

RIGHTS IN LAND AND PLANNING BEHAVIOR: A COMPARATIVE STUDY OF MOUNTAIN RESORT DEVELOPMENT

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ABSTRACT

This paper describes a theory of planning behavior and procedures for testing that theory. The theory is based on ideas from decision theory, the theory of games, and the theory of collective goods. Planning in the development of mountain resorts is used as a set of cases because there are many development actions and the communities are relatively isolated so that outside effects can be treated as affecting the community as a whole. Application of the research procedures to a first case indicates that the required data on decision situations and observed planning behavior can be collected through structured interviews. Instances of many of the types of behaviors that can be predicted by the theory were reported in the interviews.

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1 INTRODUCTION

The major intents of this paper are to describe briefly by example a theory of planning behavior and then to describe procedures being developed to test this theory. Improved understanding of planning behavior, including planning by public agencies, private developers, and citizens groups, will allow us to make better choices about how to organize planning. The organization and distribution of rights in land are argued to affect the distribution of benefits and, when transaction costs are considered, efficiency of allocation (e.g., Schmid, 1978; Alchian and Demsetz, 1973; Dahlman, 1980). One of the mechanisms by which rights in land affect outcomes is through their effects on incentives to plan. Changes in rights in land are frequently proposed as means for achieving land use objectives. Improved understanding of the relationships between rights in land and planning behavior will therefore allow us to evaluate more fully the effects of proposed systems of rights in land and proposed systems for planning.

Our current research focuses particularly on the relationships between the system of rights in land and strategic behavior among groups in planning for land development. This relationship is being studied by comparing resort communities that have undergone similar major development but that had different systems of rights in land. The results of this study should also be relevant to other kinds of development, such as resource extraction boom towns or urban redevelopment.

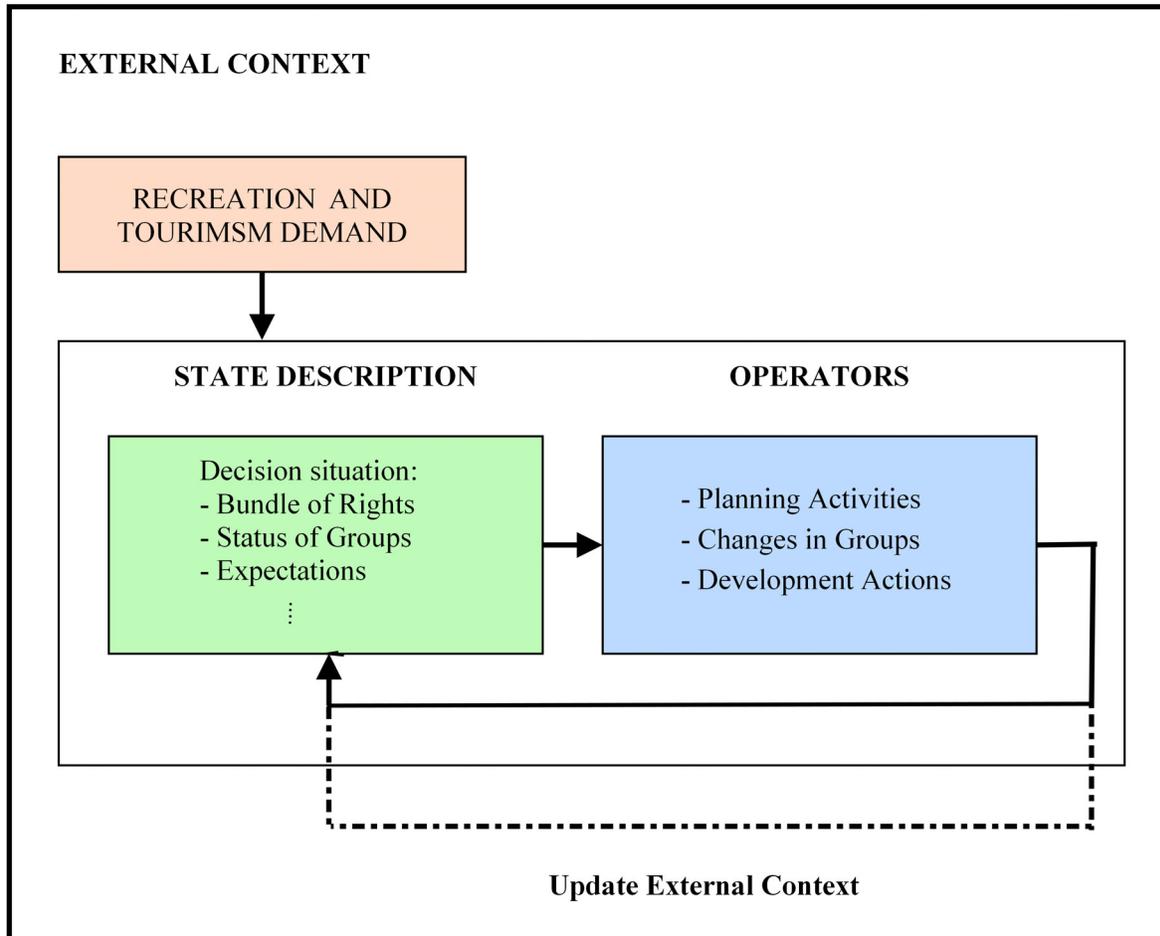
The theory of planning behavior used in this research has two components, which have been described in detail in Hopkins (1981). First, investment in information about the environment, information about related choices, information about values, and generation and evaluation of alternatives is modeled through Bayesian decision theory (e.g., Raiffa, 1968). These investments are analytically equivalent to investment in information in the traditional

Bayesian theory. Second, strategic behavior is modeled through game theory (e.g., Luce and Raiffa, 1957). Qualitative expectations about strategic behavior are based on the work of Olson (1965), Buchanan (1965), and others. The novelty of our work lies not in the development of new theoretical concepts, but in the novel application of an existing body of theory to improve our understanding of planning behavior in the process of land development. Friend and Jessop (1967) and Batty (1977) have applied similar ideas to the explanation of planning in England.

The goal of the current research is to develop specific, refutable hypotheses in qualitative form and to test these with respect to observed planning behavior. Such qualitative behaviors include, for example, whether information resulting from planning was shared or kept secret, or whether oligopolistic groups formed to invest in planning. The general approach is to describe land development in terms of states (decision situations) and planning activities, group formation, and development actions that transform one state into another. The diagram in Figure 1 describes the key components.

As described in Section 3 of this paper, data are collected through structured interviews that lead development participants backward through a series of decision situations. The changes in groups, development actions, and external changes during the state interval are recorded. Similarly the planning activities actually undertaken in each interval are recorded. Information on related groups and actions is also recorded so as to cope with the simultaneity of decision situations. The data on decision situations, but not the data on actual planning activities, are then presented to experts who are asked to predict planning activities. These predictions are developed for each interval recursively, working forward in time. It is the intent that the experts be replaced by “expert systems” algorithms to predict behaviors based on rigorously defined models incorporating the theory.

Figure 1: Context of Planning Behavior



The approach is being applied first to cases in which the planning behaviors are readily identifiable and clearly distinguishable. Mountain resort development in the United States and Switzerland has been chosen as a source of cases. The massive development activities provide a wealth of situations for predicting and observing planning behaviors. Land development is generally the dominant activity in these communities. Because the resorts are concentrated and isolated elements outside the community they can be treated as interacting with the community as a whole. The systems of rights in land in Swiss and United States mountain communities are

very different with respect to characteristics that have been argued to affect planning behavior. In neither country, however, is there a dominant national land use control system that would overpower any behaviors predictable from local situations. These resort developments are thus excellent cases because they provide variability in the independent variables, many decision situations to sample, and readily observable planning behaviors.

In the remainder of this paper we first elaborate the relationship between the distribution of rights in land and predicted planning behaviors. Then the research procedures are presented by describing their implementation for a first case, Snowmass, Colorado. This exploration leads to the conclusion that the theory can indeed be tested by the research approach proposed and that the specific research procedures are viable.

2 THEORY OF PLANNING BEHAVIOR

2.1 Introduction

The purpose of this section is to outline a theory of planning behavior. We will argue that existing theories can be used to yield relevant insights and to predict planning behavior. These theories are game theory (strategic behavior), decision theory (decision making under uncertainty), the theory of collective action (Olson, 1965), and related works. In order to convince the reader of their usefulness, a number of examples in the context of mountain resort development will be used to illustrate their applicability.

To understand land development planning behavior, we first describe the land development process. The latter can be separated into four distinguishable stages. The first may be called the preliminary stage, when market, financial and technical feasibility of a project are determined, and a site or an option for a site is purchased. In this stage fall also the various loan applications

(mortgage, construction loan, standby loan commitment). The second stage is the building stage, when the project starts taking shape. It ends with the completion of the project. The third stage is the relatively stable period when the project is still new, the tax benefits from depreciation are high while repairs and maintenance are low. As the project ages, the tax benefits will start to decrease. Eventually the owner will have to decide whether it is more profitable to sell or to refinance the project. The latter choice would result in a substantial increase in the owners' cash holdings and in newly increased tax benefits. The fourth and final stage is the aging process which ends when the project becomes technically, structurally, or economically obsolete, and a decision has to be reached whether to demolish or to rehabilitate. At this point, the development process can start all over again.

Table 1 provides a summary of the development process and the major actors, besides the developer, who are likely to be involved at each step. The developer may be an individual or a firm. An experienced developer may provide some of the expertise of the actors mentioned in the table rather than hiring outside experts.

2.2 Planning Behavior

Each stage in the land development process involves different decisions and uncertainties. The uncertainties at the beginning of the land development process tend to be especially great; they decrease as the first planning activities are undertaken and completed. Specific actions may include the collection of market information, assembly of land for development, and attempts to change the land use restrictions on the site under consideration, if necessary.

Table 1: The Land Development Process

Starting point: Developer with given interest and expertise

<u>Action/State</u>	<u>Result of Action</u>	<u>Actors</u>
Designate area Conduct market study	Recommendations: Negative=stop Positive=continue	Market Analyst
Find a suitable piece of land	Contract: purchase or option to purchase	Lawyer, Realtor, Seller
Analyze land suitability	Statement of suitability	Technical Experts
Apply for zoning change (if necessary)	Desired zoning: Rejected=stop—Approved=continue	Lawyers, Planners, Politicians, Citizens
Conduct feasibility study	Statement of financial feasibility: Negative=stop or revise plans Positive=continue	Real Estate Market Analyst
Prepare materials for mortgage application	Survey of property, topographic map Preliminary plan and layout Cost estimate Verification of compliance of plan with zoning ordinance and building code	Engineer, Architect, Landscape Architect, Builder, Lawyer, Planner
Apply for mortgage	Request for mortgage: Denied=check reasons—Approved=continue	Bank or other Lender, Lawyer
Apply for standby (or gap) loan commitment	Request for standby loan commitment: Denied=check reasons—Approved=continue	Lender, Lawyer
Find a builder	Contractual agreement	Builder, Lawyer
Record “loan package”	Public record of loans (financial commitments)	Title Lawyer or Title Company
Construction	Building progress	Builder, Subcontractor(s), Architect, Bank/Lender
Advertising	Find potential customers (buyers, lessees, or renters)	Marketing Specialist, Media, Lawyer, Realtor(s), Customers
Hire property management firm	Contractual agreement	Lawyer, Property Management Firm
Construction completed	Occupancy or absorption rate: Unsatisfactory=call standby loan, take corrective steps Satisfactory=continue	Lender (Standby Loan)
10-15 years after completion: Refinance or sell	Decision: Sell=stop Refinance=continue	Accountant, Lender
Obsolescence: Rehabilitation or demolition	Decision: Demolish=land development process can start over again Rehabilitate=process similar to land development process begins, but with more constraints	Real Estate Market Analyst, Architect, Historic Preservation Specialist (if applicable)

Since no construction is undertaken during the first stage, it is possible to keep initial planning actions secret, and there are some compelling reasons for the developer to do so. For instance, the information contained in a market study is of interest to all developers in the area under consideration. Making it generally available may increase interest in the area and thus increase interest by other developers before the person paying for the study can act on it.

Secrecy about one's intention may yield positive returns in the land acquisition process as well. If the land is currently zoned for a use less valuable than the one intended by the developer, secrecy will lead to land transactions at prices reflecting the current use and not the more profitable intended use. Such a strategy is not without risk, however. If the necessary zoning change is not granted, the developer has valuable working capital tied up in a piece of property that is of no use to him. If the developer considers this to be a likely outcome, he may prefer to inform the seller of his true intentions and to buy an option to purchase the land subject to approval of a rezoning request.

The land buying decision can be analyzed using standard decision theory as outlined in Raiffa (1968). The decision tree in Figure 2 illustrates a simple hypothetical case. The developer has two alternatives available. In DECISION 1, the developer reveals his intentions and signs an option to purchase subject to approval of a rezoning request. In DECISION 2 the developer does not reveal his true intentions and he buys the land outright at current prices.

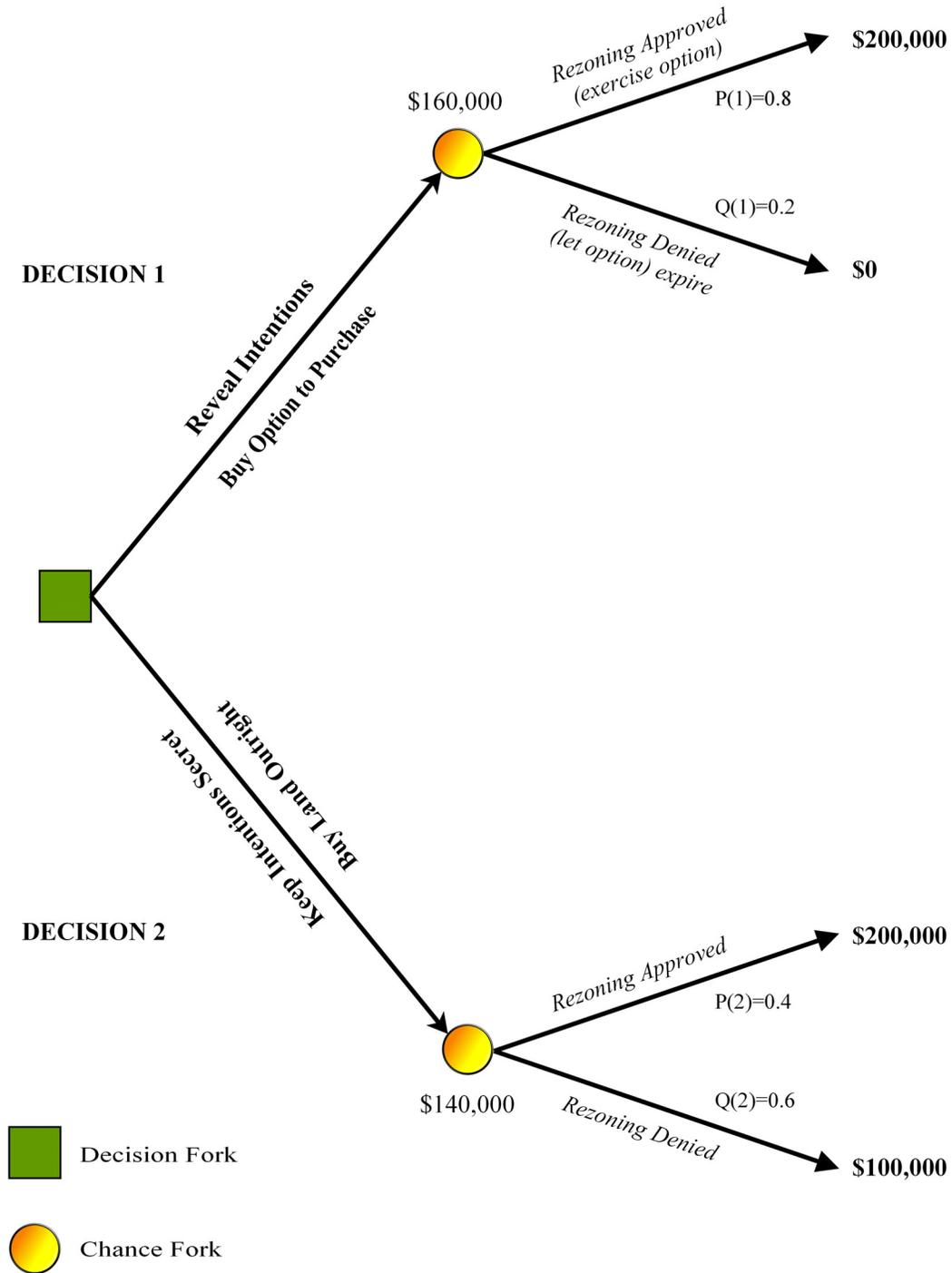
The probability of success in having the intended development site rezoned is denoted by $P(1)$ and $P(2)$ in DECISION 1 and DECISION 2, respectively. $P(1)$ and $P(2)$ may differ from one another. If the developer buys an option to purchase the land, then the seller is also interested in the approval of the rezoning request. The seller's support may facilitate the process. By contrast, if the developer does not reveal his true intentions before purchase, the seller may

feel cheated, and join the opposition. In the example, we choose $P(1) = 0.8$ and $P(2) = 0.4$. For simplicity, it is assumed, unrealistically, that the process of applying for a zoning change is free of cost. Consequently, there will be no difference in planning effort between DECISION 1 and DECISION 2. Under current land use restrictions, the land is valued at \$100,000; rezoning would double its value. If the developer buys the land and it is not rezoned, his cash position will force him to resell the land quickly for \$100,000 or less, depending on how urgently the cash is needed.

The expected value in DECISION 1 is equal to \$160,000, and \$140,000 in DECISION 2. Both amounts are prior to subtraction of the purchase price and the cost of the option (in DECISION 1). Ignoring the possibility of risk aversion, the developer will prefer DECISION 1 if the difference between \$160,000 and the purchase price plus cost of the option is larger than the difference between \$140,000 and the purchase price in DECISION 2. He is indifferent if they are equal, and he prefers DECISION 2 if the second difference is larger.

This example shows that standard decision theory can be applied to explain individual planning behavior in the land development process. The planning behaviors in this case are hiding intentions or explicitly sharing intentions through a contract. But an individual or a firm cannot plan in isolation. Eventually, even the best kept secret about a development project reaches the public, at the latest when zoning changes and a variety of permits are needed to proceed. As soon as knowledge about a project becomes public, the developer may encounter opposition and acquire allies. Groups opposing each other will display strategic behavior, based on the perception of the other groups' intentions and strengths. Simple decision models of the kind utilized in the previous example are then insufficient to explain and to predict group planning behavior. Game theory can help to explain strategic behavior, and Olson's (1965) work

Figure 2: Optimal Land Acquisition—A Decision Tree Analysis



provides a theory of group formation and decision making. Batty (1977) and Hopkins (1981) provide formal discussions of applications of these approaches to planning issues and behaviors. Thus, decision theory, game theory, and the theory of collective action will be used to explain and to predict land development planning behavior. We have now outlined the basic theoretical ideas of our research approach. To further illustrate the approach, we will discuss a few specific examples in the context of mountain resort development.

2.3 Examples: Mountain Resort Planning

Example 1: Group Formation

The change of the predominant land use from agricultural and small residential to recreational, commercial, and residential requires substantial zoning changes. In U.S. mountain communities, land holdings are usually concentrated in the hands of a few large owners prior to development. A developer interested in the area, is usually successful in assembling large parcels by making only a few land transactions. When the question of a zoning change is raised, the land is held by the developer, ranchers and/or farmers, and small mostly local landowners. The right to change the permissible land uses rests with the local residents. The local landowners, including the ranchers and/or farmers, are the natural allies of the developer. By asking for a zoning change for more than his own land, the developer creates a financial incentive for the town residents to approve his request. This situation could be described by a game matrix in which approval is the dominant solution. At this early stage the size of the group of landowners is of relatively little importance; the developer has usually already secured the land most amenable for development. This was the case in Snowmass.

Olson (1965) argues that group formation is more likely if the size of the potential group is small. In addition, if one group member has an overriding interest in the achievement of the group purpose, he may be willing to assume all or a substantial portion of the cost of group formation and action. This condition applies to a developer requesting a zoning change. Approval of the request is vital to being able to proceed, and the value of the zoning change greatly exceeds the costs of making the request. Thus, we expect that the large landowners and in particular the developer(s) take the leading role in changing the land use constraints. An example of such behavior in Aspen, Colorado, is reported in Clifford (1980). In the mid 1950s, the Aspen Institute under the guidance of Walter Paepcke initiated and partly financed the town's first zoning ordinance.

Example 2: Potential for Conflicts

If several individuals compete for the same resources, conflicts will arise. The solution of these conflicts depends on the relative strengths of those involved. The likelihood of a conflict occurring is not constant. Given that each potential development site is unique, conflicts are particularly likely to arise over the acquisition of rights in land. A good example of such behavior is provided by the development of Baldy Mountain in Snowmass as a skiing area. Initially the U.S. Forest Service holds the rights to ski development. Interested parties can apply to the Forest Service for permits to develop the ski slopes. Two developers applied for such permits. The financially more powerful of the two owned large land holdings at the base of the mountain, while the other developer held options for the purchase at some other location, also at the base of the mountain. The competition between the two did not lead to legal action, although threats of legal action were exchanged (Hauk, n.d.). The conflict was eventually resolved. The Forest Service awarded the development permit to the financially more powerful developer.

However, the winner hired the second developer as the architect of the base area facilities (Hauk, n.d.; Clifford, 1980). Aspen Ski Company was a third party in this conflict. They run the ski slopes in Aspen, and the development of a new skiing area resulted in a new competitor for them, although the tourist traffic was sufficient to support additional skiing facilities. The potential conflict was resolved when Aspen Ski Company and the successful developer entered an agreement under which the former built, maintains and operates the skiing facilities on Baldy Mountain (Hauk, n.d.).

It is likely that the amicable resolution of the conflict was possible because each developer had some unique asset which was valuable for the ski area development. Thus the first developer was successful in obtaining the development permits because of his financial power, while the prime agent of the second developer owned valuable land at the base, adjoining the land of the first developer. He also had architectural skills and experience in ski resort development. Finally, Aspen Ski Corporation had the expertise and experience in ski slope development and management.

Other important conflicts are unlikely at this stage of the resort development process. If conflicts arise, they are not likely to be initiated by town residents. The residents not only can hope for an increase in the value of their own land holdings, but also for increased economic opportunities. Thus, longtime residents of Crans-Montana, Switzerland, welcomed resort development because it increased the chances for young people to find work in the community (Darbellay, 1979). Similar sentiments were expressed in Snowmass (e.g. Maddalone, 1983).

As the town develops as a resort, landownership patterns begin to change. Large lots are being subdivided, developed, and sold. The number of vacation homes will increase quickly, and their owners will view further development with suspicion, because they may fear that the beauty

of the environment, which attracted them, may suffer in the process. Their concerns often lead them to form associations to oppose further development. Although these associations are usually open to all land owners and residents, very rarely do long time local residents join them (e.g. Pro Fex in Sils Maria, Switzerland, or a similar organization in Snowmass). Local residents may even resent the attempts of "outsiders" to influence the course of development. We can understand this conflict of interests if we consider the potential gains and losses to the two parties. The vacation home owners have very good reasons to oppose further development. The preservation of the natural environment enhances their enjoyment of the area, while limiting the supply of vacation homes increases the value of their property. For local residents, few benefits result from slowing down development. Further growth of the resort increases the value of their developable land and the economic opportunities available.

While the arguments between local residents and vacation home owners are often heated, the former usually win because they hold the right to vote. The owners of vacation homes must therefore look to other institutions where residency is not required to gain influence. They may join environmental protection groups to lobby for limitations on the development of certain areas. Another channel open to them is court action. This is probably the most effective way for nonresident land owners to influence resort development. Such action was taken in Snowmass where second home owners through the Snowmass Foundation sued to stop further development of the base village (Sachs, 1983).

Example 3: Externalities in Ski Area Development

A resort is successful because of the recreational opportunities it offers. Many of them will be man made and financed privately. Consider the development of a new ski slope. Good skiing slopes enhance the value of all land in the resort area. Owners of this land benefit from the skiing

area whether they contribute to its development or not. If this effect is very large, i.e. if much of the land is held by owners other than the developer, then it may lead to underinvestment in skiing facilities. For example, if a ski development is profitable if we include the increase in land value but not otherwise, then it will not be undertaken if the land is not held by the ski slope developer. Since the land around the base of the ski slope is particularly valuable, we should expect that the developer will try to secure this land as early as possible. In the case of the development of Baldy Mountain in Snowmass, it is suspected that some land was acquired without stating the true reason of the purchase (Clifford, 1980). This could be to benefit from lower agricultural land prices, but it is possible that the developer wanted to prevent others from learning about his intentions to develop the ski slopes and benefiting from his efforts.

Once the ski facilities are in place, and if we have many small land owners, we may observe overbuilding, for example of accommodations compared to ski area capacity. Aspen, Colorado was in this situation at one time. St. Moritz, Switzerland is another example where this has occurred. As long as there is room for expansion of the skiing facilities, this constitutes no problem. Where this is not the case, pressure may mount to develop areas which are currently protected, even if the development is very costly. This occurred in Grächen, Switzerland, where the Swiss Federal Government was persuaded to overrule its own regulations to allow the development of an additional ski slope (Baumgartner, 1983).

Why does overbuilding occur? In mountain resorts, most owners of tourist accommodations are small relative to the market. Thus, they do not perceive that they are significantly affecting the supply when they expand. The situation may be complicated by the presence of vacation home owners, who rent out their homes when they are not using them. It is difficult for a hotel or motel owner to assess the magnitude of this competition, and he may

underestimate it. A development that can be observed in many emerging mountain resorts is that initially there are only few and usually detached vacation homes. Even if they are rented tourists part of the time, the quantitative effect is modest. As the resort becomes well known, condominium development frequently increases the supply of modern accommodations, often crowding older accommodations offered by local residents out of the market.

If ownership in land is highly concentrated as is so often the case in U.S. mountain communities in the early stages of resort development, the problem of underinvestment in ski slopes is less likely to occur than if landownership is widely distributed, as is the case in Swiss communities. The problem of underinvestment can be prevented if an organization exists that is capable of bringing together all parties which benefit from ski area development. We believe it is no accident that in several Swiss mountain resorts, the community owns stock in the skiing operations. Unlike in the United States where the upper slopes are mostly held by the federal government, in Switzerland they are usually the property of the community or of an organization closely associated with the community (i.e. Genossame, Korporation). As owner of a crucial asset, the community can exercise substantial control over the development, and because it represents all residents, is able to account for opposing interests of developer and of the other land owners. Through its taxing power, it benefits from the economic advantages that accrue to all involved, thus internalizing some of the externalities created by the development.

Problems of overinvestment cannot easily be prevented on the local level. The decision makers (voters) are the same individuals interested in further development. This conflict can be resolved only through the intervention of a higher level of government. Thus, the preservation of the landscape between the lakes in the Upper Engadin, Switzerland required the action of the Swiss federal government. In this particular case, federal intervention was necessary because of

the cost of the land use restrictions as well, since Swiss law requires the government to reimburse the land owner for the loss in value that result from zoning changes.

3 RESEARCH PROCEDURES

There are four main tasks in this research. The first is to determine and describe the distribution of rights in land pertinent to planning behavior. The second is to determine and to describe decision situations so that planning behaviors can be predicted. The third is to predict planning behaviors from the theory and data. The fourth is to describe observed planning behavior so that it can be compared to the predicted behaviors. These steps are described in the context of Snowmass, Colorado, but our purpose is to show how the procedures work, not to present conclusions about planning in Snowmass.

3.1 Rights in Land

The primary focus of this study is the relationship between rights in land and strategic planning behavior. Rights in land have been described by a narrative history of the evolution of rights, maps of the spatial distribution of rights among persons, charts characterizing the bundle of rights associated with a type of parcel, and charts characterizing the bundle of rights held by types of persons.

Predicting planning behavior requires knowledge of the historical context. Prior affinities among persons or existing groups affect the likelihood of cooperation among groups. Risk aversion and leadership (in the oligopoly sense) depend on historical experience of individuals and groups in their own environment. This information is organized into a narrative history up to the time of the first decision situation to be studied. A narrative history of Snowmass is given in

Appendix A as an example of the kind of information needed and a means of providing it. Applying this information may require more detailed knowledge, such as group memberships of a particular landowner. This information is developed through the interviews described in Section 3.2. The narrative history was developed from secondary sources (e.g., Calef, 1960; Peffer, 1951; Vandenbusche and Smith, 1981), published first hand accounts (Clifford, 1980; Hauk, n.d.) and interviews with persons who lived in the area prior to development (Anderson, 1983; Maddalone, 1983). The brief summary provided in the appendix is only a small portion of the historical detail we have gathered, but it may well be sufficient in conjunction with the remaining data sources.

The spatial distribution of rights at the beginning of the resort development is described by a map. From this map we can determine how much land an individual or corporation owns in the study area, the size and arrangement of parcels, and the location relative to opportunities, such as ski slopes, and infrastructure such as roads. For each parcel owners are listed in order by date of purchase so that we can also see some of the temporal aspects of change in land ownership.

The data to construct this map were obtained from three sources. Copies of maps of "Status of Public Domain Land and Mineral Titles" were obtained from the Bureau of Land Management. These showed parcel numbers, ownership boundaries, and rights reserved to the federal government. Maps of parcel numbers were also traced from records of the Pitkin County Assessor. This latter source included ownership names, but the record keeping system had been superseded. It was therefore difficult to determine the dates for which the data were applicable. The third source was a search of the record books of the Pitkin County Clerk's office. The records sorted by township and range and recording date were scanned, starting with 1945, for land transactions in United States Public Land Survey System sections within the study area. For

each transaction the type of transaction, grantee, grantor, date, and parcel numbers or other legal descriptions were recorded. These three sources were then combined by identifying the transactions for a given parcel number on maps and thus establishing ownerships as of various dates. This procedure was sufficient to identify ownership for almost all parcels.

The procedures applied for Snowmass will be feasible elsewhere only if parcel number reference maps exist. A map for a single date is sufficient because it can be used in conjunction with transaction records to derive maps for other dates. In most parts of the United States in which land is surveyed primarily with respect to the United States Public Land Survey system, plat maps of various kinds are usually available. In the eastern United States, however, there are frequently no such maps. Parcel maps and transaction records that provide equivalent information are available for at least some resort communities in Switzerland.

Property in land is traditionally described as a “bundle of rights.” This bundle can be divided among various persons and organizations, even for the same parcel of land. Although the bundle of rights concept is ubiquitously used, we could find no satisfactory organizational format for comparing rights among different types of parcels or among persons. Charts are being developed to characterize a type of parcel with respect to all rights and types of persons. We may also organize the information in a chart for a type of person with respect to all rights and types of parcels.

Table 2: Rights in Land

CASE: Snowmass		PARCEL TYPE: USDA Forest Service		DATE: 1985
RIGHTS	WHO	EXCLUSIVE TO	TRANSFER	DISCRETION
1.0 Agriculture				
1.2 Grazing	USDA Forest Service	Agency	Lease by permit	Legislation and administrative procedures
	Grazing permit holders	Individual permit holders by time and location	None	USDA approved grazing plan
4.0 Access	General public	General public	None	Administrative regulations
6.0 Commerce	USDA Forest Service	Agency	Lease by permit	Legislative limits on area and terms
	Concessionaires	Individual concessionaire by time and location	Assignable with approval	USDA approved construction and operation plans
7.0 Vote				
7.1 Federal	Citizens	Citizens	Inheritance, residence at birth, naturalization	Forest Service, legislation,...
7.2 Town	Legal residents	Legal residents	Residence	Incorporation, zoning, sales tax,...
7.4 Annexation	Landowners	Landowners-firms, agencies, individuals	Sale, bequest	Annexation approval (other means of approval)
7.5 Special Districts	Landowners	Landowners-firms, agencies, individuals	Sale, bequest	Infrastructure provision, maintenance
8.0 Obligations				
8.4 Property Taxes	USDA Forest Service	N.A.	None	In lieu payments by negotiated agreement
	Landowners	Tax district	Sale, bequest	As per ordinance

The second column identifies the person, agency, or private organization that holds a particular right, and the remaining columns further characterize each right. Thus, the third column identifies in what way the right is exclusive. One person's right may exclude all others from that right; the right may be exclusive to a particular group; or there may be no exclusion at all. A ski development permit from the Forest Service excludes others from ski development on

that site. A grazing permit may not be exclusive of other grazers. The fourth column indicates the permissible types of transfers of the particular right, such as sale, lease, bequest, encumbrance for debt, or assignment. Transfers may be restricted. A ski development permit cannot be sold. Transfers to non-resident foreigners are restricted in many Swiss communities. The fifth column indicates the discretion that the person holds with respect to the right. Discretion within a residential use might range from the right to build a new structure to needing approval to change the color of a flower box.

By combining the types of information listed in Table 2, the maps of parcel ownership (meaning the holder of fee simple interest in most surface rights), and the narrative histories, sufficient information about rights can be organized for predicting planning behavior.

3.2 Decision Situations

The second task is to determine and to describe specific decision situations so that predictions of planning behavior can be made. Information was obtained from published first hand accounts (Clifford, 1980; Hauk, n.d.) and documents from the process itself, such as published plans, resolutions, and letters. The most important source, however, was a set of structured interviews of persons directly involved in or affected by the development.

The basic concept of the interview was to identify a decision or resolution event, and then to ask the interviewee to identify a trigger event that began the process resolved by the decision. The situation at the time of the trigger event and any changes in pertinent characteristics that occurred during the interval were then ascertained. The trigger event could usually then be treated as a decision event in turn and the sequence of questions repeated. These intervals were followed backward through the period of development activity of interest. This structuring of the

interview is not meant to imply that only one thing is happening at a time; the questions provided information about simultaneous events. The same interviews also served to obtain information on actual planning behavior. That part of the interview is discussed in Section 3.4. An interview outline is attached as Appendix B. Interviewees were asked to respond to the questions as a representative of a particular group, "your group".

A final decision event was suggested to each interviewee based on what we already knew about his or her role in planning activities and the time period we wished to cover with that interviewee. After obtaining general information about the interviewee, the first set of questions identified the group being represented, its members, and the rights held by that group. The second set of questions established a trigger event and time interval. The third set of questions covered the decision situation as of the trigger event, establishing the alternatives available, preferences among them, and perceptions of alternatives and preferences of other groups. Most interviewees responded easily to these questions. The fourth set of questions dealt with actual planning behavior and is discussed in Section 3.4. The fifth set of questions requested information on transactions in land, regulatory changes, organizational or leadership changes, or construction activity by the group represented by the interviewee during the interval. The sixth set of questions requested the same data about other groups. The seventh set of questions covered events external to the groups considered in prior questions—changes in the national economy or federal or state legislation, for example.

If the interviewee had been involved prior to the trigger event, then the questions were repeated using the trigger event as a decision event and establishing a new trigger event. It was time consuming to cover more than two time intervals in a single interview, but several individuals indicated their willingness to be interviewed again. At the end of each interview we

asked a set of questions about the formation of the group represented by the interviewee—when established, prior affinities of group members, benefit to members, leaders, benefit to leaders, costs, and original purpose. We interviewed prior and current residents, politicians, professional planners, development company executives, and lawyers. The combination of published sources and documents, many of which were obtained through the process of interviewing, and structured interviews provided information on specific decision situations sufficient to develop predictions of planning behavior. These predictions for a sequence of specific decision situations must be made with knowledge of the general context, in particular rights in land.

3.3 Predicting Planning Behaviors

The prediction of planning behaviors has not been completed and cannot be reported as a well defined, precisely modeled procedure. Some procedures and examples are described here. It is our intent to develop more specific predictive relationships that will allow reliable refutation of hypotheses. The decision situations of the various groups at a particular time, as identified through interviewing can be summarized for all groups together so that relationships among these groups can be considered in making predictions.

The predictions are, for the moment, recorded as if they were answers to the interview questions on actual planning behavior. An expert who is not aware of the actual planning behaviors is lead through the intervals, forward through the development period, and asked to predict answers to the questions through application of the theory. We will eventually model these expert predictions.

3.4 Actual Planning Behavior

Actual planning behavior is obtained through the same interviews that provide information on the decision situation. A first group of questions (see Appendix B, questions 4.1) deal with planning activities considered. For example, “What planning options did (your group) consider for clarifying values of group? (e.g., meetings, public hearings),” or, “What planning options did (your group) consider for identifying physical, environmental, or social characteristics of the situation? (e.g., staff work, hiring a consultant).” Very few interviewees were able to identify planning activities that were considered other than the ones the group actually carried out. Whether this was because they had not considered other options or could not remember is impossible to determine at this stage. Such information is not essential to us because our intent is to compare actual and predicted behavior. Information on rejected options might, however, have reinforced conclusions by showing that behaviors rejected would be predicted to be rejected.

Questions 4.2 dealt with planning activities actually carried out. Many interviewees were able to identify planning activities actually undertaken, who did the work, what the work cost, how costs were shared among groups, and whether results were kept secret. For example, in 1978 and 1979, a Master Plan was developed for the newly incorporated Town of Snowmass Village. The town hired a consultant and the cost was shared equally by the Town, The Snowmass Company, and Aspen Ski Company. There was intentional sharing of information and intentions among these three groups (Kane, 1983). The shared expectations of the Snowmass Company and the Town were formalized in Ordinance 17, Series 1978. A similar statement of shared expectations between the town and a smaller developer was formalized in Ordinance 2, Series 1979. From the interviews we have recorded examples of oligopolistic groups sharing

planning costs for related fields of choice (e.g. Maddalone, 1983; Kane, 1983), lawsuits by disenfranchised landowners (e.g. Sachs, 1983), investment in generating ideas for development (Vidal, 1983; Ethridge, 1983), investment in assessing natural and social environment (Blann, 1983), and investment in clarifying values (Ethridge, 1983). The interview procedures are thus clearly successful in identifying the types of actual planning behaviors that we wish to compare to predictions.

The final step is to compare qualitative characteristics of predicted behavior and observed behavior. Although the qualities of interest should be relatively easy to identify, we have not yet implemented any formal comparisons. With the questions in their present form, some human judgment will be required to decide what has stayed the same and what is different. As we gain experience with the procedures it should be possible to make the questions more precise. Precise questions will in turn make the comparisons of observed and predicted behaviors more reliable.

4 CONCLUSIONS

The proposed theory of planning behavior is clearly applicable to land development in mountain resorts. It has been used in Section 2 to explain what behaviors might be expected under various conditions within the development process. The types of behaviors that the theory can be used to predict have been discovered through interviewing to have occurred during mountain resort development.

The research approach of decision situations (states) and planning activities, group formation, and development actions has been successfully implemented as the organizational concept for structured interviews. Such interviews have been conducted for a first case and yielded the necessary types of data, both as to decision situations and as to actual planning

behavior. Other data on historical context and rights in land have been obtained using procedures that can work in both the United States and Switzerland.

The major task that remains is to develop and to test specific, rigorously refutable hypotheses. Such a hypothesis might be stated qualitatively as: If a small number of developers are involved in the development of a resort, they will form an oligopolistic group to share the costs of planning. In comparing actual to predicted behavior, such characteristics as the cost share formula can be used to test whether the group behaves as predicted by the theory. Other hypotheses might include the relationship between the number of potential allies for development approval and secret versus open intent in purchasing land or the use of lawsuits if non-resident owners have no voting rights. The information obtained in the first case study suggests that such hypotheses can be developed operationally for testing with respect to mountain resort development. Both the interview procedures and the data collection for historical context and rights in land can clearly be made more efficient as experience is gained in data collection and analysis.

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Appendix A

Narrative History for Snowmass to 1955

White homesteaders began settling in the Roaring Fork Valley in about 1880. The State of Colorado, Pitkin County, and the town of Aspen were all established by 1885. The United States Forest Reserves were first created in 1891. General farming by homesteaders was gradually replaced by ranching, which continued through 1955. There was negligible mining activity in the Brush Creek valley in which Snowmass is now located.

Cattle ranchers and sheepherders were historically at odds because they competed for the same pasture, some of it in the public domain, and cattlemen believed sheep destroyed land for cattle. Beginning with the Forest Reserves in about 1899, permit systems evolved for controlling the number of animals on federally owned land. These systems tended to favor adjacent residents and to vest rights implicitly to continued grazing. The vesting of rights was not, however, sustained legally without a permit. Access to the federal lands was crucial because most ranchers did not own sufficient land to sustain an economically viable ranch. Ranchers generally owned only their hayfields and some winter pasture. Sheep were grazed in the higher areas by permit to herders from outside the local area, often outside Colorado. In general, cattle ranchers were local landowners, residents, and Anglos; sheepherders were nomadic and Mexican or Basque. As might be expected, given that they were residents who could vote, cattlemen had greater success at the state level in passing laws favorable to their interests than did sheepherders.

During World War II, the United States Army's 10th Mountain Division was stationed for training in the mountains south of Aspen, Colorado. Some of the men of this division were impressed enough with the area to return after the war. They formed a nucleus of expertise around which much of Aspen ski development occurred. At about the same time, 1945, Walter

Paepcke, a wealthy Chicago industrialist, visited Aspen. Impressed by its beauty and remoteness, he decided to resurrect the old mining town. He began three enterprises: The Aspen Company, which leased and restored old buildings; the Aspen Skiing Corporation, which developed ski trails and lifts, and the Aspen Institute for Humanistic Studies, which encouraged artists and scholars from outside the community to visit during the summer. Members of the 10th Mountain Division and D. R. C. Brown, whose father held many of the mineral claims on Aspen Mountain, worked with him in these ventures.

As a result the town of Aspen began to develop as both a winter and a summer resort. The development of the town did not affect the rest of the Roaring Fork Valley, including the area that became Snowmass, until the mid 1950's.

5/25/83

APPENDIX B

COMPARATIVE TOURISM DEVELOPMENT PROJECT

INTERVIEW FORMAT

COVER SHEET

COMMUNITY:

INTERVIEWER:

INTERVIEW:

ADDRESS:

PHONE:

SCHEDULED DATE/TIME:

CONFIRMED:

LOCATION:

GENERAL INFORMATION QUESTIONS: (specific to interviewer)

FINAL EVENT: (alternate final events:)

GROUP REPRESENTED: TITLE/ROLE/HOW:

LONG:

REFERRALS:

DOCUMENTS:

QUESTION FORMAT

1. [Your Group] AS OF FINAL DECISION

1.1 Group membership (by name & role If group < 10) (otherwise identify leaders and profile of membership)

1.2 Rights held by group: What? Where? (see classification of rights in land)

2. TRIGGER EVENT

2.1 What prior decision triggered consideration of alternatives for [the current final decision]? (i.e. set the decision situation)

2.2 When did [the trigger event] occur? (time period should probably be in range .5 to 5 years)

MONTH/DAY/YEAR :

COMMENTS:

3. DECISION SITUATION AS OF [TRIGGER EVENT]

3.1 What alternatives did [your group] think were available immediately after [the trigger event]? (label each option by letter for further reference)

3.2 What was the order of preference among these alternatives at that time?

3.3 What other groups were seen as relevant to the decision situation, either as adversary or possible coalition? (number each group for further reference)

3.4 What did [your group] at that time think were the alternatives available to each of the other groups? (label with # - letter)

3.5 What did [your group] think was the order of preference among these alternatives to each other group?

COMMENTS:

4. PLANNING SITUATION AS OF [TRIGGER EVENT]

4.1 What planning options did [your group] consider for

4.1.1 clarifying values of group? (e.g. meetings, public hearings)

4.1.2 identifying physical, environmental, or social characteristics of situation? (e.g. staff work, hiring a consultant)

4.1.3 learning about alternatives & expectations of other groups? (e.g. joint meetings, staff work to predict)

4.1.4 developing or evaluating alternatives? (e.g. staff time, or hiring a consultant)

COMMENTS:

4.2 When you were considering planning options (e.g. hiring a consultant) were any of these options seen as being advantageous or detrimental to other groups.

4.3 Which planning options were actually undertaken?

4.3.1 What were the results of planning options undertaken by [your group]

4.3.2 Were the costs of any of these shared among a coalition of groups? Which options w/which groups?

4.3.3 What were the costs of the options undertaken?

4.3.4 Were the results of any of these intentionally shared with or kept secret from other groups?

Which from which groups?

4.3.5 Were results of any planning options undertaken by other groups shared or kept secret from [your group]

4.3.6 What were the results of planning options undertaken by other groups?

COMMENTS:

5. [YOUR GROUP] ACTIONS DURING INTERVAL

5.1 During the interval between [the trigger decision] and [the final decision] did [your group]:

5.1.1 initiate or carry out transactions in rights in land? What? When? Where? from whom or to whom?

5.1.2 initiate or enact any regulatory legislation or decisions? When? What?

5.2 During the interval between [the trigger decision] and [the final decision] were there in [your group]

5.2.1 any changes in organizational structure? What? When? Why?

5.2.2 any changes in membership? Who? When? Why? How?

5.2.3 any changes in leadership? Who? When? Why?

5.3 During the interval between [the trigger decision] and [the final decision] did [your group]:

5.3.1 initiate or complete any construction projects? What? When?

5.3.2 initiate or complete any other actions? What? When?

COMMENTS:

6. OTHER GROUP ACTIONS DURING INTERVAL

6.1 During the interval between [the trigger decision] and [the final decision] did [any other group]:

6.1.1 initiate or carry out transactions in rights in land? What? When?

Where? from whom to whom?

6.1.2 initiate or enact any regulatory legislation or decisions? When? What?

6.2 During the interval between [the trigger decision] and [the final decision] were there in any other group:

6.2.1 any 'changes in organizational structure? What? When? Why?

6.2.2 any changes in membership? Who? When? Why? How?

6.2.3 any changes in leadership? Who? When? Why?

6.3 During the time between [the trigger decision] and [the final decision] were there in any other group:

6.3.1 changes in organizational structure? What? When?

6.3.2 changes in leadership? Who? When?

6.4 During the time between [the trigger decision] and [the final decision] did any new groups form? For each such group:

6.4.1 When did it formally organize?

6.4.2 What affinities existed among individual members before group formed?

6.4.3 What did individuals have to gain by joining group? (may be different types of individuals and different types of gains)

6.4.4 Who were the founding leaders of the group?

6.4.5 What did these leaders have to gain relative to other group members by leading group?

6.4.6 What were the costs in time, money, or other of joining group?

6.4.7 What was the purpose of group when formed? (return to question 6.4.1 if other groups were newly formed)

COMMENTS:

7. EXTERNAL CHANGES DURING INTERVAL

7.1 Were there any changes outside the immediate context during the time between [the trigger decision] and [the final decision], such as changes in state or national economy or legislation, or actions by competitors? Did [your group] exist prior to [trigger decision]?

If yes, consider [trigger decision] to now be a final decision and go to Question 2.

Otherwise:

8. FORMATION OF [YOUR GROUP]

8.1 When did [your group] form?

8.2 What affinities existed among individual members before [your group] formed?

8.3 What did individuals have to gain by joining [your group]? (may be different types of individuals and different types of gains)

8.4 Who were the founding leaders of [your group]?

8.5 What did these leaders have to gain relative to other group members by leading [your group]?

8.6 What were the costs in time, money, or other of joining [your group]?

8.7 What was the purpose of [your group] when formed?