

Joe -
Here's another
application of the
Moloka'i Project
data.
Best regards,
Penelope

THE GROWTH MACHINE, TOURISM, AND THE SELLING OF CULTURE

PENELOPE CANAN
University of Denver

MICHAEL HENNESSY
Prevention Research Center, Berkeley, California

ABSTRACT: This case study of conflict over land use on the Hawaiian island of Moloka'i examines the tension between a tourism growth machine and the island's residents. Using newspaper accounts, qualitative observations, and a multidimensional inventory of value structures, the authors conclude that the basis of communal association varies among three groups: the growth machine, island residents who want to limit development, and those who favor diverse types of development. These social orientations are identified as *gesellschaft*, *gemeinschaft*, and *Zwischengruppe* ("in between group"). The article concludes with a discussion highlighting the internal contradictions of marketing traditional cultures.

This case study describes land use conflict over resort development on the Hawaiian island of Moloka'i. The example is instructive partly because of the differences in values between outside developers and residents but also because it demonstrates that conflicts in the social system are directly observable in the spatial order (Castells 1977; Harvey 1973; Logan 1978). By viewing communities as locations of political and economic exchange, this research follows in the direction of the "new community sociology" of Buttell (1980), Gilbert (1982), Logan and Semyonov (1980), Lovejoy and Krannich (1980), Newby (1980), and Walton (1981). Especially influential to our approach is the growth machine perspective of Molotch (1976, 1979) and developed by Krannich and Humphrey (1983), Molotch and Logan (1984), and Logan and Molotch (1987).

Molotch suggests that communities are defined by their self-identified similarity regarding the future use of land and that the competition for land is the major force for political organization in the local arena. Localities represent the "areal expression of the interests of some land-based elite" (1976: 309) and when there are coalitions of competing land interests with sufficiently enduring quality, communities exist as "aggregates of land-based interests" (1976: 310). He describes a politically organized "growth machine" comprised of two groups distinguished according to the directness of the benefits of development. "Advocates" stand to gain directly; they are the owners of land, speculators, investors,

and the like. "Statesmen" of the growth machine, on the other hand, benefit indirectly. As realtors, bankers, owners of secondary industries, and utility investors, their interest in development is defined by the economic returns of overall growth and is not tied to specific development alternatives.

Inevitably, land use proposals presented by the growth machine require local residents to take positions regarding development. It is these reactive choices that create local (nested) communities (Molotch 1976) for whom the element of self-identification differs. However, Molotch did not discuss what happens to the internal structure of communities when they are forced to react to land development proposals. Only recently did he and Logan mention the relevance of the growth machine perspective for rural-urban clashes that occur when urban elites want to develop rural property, specifically for suburbanization (1987: 118). This article extends Molotch's notion to understand how growth issues are related to the bases of community attachment in a rural island community.

We begin with a description of Moloka'i, Hawaii, an ideal location for examining the consequences for community stemming from conflict over growth policy. Fifteen years of newspaper accounts document efforts by a growth machine to sell tourism to islanders as an economic imperative and a nonthreatening alternative to their traditional lifestyle. Qualitative observations also assist an examination of the social bases of an antidevelopment countercoalition.

In addition, quantitative survey data provide evidence for Molotch's contention that the choices made about the future use of land literally create communal associations. By way of exploration, possible factors influencing residents' choice of community identification—especially jobs and the contradictions inherent in selling place, lifestyle, and culture—will then be discussed. Finally, we describe the physical partitioning of the island, a temporary spatial solution to the social conflict over growth policy.

MOLOKA'I AND GROWTH MACHINE RESEARCH

The Hawaiian island of Moloka'i, known as the "Friendly Isle," is an ideal research site for studying the growth machine because of its geographical, political, economic, and sociocultural characteristics. Its geography creates clear physical boundaries and its small size (26 by 11 miles) means that social processes are highly visible and easy to identify. Socioculturally its residents are predominantly part-Hawaiian and Filipino Americans who share the recent agricultural, economic, and cultural past. Politically, Moloka'i is one of four islands in Maui County in a state where governmental centralization is the highest in the United States. (Except for the city and county of Honolulu, political jurisdictions below the county level do not exist and the state provides services that are usually found under local control, like education.) Economically, the residents are not well off. Unemployment is high (more than 15%), salaries are low (the average income is less than 85% of Oahu salaries, which rank twenty-sixth of the 50 state averages), and the general cost of living (10% higher than Oahu) ranks second among the 50 state averages.

Land ownership is extremely concentrated (private plots make up 2% of the land) and the major landowners (Moloka'i Ranch, Hawaiian Homes Commission,

state, and national governments), as well as the major political actors, are based off-island. Molotch says that development of land is the central political problem and political rationale for local government. On Moloka'i this is certainly true: with the withdrawal of agriculture, land use issues dominate community organization and political debate.¹

Moloka'i is one of the last islands in the Hawaiian chain to be targeted for resort development. Since commercial agricultural growth has ceased, the county of Maui and the state of Hawaii back tourism as the economic choice to counterbalance agricultural decline (*Honolulu Advertiser* 1983a, b). State documents also emphasize that Moloka'i's only economic future lies in expanded tourism:

...the available data reveal agriculture's declining role and the visitor industry's compensating growth. The job count in the agricultural sector—which provided nearly half of the jobs on Moloka'i through 1972—has fallen gradually. The growth of the local visitor industry, however, has provided about 250 new jobs since 1977 (Hawaii Department of Planning and Economic Development 1983: 8).

To begin tourist development, Moloka'i Ranch sold 6,762 acres (4.2% of Moloka'i) to a mainland-based development company in 1976. Their development, Kalua Koi Resort, now has a 292-room Sheraton Hotel, an 18-hole golf course, a 16-parcel subdivision, and 200 condominiums. They also plan a development of 350 "ranch estates" on over 5,000 acres along Moloka'i's only expansive white sand beach at Papohaku (Hawaii Department of Planning and Economic Development 1983: 17). "Full development" would mean 1,607 dwelling units (condos, hotel rooms, and single-family dwellings) of which about 30% currently exists (Hawaii Department of Planning and Economic Development 1983: 18, 19).

Kalua Koi Resort's ultimate plans are for a "resort destination," meaning that visitors receive a self-contained vacation experience and the goal is "land use-synergism" (Lamarche 1976; Molotch & Logan 1984: 492). More important, vacationers at the hotel and condominiums are also invited to purchase a piece of paradise. For example, Kalua Koi's advertisement in *Islands* (October 1983) states:

While parts of Hawaii were going high-rise, the Island of Moloka'i kept its feet on the ground. We lead the simple life. Go torchlight fishing. Raise some livestock. Hold incredible luaus. Go visiting on horseback. Cling to the Hawaiian values of friendship and family love.

This spirit is enshrined at Kalua Koi Resort, along the beach at west Moloka'i just 18 minutes by plane from Honolulu. You should see it. Golf it. Bike it. Hike it. Sample its blend of Hawaiian hospitality and resort luxury. Like it? We'll also show you some of Hawaii's most promising land ownership opportunities within the resort at Papohaku Ranchlands.

Other advertisements offer opportunities to "stake your claim" on ranch parcels beginning at \$120,00 and oceanfront 5-acre parcels beginning at \$325,000.

Thus the advertisement campaign transforms visiting into a sales pitch, with the intention of creating a new landowning class. This class would be both culturally alien and overwhelming in size, not to mention financially better off than the impoverished local residents.

THE TOURIST GROWTH MACHINE ON MOLOKA'I

Pressures for growth are not due solely to the invisible forces of the market, but also to a political process that involves local growth machine advocates as well as supporters in other communities, usually higher up the "land use planning ladder." On Moloka'i, the local advocates are primarily Moloka'i Ranch and Kalua Koi Resort. The "Statesmen" include state and county government personnel, bankers, and owners of companies dependent on tourism (aviation companies, rental cars, recreational specialists, golf course managers, and potential fast food chain owners).

To gain the necessary support for development changes on this small island, growth proponents have used a variety of persuasion messages. They claim that the local lifestyle will not be adversely affected; they promote the appearance that all fiscal consequences will be positive (an expansion of tax rates, for example), while ignoring the drain on public resources; they take credit for the rise in service sector jobs; and they attempt to discredit locally based opposition to development that is grounded in maintaining the slow-paced traditional lifestyle that the growth machine itself uses in its sales campaigns (see also Judd & Collins 1979).

A major aim has been to allay fears of unwanted cultural change, an effort bolstered by the governmental planning bureaucracy. The Hawaiian Department of Planning and Economic Development states that "the visitor industry on Moloka'i can be developed without sacrificing important social values, and can with wise planning even support them" (1983: 24). However, many residents are wary, given early official statements about development intentions for 4,000 hotel rooms and a total development population of 30,000 residents (*Honolulu Star Bulletin* 1967, 1971b).

Another avenue of promotion is to promise that the fiscal resources of the island will not be burdened. In every land use proposal, proponents have claimed that property tax rates will increase, that county revenues will increase, and that public resources will be enhanced. These promises have paralleled those of no increase in public sector expenditures. Because there is no necessary link between taxes collected on Moloka'i and services provided to the island, the growth machine on Moloka'i can deemphasize the public costs of development, as the increased tax burden due to new infrastructure requirements will be borne by the entire county, not just Moloka'i.

Maui County officials justify expenditures in Moloka'i in two ways: (1) it is necessary to provide a basic level of services to justify the tax revenues extracted from the island, and (2) the added cost of infrastructure to encourage economic growth is a long-term investment that will hopefully earn the county a nice return in the form of future tax revenue increases.

However, the main rationale for permitting the intensification of tourist-oriented land uses is the provision of jobs that are critical in the wake of the decline of agricultural sector employment. This is true of Moloka'i: developer claims of job creation and multiplier effects are frequent and initially welcome (*Honolulu Star Bulletin* 1971a, 1973a, b, 1975c, 1976; *Honolulu Advertiser* 1971).

THE SOCIAL BASIS OF OPPOSITION TO DEVELOPMENT

Critics say that alternatives to tourism were never seriously considered and that when agricultural development was proposed, the competition for transmission space of the existing water delivery system was won by land development interests. Although a lack of state commitment to agriculture on Moloka'i may be partly responsible for the failure to provide for displaced pineapple workers, the state, by default, now supports tourism as a "compensating" industry. Yet during the economic woes of the 1980s, the state pledged public funds to promote the now-ailing tourist industry.

Opposition is primarily found among the native Hawaiian population, and statewide environmental groups.² But islandwide, residents are not convinced that Kalua Koi's presence has been beneficial. Journalistic observations of opposition to tourist development (and to Kalua Koi Resort itself) were confirmed by a recent survey conducted by the resort developers themselves (see Table 1).

The coalitions formed in the 1970s to challenge uncontrolled tourist development were not without overt hostility. As observed in *National Geographic* (1981: 198ff):

An old-timer expressed disgust: "You know who buying up all Moloka'i? 'Uncle Kapu,' that who. Everywhere now you see his name." Indeed it has become prominent; many properties once freely crossed to reach common hunting and fishing grounds now bear signs reading KAPU. It's the Hawaiian word for "keep out."

Table 1
Resident Attitudes about Development and Kalua Koi Resort
(N = 290)

Attitude	% Agree	% Disagree
Preservation of the rural lifestyle on Moloka'i should be everyone's concern.	84	16
Because Moloka'i is such a nice place, we should share what we have with visitors.	34	66
In the long run antidevelopment persons on Moloka'i serve a positive function for the people of Moloka'i.	47 (32% undecided)	21
Moloka'i should remain the way it is now because we have enough resort development.	55	45
Kalua Koi is of no, or little benefit for Moloka'i residents.	63	36

Source: Rural Land and Water (1983).

One common theme among antidevelopment forces is the anticipated destruction of the fragile Hawaiian culture, especially on Moloka'i, the only island where it is still somewhat intact (see, for example, *Honolulu Star Bulletin* 1975a; *Honolulu Advertiser* 1978b). Part of the concern over the destruction of the Hawaiian culture is based in the loss of access to places where traditional subsistence and cultural activities have been carried out for centuries (*Honolulu Star Bulletin* 1975b, 1984; *Honolulu Advertiser* 1975a).

Another fear is that natural resources are not sufficient to accommodate the population increase hoped for by the advocates of development and that such an increase would compete with local residents' usage of the same resources. Diversified agriculture, for example, was endorsed by 100% of the local population in our 1981 survey,³ but water shortages may make this impossible. In fact, litigation against the use of state water transmission facilities for the private use of Kalua Koi Resort (a case instigated by Life of the Land, an antidevelopment group) held up the initial development of the resort in the early 1970s (*Honolulu Advertiser* 1972, 1975a, b, 1983a, b).

Consistent with Molotch's argument, conflicts on Moloka'i revolve around land: who uses it and for what purpose. The conflict arises partly because the development is opposed by local residents who will not only not benefit but may lose out by the introduction of an alien, culturally disparate landowning class (*Honolulu Star Bulletin* 1971c, d; *Honolulu Advertiser* 1978a).

VALUE STRUCTURE OF THE GROWTH MACHINE AND ITS LOCAL OPPONENTS

On Moloka'i the conflict over land is especially intense because of the difference in the meaning of *land* found among the competing interests. For the growth machine *land* is property; capital that can be enhanced in value by more profitable uses/development (Molotch & Logan 1984). For the indigenous people, the land is the source of cultural identity, social life and spirituality (Charlot 1979). Given the attractive lure of needed jobs, conflicts necessarily surface: What does the proposal of the growth machine do to the local culture, since a choice is required regarding the meaning of *land*? This dilemma is real: jobs are needed in the wake of agricultural decline and the culture and quiet ambience of island life are jeopardized if the island's economy and demography change drastically.

In short, the growth machine presents a very difficult choice to the island residents, a choice that has social structural consequences. The sociological question is: How are the bases of community attachment affected by such a fundamentally contradictory choice? To investigate this question, we use survey data collected in 1981.

Measuring the Structure of Community Values

To carry out the values aspect of the research, we chose the Galileo methodology (Woelfel & Fink 1980), which is a complete system of research methods, including interview methods, questionnaires, and a computer program designed particu-

larly to measure values, beliefs, and attitudes in such a way that the complex, multidimensional nature of such phenomena is captured, while avoiding as much as possible the biases of the researchers.⁴

There are three steps in a Galileo analysis. The first is to define the important value concepts for the population in question. Taped in-depth interviews of 26 Moloka'i residents lasted from 1 to 2.5 hours. The respondents represented a purposively diverse group, ranging from Hawaiian elders (a revered position in the Hawaiian community) to local business and commercial leaders. These interviews covered such topics as living conditions on the island and hopes and expectations about its future.

After these interviews were completed, we analyzed the content of the tapes and selected 13 concepts as most common and representative. These reflect many of the traditional values of rural life (RURAL, EVERYBODY KNOWS EVERYBODY, SLOW PACE), the cultural heritage of precontact Hawaii (LIVING OFF THE LAND, LAND, FAMILY TOGETHER, HAWAIIAN CULTURE, SPORTS), as well as current issues and problems (JOBS, DEVELOPMENT, HIGHER PRICES, TOURISM, EDUCATION). To this list we added three other concepts. ELECTRICITY SELF-SUFFICIENCY was added for original policy purposes; ME, to locate the individual respondent within the value structure, and PREFERRED WAY OF LIFE ON MOLOKA'I to indicate respondents' expectations about the importance of these value concepts in the future.⁵

The Galileo questionnaire requires a pairing of each concept with all others. Numerical "distances" between concepts are evoked from the respondents such that a distance of zero represents concepts that are identical and concepts that are dissimilar are represented by large values.⁶ The value questionnaire was administered to two different groups: a simple random sample of all Moloka'i residents, selected from the billing files of the electric utility company ($N = 219$) and a purposive sample of economic and political decisionmakers in the state ($N = 29$) that included the governor, state legislators, other state and county planning officials, and state, county, and local businessmen. The general manager of Kalua Koi Resort and the manager of Moloka'i Ranch were also part of this group. Thus the decisionmakers represent both local advocates and statesmen of the growth machine in the state of Hawaii.

The third step in the Galileo analysis is the structuring of the 15 value concepts. To do this, Galileo first computes the average distance matrix between all concepts⁷ (with average values in the off-diagonal and zeros in the main diagonal) and then solves for the principal components of the centroid scalar product transformation of the average distance matrix.⁸ When the principal components weights are used as coordinates, the values can be plotted in three-dimensional space, identical to the use of extracted coordinates by other scaling procedures (Davison 1983). These plots translate conceptual similarity into physical proximity: values that are related cluster together, whereas values that are dissimilar are apart (Woelfel & Fink 1980). For the analysis of individual concepts, the linear distance between concepts in space can be presented using charts similar to those found in highway maps. While both presentations represent the same relationships, they are useful for different styles of interpretation (as demonstrated below).

ANALYSIS STRATEGY

For this article we are interested in the value structure of various groups as they are oriented toward issues presented by the growth machine. Three groups' values were studied: decisionmakers, whose generalized and specific interests in Moloka'i's (and the state's) economic development represent the growth machine; local residents supporting diverse development; and, local residents opposing development. The two latter groups were distinguished by their responses to the question: What kinds of development do you think would be good for Moloka'i? The options were condominiums, single-family housing, agriculture, industry, apartments, and hotels/resorts. These dichotomous items were Guttman scaled (coefficient of reproducibility = .84) and supporters of limited development were classified as respondents with scores of 1-3, supporters of diverse development by scores of 4-6.⁹ Although these three groups represent analytic communities of interest, whether they in fact do have different value structures was the empirical question addressed here.

RESULTS

The values of the three groups were found to be structured in three identifiable clusters.¹⁰ One cluster captured the traditional, rural, and cultural values on the island that comprised Kalua Koi's description in its advertisement cited above (RURAL, HAWAIIAN CULTURE, SLOW PACE, EVERYBODY KNOWS EVERYBODY, FAMILY TOGETHER, LIVING OFF THE LAND). Another cluster is consistent with the activities of the growth machine (TOURISM, DEVELOPMENT, and HIGHER PRICES). A third, middle cluster was made up of the concepts of LAND, EDUCATION, and JOBS (see Figures 1, 2, 3).

All three groups located the PREFERRED WAY OF LIFE ON MOLOKA'I (concept N) and HAWAIIAN CULTURE (concept E) within the first, rural/traditional cluster.¹¹

The results concerning the personal importance of traditional values diverge for the three groups as shown by the different location of the ME concept (concept O). Decisionmakers place their own orientation within the middle cluster that represents the socioeconomic status variables of land, education, and jobs. The supporters of limited development put their ME (O) very close to the PREFERRED WAY OF LIFE ON MOLOKA'I (N), that is, within the Hawaiian culture/rural cluster. But local residents who support diverse types of development fall between these two extremes when they locate themselves in the value structure.¹²

It is especially noteworthy that no group locates itself (the ME) within the cluster representing the concepts of the growth machine; neither does any group see the values of the growth machine near the PREFERRED WAY OF LIFE ON MOLOKA'I. This shows another consistency with Molotch's conceptualization: that is, the issue of development acts as an "independent variable" orienting an individual's social and economic choices. Thus we view the differences in self-reported relations with tourism and development to be consistent with the existence of three different communal associations.

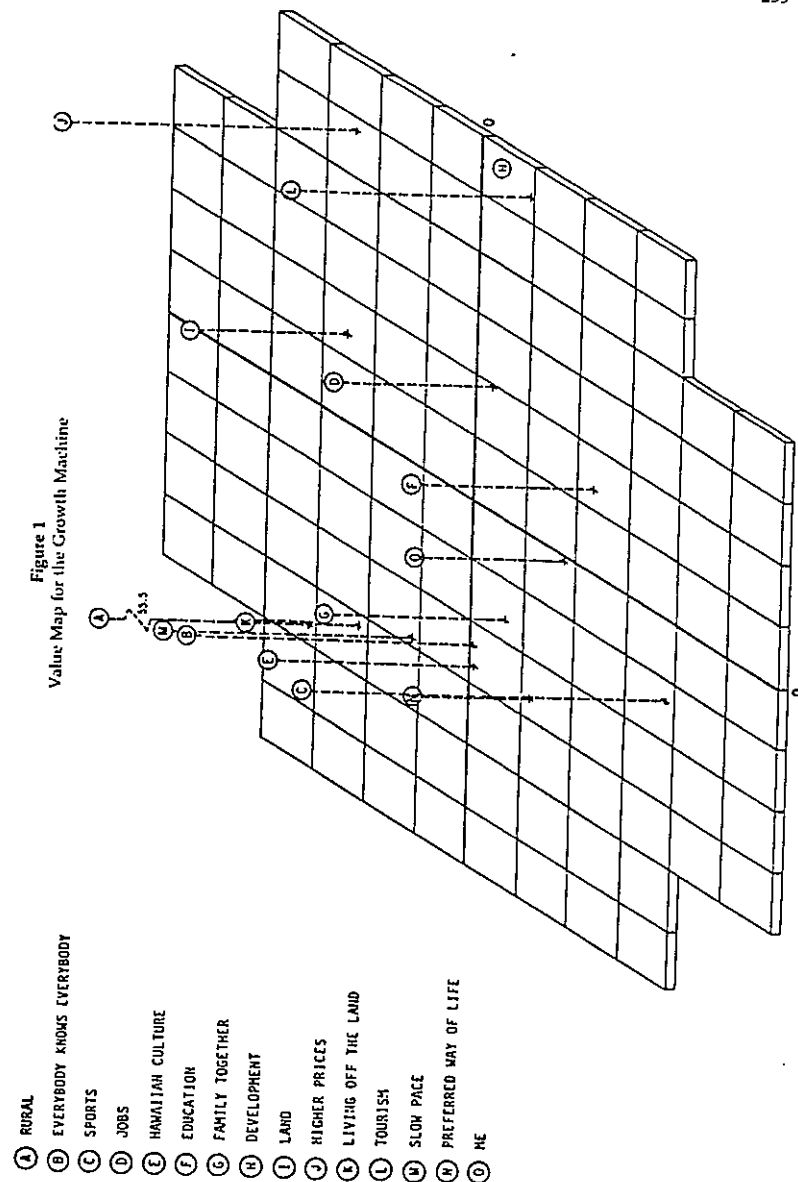


Figure 2
Value Map for Supporters of Diverse Types of Development

- A RURAL
- B EVERYBODY KNOWS EVERYBODY
- C SPORTS
- D JOBS
- E HAWAIIAN CULTURE
- F EDUCATION
- G FAMILY TOGETHER
- H DEVELOPMENT
- I LAND
- J HIGHER PRICES
- K LIVING OFF THE LAND
- L TOURISM
- M SLOW PACE
- N PREFERRED WAY OF LIFE
- O ME

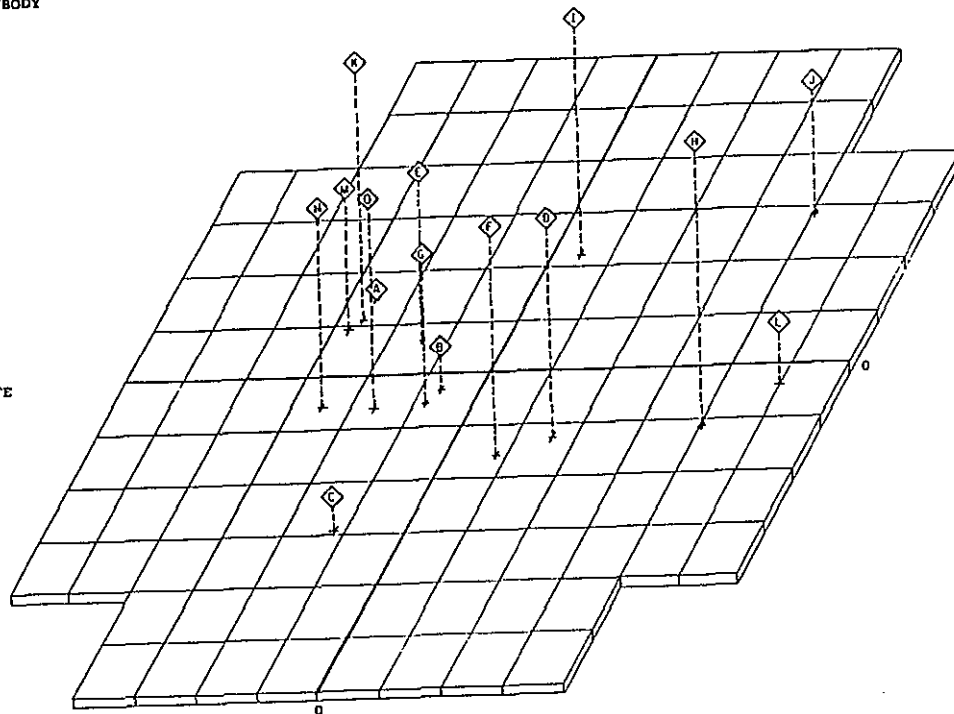
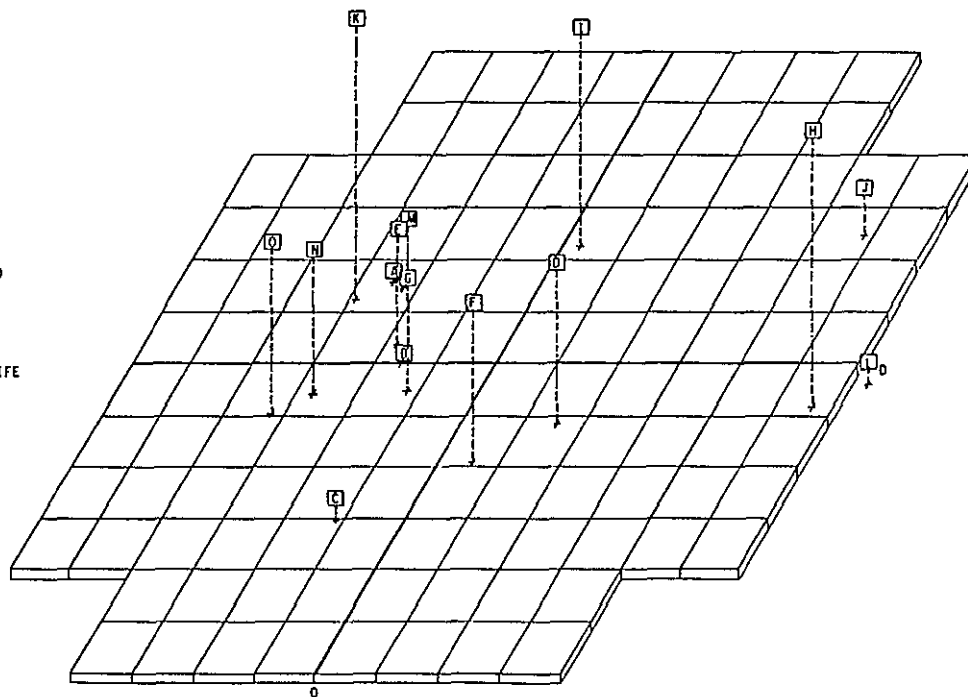


Figure 3
Value Map for Supporters of Limited Types of Development

- A RURAL
- B EVERYBODY KNOWS EVERYBODY
- C SPORTS
- D JOBS
- E HAWAIIAN CULTURE
- F EDUCATION
- G FAMILY TOGETHER
- H DEVELOPMENT
- I LAND
- J HIGHER PRICES
- K LIVING OFF THE LAND
- L TOURISM
- M SLOW PACE
- N PREFERRED WAY OF LIFE
- O ME



One community, represented by the decisionmakers, orients itself by a class or socioeconomic basis of community identification, commonly referred to as *gesellschaft* (Tonnies 1957). Another, represented by those who would limit development, places itself in the midst of a traditional, *gemeinschaft* or status-based community. The third, those we called the "local supporters of diverse development," places itself between these two communities in terms of the choices of the growth machine and might appropriately be called *Zwischengruppe* ("in between group").

THE LOGICAL INCONSISTENCIES OF SELLING PLACE

Moloka'i as a place has many attractive features that are now being explicitly offered as a commodity (Caruso & Palm 1973). Culturally, the Friendly Isle of Moloka'i is sold as a last refuge of the Hawaiian people ("go torchlight fishing," "hold incredible luaus," etc.). Moloka'i is also marketed as an ideal physical location because of its historical condition of not having been developed. Deserted beaches, family cohesiveness, naturalistic settings, and friendly natives (all in stark contrast to Waikiki) are major aspects of a marketing campaign that, if successful, will necessarily destroy the very characteristics of Moloka'i that now make it appealing. What makes Moloka'i such a lovely place will be lost if the potential of the sales strategy is realized. Thus, only short-term gain is possible for the advocates of the growth machine because "success" will inevitably result in the destruction of the very conditions that now make Moloka'i an attractive location. (Of course, similar contradictions of development have already been realized in Atlantic City, Miami Beach, and Waikiki. See also Vincent [1980] for a European example and Finney [1975] for tourism effects in Polynesia.)

This obvious logical contradiction provokes antidevelopment sentiment. Moloka'i residents know in the same way that selling land transfers ownership and control, the selling of a culture results in a culture that is alienated from the local people and reduced to symbolic caricatures—plastic leis, commercialized luaus, and cellophane grass skirts—all part of making the "Aloha Spirit" a product. In fact, Hawaii residents now experience state-sponsored advertisements produced for television and radio that promote the awareness of local dependency on tourism and "teach" disenchanted natives how to give the impression of having the "Aloha Spirit." The message is, "You'd better seem friendly or you (and the state economy) will suffer the consequences."

All residents know where the appeal of Moloka'i lies. They live it. They, as well as the growth machine representatives surveyed, report that the PREFERRED WAY OF LIFE on the island is located in the slow-paced, Hawaiian culture and rural lifestyle. No group put the PREFERRED WAY OF LIFE in the tourism cluster. Moloka'i's and the state's solution to the land-use conflict is to partition the island explicitly into tourist and nontourist regions. Keeping the resort destination contained on the west end is a response to antidevelopment pressures from the community. As Castells (1977), Harvey (1973), and Molotch (1976) suggest, conflicts in the social system are directly observed in the spatial order. This physical partition is an acknowledgment of the social partition created by the contradictions of tourist development on Moloka'i.

SUMMARY

Molotch's growth machine hypothesis is relevant to this study in several ways. First, it states the political and economic importance of land and its use as a resource that primarily benefits a small exploitative coalition. Second, it proposes that the competition for land is a major force for organizing political action and for creating political positions and ideological orientations. Third, it identifies the members of the growth machine and their supporters who differ in the directness of benefits from growth and in their promotional activities. Here growth support is crucial because its purpose is to regulate the use of land and to promote "good planning" in the public interest. Last, it suggests that antigrowth coalitions will develop, because growth benefits only a small proportion of local residents, actually costs them more money, and negatively affects the quality of their lives.

On Moloka'i competition over land use is fierce, and land use decisions benefit an identified progrowth coalition. The values data comparing two groups of residents with the growth machine underscored the differences in community identification, especially the emergence of a group caught between the status and achievement forms of association. Ironically, all groups appreciate that the preferred way of life on the island is located in a value system of interpersonal relationships (EVERYBODY KNOWS EVERYBODY, FAMILY TOGETHER), self sufficiency (RURAL, LIVING OFF THE LAND), and Hawaiian culture (HAWAIIAN CULTURE, SLOW PACE) in stark contrast to the values important to the growth machine (TOURISM, DEVELOPMENT, HIGHER PRICES). This is exactly the cluster of preferred values that is placed in jeopardy through the internal contradictions of the growth machine and the selling of Hawaiian culture.

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NOTES

1. The withdrawal of agriculture does not mark the initiation of a relationship between land use and politics. Before Western contact, Moloka'i's 261 square miles were divided into pie-shaped districts (known in Hawaiian as *ahupua'a*) that ran from mountaintop to ocean floor. These ecologically diverse land divisions sustained extended families who traded the products of mountain slopes with those of the ocean and coastal plains. Although estimates of precontact population vary,

authorities agree that the traditional organization of society and land sustained a larger population than the number of current residents (about 6,000). Western principles of property ownership adopted under the Monarchy in 1848 (because of the demand for large lots for sugar planting, according to Young and Newton [1980: 93]) resulted in alienation of the indigenous land "owners," severe concentration of land ownership, and the creation of large sugar and pineapple plantations.

Moloka'i Ranch (founded in 1896) became the largest landowner on the island (with more than 41% of the land). The Hawaiian Homes Commission, established in 1920 under a land reformation, owns 29,000 acres (16%) and is second. Today private lots make up only 2% of the land (Hawaii Department of Planning and Economic Development 1983: 11).

Young and Newton (1980: 100) summarize the land history as follows:

King Kamehameha IV was the first to control extensive lands on the west end of Moloka'i, establishing a sheep ranch there in 1859... Kamehameha V used part of the area for a cattle ranch and set aside the remainder of the west end for hunting. In 1884 these lands were deeded to Bernice Pauahi Bishop, who then deeded them to her husband. Twelve years later, more than 70,000 acres were sold for \$150,000 to a syndicate, which formed the Moloka'i Ranch. In 1908 Charles Cooke bought out the other parties in the ranch, and today it is still owned by shareholders who are second- and third-generation members of the Cooke family.

Pineapple production on Moloka'i was begun in 1923 first by Libby, MacNeil and Libby; and then Del Monte Corporation. In 1970 Dole bought out Libby. All pineapple production was conducted on lands leased from Moloka'i Ranch. The phase out of both pineapple companies began in 1972; the last Dole harvest was in 1975 and Del Monte closed out in 1983. (See Bowen and Foster [1983] for a profile of the island's displaced pineapple workers.)

Low yields, high water costs, and transportation distances were cited as corporate reasons for withdrawal. However, according to Young and Newton, local labor costs and interest in higher profit in tourism development were additional factors.

Perhaps the most important reasons for Dole's decision to leave Moloka'i were those not explicitly stated by the company. Both Dole and Del Monte are launching pineapple operations in the Philippines, where workers are compensated at rates equivalent to those paid in Hawaii in 1930.... One additional factor precipitating Dole's hasty departure from Moloka'i was the eagerness of the Moloka'i Ranch Company to develop tourist facilities on a portion of its land holding on the west end of Moloka'i (1980: 103, 104).

2. As observed in *National Geographic* (1981: 207),

Anti-development sentiment is fueled in part by a statewide drive among native Hawaiians to secure lands they feel are rightfully theirs by virtue of their ancestry. Because the local native Hawaiians recognized the need for more sophisticated weapons than talk, prayer, and demonstrations, leaders of the movement are fast learning how the law can be used for as well as against them. Already their educated efforts have paid off with one stunning victory—defeat of a large project planned for the Pukoo area on the east end.

3. The original focus of the research, funded by the Hawaii Natural Energy Institute of the University of Hawaii, the National Center for Appropriate Technology, and the county of Maui, was the configuration of alternate energy strategies that would be consistent with (and not antithetical to) the socially valued characteristics of the island and its residents. (For more information, see Canan, Hennessy, et al. 1981.) Although many types of data were collected (including questionnaire data, informal qualitative interviews, and standard archival social indicator information), this article concentrates on the values' portion of the study.

4. The Galileo methodology seemed ideal for four major reasons: (1) values concepts are grounded in the phenomenological reality of the community under study rather than dictated by professional biases; (2) it is suited for populations like that of Moloka'i where there is a heavy reliance on verbal, as opposed to written, communication and where bartering is commonplace; (3) research findings may be displayed graphically, promoting rapid understanding of a wealth of data meaningful to residents, decisionmakers and scholars alike; and (4) repeated sampling from the same universe produces a moving picture (time series) of community value change, thus enabling one to capture a dynamic as opposed to a static image of community values as well as measure the value consequences of introduced deliberate change.

5. In all the analyses presented in this article, ELECTRICITY SELF-SUFFICIENCY has been deleted. This has no effect on the substantive conclusions because the Galileo analysis including Electricity Self-Sufficiency is virtually identical to the results here although the principal components fit is improved (see Canan & Hennessy [1982]).

6. Each respondent's reports were standardized to a common metric for comparability (see Canan, Hennessy, et al. [1981]).

7. This matrix is $K(K-1)/2$ elements in size for each respondent, where K is the number of concepts.

8. A centroid scalar products matrix is a transformation of the distance matrix such that the origin of the new matrix is at the geometric center of the K -dimensional space (Woelfel & Fink 1980).

9. Kalua Koi's own study of preferred future development showed that 94% of the residents favored agriculture, 39% hotels and resorts, 12% condos, 89% single-family houses, 71% industry, 43% apartments, and 5% none, very close to our results collected in 1981 (Rural Land and Water 1983: 1).

10. Eighty-three percent of the total distance is explained by the three-dimensional solution for the growth machine; 82% for supporters of limited growth; and 74% for supporters of diverse types of growth. No dimension explained less than 10% of the total variance in distance. The x coordinates (left-right distances) represent a culture conflict dimension. The y coordinates represent a dimension showing the social aspects of interpersonal relations on the island, and the vertical, z coordinates, represent a dimension of the social uses of land, ranging from land as a basis for social interaction (concepts A , B , C , and L) or for economic alienation (K , H , I).

11. The actual distance between the PREFERRED WAY OF LIFE ON MOLOKA'I (N) and HAWAIIAN CULTURE, for example, is 18 for the growth machine, 17 for sup-

porters of diverse types of development, and 15 for supporters of limited types of development.

12. The distance between ME (O) and EDUCATION (F), for example, is 16 for the growth machine, 26 for diverse development supporters, and 38 for supporters of limited development.

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