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ABSTRACT

The main thesis of this paper is that innovative changes in both urban metapolicy and in urban education are needed to meet present and future urban problems. Metapolicy deals with policies on policymaking, including the characteristics of the policymaking system and basic policy frameworks and postures. Unless urban metapolicy is improved, no meaningful improvements are possible in concrete policies on specific issues. Required changes in urban metapolicy include: (1) development of urban policy sciences knowledge; (2) invention of new urban policy tools; (3) explicit strategy determination; (4) new policy-contributing institutions and/or policy research organizations; (5) improvement of urban policymaking personnel; and, (6) advancement of citizen participation. This analysis has important implications for urban educators. On one hand, similar improvements in the urban education policymaking subsystems are needed for better urban educational policies. On the other hand, some radical changes in urban education are needed to meet the needs of better urban metapolicies. These include: (1) education of adults for more active roles in urban policymaking; (2) preparation of children for even more active future roles in urban policymaking; (3) training and retraining of urban policy practitioners for new patterns of urban policymaking; (4) training of new types of urban policy professionals; and (5) development of policy scientists. (Author)

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URBAN METROPOLITAN AND URBAN EDUCATION

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URBAN METAPOLICY AND URBAN EDUCATION

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ABSTRACT

THE MAIN THESIS OF THIS PAPER IS THAT INNOVATIVE CHANGES IN BOTH URBAN METAPOLICY AND IN URBAN EDUCATION ARE NEEDED TO MEET PRESENT AND FUTURE URBAN PROBLEMS. METAPOLICY DEALS WITH POLICIES ON POLICYMAKING, INCLUDING THE CHARACTERISTICS OF THE POLICYMAKING SYSTEM AND BASIC POLICY FRAMEWORKS AND POSTURES. UNLESS URBAN METAPOLICY IS IMPROVED, NO MEANINGFUL IMPROVEMENTS ARE POSSIBLE IN CONCRETE POLICIES ON SPECIFIC ISSUES. REQUIRED CHANGES IN URBAN METAPOLICY INCLUDE: (1) DEVELOPMENT OF URBAN POLICY SCIENCES KNOWLEDGE; (2) INVENTION OF NEW URBAN POLICY TOOLS; (3) EXPLICIT STRATEGY DETERMINATION; (4) NEW POLICY-CONTRIBUTING INSTITUTIONS AND/OR POLICY RESEARCH ORGANIZATIONS; (5) IMPROVEMENT OF URBAN POLICY-MAKING PERSONNEL; (6) ADVANCEMENT OF CITIZEN PARTICIPATION. THIS ANALYSIS HAS IMPORTANT IMPLICATIONS FOR URBAN EDUCATORS. ON ONE HAND, SIMILAR IMPROVEMENTS IN THE URBAN EDUCATION POLICYMAKING SUBSYSTEM ARE NEEDED FOR

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BETTER URBAN EDUCATIONAL POLICIES. ON THE OTHER HAND, SOME RADICAL CHANGES IN URBAN EDUCATION ARE NEEDED TO MEET THE NEEDS OF BETTER URBAN METAPOLICIES. THESE INCLUDE: (1) EDUCATION OF ADULTS FOR MORE ACTIVE ROLES IN URBAN POLICYMAKING; (2) PREPARATION OF CHILDREN FOR EVEN MORE ACTIVE FUTURE ROLES IN URBAN POLICYMAKING; (3) TRAINING AND RETRAINING OF URBAN POLICY PRACTITIONERS FOR NEW PATTERNS OF URBAN POLICYMAKING; (4) TRAINING OF NEW TYPES OF URBAN POLICY PROFESSIONALS; AND (5) DEVELOPMENT OF POLICY SCIENTISTS. THE PROPOSED IMPROVEMENTS IN URBAN METAPOLICY AND URBAN EDUCATION ARE INTERRELATED; THEREFORE MULTIDIMENSIONAL REFORMS ARE NECESSARY TO MEET THE URBAN CHALLENGE.

A SHORT APPRAISAL OF URBAN POLICYMAKING¹

"Urban problems" -- however ill-defined this concept may be² -- are one of the main concerns of modern society. The transition to a "saturated society" in which many of the material and service necessities of

¹This section is based in part on comments I made at the round table on "Long-Range Urban Planning" at the American Orthopsychiatric Association 47th Annual Meeting -- March 23-26, 1970, San Francisco.

²My impression is that the term "urban problems" is used as referring to a vague cluster of social problems, with different emphasis on various issues -- depending on the interests of the uses. Even in its narrower uses, the term "urban problems" is significantly broader than the term "city problems," though there is much overlapping between them. For the purposes of this paper I will use the term "urban problems" without further definitions. My main justification for doing so is that my analysis and conclusions are quite insensitive to various uses and meanings of that term.

life become free goods, the population growth, anticipated innovations in technology, and many of the possible (though unpredictable) transformations in culture and values -- all will result in urban configurations and urban problems even more difficult to manage and resolve than the contemporary ones. Therefore, when we compare our incapacities to handle present urban issues with the problems of urban conglomerates of tomorrow, which will be more difficult by several orders of magnitude, one cannot but be somewhat afraid about the future. The extrapolated shape of urban issues seems clearly to bear out what I like to call aphoristically the Dror Law:

While the difficulties and dangers of problems tend to increase at a geometric rate, the knowledge and manpower qualified to deal with these problems tend to increase at an arithmetic rate.

Two typical reactions to present and expected problems are: (1) to try and deal with them by pushing harder for solutions which are supposed to have worked in the past (e.g., more police in the streets to control crime); and (2) to look for new ideas in respect to concrete and acute problems faced today. But very little is done to improve urban policymaking and decisionmaking capabilities, so as to be better able to handle dynamic problems and changing situations.

The search for better solutions to present problems is both essential and useful, and much more needs to be done to move from "muddling through" to explicit policy innovations. But I think that efforts limited to resolving defined problems are doomed unless they are accompanied by far-reaching attempts to improve the urban policymaking system (which includes

components in all levels of government -- federal, state and local -- as well as special interest groups, the universities, etc.). The case for this rests mainly on three reasons:

1. Innovative policy proposals have little chance of being carefully considered, adopted, implemented and revised unless the urban policymaking system develops new capacities for creativity, policy analysis, implementation and feedback. Also required are significant relaxations of present constraints on policies, including, in particular, political and organizational constraints. New patterns of decisionmaking are needed which in turn require changes in most of the elements of the urban policymaking system -- including personnel, structure, "rules of the game," equipment, and perhaps most important of all, "policy-making culture."
2. Many problems can be better resolved before they are made visible by assuming crises dimensions. Therefore, prediction of problems and allocation of resources to treatment of future problems are needed, requiring in turn changes in urban policymaking so as to make it more future-sensitive.
3. For many present and expected problems no useful policies can be identified through contemporary policymaking knowledge. What is required, therefore, are new types of policy knowledge, policy research, policy invention and policy professionals.

Urban planning does little to change the picture. To be more exact: there exists no urban planning, but only city planning -- which is something quite different. Not only is city planning constrained by the above-mentioned limitations of contemporary urban policymaking as a whole, but it suffers from a number of additional inadequacies of its own, such as:

1. Strong orientation to the physical features of cities, despite much lip service to more comprehensive approaches. Social problems in particular are ignored in most real life city planning.

2. Poorness in policy instruments. Thus, despite recognized extreme weaknesses, "master plan" and zoning continue to be regarded as major policy instruments of city planning.

3. Fargoing isolation from most facets of urban policymaking, including nearly all acute problems, the treatment of which in fact significantly shapes urban futures. Attempts to tie in city planning with ongoing decisionmaking through PPBS have as yet achieved very little.

4. Value-loadedness. Most city planners not only prefer one image of "ideal city"³ over all others, but regard their preference as science-based and avoid all explicit value-sensitivity testing. The recent undermining of many "ideal city" images causes much bewilderment and

³For an illuminating discussion of "ideal cities," see C.A.O. van Nieuwenhuijze, "The Ideal City or the Varieties of Metasocial Experience: A Typology," in C.A.O. van Nieuwenhuijze, *The Nation and the Ideal City* (The Hague: Mouton, 1966), pp. 74-148.

heartsearching, but as yet has contributed little to a clearer conception of the roles of city planning in relation to urban policymaking and in respect to value judgments.

Most, if not all, of these weaknesses are recognized by the more advanced city planning scholars and practitioners, who slowly move towards a conception of urban planning in the full sense of that term. but, as yet, actual city planning is little influenced by the newer ideas and it is hard to see how even a sophisticated urban planning approach could have significant impacts within the present urban policymaking system.

To sum up my short appraisal of contemporary urban policymaking, I see the main problem not as one of weaknesses of present urban policies alone. I think the problem is a more fundamental one: the present urban policymaking system is incapable of handling present and future urban issues. Not only do we not have an urban policy,⁴ but a good "urban policy" cannot be formulated and implemented without redesign of the urban policymaking system.

In short, my main thesis is that in order successfully to face urban problems, we must innovate metapolicies, that is, policies on how to make policies.

Approaches to Urban Metapolicy

Governmental reform is not a new idea and there has been quite some talk in the United States on required adjustments in public institutions

⁴Compare Daniel P. Moynihan, "Toward a National Urban Policy," *The Public Interest*, No. 17 (Fall 1969), pp. 3-20.

to meet urban problems⁵ and even some action in this direction.⁶ But the idea of metapolicy goes beyond individual reform proposals. Its basic framework is a systems view of policymaking:⁷ Policymaking is regarded as an aggregative process in which a large number of different units interact in a variety of part-stabilized but open-ended modes. In other words, urban policy is made by a system, the urban policymaking system (which is very closely related to the public policymaking system, as urban policy is related to public policy).

This system is a dynamic, open, non-steady-state and includes a large variety of different and changing multi-role components interconnected in different degrees and through a multiplicity of channels; it is closely interwoven and overlapping with other policymaking systems and with social macro-systems (e.g., the productive system, the demographic-ecological system, the technological and knowledge system and the cultural system), and it behaves in ways which defy detailed modeling.

⁵E.g., see Theodore J. Lowi, *The End of Liberalism: Ideology, Policy, and the Crisis of Public Authority*, (N.Y.: Norton, 1969); and Robert Wood, "When Government Works," *The Public Interest*, No. 18 (Winter 1970), pp. 39-51.

⁶For instance, establishment of the Urban Institute and of the National Goals Research Staff in the White House.

⁷See Yehezkel Dror, "Some Normative Implications of a Systems View of Policymaking," in Milton D. Rubin, ed., *Man in Systems* (N.Y.: Gordon and Breach, 1970), in press. (Earlier version, RAND Paper P-3991-1, February 1969.)

Even such a very simple systems perspective of public policymaking leads to three important improvement-relevant conclusions:

a. As urban policy is a product of complex interactions between a large number of various types of components, similar changes in the output (or similar "equifinal states") can be achieved through many alternative variations in the components. This means, for our purposes, that different combinations of a variety of improvements may be equally useful in achieving equivalent changes in the quality of policymaking. This is a very helpful conclusion, because it permits us to pick out of a large repertoire of potentially effective improvements those which are more feasible under changing political and social conditions. This view also emphasizes the open-ended (or, to be more exact, "open-sided") nature of any search for improvement-suggestions: there is, in principle, unlimited scope for adventurous thinking and invention.

b. A less optimistic implication of a systems view of urban policymaking is that improvements must reach a critical mass in order to influence the aggregative outputs of the system. Improvements which do not reach the relevant impact thresholds will, at best, be neutralized by countervailing adjustments of other components (e.g., a new urban planning method may be reacted to in a way that makes it an empty ritual), or, at worst, may in fact reduce the quality of overall urban policy (e.g., through possible boomerang effect, reducing belief in capacity of human intelligence, with possible retreat to some types of mysticism, leader-ideology, etc, or by implementing wrong policies more "efficiently," and thus reducing an important social protective mechanism -- inefficiency as diminishing the dangers of implementation of wrong decisions and as permitting slow and tacit learning).

c. The third, and again optimistic, implication of a systems view of urban policymaking is, that thanks to the interactions between different system components, it may be possible to achieve the threshold of overall system output effects through a combination of strategic changes in controlling subcomponents, each one of which by itself is incremental. In other words, a set of incremental changes can in the aggregate result in fargoing system output changes. Furthermore, because we are speaking about changes in the urban policymaking system, there may be a good chance that a set of relatively minor and quite incremental changes in the urban policymaking system will permit -- through multiplier effects -- fargoing innovations in the specific policies made by that system. This possibility is of much practical importance, because of the much greater feasibility of incremental change than of radical change in United States urban politics. (Though, I think, the readiness to innovate is increasing by step-level functions, as a result of shock effects of highly perceived crises symptoms.)

The systematic design, analysis and evaluation of policymaking-system improvements is the main subject of metapolicy. Urban metapolicy is therefore concerned with improving the urban policymaking system. Such improvements involve all dimensions of the urban policymaking system, including environment, inputs, policy knowledge, personnel, structure, process patterns and stipulated output.⁸ Also included in the concept of urban metapolicy are frameworks and directives for the substantive

⁸For a detailed discussion within a general policy sciences orientation, see Yehezkel Dror, *Public Policymaking Reexamined* (San Francisco: Chandler, 1968), esp. Part V.

policies made by the urban policymaking system, in respect to basic assumptions, problem perceptions, value hierarchy, strategies and so on.

Let me concretize the idea of innovative urban metapolicy with a number of illustrative interrelated ideas:

1. Encouragement of innovative policy research on urban problems, as a part of emerging policy sciences.⁹ This involves novel research methods (such as social experimentation), novel research tools (e.g., acceptance of tacit knowledge of politicians and senior executives as an important source of knowledge) and novel research structures (e.g., interdisciplinary policy-oriented teams). Also necessary are study and utilization of experience with urban problems in other countries. Especially relevant are European and Japanese experiences, which are very little known in the United States. A main aim of such urban policy research should be development of an overall conception of "urban policy," which can be of much help, initially by operationalizing the meaning of "urban problems" and then by providing heuristic search patterns for possible resolutions.¹⁰

⁹On the nature and characteristics of policy sciences, see Harold D. Lasswell, "The Emerging Conception of Policy Sciences," *Policy Sciences*, Vol. 1, No. 1 (Spring 1970) in press; and Yehezkel Dror, "Prolegomena to Policy Sciences," *Policy Sciences*, Vol. 1, No. 1 (Spring 1970) in press.

¹⁰The absence of any integrated conception of "urban policy" in the United States is not surprising, but is very disturbing. This omission is well demonstrated by the differences between foreign affairs and urban affairs. Foreign affairs are heterogenous and multidimensional; nevertheless,

2. Invention and development of new urban policy tools, ranging from monitoring and information processing to new policy instruments. Such tools may include for instance: urban indicator systems, to permit early identification of problems and to encourage feedback on policy results; cable T.V., to provide multiple communication channels with citizens; home computer consoles, for systematic contingency opinion polling; differential scheduling of work hours, weekend days and holidays, to deal with rush-hour and rush-day traffic; and so on.

3. Explicit strategy decisions (including mixed strategies) are needed on the following issues, among others: degrees and locations of acceptable innovations in policies; extent of risk to be accepted in policies and choice between a maximax posture or/and maximin posture and/or minimin-avoidance posture;¹¹ preferable mix between comprehensive

some integrating conceptions exist, as well illustrated in President Nixon's First Annual Foreign-Affairs Message, *United States Foreign Policy for the 1970's: A New Strategy for Peace*. But were one to decide to put together an Annual Social State of the Nation, it would have to be either very eclectic or very abstract -- because there exists not even a useable concept package for urban affairs. Also relatively simple issues, such as the relation between the "urban problems" cluster and the emerging "environmental problems" cluster, are quite unexplored.

¹¹I use the term "minimin-avoidance" to refer to policies directed at avoiding the worst of all possible situations. One important advantage of such a strategy concerns support recruitment: it is often much easier

policies, narrow-issue oriented policies, and shock-policies (which aim at breakthroughs accompanied by temporary disequilibrium); and preferable mix between policies oriented towards concrete goals, towards a number of defined future options, and/or towards building up resources better to achieve as yet undefined goals in the future. Such strategy decisions in turn require a variety of methodological innovations, such as construction of alternative comprehensive urban futures and policy analysis networks.¹²

4. New institutions must be designed and established as influential components of the urban policymaking system. Especially urgent is the need for "think tank" research institutes to work specifically on urban

to achieve agreement on ills to be avoided than on operational positive formulations of "good life" to be realized.

Some success in minimin-avoidance would constitute a significant improvement over reality. However simple this may sound, human capacities to approximate minimin is amazing. Still well worth reading in this connection is Walter B. Pitkin, *A Short Introduction to the History of Human Stupidity* (N.Y.: Simon and Schuster, 1932). Urban policies could fill a long chapter in a modern version of such a history.

¹²On this concept see Yehezkel Dror, Policy Analysis: A Theoretic Framework and Some Basic Concepts (RAND Paper P-4156, July 1969) and idem, A Policy Sciences View of Future Studies: Alternative Futures and Present Action (RAND Paper P-4305, February 1970).

policy issues. The short experience of the New York-Rand Institute demonstrates the importance of such services for urban government. Establishment of The Urban Institute is another important step in this direction. But a whole set of such institutes to serve all centers of urban policymaking is required. Other possible institutional innovations include Look Out Institutes for early identification of emerging problems, and allocation of urban policymaking roles to universities.

5. Urban policymaking personnel must be improved. This includes, for instance, intense efforts to improve qualifications of urban politicians. Thus, urban politicians should be encouraged to participate in courses and seminars in policy sciences, to be designed for this purpose. Also needed is reform of urban senior civil service policy, including requirements for better qualifications, encouragement of rotation with other governments and with business, and incentives to draw top-quality candidates. More important are activities to train presently non-existing urban policy scientists and urban policy professionals. All this involves the relations between urban metapolicy and urban education, to which I will return soon.

6. Also closely related to urban education is another main direction of urban metapolicy improvement, namely advancement of citizen participation in urban policymaking. Here, modern technology may be very helpful, by providing tools for much better presentation of urban issues before the public (e.g., policy analyses of controversial issues on T.V. and citizen education through active participation in urban games through cable T.V.), and for more intense involvement of the public in decision-making (e.g., as already mentioned, systematic opinion polling with the help of computer home consoles).

Having clarified the concept of metapolicy we are now ready to take up our next and final subject, which I already touched upon in the last two metapolicy directives -- namely some relations between urban education and urban metapolicy.

Urban Education and Urban Metapolicy

One rather obvious application of our general analysis to education concerns the necessity for reform of the urban educational policymaking subsystem of the urban policymaking system, as a requisite for improving urban educational policies. All our analysis on the dependency of better policies on improved metapolicy applies to education, as do the various illustrations of needed metapolicy directions. Some adjustments are necessary to meet the special characteristics of educational policymaking.¹³ But the general conclusion is I think quite clear without further details: The urban educational policymaking subsystem must be improved through innovative metapolicy, as a condition for design, evaluation, adoption, and implementation of urban educational policies that can meet contemporary and future needs.

One point that should be emphasized is that improvement of the urban educational policymaking subsystem cannot take place in isolation. Because of the strong interconnections and overlappings between the urban educational policymaking subsystem and the urban policymaking system as a whole, the first cannot be changed without changes in the latter.

¹³ See Rachel Elboim-Dror, "Some Characteristics of the Education Policy Formation System" *Policy Sciences*, Vol. 1, No. 2 (Summer 1970), forthcoming.

Furthermore, because of the diffuse nature of education and the multiple forms of educational institutions,¹⁴ any sharp distinction between "education" and other policy issues is a doubtful one. Education constitutes a main policy instrument for achievement of nearly all urban policy goals and the states of nearly all aspects of urban life influence urban education. Therefore, educational policies must be closely fused with urban policies as a whole; and the educational policymaking subsystem must be considered and improved as an integral part of the urban policymaking system.

Less obvious are the implications of our analysis for the functions of urban education as an essential instrument of metapolicy innovations. This is still a very neglected subject. Let me therefore point out a few main directions of changes in urban education required in order to reform the urban policymaking system. Such changes are needed on at least five levels:

1. Education of adults for more active roles in urban policymaking.
2. Preparation of children for even more active future roles in urban policymaking.
3. Training and retraining of urban policy practitioners for new patterns of urban policymaking.
4. Training of new types of urban policy professionals.
5. Development of urban policy scientists.

I will discuss these five levels one by one.

¹⁴ See Michael Marien, *The Education Complex: Emergence and Future of a Macro-System* (N.Y.: Free Press, 1970) forthcoming.

1. Education of adults for more active roles in urban policymaking. I already mentioned the intensification of citizen participation in urban policymaking as one of the directions of urban metapolicy improvement. But in order for increasing citizen participation to constitute in fact an improvement, changes in the quality of that participation are needed. At the very least, needed are: more knowledge on urban problems; better understanding of interrelations between different issues and various resolutions; and fuller realization of longer range consequences of different alternatives. Also highly desirable are better value explication and sensitivity to value trade-offs; increased propensities to innovate; and capacities to face uncertainty.

The slogan of "enlightened citizen" as a requisite of democracy has been with us for too long to be taken serious. Nevertheless, increasing demands for citizen participation based both on ideological reasons and functional needs do combine and make "citizen enlightenment" a hard necessity. Indeed, because of the growing complexity of urban issues, increased quality of citizen contributions to urban policies is essential in order to preserve the present level of citizen participation in urban policymaking. In other words: If the quality of citizen inputs into urban policymaking remains as it is now, meritocracy may well become the only chance for survival. Therefore, building up the policy contribution capacity of citizen is essential for continuous viability of urban democracy.

This is the challenge facing adult education from the point of view of urban metapolicy. When we add the many other reasons making adult education into an increasingly important social and individual activity

(such as learning as a main leisure-time activity), then we arrive at a really first class challenge for adult education. To meet this challenge, radical novadesign of urban adult education is required.

To illustrate, let me mention these main plausible directions of novadesign of urban adult education:

a. The mass media of communication must develop new formats for presenting and analyzing public issues in ways conducive for informed individual opinions formation. For instance, policy issues should be presented in the form of policy analysis networks, with clear alternatives, explicit sensitivity analysis, uncertainty explication and assumption visibility. Present techniques are adequate for presentation of such programs on T.V. in ways which combine audience appeal with improvement of citizen comprehensions of complex issues.

b. Training tools which are simultaneously interesting and beneficial must be developed. Such tools include, for instance, cases, projects, urban games, and individual policy exploration programs. In particular, urban games and individual policy exploration programs are very promising. Based on computers and brought to each house through cable T.V. and home computer consoles, suitable games and policy exploration programs can combine education for better urban policymaking with inputs into urban policymaking¹⁵ -- while also providing fascinating leisure-time activities. (The same equipment can serve other multiple purposes in respect to broad educational goals, urban metapolicy improvements, leisure-time use, communication, etc., thus justifying their costs.)

¹⁵ E.g., see Stuart Umpleby, "Citizen Sampling Simulation: A Method for Involving the Public in Social Planning," Paper to be presented at the International Future Research Conference, Kyoto, Japan, April 10-16, 1970.

c. Incentives for participation in policy-oriented educational activities must be provided. Hopefully, increased opportunities to participate in urban policymaking together with availability of clearly relevant learning opportunities will provide basic motivation. This may be the case all the more because of the possibility -- illustrated by the proposed techniques -- to combine the useful with the attractive. But additional incentives may be necessary. Competitive games and exercises may provide one set of incentives; public attention and dramatization may provide a second set of incentives. If this does not work out, reservation of some special opportunities to participate in urban policymaking (other than the basic rights of voting, expression of opinion, etc., reserved of course for all) for those who do undergo a set of learning activities might prove necessary in some circumstances in the longer run. But adoption of suitable programs in schools -- as soon discussed -- should make such distasteful distinctions unnecessary.

These are only some illustrations which do point out possibility for redesign of urban education to serve, *inter alia*, the needs of increasing citizen participation in urban policymaking. This is a problem in need of much research and creativity.

2. Preparation of children for future roles in urban policymaking. On a more fundamental level, preparation for increased participation in urban policymaking must take place before maturation. The best location to prepare the citizen for increased policymaking roles is in school, when the necessary knowledge and capacities should be developed as a basic part of the equipment needed by every citizen in a modern urban democratic society.

The necessary knowledge and capacities to be conveyed and developed at school do include, among others: some knowledge and understanding of the urban system and of urban dynamics; a feel for alternative urban futures; abilities to handle uncertainty and probabilities; basic skills in logic and semantics; understanding of the elements of policy analysis and capacity to handle problems with the help of policy analysis networks; tolerance of ambiguity; appreciation of main concepts of social sciences, economics and decision theory and their application to urban issues; and ability to search for information on new problems and issues and absorb that information within one's frame of appreciation.

This is a formidable list which may look prohibitive, unless we bear in mind that no technical skills and professional knowledge are aimed at. Some familiarity with fundamental concepts, some appreciation of their use and -- most important of all -- some skill in application of the knowledge and concepts to concrete issues as a main mode for making up one's mind, this is all that is aimed at.

Even so, this is an ambitious program which can only be approximated through fargoing changes in school teaching. Much of the required knowledge and capacity should be developed through new approaches and novel teaching methods in traditional subjects. Thus, the study of history should include the history of urban life, should be problem oriented, and should be supplemented by treatment of alternative futures. To add another illustration: mathematics should be taught as a problem-solving approach, with emphasis on probability theory, Boolean algebra and theory of games. Some new subjects also have to be added, devoted explicitly to urban problems and policy analyses. In the new subjects and in the

new contents of the traditional subjects, new teaching methods play a major role. Such new teaching methods include, for instance, gaming, computer interaction, and internships. Existing methods such as projects and essays can also be very useful, if suitably adjusted.

These few pointers provide no solution to the nearly insurmountable difficulties of reforming school education -- which are beyond both my competence and the scope of this paper. But I do want to emphasize that preparation of the future citizen for his future roles in urban policy-making while still in school is essential for managing the urban clusters of tomorrow democratically. This is only one of many demands upon school education resulting from the changing patterns of urbanism; but it is a demand deeply rooted in the requisites of improved urban metapolicy.

3. Training and retraining of urban policy practitioners. The need to train and retrain urban policy practitioners for the changing requirements of urban policymaking is a clear and straightforward one, which would not require much elaboration were it not for the taboos surrounding parts of it.

The need to reequip urban civil servants is more and more recognized. With changes in the main functions of urban management from administrative efficiency to urban problem solution and directed social change, the classic contents and skills of public administration become relatively less important (though they should not be forgotten). Instead, urban policy sciences, applied social sciences, and modern organization theory must be the foundations for urban management. Even though it is a hard and slow process, suitable changes do go on at universities, at new schools of urban affairs, at redesigned schools of public administration, and at schools of management. These changes can be expected to take care of

training and retraining urban civil servants, though this trend should be accelerated.

The situation is completely different in respect to the most important component of urban policy practitioners and of the urban policy-making system as a whole, namely urban politicians. As a result of naive misunderstandings of democratic theory and of institutional carry-over from simpler periods, the idea that elected politicians *ipso facto* their election are qualified (as distinct from legitimized) to fulfill crucial roles in policymaking is usually accepted without questioning. This is a wrong conclusion, ideologically as well as factually.

Ideologically, democracy does imply that candidates do not have to pass any educational qualification test and that every person duly elected is legitimately entitled to exercise all the prerogatives of office. But there is no reason in democratic ideology for ignoring the need that politicians be suitably qualified and for abstaining from establishing institutions to encourage politicians to develop the necessary knowledge and capacities. Factually, the dangers of politicians either overrelying on experts and meritocrats or of underutilizing modern knowledge, as a result of lacking sufficient knowledge and capacities to correctly utilize systematic knowledge and structures rationality, are obvious today. These dangers will be aggravated in the future when both relevant knowledge and problems are even more complex and difficult to handle.

My conclusion, therefore, is that improvement of politicians through learning is essential (though, by itself, insufficient) for qualifying them to handle present and future urban problems. The need can be handled

within the tenets of democracy, if we are innovative enough in designing suitable institutions. In particular, needed are special courses, seminars, and curricula for politicians, ranging from one week to a year, devoted to conveying to politicians appreciation, knowledge, and skills in urban policy sciences.¹⁶ While politicians cannot and should not be forced to participate, better politicians will welcome short and well-designed seminars which may help them in fulfilling their duties. At the same time, sabbatical leave for politicians to engage in longer courses of study paid for by the public should become universal. Hopefully, participation in courses and training will be recognized by the electorate as desirable, thus providing a powerful incentive for politicians who are looking, as they should, for votes.

Here, some synergetic relations between different proposals become visible, namely the interdependence between adult education for better urban policymaking, preparation of pupils for future participation in urban policymaking and popular support for policy relevant studies by politicians. But let me wait with further emphasis of the mutually reinforcing bonds between various policy-oriented changes in urban education till we examine the training of new types of urban policy professionals and the development of urban policy scientists.

4. and 5. Training of new types of urban policy professions and development of urban policy scientists. Development of reliable urban policy sciences knowledge is a precondition for all other proposed improvements both of urban metapolicy and of urban policy relevant education.

¹⁶Special institutes providing short courses to elected urban politicians exist in some countries. The *Kommunskolan* in Sweden is a good illustration.

Only reliable urban policy sciences knowledge can serve as a basis for better urban metapolicies and for urban policy relevant teaching material. In order to develop urban policy sciences systematically and on a massive scale, a new generation of scholars and researchers are needed who avoid the trained incapacities of existing disciplines and are able to work out the innovative paradigms of policy sciences. And in order to apply urban policy sciences to concrete urban metapolicy and policy problems, a new profession of urban policy analysts is necessary to fill new roles in the urban policymaking system.

It is convenient to discuss education of policy sciences scholars and of policy analysis professionals together, because: (a) there should be no clear distinction between these two roles, as movement between and fusion of abstract research and concrete applications is among the specific characteristics of policy sciences; and (b) similar innovative academic arrangements are necessary for both of them. What is required are teaching programs on the post-graduate level which are characterized by the following features:¹⁷ (1) interdisciplinary basis, with special emphasis on decision theories on one hand and behavioral sciences on the other; (2) strong emphasis on training through applied work, so as to develop capacity to transform abstract knowledge into concrete recommendations and to develop abstract knowledge on the basis of real life applications; (3) encouragement of creative innovation, together with strict analysis;

¹⁷For a detailed discussion, see Yehezkel Dror, "Teaching of Policy Sciences: Design for a Doctorate University Program," *Social Science Information* (1970), in press; (earlier version RAND Paper P-4128-1, November 1969).

(4) strong emphasis on methodology, combined with extensive problem area knowledge; (5) sensitization to involved values, with education for a "clinical" approach; (6) very demanding programs, which only limited groups of carefully selected students can successfully undertake.

Such programs need new locations at universities; it may even be the case that such programs have a better chance to succeed not at established universities, but at policy research organizations which can combine applied policy sciences work, production of new policy sciences knowledge, and advanced teaching in policy sciences.

Additional variations come easily to mind. For instance, some elements of urban policy sciences should be included in all university curricula -- to broaden preparation for citizen participation (undergraduate programs), prepare different professions for urban policy relevant work (e.g., medicine, social work, social science and engineering) and to initiate future urban politicians (e.g., law). But, as in all other sections, my intention here is not to exhaust the subject, only to indicate some guidelines for thought, research, and action.

It is important to recognize the interdependencies of the different analyses and proposals. Not only are different metapolicy proposals interdependent and different urban education proposals interdependent, but better urban metapolicy depends on improvement of urban education, and improvement of urban education depends on better urban metapolicy. This does not imply that everything can or should be done simultaneously. But it is correct to draw the conclusion that isolated incremental changes here or there will make no worthwhile contributions. A massive and multidimensional effort is needed to improve urban metapolicy and urban education, so as to meet the urban challenges of the present and of the foreseeable future.