produce its own services.

The separation of the *provision* of public goods and services from their *production* opens up the greatest possibility of redefining economic functions in a public service economy. Public control can be maintained in relation to performance criteria in the provision of services, while allowing an increasing amount of competition to develop among the agencies that produce them.

With the incorporation of the City of Lake-

ence to competitive forces within a unit of government. Competition among pressure groups, factions and political parties is a fundamental feature of the democratic political process, but is not within the primary focus of this paper and its concern with the polycentric system.

¹⁴ This analysis is confined to competition between units of government and makes no refer-

wood in 1954, Los Angeles County, for example, expanded its system of contracting for the production of municipal services to a point approaching quasi-market conditions. Newly incorporated cities, operating under the so-called Lakewood Plan, contract with the county or other appropriate agencies to produce the general range of municipal services needed in the local community.

Each city contracts for municipal services for the city as a whole. Services beyond the general level of performance by county administration in unincorporated areas are subject to negotiation for most service functions. Each city also has the option of producing municipal services for itself. Private contractors too have undertaken such services as street sweeping, engineering, street maintenance and repair, and related public works. Some contracts have been negotiated with neighboring cities. As the number of vendors increases, competition brings pressures toward greater responsiveness and efficiency.

By separating the production from the provision of public goods it may be possible to differentiate, unitize and measure the production while continuing to provide undifferentiated public goods to the citizen-consumer. Thus Los Angeles County has, under the Lakewood Plan, unitized the production of police services into packages, each consisting of a police-car-on-continuous-patrol with associated auxiliary services. A price is placed on this police-car-on-continuous-patrol package, and a municipality may contract for police service on that basis. Within the local community, police service is still provided as a public good for the community as a whole.

Problems of scale arising from possible conflicts between criteria of production and criteria of political representation may be effectively resolved in this way. Efficient scales of organization for the production of different public goods may be quite independent of the scales required to recognize appropriate publics for their consumption of public goods and services. But competition among vendors may allow the most efficient organization to be utilized in the production, while an entirely different community of interest and scale of organization controls the provision of services in a local community.

The separation of production from provision may also have the consequence of turning local governments into the equivalents of associations of consumers. While Sidney and Beatrice Webb viewed local governments as associations of consumers, the dominance of production criteria in American municipal administration

has largely led to the subordination of consumer interests.¹⁵ However, cities organized to provide the local citizenry with public services produced by other agencies may be expected to give stronger representation to consumer interests. Among the so-called Lakewood Plan cities in Los Angeles County, for example, the local chief administrative officer has increasingly become a spokesman or bargainer for local consumer interests.

In this role, the chief administrative officer is similar to a buyer in a large corporation. Recognizing that the greater the number of vendors of public services, the greater the competition, the local chief administrative officer may seek to expand the number of his potential suppliers. As competition increases, vendors become more sensitive to the consumer demands he negotiates.

The production of public goods under the contract system in Los Angeles County has also placed considerable pressure upon the county administration to become more responsive to demands of the public service clientele organized through their local cities. Important changes in operating procedures and organizational arrangements have been introduced into the county's administration of police protection, fire protection, library services, street maintenance, building inspection and engineering services in order to increase efficiency and responsiveness.

Under these circumstances, a polycentric political system can be viable in supplying a variety of public goods with many different scales of organization and in providing optimal arrangements for the production and consumption of public goods. With the development of quasi-market conditions in production, much of the flexibility and responsiveness of market organization can be realized in the public service economy.

Several difficulties in the regulation of a competitive public service economy can be anticipated. Economic pricing and cost allocation are dependent upon the development of effective measurement of municipal services. Since the preferred states of affairs in a community cannot be converted to a single scale of values such as dollar profits in a private enterprise, it may be more difficult to sustain an objective competitive relationship in a public service economy. Although costs of contract services from different vendors of a public

¹⁵ Sidney and Beatrice Webb, *English Local Government: Statutory Authorities for Special Purposes* (London: Longmans, Green and Co., 1922), p. 437 ff.

good may be the same, objective standards for determining the value of the benefits are needed, and may be hard to come by; otherwise the latitude of discretion available to the negotiators may limit the competitive vitality of the system and shift the competition to side-payoffs.

Without careful control of cost allocations and pricing arrangements, funds from non-competitive welfare functions might be used to subsidize the more competitive service areas. In Los Angeles County, close scrutiny of cost accounting practices and pricing policies by the grand jury has helped to prevent funds from being so transferred.

Any long-term reliance upon quasi-market mechanisms in the production of public goods and services no doubt will require more of such careful scrutiny, control and regulation than has been applied toward maintaining the competitive structure of the private market economy. The measurement of cost and output performance may become an essential public function of the state in the administration of metropolitan affairs if continued reliance is placed primarily upon a polycentric system in the government of metropolitan areas.

Reliance upon outside vendors to produce public services may also reduce the degree of local political control exercised. The employee is subject to the control of the vendor and not directly to the control of the municipality. In contrast to the more immediate lines of responsibility and communication between local municipal employees and city officials, reliance upon vendors to provide municipal services may also restrict the quality and quantity of information about community affairs that are provided to the city's decision-makers. This constraint on information might reduce the degree of their control over public affairs.

This discussion merely indicates some of the considerations to be examined in an analysis of the effects of competitive arrangements in providing public services. As long as the particular contracting agencies encompass the appropriate sets of public interests no absolute impediment to their use need exist. With appropriate public control, competitive arrangements may afford great flexibility in taking advantage of some of the economies of scale for the production of public services in a metropolitan area, while, at the same time, allowing substantial diversity in their provision for the more immediate communities, based upon political responsibility within local patterns of community identification.

Conflict and Conflict Resolution. More difficult problems for a polycentric political system

are created when the provision of public goods cannot be confined to the boundaries of the existing units of government. These situations involving serious spill-over effects are apt to provoke conflict between the various units in the system. Arrangements must be available for the resolution of such conflicts if a polycentric political system is to solve its problems. Otherwise, competition and conflict are apt to become acute.

No community, on its own initiative, has much incentive to assume the full costs of controlling adverse consequences which are shared by a wider public. The competitive disadvantage of enforcing pollution abatement regulations, for example, against individuals and firms within a single community, when competitors in neighboring communities are not required to bear such costs, leads each community to excuse its failure to act by the failure of other similarly situated communities to act. In a polycentric system this is especially serious where many of the public "goods" involve the costly abatement of public nuisances.

Concerted action by the various units of government in a metropolitan area is easier to organize when costs and benefits are fairly uniformly distributed throughout the area. By way of example, this has been done under contractual agreements for mutual aid to assure the mobilization of greater fire-fighting capability in case of serious conflagrations. The random and unpredictable nature of such fires causes them to be treated as a uniform risk that might occur to any community in the larger metropolitan area.

Similar considerations apply to efforts to control mosquito infestations or air pollution. Leagues of cities, chambers of commerce and other civic associations have frequently become the agencies for negotiating legislative proposals for the creation of mosquito abatement districts, air pollution control districts and the like.

More difficult problems for the polycentric political system arise when the benefits and the costs are not uniformly distributed. Communities may differ in their perception of the benefits they receive from the provision of a common public good. In turn, a community may be unwilling to "pay its fair share" for providing that good simply because its demands for provision are less than in neighboring communities. These situations call for effective governmental mechanisms which can internalize the problem. If necessary, sanctions must be available for the enforcement of decisions.

The conflicting claims of municipal water supply systems pumping water from the same

underground basins in Southern California, for example, have uniformly been resolved by recourse to legal actions in the state courts. The courts have thereby become the primary authorities for resolving conflicts among water supply agencies in Southern California; and their decisions have come to provide many of the basic policies of water administration in the Southern California metropolitan region. The state's judiciary has played a comparable role in conflicts among other local government agencies in such diverse fields as public health, incorporation and annexation proceedings, law enforcement, and urban planning.

The heavy reliance upon courts for the resolution of conflicts among local units of government unquestionably reflects an effort to minimize the risks of external control by a superior decision-maker. Court decisions are taken on a case-by-case basis. The adversaries usually define the issues and consequently limit the areas of judicial discretion. This method also minimizes the degree of control exercised following a judgment. California courts, in particular, have accepted the basic doctrines of home rule and are thus favorably disposed to the interests of local units of government in dealing with problems of municipal affairs.

The example of municipal water administration may be pursued further to illustrate other decision-making arrangements and their consequences which bear upon the resolution of conflict in a polycentric political system.¹⁶

While litigation may be an appropriate means for resolving conflicts over a given supply of water, local water administrators in Southern California have long recognized that law suits never produced any additional water. Organization for the importation of new water supplies was recognized as the only means for solving the long-term problem.

Los Angeles built the first major aqueduct to import water into the area on its own initiative. This water supply was used to force adjoining areas to annex or consolidate to the City of Los Angeles if they wished to gain access to the new supply. The condition for the provision of water required adjoining areas to sacrifice their identities as separate political communities. To get that one public good they were forced to give up other public goods. This provoked sufficient opposition to block any new developments which were not based upon consent and co-

operation. The mechanisms for the resolution of subsequent conflicts were required to take on new forms.

The importation of Colorado River water was later undertaken by a coalition of communities in Southern California formed through the agency of the southern section of the League of California Cities. The League afforded a neutral ground for the negotiation of the common interests of the City of Los Angeles and the other cities in the metropolitan area which shared common water problems. After satisfactory arrangements had been negotiated, including provision for the formation of a new metropolitan water district and endorsement of the Boulder Canyon project, a Boulder Dam Association was formed to realize these objectives. In due course a new agency, the Metropolitan Water District of Southern California, was formed; and the Colorado River aqueduct was constructed and put into operation by this new district.

More recently, the Southern California Water Coordinating Conference, meeting under the auspices of the Los Angeles Chamber of Commerce, has been the agency for negotiating regional interests in the development of the California Water Program. The Metropolitan Water District was not able to represent areas in Southern California which did not belong to that district; and the rise of a variety of special municipal water districts precluded the League of California Cities, which represents cities only, from again serving as the agency for the negotiation of metropolitan interests in municipal water supply.

These illustrations suggest that a variety of informal arrangements may be available for negotiating basic policies among local government agencies in a metropolitan area. Such arrangements are vital in negotiating common interests among them. The larger public is taken into account in an informally constituted political community. These arrangements work effectively only so long as substantial unanimity can be reached, for formal implementation of such decisions must be ratified by each of the appropriate official agencies, including the state government when changes in state law or administrative policies are involved.

Higher levels of government may also be invoked in seeking the resolution of conflict among local governments in metropolitan areas. Again recourse is sought to a more inclusive political community. Under these circumstances, conflict tends to centralize decision-making and control. The danger is that the more inclusive political community will not give appropriate recognition to the particular

¹⁶ For further detail see: Vincent Ostrom, *Water and Politics* (Los Angeles, Haynes Foundation, 1953), esp. chs. 3, 6 and 7.



public interests at issue and tend to inject a variety of other interests into settlements of local controversies.

Appeal to central authorities runs the risk of placing greater control over local metropolitan affairs in agencies such as the state legislature, while at the same time reducing the capability of local governments for dealing with their problems in the local context. Sensitivity over the maintenance of local control may produce great pressure for the subordination of differences while conflicting parties seek a common position approximating unanimity. A substantial investment in informal negotiating and decision-making arrangements can be justified from the perspective of the local authorities if such arrangements can prevent the loss of local autonomy to higher levels of government.



Ironically but logically, this effort to avoid recourse to conflict and the consequent centralization of decision-making tends also to reduce the local autonomy or degree of independence exercised by the local governing boards. Pressure for agreement on a common approach to some metropolitan problem limits the choices available to any particular local government. However, this range of choice may still be greater than that which would result from a settlement by a central authority. Negotiation among independent agencies allows the use of a veto against any unacceptable position. Agreement must be negotiated within the limits of the various veto positions if the alternative of recourse to an external authority at a higher level of political jurisdiction is to be avoided.

To minimize the costs of conflict to their power positions, administrators of local government agencies in metropolitan areas have tended to develop an extensive system of communication about each other's experience and to negotiate standards of performance applicable to various types of public services. Professional administrative standards may, thus, operate to constrain the variety of experience in local government agencies. Information about areas of difference and of potential conflict tend to be repressed under these circumstances. The negotiations about common problems through informal agencies are apt to be conducted in secrecy, and careful control may be developed over sensitive information.

These pressures to avoid the costs of conflict and seek agreement about metropolitan problems reflect the importance to local governments of resolving general public problems by negotiation at the local level in a metropolitan community. To the extent that these pressures are effective, the patterns of local government in a metropolitan area can only be understood by attention to the variety of formal and informal arrangements that may exist for settling area-wide problems.

Contrary to the frequent assertion about the lack of a "metropolitan framework" for dealing with metropolitan problems, most metropolitan areas have a very rich and intricate "framework" for negotiating, adjudicating and deciding questions that affect their diverse public interests. Much more careful attention needs to be given to the study of this framework.