

the public. Ensuring open participation on the committee is important; otherwise, the committee will be an elite group with a strong voice. Care must also be taken to cover regional issues and not focus solely on local issues.

The recommendations given above can improve the effectiveness of the committee in the implementation stage. However, effectiveness must also be improved in the earlier planning stages. If the long-range system planning process is brought down to the local level, more individuals will participate in the process because local issues will be brought to the surface. One way to accomplish this is to base participation on the corridor or subarea level rather than on the system level. This approach has been successful in special-purpose studies such as the Boston Transportation Planning Review (5) and could be successful for an ongoing advisory committee. Such an approach is definitely oriented toward transportation issues and specific projects. To make the best use of this approach, the committee can be divided into subcommittees that are based on one or more corridors. This will help to focus on corridor issues and thereby stimulate interest among local community organizations. Furthermore, this approach should strengthen the advisory and participatory-planning roles by relating them to corridor issues.

As previously mentioned, the scope of the participatory-planning role must be limited and well defined. Participatory planning is usually more effective in the later stages than in the earlier stages of the systems planning process. For example, it would be more effective in the alternative selection stage than in the goals and objectives stage. The corridor approach would also strengthen the advisory role by focusing on local issues as well as regional issues. For instance, the committee might develop goals and objectives for a given corridor that support the regional goals and objectives.

The success of the corridor approach is severely limited by time and budget constraints and by the difficulty in managing the process, but the approach could be attempted on a limited basis for one corridor or one project. This would still necessitate a large effort on the part of the planning staff and the transportation com-

mittee. Nevertheless, this model could help to improve the committee's effectiveness in resolving issues by focusing on the vital issues.

## CONCLUSIONS

The effectiveness of a regional citizens' transportation committee can be improved by emphasizing the use of the review-and-comment role and the advocacy role at the project implementation stage. These roles encourage participation and contribute to the resolution of transportation issues. Since project planning is clearly linked to systems planning, improved citizen participation at the project level will enhance the quality of the systems planning process. The planning for the system as a whole can be further improved by breaking the system down into corridors or subareas. The citizens' committee would then be divided into subcommittees based on these geographic stratifications. This step would not only improve the review-and-comment and advocacy roles but would also strengthen the advisory and participatory-planning roles.

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*Publication of this paper sponsored by Committee on Citizen Participation in Transportation Planning.*

# Effective Citizen Participation: Public Search for "Democratic Efficiency"

Richard Yukubousky

The question of how to achieve the democratic goals of public participation without resorting to a process that is cumbersome, frustrating, and costly to communities and public agencies is examined. The concept of "democratic efficiency"—the ratio of citizen satisfaction with planning outcomes to public participation resources "spent" in the planning process—is proposed as an aid in the design of public participation programs that are both democratic and efficient. Simple dichotomies that describe the critical trade-offs between democracy and process efficiency are used, and strategies, interaction techniques, organizational devices, and support resources that have high potential for achieving effective participation are suggested. Substantial gains in democratic efficiency can be achieved through staff training, technical assistance for community groups, meeting preparation, and public participation in the design of the citizen-participation process itself. Several promising interaction techniques that

are not now widely used are identified for further research and development. These are citizen juries, assemblies to integrate subarea and area-wide transportation planning, and other structured interaction techniques.

Over the past decade, citizens, planners, and public officials have gained considerable experience in dealing with the complex issues of citizen participation in planning and decision-making processes. From a historical perspective, it has been a relatively short time since the question of whether or not citizen participation was desirable was being debated. Now concern has shifted to the question, How can we most effectively engage citi-

Figure 1. Ideology in the citizen-participation process.

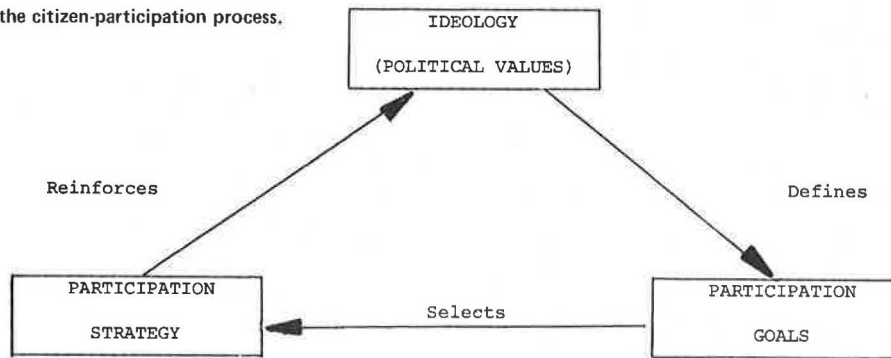


Table 1. Ideologies, goals, and strategies in citizen participation.

Ideology	Goal	Strategy
Democratic	Identify values, goals, and needs (4, 5) Foster human development, e.g., reduce alienation, develop leadership skills, and enhance problem solving (6-8)	Consultation
Liberal	Increase political sophistication (9) Protect freedoms and liberties (9) Identify important social problems (9) Adopt marginal changes that ensure long-term societal stability (9)	Partnership
Socialist	Win power for the poor (3) Foster dignity and self-respect (10) Enhance solidarity and sense of community (11)	Advocacy and confrontation
Technocratic	Prevent obstruction of agency plans (6) Maintain agency stability Educate the public about decisions that have already been made (6) Change behavior (12)	Cooptation, manipulation, and therapy

zens, planners, and public officials in participatory planning processes?

This paper addresses one particularly thorny problem that cuts across most issues of effective participation: the multiple trade-offs between democratic citizen participation and efficiency of process. Citizens desire a planning process that is open, fair, representative, informative, and meaningful. People are reluctant to contribute their time, energies, and skills when they believe that planners and decision makers will not really give full consideration to their ideas and legitimate concerns. However, a process that conscientiously attempts to meet these objectives is usually more time-consuming and requires greater staff resources and patience and larger budgets than traditional technocratic processes, which permit little, if any, citizen participation. Planning administrators feel the crunch between democracy and process efficiency, too, especially when they must justify expanded budgets to facilitate participation and at the same time develop and manage work programs that produce timely products.

In research on neighborhood planning in Seattle, the most common citizen complaints were that Seattle's very democratic neighborhood planning process took too long, consensus projects were not implemented fast enough, important information was not readily available, meeting agendas were not well organized, and the planning process was attempting to meet conflicting objectives (1). These complaints are symptomatic of a planning process that is democratic but not efficient. Citizens become "burned out" by this process and express an unwillingness to participate in future community planning activities.

I believe that the biggest challenge facing citizen-participation specialists is to devise ways to facilitate the democratic goals of participation without resorting to a cumbersome, time-consuming process that wastes "people energy" and needlessly consumes community and agency resources. This paper discusses a number of suggested approaches that have high potential for accomplishing both the democratic and efficiency objectives of citizen participation.

#### IDEOLOGICAL ROOTS OF THE CONFLICT

Public planning is inherently a political process, since it deals with the distribution of important societal values (2). Thus, our first task in identifying effectiveness criteria for citizen participation must be an examination of the sociopolitical values on which that process will be built. Figure 1 shows why this task is so important.

Ideologies (or sociopolitical values) define goals for public participation. These goals guide the selection of participation strategies. In turn, the successful implementation of those strategies is supposed to reinforce the values on which the ideology is founded. Our task would be greatly simplified if all citizens, planners, and public officials shared the same sociopolitical values because we would then have near consensus on what the goals and proper strategies of participation should be. This is not the case. Other writers have convincingly demonstrated that several important ideologies may be brought to the planning arena by diverse participants (3). Table 1 gives an overview of important ideologies, related goals, and associated strategies of participation.

Political analysts generally agree that the American political system is most strongly influenced by the political philosophies of classic democracy and liberalism. Both ideologies assume the primacy of individuals as the best judges of their own interests. Most modern interpretations of democratic theory do not call for a devolution of political power. Therefore, the strategy of participation that is most generally associated with democratic theory is that of consultation. Opinions, attitudes, and inputs are sought but only to advise planners and policymakers. After full consideration of all viewpoints, elected public officials make decisions. Citizens neither control budgets, devise policy, nor hire and fire staff. When using the consultation strategy, citizens define the goals, but rarely the means, of planning (3). Goal-setting exercises, public hearings, surveys, analysis of client needs, and other indirect citizen-participation techniques are frequently used in a strategy of consultation.

Whereas democratic theory defines the public interest through majority vote, liberal theory is much more complicated in that the public interest is defined through the interplay of multiple minority-group interests (13).

Thus, the strategies of participation called for in liberal theory are also considerably more complicated. Through partnership strategies, citizens and power holders negotiate terms on how planning and decision-making responsibilities will be shared and establish ground rules that neither side can unilaterally dismiss in order to resolve impasses. Joint policy boards, planning committees, and bargaining and negotiating tactics characterize the partnership strategy.

Socialism provides a philosophical basis for people who are primarily concerned with equality and the advancement of the poor. Advocacy planning is a strategy of participation that has been linked to socialist theory (3), although others would argue that advocacy is merely an application of liberal theory (14). Since the poor lack the conventional sources of power needed to function effectively in the political arena, advocacy must frequently rely on a strategy of confrontation to achieve its goals.

A technocratic ideology often drives agency staff members who are overly concerned with order, progress, and efficiency (3). Citizen participation is frequently denied and, where it is permitted, the goals are usually to (a) prevent obstruction of agency plans, (b) maintain agency stability, and (c) educate the public about what has already been decided. The strategies of participation most frequently associated with technocratic planning are cooptation, manipulation, and therapy (15).

Even this brief examination of political ideologies suggests that there will not always be agreement on what the proper strategy of citizen participation should be. This is one reason why I believe that it is important to obtain citizen input in designing the public participation process. Otherwise there is grave risk that the structure and conduct of the participatory planning process itself will become a heated public issue that damages the credibility of the planning effort. Moreover, this brief review suggests several obstacles to our quest for democratic efficiency:

1. Democratic and efficiency goals derive from different ideologies. Democratic goals are embellished in democratic and liberal value systems, whereas efficiency goals are best articulated in technocratic theory, which is at best antidemocratic.
2. Ideological issues are rarely resolved through so-called "rational" debate and analysis, since different ideologies usually have quite diverse standards of rationality.

### CONCEPT OF DEMOCRATIC EFFICIENCY

Simply defined, democratic efficiency is the ratio of public satisfaction with planning outcomes to the citizen-participation resources "spent" in the planning process. The ideal is instantaneous consensus (complete satisfaction) without having to expend any resources. This definition is comprehensive to the extent that all citizen-participation resources, including citizens' time, expertise, and out-of-pocket expenses, are recognized. However, I do not believe that it is either possible or desirable to quantify the variables in the "formula". Hypothetically, one can concoct examples that show that a process that achieves 40 percent consensus while using very few citizen-participation resources is more democratic and efficient than a process that achieves 90 percent consensus but expends far greater resources. The chief problem with such a comparison is that it ignores a significant political reality—i.e., a project that gets 40 percent support is unlikely to be implemented if the other 60 percent of the public opposes it. Nor does the formula enlighten us about how to allocate citizen-participation resources among major and minor planning studies; there is evidence that larger planning studies generally require a smaller proportion of their total planning budget for citizen-participation activities (16). Despite these caveats, the concept of democratic efficiency provides a useful, although primitive, tool to aid in the search for efficient techniques that accomplish democratic goals.

### DESCRIPTIVE MODEL OF PARTICIPATION

Figure 2 is an adaptation of the descriptive model of citizen participation that was recently developed at the University of Washington (17). The model incorporates the results of more than 10 years of empirical research and evaluation in citizen participation. Since the model approximates the relationship among important variables, it provides a useful starting point in the quest for citizen-participation strategies that are both democratic and efficient.

Issues—their history, character, and implications—give people a basis for deciding whether or not to become involved. Issues also influence the selection of participation strategies. For example, a controversial urban freeway issue will generally require a more complex participation structure than that required to resolve disputes over a rural bypass route. Participants—their

Figure 2. Descriptive model of citizen participation.

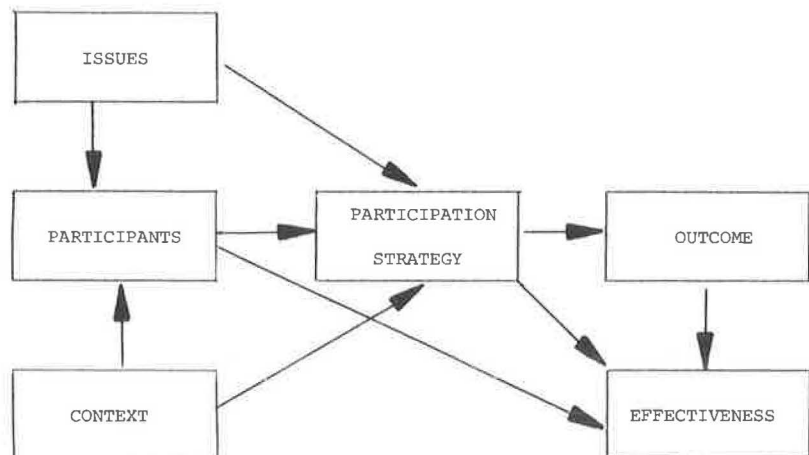


Table 2. Achieving democratic efficiency in citizen participation.

Item	Characteristic		Democratic Efficiency
	Democratic	Technocratic	
Number of participants	Many	Few	Substantive representation, assemblies, subarea planning
Number of goals	Many	Few	Priority-setting workshops
Decision rule	Majority rule	Elite decision making	Consensus seeking
Representation	Elected representatives, self-selection	Appointed representatives	Citizen juries
Citizen roles	Citizens initiate alternatives	Citizens react to proposals	Collaborative planning, design-ins, workshops
	Uninformed citizens	Experts	Citizen training, community technical assistance, gaming
	Community sets agenda	Staff sets agenda	Partnership
	Full citizen power	Little or no citizen power	Citizen representatives on policy board, arbitration, mediation, negotiation
Planner roles	Coordinator-catalyst, facilitator, counselor	Technical experts	Staff training for all roles
Support resources	Full disclosure of all information	Secrecy	Public information packets, design catalogs, project monitoring, community technical assistance
	Staff skilled in group dynamics	Staff lacking in group skills	Training of staff and community leaders
	Staff well-prepared	Staff ill-prepared	Good agendas, pretest communications, information packets
	Variety of citizen-participation resources	Few citizen-participation resources	Reimbursement of citizen expenses, citizen honoraria, advocates
Techniques	Unstructured interaction	Little or no interaction	Structured interaction, e.g., group process
Scheduling	Intensive dialogue	Feed forward and feedback	Computer polling
	Long planning study	Quick decision	No more than one year for planning study

past experiences, ideologies, motivations, positions in the community, and resources—also influence the selection of citizen-participation strategies. And finally, the institutional context for participation (source of funds, mandate, agency jurisdictions, governmental structures, etc.) often dictates the style of participation.

Note that the strategy of participation directly affects outcomes and effectiveness. Naturally, participants themselves influence the effectiveness of the participatory process. And, consistent with our definition of democratic efficiency, satisfaction with planning outcomes is related to effectiveness.

In reality, there are few opportunities to change issues or their context for resolution, although creative citizens and public officials can find exceptions. For example, in the West Seattle bridge issue, some citizens circulated a petition to secede from the city of Seattle and reincorporate as an independent city, thereby becoming eligible for state and federal funds to solve a critical transportation problem. In other cases, public officials have redefined issues to attract new participants. According to the model (Figure 2), redefinition of the issue or institutional context could result in changes in the participation strategy, which would in turn have an impact on outcomes and effectiveness. However, the key variable that influences the effectiveness of participation is the strategy or form of participation. Therefore, in attempting to identify effective strategies of participation, this paper concentrates on alternative interaction techniques, organizational structures, and resources for citizen participation.

#### TOWARD DEMOCRATIC EFFICIENCY

Specific suggestions for achieving democratic efficiency are discussed in the remainder of this paper. Table 2 gives a number of dichotomies that guided this analysis. The table identifies traits that are generally associated with democratic or liberal ideologies of participation and those generally associated with technocratic participation. I do not support technocratic, elite solutions to the citizen-participation dilemma. But, since efficiency is an important underlying value, we can look to technocratic ideology for examples of opposites or polar extremes to democratic traits. To find compromises that are both democratic and efficient, we need to identify solutions that are somewhere between

the two extremes. Accordingly, the right-hand column in Table 2 presents what I judge to be promising resolutions.

#### Number of Participants

Our first consideration relates to the number of participants in the citizen-participation exercise. Representation has historically been the compromise between democracy and efficiency. According to Peterson (18), substantive representation of low-income and minority groups is highest where

1. There is an organized relationship between formal representatives and their constituency,
2. There is competition among those seeking to be formal representatives,
3. Formal representatives are educated and sophisticated about the political and decision-making processes, and
4. Formal representatives have substantial influence over the relevant program (i.e., there is incentive to take participation seriously).

Transportation planners are becoming more involved in planning at the subarea or neighborhood scale (19). Subarea planning is inherently more democratic than regional systems planning since (a) issues and potential impacts are more tangible, thus (b) attracting the participation of larger numbers of citizens. However, where there are important issues that need to be addressed at a regional scale, these studies can be organized around geographically based assemblies, a process in which each neighborhood or subarea appoints or elects representatives to a larger body that coordinates the interface among smaller-scale solutions.

As more people become involved, there is a corresponding increase in the number of articulated goals. Planning at any scale becomes frustrating and cumbersome when it attempts to achieve too many goals. Thus, it is strongly recommended that community workshops be formed early in the planning process to identify priorities and goals that should receive immediate attention. Early priority setting will focus the planning process on key issues, thereby streamlining the process and reducing the level of citizen frustration.

### Representation

Democratic planning generally calls for elected representation or self-selection of citizen participants. By contrast, technocratic planning frequently relies on appointment of citizen representatives. A third possibility, which, to my knowledge, has not been tried, is the empanelment of citizen juries to hear pro and con arguments about alternative solutions and to select the best approach. Citizen juries could directly involve citizens who normally do not participate, provide better representation through random or quasi-random selection of citizens, and allow jury members to devote full-time attention by reimbursing them for their time. This alternative deserves more attention than it has received.

### Roles

There is a basic dichotomy between initiative planning, in which citizens initiate proposals, and reactive planning, in which citizens merely react to agency proposals (20). Reactive planning is generally considered to be more efficient because technical experts are more skilled at framing and developing alternatives than citizens are. Certain techniques (e.g., "design-ins," workshops, and charettes) facilitate collaboration between citizens and planners in developing meaningful alternatives (5). However, truly successful collaborative planning depends more on technical assistance and citizen training than on the application of specific interaction techniques. Collaborative planning also requires the planner to perform as coordinator-catalyst, facilitator, and counselor in addition to technical expert. Most technical people have not had the training to effectively carry out these demanding roles, which require skills in community organization, group dynamics, interpersonal relations, and mediation. Staff training can pay handsome dividends in increased democratic efficiency.

Democratic planning devolves greater power and influence to citizens than does technocratic planning. A planning process that is both democratic and efficient will minimize the risks of reaching an impasse—e.g., through partnership arrangements that involve the community in setting the agenda for the planning study. The election or appointment of citizen representatives to policy boards is one technique by which to directly involve citizens in crucial deliberations over the design of citizen-participation programs, study agendas, programming, and scheduling. Major actors whose support is crucial for project implementation should concur about their respective roles, responsibilities, support services, and contributions to the process before the study is launched. During evaluation and decision-making activities, direct negotiations can sometimes resolve impasses between community groups and power holders. When all else fails, a third-party mediator or arbitrator may be employed to resolve serious conflicts.

### Support Resources

Several researchers have concluded that the effectiveness of participation and satisfaction with outcome are related more to the diversity of citizen-participation resources than to the specific interaction techniques used (1, 17). There is a wide array of support resources that can substantially enhance the democratic efficiency of the citizen-participation process with modest increases in citizen-participation budgets:

1. Information—(a) public information programs, (b) data packages, (c) design catalogs, and (d) project monitoring (to provide better citizen information in the

future about probable impacts);

2. Community skills and group dynamics—(a) staff training, (b) leadership training, and (c) community technical assistance;

3. Meeting preparation—(a) better meeting agendas, (b) pretest communications, and (c) information packets and brochures; and

4. Other supports—(a) citizen honoraria, (b) reimbursement for citizen expenses, and (c) advocates.

### Techniques

By definition, democratic techniques call for direct involvement. On the other hand, efficient techniques are usually indirect. Thus, democratic techniques are dialogue intensive, whereas technocratic techniques rely on feed forward and feedback. Computer-based polling techniques in face-to-face meetings offer some promising new approaches that are both democratic and efficient. This technology-augmented meeting procedure gives all participants equal opportunity to anonymously register their opinions and get immediate feedback on the opinions and attitudes of the entire group. When facilitated by a skilled moderator, this approach enables rapid appraisal of consensus and disagreement, identifies additional information needs, permits discussion of controversial issues without intimidation, and rapidly establishes priorities (21).

There is also a basic dichotomy between structured and unstructured techniques of community interaction. Techniques that are democratic but are still overlaid by a structure could achieve greater democratic efficiency. Task forces and group process are two techniques that readily come to mind.

### Scheduling

Finally, we arrive at the biggest challenge suggested by this analysis: making quick decisions that are somehow based on thorough evaluations that meet legitimate community concerns. Based on my own research in Seattle, I strongly suggest that planning studies not take more than one year (1). This is an immense challenge, but citizens, and sometimes planning staffs, burn out and lose their enthusiasm after this period of time.

### CONCLUSIONS

Through application of the concept of democratic efficiency, this paper suggests a number of approaches to resolving the dilemmas posed by the desire to achieve both democracy and efficiency in citizen-participation processes. Substantial gains in democratic efficiency can be achieved by making modest increases in planning and administrative budgets for staff training, technical assistance for community groups, meeting preparation, and citizen participation in the design and implementation of citizen-participation processes.

By broadening the diversity and scope of agency resources used to complement volunteer citizen resources, the level of citizen frustration that is often associated with democratic but poorly facilitated planning processes can be reduced. Expenditure of these resources should yield public benefits by reducing delays in implementation at the end of the planning process, since the resulting decisions will be built on a solid base of citizen support. Without citizen support, transportation plans are nearly impossible to implement. And while planners scramble to build a constituency that could have been developed earlier through a properly conceived and implemented citizen-participation program, transportation capital and operating costs inflate rapidly, and corridors with un-

certain futures suffer severe adverse economic and social impacts. It may be more cost effective in the long run to spend the resources to do citizen participation right the first time around.

In summary, our substantive knowledge about the effectiveness of citizen participation is still quite primitive. Since the costs of citizen frustration and delayed decisions are high, we cannot afford to be complacent that our current approaches and techniques are adequate. If we are to learn which approaches are truly effective, more evaluation studies that monitor citizen-participation processes from beginning to end are needed (22). We also need citizen participation in evaluating the effectiveness of citizen-participation programs, since approaches that achieve agency goals but frustrate citizen goals are not truly effective.

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*Publication of this paper sponsored by Committee on Citizen Participation in Transportation Planning.*

#### *Abridgment*

## Transportation Investment in Less-Developed Countries: The Case of Guyana

G. Budhu and A. G. Hobeika

The procedure of incorporating the transportation variable in determining the effect of transportation investment for low-volume roads is generalized and applied to regions in Guyana where water is the only mode of transportation. Several regions in Guyana that have poor means of access are known to have characteristics similar to developed regions of the country that have "efficient" modes of transportation. Yet these regions remain sparsely populated and relatively underdeveloped. Previous studies that

have used the traditional approach of quantifying benefits against costs have always concluded that transportation investment was infeasible in such regions. The economic activities and constraints of the Berbice-Orealla region of Guyana are formulated into a linear programming model to determine the net economic effect of transportation investment in the region. The analysis shows that the benefits of improved transportation for the region exceed the costs. Application of the model to other