

*The
California
Geographer*

Volume XXX
1990

Annual Publication of the
CALIFORNIA GEOGRAPHICAL SOCIETY

The CALIFORNIA GEOGRAPHER

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Typeset by G-F GRAPHIC CONSULTANTS
San Luis Obispo, California



Printed and bound by ED'S PRINTING
Chico, California

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THE TULARE LAKE BASIN: AN ABORIGINAL CORNUCOPIA

*William L. Preston**

"Together with the Tulare Lake Basin the lower Kaweah River and its delta from Lemon Cove to below the town of Tulare was probably one of the most densely populated spots in California, or possibly even north of the Valley of Mexico."¹

The Tulare Basin's former ability to support unusually dense populations of California aborigines (known as Yokuts)² has long been recognized by anthropologists.³ This consensus is based upon historical observation, ethnographic inquiry, and the recognition that the Tulare Basin (here defined as the Valley portion of Tulare and Kings Counties) once offered a cornucopia of resources for its pre-hispanic inhabitants (Figure 1).

Inconveniently, material evidence of the Yokuts and their lifeways has been almost entirely obliterated by the dramatic landscape alterations which have occurred since the first Europeans arrived in the Basin. As a consequence, efforts to assess the actual number of Yokuts who once dwelled there have been assisted only marginally by archaeological data. Similarly, due to those same environmental alterations, tangible evidence of the Basin's natural fertility is equally scant. Post-European landscape changes have

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FIGURE 1. *The Tulare Lake Basin*

been of such magnitude that researchers—on the basis of the inordinately large number of Yokuts known to have lived in the Basin during the early historical period (*i.e.*, after 1769)—have frequently assumed a rich environmental foundation. Initially, this assumption of environmental fecundity was strengthened by the few early descriptions of Basin landscapes. Later, it was reinforced by scholarly efforts to reconstruct the aboriginal environment.⁴

These noteworthy attempts at environmental reconstruction, derived from historical recollection and ecological methodologies, tried to determine local detail (for purposes of quantifying nutritive resources) in a land where detail had all but vanished. Indeed, the sheer magnitude of change in the Basin leaves any attempt at precise reconstruction untestable and, as a consequence, questionable. Though admirable in their own right, these reconstructions commonly ignored the larger topographic and climatic influences which controlled the nature and content of biological resources available to the Yokuts. Thus they also often ignored the specific environmental variables which were most crucial to sustaining human populations. Even without detailed ecological reconstruction, however, a comprehension of these larger geographic processes leaves little doubt of the Basin's special ability to nurture very large populations of foragers.

The intent of this paper is to examine these larger geographic processes and by doing so to demonstrate why the Tulare Basin's geography was absolutely ideal for an aboriginal foraging society. When examined in light of such traditional geographical perspectives as relative position, proximity, and scale, the Basin is revealed as a lush land—a land containing an unsurpassed biological diversity that was complemented by climatic and hydrological conditions which optimized the harvesting of food. The combination of these variables proved to be ideal for the large number of Yokuts actually observed in the Basin, and probably for

many more who perished long before foreigners had the opportunity to observe and count them.

Early Recognition of Geographic Uniqueness

“ . . . the woods here seemed to be swarming with Indians.”⁵

Owing in considerable measure to its central position, the stubborn residual presence of Yokuts, and the quantity of Hispanic and American reports, the Basin figured prominently in efforts by early ethnographers to determine aboriginal populations for the state as a whole.⁶ The Basin was a land removed from most of the direct ravages of missionization, yet close enough to the mission strip to be readily observed by both initial Hispanic and later American forays. These early accounts often included remarks about the Yokuts who called this land home. More sophisticated efforts to refine the region's demographic landscape were first undertaken by Sherburne Cook and Martin Baumhoff.⁷

Recognizing the limitations inherent in the early ethnographic estimates,⁸ and given the paucity of archaeological evidence, Cook relied almost exclusively upon information gleaned from detailed and exacting analysis of historical documents. These were comprised primarily of Hispanic records for the years prior to 1840, and chronicles of the various efforts by Americans during the late 1840's and early 1850's to determine the number of souls residing in their new domain.⁹ Although never claiming to base his calculations on the carrying capacity of the land, Cook would attempt to fill observational voids by extrapolating population densities from areas of known populations (well documented) and then infer populations for Yokuts sharing similar but inadequately documented environments. To his credit, Cook's attempts at area comparison were wisely qualified with the recognition that “. . . the dry and arid plains of modern Kings, Tulare, and Kern counties bear little or no resemblance to the former region of rivers, sloughs, swamps, and lakes which once supported uncounted mil-

ions of game birds and animals, together with a luxurious vegetation capable of supporting a very dense human population."¹⁰

Cook's estimated population for the Tulare Lake Basin—a startling 18,600—is regionalized in Figure 2. His cumulative estimate for the entire San Joaquin Valley was 83,820, astounding in comparison to the readily accepted population of 18,000 forwarded earlier by Kroeber or even the 52,800 suggested by Merriam.¹¹ Ultimately on the basis of this, and subsequent studies, Cook proposed a statewide aboriginal population of 310,000.¹²

In 1963, Martin Baumhoff published a work which tested both the validity of Cook's demographics and the value of an ecological approach.¹³ Baumhoff proposed to establish the degree to which population size and density of hunters and gatherers were dependent on available amounts of certain food products.¹⁴ In order to accomplish his goal, a reconstruction of the aboriginal resource environment was required. A variety of sources were synthesized in order to re-create the vegetative environment of several California regions, including the Tulare Basin.¹⁵ From this, a faunal component was rationally inferred as a base for quantification of a carrying capacity. Using calculations based solely upon coefficients for acorn and game staples, Baumhoff was easily able to verify Cook's numbers (considered the "actual") for the Basin.¹⁶ Actually, Baumhoff's calculations substantiated greater numbers than those forwarded by Cook; and he subsequently chose to roll back the environmental carrying capacity (by reducing the amount of acorns and game) until his numbers conformed with Cook's.¹⁷ Baumhoff's respect for the strength of Cook's scholarship is understandable; but a more thorough re-construction of the Basin's environments would suggest that, if anything, the acorn and game ratings should have been raised.¹⁸

Both Cook and Baumhoff accepted two assumptions which not only reflected—and still reflect—contemporary

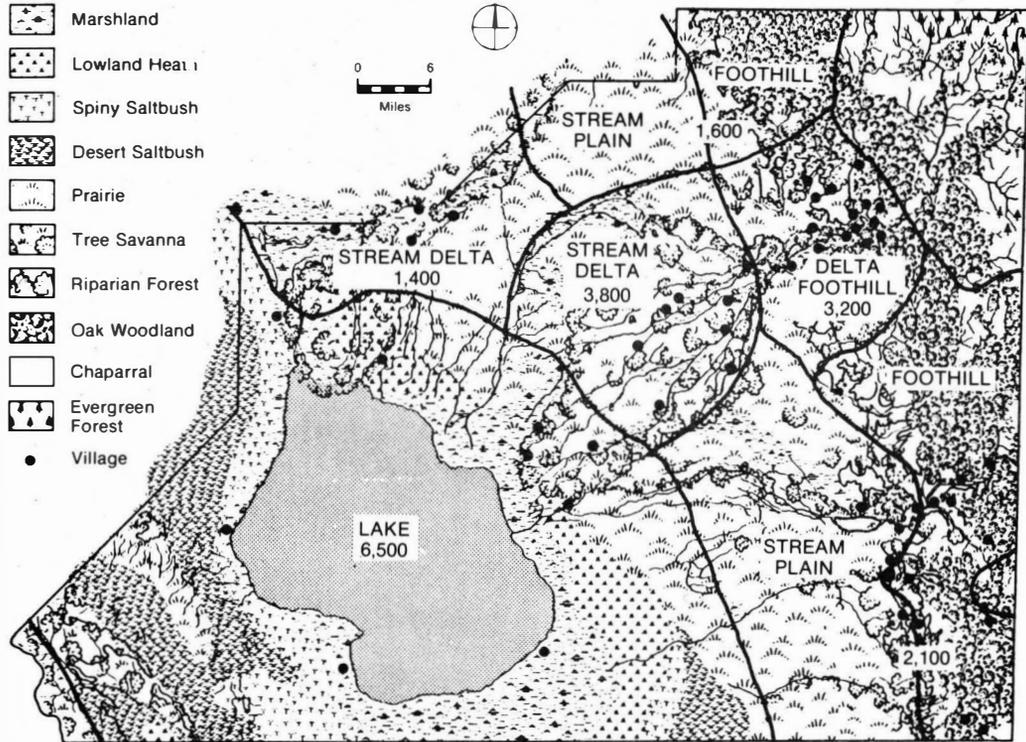


FIGURE 2. *Yokuts Resource Habitats and Population, circa 1769. Although the Yokuts shared a common set of resource perceptions and technologies, the habitats of the basin responded differently to human attentions and thus afforded different carrying capacities.*

conventional wisdom, but also had constraining impacts upon their demographic conclusions. In keeping with tradition based upon previous scholarship,¹⁹ both men accepted the thesis that aboriginal life persisted in a pristine state within California and the valley proper right up to missionization.²⁰ The second assumption, based on the concept of Malthusian Equilibrium, was that pre-contact populations were in dynamic equilibrium at a stable maximum in relationship to their environment.²¹ The following analysis of the Basin's geographic attributes demonstrates the inadvisability of accepting either of these assumptions or, for that matter, the demographic estimates which they constrain.

Optimal Foraging and Geographic Reconstruction

*"In the entire San Joaquin Valley there was probably no more thickly settled district than that surrounding Tulare Lake and the Kaweah River branches, and certainly none more suited to the needs of primitive man."*²²

Baumhoff in 1963 did not agree with Latta's assessment of the Basin's aboriginal fertility. He had calculated much denser populations for the San Joaquin and Sacramento drainages, where a fish component was integrated into his calculations. Yet even without a thorough recognition of the Basin's carrying capacity, Baumhoff, utilizing only the coefficients of game and acorns, clearly validates Cook's revolutionary numbers. Taking a step beyond that to factor in the major geographic attributes of the Tulare Lake Basin not only reveals a land capable of sustaining a far greater number than either Baumhoff or Cook imagined, but also tends to substantiate Frank Latta's assertion that the Basin had few rivals.

Our examination of the Basin's aboriginal geography will focus on regional processes and conditions directly relevant to Yokuts' subsistence. In large measure, these elements have been determined by documented evidence (archaeological, ethnographical, and historical) on the one

hand, and a perspective originating in optimal foraging theory on the other.²³

Central to the optimal foraging approach is the assumption that hunting and gathering populations are limited more by the degree of nutritional intake than by cultural explanations such as birth control. In essence, any resource gathering decision, or *environmental parameter*, which effects procurement of food will in turn effect and determine survival and reproduction ("fitness" in the lexicon of the socio-biologists).

Although the model is controversial, even its detractors have little problem with the latter interpretation.²⁴ This less controversial perspective is imminently useful and enormously valuable in an effort to pinpoint the environmental geographic variables most important to an understanding of aboriginal subsistence. Thus the following reconstruction emphasizes those variables which influenced the Yokuts' ability to acquire life sustaining resources and—through reasonable inference—their population size.

A Fortuitous Position and Proximity

*"Deer, rabbits, and gophers could be hunted in the mild winter as well as in summer."*²⁵

A unique blend of geologic and climatological processes combined to sculpt an environment in a geographic position which captured a great lake and also nurtured an enormous population of Yokuts.²⁶

The Basin's geographic position has strongly influenced its climate and, by extension, its life-supporting environments. A southerly location (Latitude 36° N) on the western edge of a mid-latitude continent yields a climatic regime characterized by warm, dry summers and cool, moist winters.²⁷

Removed somewhat (by the Coast Ranges) from the moderating influences of the sea, Basin Yokuts endured warmer summers and colder winters than their neighbors

on the coast. Yet the thermal and snow-free environment of this subtropical latitude permitted active and unimpeded year-round resource gathering.²⁸ Both lakes and streams remained unfrozen and continued to yield an abundant winter return to talented Yokuts foragers. Thus the Basin's Yokuts inhabited a land where exposure to seasonal vagaries of climate only rarely hindered their pursuit of nutrition or threatened their livelihood.

Lying as it does in a trough behind the Coast Ranges, which lie athwart the prevailing westerlies, a rainshadow is cast eastward, over the western portion of the Basin (Figure 3). This effect accentuates moisture differences between the dry west and moister east. In turn this moisture regime is the principle determinant of the Basin's biological patterns. Disallowing, momentarily, for the exceptions created by

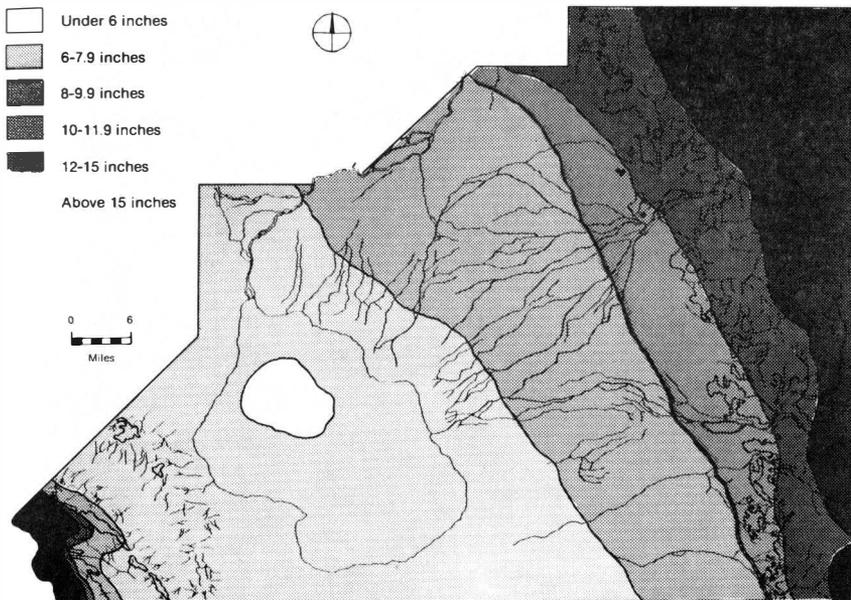


FIGURE 3. Average Annual Precipitation. Annual rainfall on the floor of the basin varies from less than six inches near the trough to more than fourteen inches near the foothills.

surface runoff, the vegetative environments are roughly aligned in a north-south direction, with species diversity and density increasing with precipitation toward the east (Figure 4). These conditions would have yielded a striking east to west decline in foraging potential if not for the convenient ameliorating affects of runoff.

The relative paucity of precipitation on the west side, and its complete absence during summer, is more than compensated for by the winter entrapment and storage of snowfall on the western slopes of the Sierra Nevada.²⁹ As the snow thaws in spring and summer the water is conveyed to the Basin through a network of perennial streams (Figure 5). The amount and timing of discharge from the

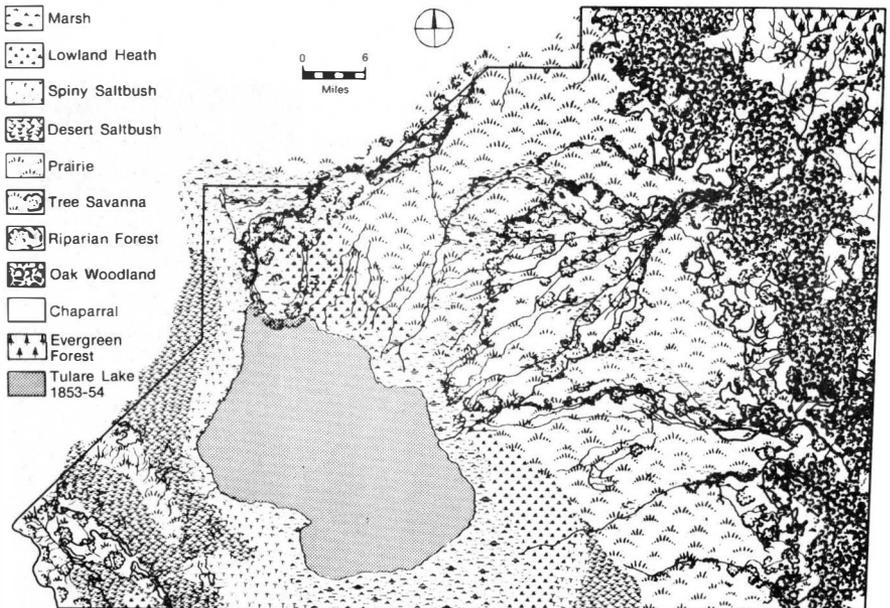


FIGURE 4. Biotic Zones, circa 1769. Natural vegetation zones roughly parallel the north south contours of precipitation, temperature and elevation. Diversity increases away from the valley trough, although vegetation patterns are complicated by surface and subsurface water availability.

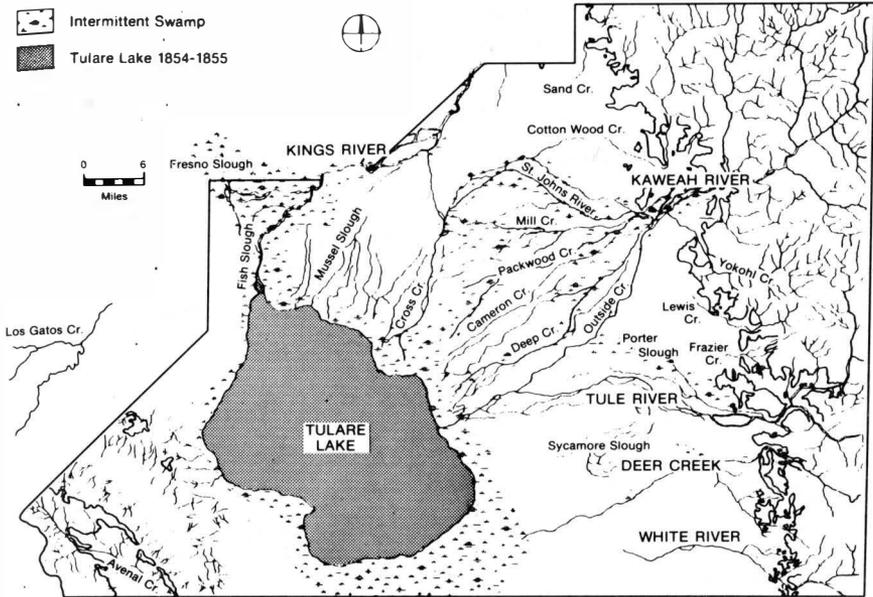


FIGURE 5. Surface Hydrology, circa 1769. Fed primarily by melting snow in the wetter climates of the Sierra Nevada, basin streams empty into a large, shallow lake. Swamps and swampy sloughs border the lake, especially in spring and early summer.

east was fortuitous and had an immense impact upon the resource geography of the Basin. In essence, the volume of water was at a maximum during the high sun or growing season. Riparian and adjacent flood zones (overflowed lands) were naturally irrigated and supported a lush floral habitat for both animals and Yokuts. Resource disadvantages experienced by western Yokuts due to aridity were thus offset by these verdant tendrils of biotic richness which extended westward, crosscutting the general biotic pattern.

An even more important compensation for western aridity is Tulare Lake itself. By virtue of its position to the west of center, this teeming pool of resources wetted the most arid zone.³⁰ Size and seasonal fluctuation exaggerated a resource bounty whose effects rippled beyond the realm of

shoreline Yokuts to habitats farther afield. The influence was even subterranean. The lake contributed to unusually high levels of groundwater which extended beyond its shores and helped to account for a larger concentration of acorn bearing oaks than elsewhere in the San Joaquin Valley.³¹

The average size of Tulare Lake, as it existed since circa 1500 A.D., is shown in Figure 5. However, during late spring and early summer the lake would expand enormously and usually spill over into the San Joaquin drainage through Fish Slough.³² This frequent occurrence allowed an intrusion of additional protein to the Basin and its Yokuts from a foreign environment (the Pacific Ocean). Noteworthy in this respect was the entry of migrating salmon, steelhead, and sturgeon into the lake and their subsequent entrapment as the lake receded in late summer and fall.³³ In turn, these exotic species migrated into Basin streams and further enhanced the fish resource available to Yokuts living some distance from the lake shore.³⁴

The seasonal waxing and waning of the shorelines was a function of both hydrology and low relief (the lake had a maximum depth of only forty feet during high water). This exceptionally shallow lake provided wide, biologically rich, and easily accessible shorelines.³⁵ The seasonal shifting of these spacious shores exposed resources (mussels, eggs, fish, tules, cattails) of considerable abundance and worth to the Yokuts.

Resource disturbances caused by the climatic anomalies (droughts and floods) characteristic of Mediterranean regimes were cushioned by these same hydrologic and geomorphic properties. During unusually dry conditions a contracting lake would have exposed once inaccessible portions (new marshy shorelines) of the lake floor and concentrated aquatic species for easier capture.³⁶ On the other hand, the inconvenience of floods produced expanded lakeside edges which extended the resource bounty onto the eastern plains and up the streams.³⁷

The Basin's geographic position, in combination with a unique hydrologic setting, brought the Yokuts even greater subsistence advantages by way of the atmosphere. Situated beneath the major west coast flyway, countless migrating waterfowl (geese, ducks, swan, pelicans) found the Basin's mild temperatures and unfrozen water bodies (streams as well as lake) ideal for resting, nesting, and feeding. Waterfowl and non-aquatic migratory species (dove) arrived from the north and south by the millions. In fact, no season of the year was devoid of arrivals and departures.³⁸ Many of the species were gregarious and provided a ready source of protein (meat and eggs) for the Yokuts, who demonstrated considerable expertise as fowlers.³⁹

Augmenting this longitudinal stream of resources was a latitudinal flow of both atmospheric and terrestrial species whose migratory cycle exhibited a shorter range of movement between mountain and Basin habitats. In this fashion diets were seasonably embellished by gregarious species such as wild pigeons, deer, and antelope.⁴⁰

Due to their close proximity to the adjacent highlands, the Basin's Yokuts could and did do more than wait passively for the seasonal arrivals of these sources of protein. Relatively short upslope forays yielded a great variety of life-sustaining resources (flora and fauna). Even when direct access to such resources was hampered by territorial restraints involving foothill tribes, the resources were usually available through trade.⁴¹

Territorial Sufficiency on a Small Scale

*"The distances ranged over were minute."*⁴²

There can be little, if any, doubt that the Basin's Yokuts benefitted from the proximity of relatively exotic materials on the flanks of nearby mountains. These were, however, supplemental. The diversity and quantity of resources in the Basin proper was more than sufficient to sustain not just the accepted aboriginal numbers but many more. The existence

of an overall sufficiency does not imply that the subsistence potential was uniform throughout the Basin. Certain environments (lake shores and riparian zones) were considerably more productive than others (grassy plains), and that reality is expressed in Yokuts' demography (see Figure 2).

Various regional and seasonal shortcomings were easily overcome as a function of scale. Environments ranging from arid plains to verdant lake shores were all concentrated in a compact region of approximately fifty by fifty miles. Owing in part to this pattern of resource diversity, a quilt work of sixteen self-sustaining tribes, each with access to numerous biotic zones, emerged within this rich environmental matrix (Figure 6).⁴³

When one set of resources was diminished by seasonal

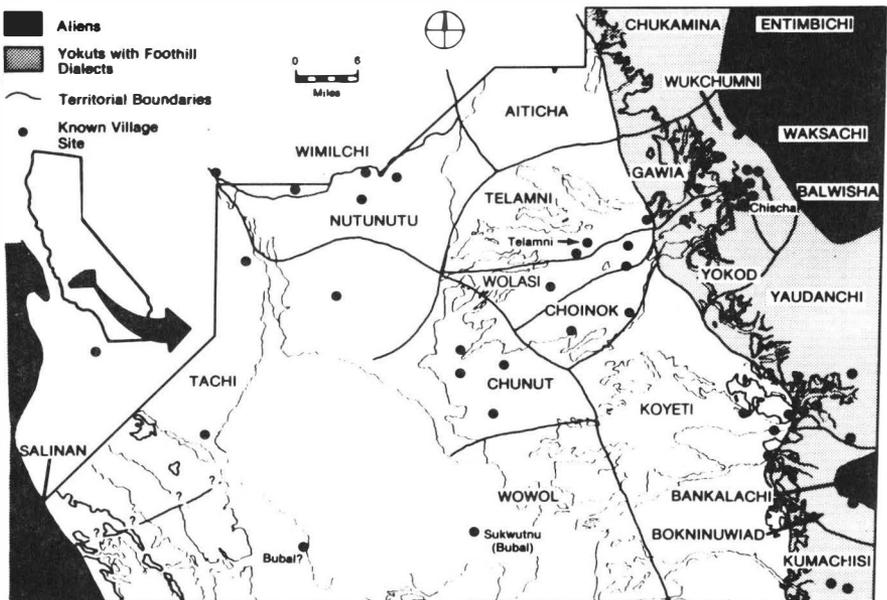


FIGURE 6. *Known Yokuts Villages, Territories, and Language Areas, circa 1769. Tribal territories and settlement patterns varied in accordance with the carrying capacities of Yokuts habitats. Villages were close together and territories small in the Kaweah Delta, more widely spaced elsewhere.*

climatic change or over exploitation, Yokuts would switch to another environment within their tribal boundaries where chosen resources were ripening or more seasonally abundant.⁴⁴ If a preferred commodity was not locally available within a given tribal area, arrangements (trade and sharing) would be made to provide access to resources beyond tribal boundaries.⁴⁵ If the appropriate season was at hand, numerous species (elk, antelope, fish, waterfowl) ignored tribal sovereignty and migrated across tribelet boundaries, making external arrangements and forays unnecessary.

Indeed, whether the quest for life-sustaining resources involved internal circulation within tribal boundaries or external exchanges, the enormous environmental diversity available within short distances kept movement by Yokuts to a minimum. Thus energy which might otherwise have been expended on travel could be conserved or diverted to other resource pursuits close to home.

Approaching the Demographic Optimal

*"There is plentiful game, such as deer, antelope, mule deer, bear, geese, cranes, ducks and many other species of animals, both terrestrial and winged."*⁴⁶

Like most California aboriginal groups, the Yokuts were extremely omnivorous.⁴⁷ The Basin's geographical attributes of position, proximity, and scale provided a rich and accessible environmental *smörgåsbord*, which yielded great nutritional returns for a people engaged in foraging. Given the lack of intensive geographic reconstructions elsewhere in the state, it is difficult to assert categorically that the Basin was more advantageous to prehispanic foragers than other regions. Nevertheless, the special geographic advantages discussed in this paper were largely responsible for the inordinately dense populations generally accepted for the Basin.

This treatment does suggest that previous estimates—most notably Cook's and Baumhoff's—of the Basin's ab-

original carrying capacity fell far short of what actually existed. In nearly every broad category of foodstuff (acorns, game, grass seed, birds, fish) the quantity and spatial distribution was greater than previously recognized. Important as well were the ideal conditions which facilitated relatively easy year-round access to these food stuffs. How this might translate into numbers of additional Yokuts is essentially a futile exercise in conjecture, except on one point—fish. As noted earlier, the only quantitative attempt at reconstruction was undertaken by Martin Baumhoff. Using only acorns and game as staples, he was able to substantiate more than the “actual” numbers (18,600 Yokuts) calculated by Cook. In areas where fish were factored into his calculations, such as the San Joaquin and Sacramento drainages, densities of aborigines were higher than in the Basin.⁴⁸ In retrospect, Baumhoff’s failure to identify a fish component is unfortunate; for analysis of the archaeological, ethnological, and historical evidence clearly demonstrates both the presence and importance of anadromous species in the Tulare Basin.⁴⁹ This account of the Basin’s peculiar hydrologic regime only reinforces that assessment. By factoring the fish component into Baumhoff’s formulations (treated in another paper), the carrying capacity of the Basin is radically raised from 18,600 to 35,000 Yokuts.⁵⁰ By accepting the higher number, the Basin’s aboriginal densities easily match—and in most cases surpass—all other regions in the valley and state, just as Cook and Latta long ago surmised.

The immediate implications for the aboriginal demography of other regions within the state where resources may have been underestimated are profound. Yet the anomaly still exists. Why are the numbers derived ecologically (35,000) inconsistent with Cook’s calculations (18,600) based upon historical observation and reasonable inference? Was Cook’s methodology unsound? I believe not. Cook’s methodology and estimates are not inconsistent with the revised estimates. His assumptions are, however.

Conclusions

*"From the extreme northern part of the Sacramento Valley to the Tulare Lake, death had obtained a victory as unequalled, as it was unknown by nearly all, except the recording angel."*⁵¹

The assertion that Basin Yokuts were in equilibrium with their environment and were in a pristine state until 1769 is questionable. Conventional wisdom, adopted by both Cook and Baumhoff, holds that the Yokuts were somehow maintaining their population well below carrying capacity. Conscious, cultural limitation of growth in the face of relative resource bounty, however, has little precedence.⁵² The glaring absence of population curtailment in the ethnographies would seem to indicate that Basin Yokuts displayed little concern for controlling their population in order to prevent future resource shortages.⁵³

Yet the dilemma remains. Even if the Yokuts were not living at a stable equilibrium with their environment, they evidently had not filled the Basin's demographic capacity by historical times. If cultural curtailment of population is eliminated, how then can the difference between the observed and potential be reconciled? Could it be that the Yokuts viewed by the first Europeans—the basis of Cook's estimates—were simply remnant populations? It is, in fact, quite probable that Cook was estimating demographics for a population long since culled by the ravages of European disease.

Given the large differences between observed populations and the Basin's enormous carrying capacity, the widely held view that California aborigines remained unaltered until mission times is at best tenuous. Nor does this view sit well in light of the documented spread of disease elsewhere in the New World. The rapid dispersal and catastrophic impact of European-induced diseases throughout Central America and eastern North America during early colonial times is well documented,⁵⁴ as is the spread of rapacious diseases in Baja California and northwestern Mexico from

the sixteenth through the eighteenth centuries.⁵⁵ The view that epidemic diseases rippling northward from Mexico somehow stopped at the frontier of Alta California at the very least is questionable, if not unbelievable. Similarly the assumption that landings by such voyagers as Cabrillo (1542), Drake (1579), and Viscaíno (1602-1603) occurred without demographic consequences goes against colonial precedence.⁵⁶ In light of densities, sedentism, and frequent intertribal exchanges, California's aboriginal populations were in all probability highly susceptible to disease transmittals. The simple circumstance that interior Yokuts were first observed at numbers substantially lower than the environment would allow provides strong evidence that they were neither pristine nor in equilibrium at the time of the founding of Mission San Diego in 1769.

The Tulare Basin's advantages of relative position, proximity, and scale were truly optimal for those aboriginal foragers who dwelled there. Their dense numbers were illustrative of these geographic advantages. The true potential of the Basin as a foraging cornucopia, however, was known only by Yokuts prior to 1492.



NOTES

1. Sherburne F. Cook, "The Aboriginal Population of the San Joaquin Valley, California," *University of California Anthropological Records*, Vol. 16:2 (1955), pp. 31-80.
2. The Yokuts were the aboriginal inhabitants of the San Joaquin Valley first encountered by people of European ancestry. Their ancestors, who belonged to the larger Penutian language family, entered the valley around five thousand years ago and through time became proficient harvesters of the valley's natural resources. See Melvin C. Aikens, "The Far West," *Ancient Native Americans*, edited by Jesse D. Jennings (San Francisco: W. H. Freeman, 1978), p. 139.
3. See C. Hart Merriam, "Indian Population of California," *American*

Anthropologist, Vol. 7:4 (1905), 594-606; and Frank F. Latta, *Handbook of Yokuts Indians* (Oildale: Bear State Books, 1949), p. 9.

4. Levi T. Burcham, *California Range Land: An Historical-Ecological Study of the Range Resources of California* (Sacramento: State Department of Natural Resources, 1957); and Martin A. Baumhoff, "Ecological Determinants of Aboriginal California Populations," *University of California Publications in American Archaeology and Ethnography*, Vol. 49:2 (1963), pp. 155-236.
5. Ingraham Kip, *The Early Days of My Episcopate* (New York: Thomas Whittaker, 1892), p. 235. The quote is from Kip's diary of his journey through the Central Valley in 1855.
6. As a function of its position within the Central Valley, the Basin with its curious fluctuating lake has long straddled an important pathway for people originating in foreign lands. See Merriam, op. cit., note 3, p. 594; and Alfred L. Kroeber, *Handbook of the Indians of California* (Berkeley: California Book Company, 1925), pp. 490-491.
7. Cook, op. cit., note 1; and Baumhoff, op. cit., note 4.
8. Ethnographic estimates were proposed by several individuals, among them: Stephen Powers, *Tribes of California* (Berkeley: University of California Press, 1976; reprint of 1877 original) p. 419; Merriam, op. cit., note 3; and Kroeber, op. cit., note 6, pp. 490-491.
9. Cook, op. cit., note 1, p. 32.
10. Cook, op. cit., note 1, p. 45.
11. See Kroeber, op. cit. note 6, pp. 488-491 and 880-891; also Merriam, op. cit., note 3.
12. Sherburne F. Cook, *The Population of the California Indians, 1769-1970* (Berkeley: University of California Press, 1976), p. 43.
13. Baumhoff, op. cit., note 4.
14. Baumhoff, op. cit., note 4, p. 156.
15. As a fundamental data base, Baumhoff relied heavily upon Wieslander and Jensen's 1945 map of vegetation types and Levi Burcham's ground-breaking reconstructions produced in 1957. See A. E. Wieslander and H.A. Jensen, *Vegetation Types of California* [map] (Washington D.C.: U.S. Department of Agriculture, California Forest and Range Experiment Station, 1945). See also Burcham, op. cit., note 4, pp. 79-96. These sources were complemented by soil and irrigation surveys.

16. Baumhoff had incorrectly concluded that the Basin did not possess a dependable anadromous fishery. See William L. Preston, "Infinidad de Gentiles: Aboriginal Population in the Tulare Basin," *Association of Pacific Coast Geographers Yearbook*, Volume 51 (1989), pp. 79-100.
17. Baumhoff, op. cit., note 4, pp. 216 and 221.
18. William L. Preston, *Vanishing Landscapes: Land and Life in the Tulare Lake Basin* (Berkeley: University of California Press, 1981), pp. 19-30.
19. Kroeber, op. cit., note 6, pp. 238-239.
20. Cook addressed the possibility of pre-mission influence; but lacking definitive data concerning the impact of disease, he chose to adhere to prevailing conventional wisdom. See Cook, op. cit., note 1, p. 31.
21. Baumhoff, op. cit., note 4, p. 230; also Cook, op. cit., note 12, p. 29.
22. Latta, op. cit., note 3, p. 9.
23. The thinking behind optional foraging is based upon the premise that humans are genetically programmed to exploit resources in a fashion similar to other organisms and, therefore, will forage with the sole purpose of maximizing nutritional intake. Conventional wisdom, on the other hand, has always held that foragers strive to minimize their foraging time, an alleged trait applicable only to humans. Perceived in this fashion, the forager is always predicted to choose the "optimal" or best strategies that maximize nutritional gain and minimize the costs relative to gain. See Gary E. Belovsky, "Hunter-Gatherer Foraging: A Linear Programming Approach," *Journal of Anthropological Archaeology*, Vol. 6 (1987), pp. 31-32. It is argued that optimal behavior increases survival chances and releases valuable time for other important life-supporting activities. For a discussion of this argument see G. A. Smith, "Human Adaptation and Energetic Efficiency," *Human Ecology*, Vol. 7 (1979), pp. 53-74; see also David Webster and Gary Webster, "Optimal Hunting and Pleistocene Extinction," *Human Ecology*, Vol. 12 (1984), pp. 275-289.
24. In the 1970's and 1980's numerous groups of foragers have been re-examined through the perspective of optimal foraging. To the distress of purveyors of conventional wisdom, an unsettling accordance between the predicted (by the optimal foraging perspective) and the observed (concerning the concept of limited

needs) has occurred. See Kristen Hawks, James F. O'Connell, Kim Hill, and Eric L. Charnov, "How Much Is Enough? Hunters and Limited Needs," *Ethnology and Sociobiology*, Vol. 6:3 (1985), pp. 3-15; cost minimization, see Webster and Webster, *op. cit.*, note 23; game conservation, see R. B. Hames, "Game Conservation or Efficient Hunting," *The Question of the Commons: The Culture and Ecology of Communal Resources*, edited by Bonnie J. McCay and James M. Acheson (Tucson: University of Arizona Press, 1987), pp. 92-107; and on predator/prey relationships, see Gary E. Belovsky, "An Optimal Foraging-Based Model of Hunter-Gatherer Population Dynamics" (Paper read at a meeting of the Human Behavior and Evolution Society, University of Michigan, Ann Arbor, April 1988).

25. Kroeber, *op. cit.*, note 6, p. 524.
26. Topographic down warping structurally differentiates the Tulare Lake Basin from other Central Valley environments. The resulting interior drainage of this basin-within-a-valley would impound the waters of the Kings, Kaweah, Tule, and White Rivers, as well as Deer Creek, to form Tulare Lake.
27. Although the seasonal regime of moisture and drought resembles Mediterranean conditions, the low rainfall and cooler winters qualify most of the Basin for a semi arid classification; and the western portion is virtually a climatic desert.
28. Winter temperatures rarely drop below freezing (mean January temperatures range between 32° and 56° F). Therefore, foraging time is not unduly constrained by the physical environment because a forager's thermal equilibrium is easily maintained. See Belovsky, *op. cit.*, note 23, p. 38.
29. Once again the Basin's location is optimal. The highest peaks of the Sierras (exemplified by Mount Whitney at 14,494 feet) are situated directly to the east, which endows them with a heightened moisture catchment potential from passing storms. In addition, elevational changes between valley and mountains are more pronounced on the eastern margins of the Basin than elsewhere in the Central Valley. This exceptional change in relief produced sharper biological differences over short but accessible distances from the Basin's flatlands. For a good study of Tulare County's physical geography, see James T. Scofield, "Physical Geography: A Study of Tulare County, California" (Unpublished M.A. thesis, California State University, Fresno, 1967).

30. The axis of the San Joaquin Valley lies to the west of center and is relatively close to the Coast Ranges. The streams which descended from the Sierra foothills fed lakes (Buena Vista, Kern, Goose, and Tulare) which were impounded along the western edge of the southern valley.
31. R. L. Piemeisel, and F. R. Lawson, "Types of Vegetation in the San Joaquin Valley of California and Their Relation to the Beet Leafhopper," *U.S.D.A. Technical Bulletin 557* (Washington, D.C.: Government Printing Office, 1937), pp. 6-7.
32. Even during the early American period when colonists were busy diverting and blocking runoff to the lake, it continued to overflow in all but eight years between 1852 and 1879. See Frank F. Latta, "Little Journeys in the San Joaquin," a 1937 compilation of newspaper accounts held in the California State Library, Sacramento, (no page numbers).
33. Peter B. Moyle, *Inland Fishes of California* (Los Angeles, Berkeley, and London: University of California Press, 1976), p. 114.
34. The presence of these anadromous species would seem to qualify the Basin for the fish coefficient which Baumhoff failed to attribute to the land in his attempt to quantify carrying capacity. See Preston, *op. cit.*, note 18, p. 26.
35. Not only do shallow lakes produce far more biomass than do deep lakes of equal spatial extent, but also they facilitate harvesting over extensive shoreline areas. See M. L. Weide, "Cultural Ecology of Lakeside Adaptation in the Western Great Basin" (Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles, 1968). Uncle Bud Askers (early 1850's) observed Yokuts wading in for a mile or more in their quest for clams [mussels], and yet they were treading waters only six to eight inches deep. See Latta, *op. cit.*, note 32.
36. The Yokuts displayed a sophisticated variety of fishing techniques but owing to the lake's shallowness were often able to take fish in a most simple manner. In 1854 and 1855 Hank Hawn observed Yokuts catching lake trout of up to 40 pounds with their bare hands. See Latta, *op. cit.*, note 32.
37. Michael J. Moratto, Thomas F. King, and Wallace B. Woolfenden, "Archaeology and California's Climate," *Journal of California Anthropology*, Vol. 5 (1978), p. 158.
38. For information concerning the Basin's diverse variety of birds,

see Howard L. Cogswell, *Water Birds of California* (Los Angeles and London: University of California Press, 1977); also Arnold Small, *Birds of California* (New York: Winchester Press, 1974).

39. For information concerning the Yokuts as fowlers, see Anna H. Gayton, "Yokuts and Western Mono Ethnography," *University of California Anthropological Records*, Vol. 10 (1948), p. 72; and Frank F. Latta, *Tailholt Tales* (Santa Cruz: Bear State Books, 1976), p. 99.
40. Gayton, op. cit., note 39, p. 56; and Latta, op. cit., note 32.
41. James T. Davis, "Trade Routes and Economic Exchange Among the Indians of California," *University of California Archaeological Survey Report No. 54* (1961), pp. 39-41.
42. Kroeber, op. cit., note 6, p. 524.
43. Kroeber, op. cit., note 6, p. 474.
44. In stark contrast to the arduous seasonal migrations of native Americans who lived in less diverse environments (e.g., plains tribes) the longest seasonal migrations conducted by the Yokuts rarely exceeded ten to twenty miles—a day's walk. See Kroeber, op. cit., note 6, p. 480.
45. Kroeber, op. cit., note 6, p. 480.
46. Quoted are the 1772 remarks of Pedro Fages who visited the southern portion of the Basin. In Herbert E. Bolton, *In the South San Joaquin Ahead of Garces* (Bakersfield: Kern County Historical Society, 1935), p. 12.
47. Kroeber, op. cit., note 6, p. 523.
48. Baumhoff, op. cit., note 4, p. 221.
49. Preston, op. cit., note 16, pp. 91-95.
50. Preston, op. cit., note 16, p. 90.
51. Quoted is the 1832 observation of "Trapper" as he surveyed the consequences of a malarial epidemic which swept the valley. In S. F. Cook, "The Epidemics of 1830-1833 in California and Oregon," *University of California Publications in American Archaeology and Ethnology*, Vol. 43 (1955), p. 319. In this author's view the epidemic was only the latest in a series which may have first devastated California aborigines as early as the 1500's.
52. Some contemporary researchers have simply discarded the concept of equilibrium. Closer examination of hunting and gathering peoples reveals constant change in the interaction between popu-

- lation and environment. Generally, populations are found to increase even when cultural mechanisms are utilized. See Mark Cohen, *The Food Crisis in Prehistory* (New Haven: Yale University Press, 1977), p. 420.
53. Gayton, *op. cit.*, note 39, p. 101. There is no mention in the ethnographies of widespread birth control being used by the Yokuts.
 54. See Henry F. Dobyns, "An Outline of Andean Epidemic History to 1720," *Bulletin of the History of Medicine*, Vol. 37:6 (1963), pp. 493-515; Henry F. Dobyns, *Their Number Become Thinned: Native American Population Dynamics in Eastern North America* (Knoxville: University of Tennessee, 1983); Alfred W. Crosby, Jr., *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport: Greenwood Press, 1972); and Robert H. Jackson, "Epidemic Disease and Population Decline in the Baja California Missions, 1697-1834," *Southern California Quarterly*, Vol. 33:4 (1981), pp. 308-346.
 55. See Jackson, *op. cit.*, note 54; and Carl O. Sauer, *Aboriginal Population of Northwestern Mexico* (Berkeley: University of California Press, 1935).
 56. Phillip L. Walker, Patricia Lambert, and Michael J. De Niro, "The Effects of European Contact on the Health of California Indians" (Paper read at the Society of American Archaeologists Columbian Quincentenary Symposium, Part II: Contact Period Strategies in the California's, University of California, Los Angeles, 1988); and Harry Kelsey, "European Impact on the California Indians, 1530-1830," *The Americas*, Vol. 41:4 (1984), pp. 494-511.



THE RÔLE OF LAND TENURE IN REGIONAL DEVELOPMENT: ARVIN AND DINUBA REVISITED

*Trudy Wischemann**

In both polite conversation and in academic research, land tenure is a subject normally reserved for Third World or “developing” countries. When the concept is brought home, it is most often in reference either to marginal groups—Black tenant farmers in the South, for example; or to historic events, such as the Depression-era displacement of sharecroppers. On rare occasions when the subject is raised to address modern social issues and resource policy decisions, official responses range from agnosticism to knee-jerk denial. This paper is about regional developmental influences of land tenure in California’s breadbasket—the Central Valley—and one of the more recent efforts to keep the subject suppressed.

Tenure and Development: Goldschmidt’s Hypothesis

Modern social science has produced but one line of investigation pertaining to the social consequences of domestic land tenure patterns, a line related to the trend toward concentration in U.S. agriculture. Between 1940 and 1944, Walter R. Goldschmidt conducted two studies of the influences of land tenure on social conditions and commercial

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development in three California farm towns. In the first study, an ethnographic/historical investigation of Wasco, a town surrounded by large-scale agriculture, Goldschmidt found strong social polarization between farmworkers and non-farmworkers, and a developmental level stifled by the limited buying power of the larger but poorer farmworker population. The second study sought to test these relationships by comparing Arvin and Dinuba, a pair of farm towns with differing land tenure patterns (Figure 1.)

Goldschmidt constructed the Arvin–Dinuba study to control for as many variables as possible. The two towns were comparable in terms of their resource bases and population size; they produced equivalent dollar values of agricultural products and were both significantly dependent on hired farm labor. The major difference between them was the size and operational structure of the farms supporting them. Arvin was surrounded by large-scale, manager-operated farms, while Dinuba was supported primarily by small-scale, family-operated farms. Goldschmidt found that the large-farm town was markedly underdeveloped relative to the small-farm town, which had more than twice as many businesses, schools and parks, churches, social organizations, and civic groups, as well as a volume of retail trade three times greater than the large-farm town. These differences were directly traceable to the different proportions of farm operators and farm laborers produced by the different patterns of farm scale and tenure.

Critiques: Old and New

Political opposition to the second study arose before it was completed in 1944. The Arvin–Dinuba study was conducted as part of the original feasibility investigations for the federal Central Valley Project (CVP), which was subject to the 160-acre limitation and residency provisions of U.S. reclamation law. Large landowners were trying to get the CVP exempted from these provisions.¹ The Arvin–Dinuba

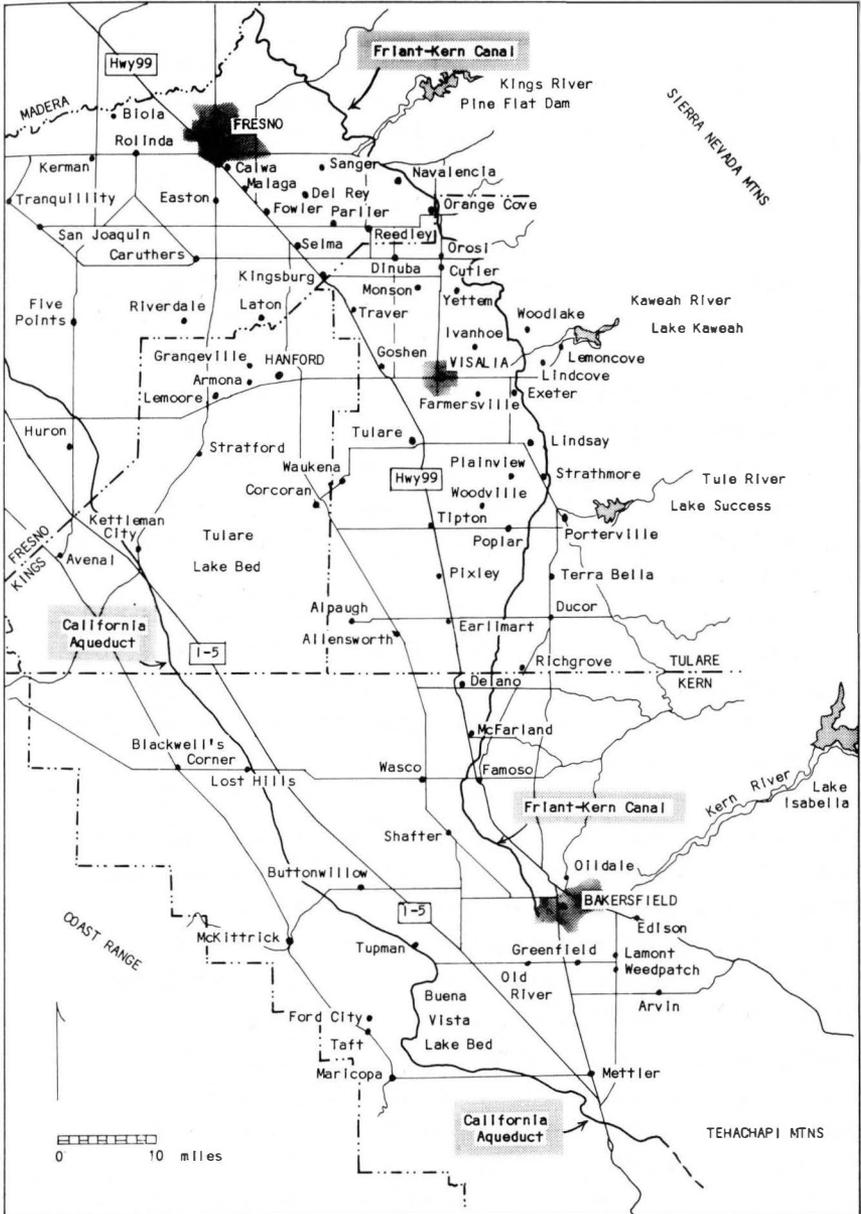


FIGURE 1. *Modern Communities of the Upper San Joaquin Valley.*

study was intended to determine whether large or small farms made a social difference. During the study, proponents of large-scale agriculture worked with newspapers and radio stations to interfere with data collection by encouraging townspeople to refuse to be interviewed. Once it was finished, political pressure on the Bureau of Agricultural Economics, the agency under which the study was conducted, prevented it from being published. Additionally, that same pressure not only prevented the Bureau from undertaking further social research (including a planned project to examine a large sample of Central Valley communities for land tenure effects), but also was influential in the subsequent demise of the agency.² Despite this onslaught—or perhaps because of it—Goldschmidt's research stands as the primary testimony to both the social impacts of agricultural scale and the implications of federal water policy for rural communities.

Recent criticism of the Arvin–Dinuba study has grown more academic in form, though not significantly in content, and continues to be generated primarily to deflect public pressure for enforcement of reclamation law.³ Much of this criticism also reflects a misunderstanding of both the nature of social science and the scope of Goldschmidt's research. Thus far, the only scientifically valid criticism made of Goldschmidt's study is that the relationship he posited cannot be extrapolated to all communities from a two-community case study. Fortunately, studies at the statistical level comparable to Goldschmidt's proposed "second phase" have tested the hypothesis that California's large-scale, farm-worker-intensive farms produce poorer communities; and their findings support Goldschmidt's thesis.⁴ Invalid critiques continue to be generated, however, by treating the Arvin–Dinuba study as if it were an input-output experiment, which ignores or misses entirely the ethnographic model of community development and the rôle of land tenure that it provides.

Hayes and Olmstead's 1984 paper, "Farm Size and Community Quality: Arvin and Dinuba Revisited,"⁵ is a case in point. It claims to show that Arvin and Dinuba were not as comparable as Goldschmidt portrayed them, thus invalidating the findings of the study. Four of their five points are specious and seem intended to mislead.⁶ The fifth point, however, raises interesting questions about the developmental influences of large, exogamous, corporate forces on local and regional development, essentially suggesting (but not investigating) an alternative hypothesis to the influences of land tenure. Had the Hayes and Olmstead paper been anything more than yet another attempt to discount the Arvin-Dinuba study, it might have made some contribution to our knowledge. The purpose of this paper is to investigate the alternative hypothesis suggested by Hayes and Olmstead and to evaluate its merit.

Alternative Hypothesis: Southern Pacific

The valid question which Hayes and Olmstead raise concerns the developmental impetus of the Southern Pacific Railroad (SP), which actually initiated towns and promoted settlement along its routes throughout California and elsewhere. Hayes and Olmstead note that SP platted Dinuba, but not Arvin, and that the two towns differed in terms of their railroad service:

Goldschmidt fails to note that Dinuba's early development was tied to the promotional schemes of the Southern Pacific Railroad. When the Southern Pacific built its second trunk line through the valley in the 1880's, it spaced depots at uniform intervals. The railroad then transferred the land around these stations to the Pacific Improvement Company, a subsidiary designed to encourage community development. This firm platted towns centering on the stations and actively promoted immigration. Dinuba was the first of these planned communities [Preston, pp. 146-147]. There was no comparable railroad sponsorship for Arvin. From its start as a depot, Dinuba had far better transport facilities than Arvin. Dinuba was a main line regular passenger stop until the early 1940's. During its forma-

tive years, as many as seven passenger trains a day stopped there . . . By contrast, Arvin was on a spur line that did not carry passengers.⁷

Underlying this paragraph is a basic and hidden community development paradigm: that rural development is dependent upon urban-based capital flowing into the region. In effect, the Arvin–Dinuba study is a direct challenge to this paradigm, a model of the positive community development effects of indigenous, independent local development. Close examination of the influences of Southern Pacific and other exogamous financial interests on the development of Tulare and Kern Counties provides more support to Goldschmidt's proposition than to Hayes and Olmstead's.

Tulare Development: SP versus Small Farmers

Preston's discussion of Southern Pacific's developmental influence is far more interesting, and precise, than that which Hayes and Olmstead present. Dinuba was not SP's first "planned community," just one of many in a second generation of platted communities. The first generation was located along the initial SP line built between 1872 and 1874, which ran west of Visalia.⁸ One of the major towns platted along this route was Tulare City, designed by SP to compete with Visalia and hopefully to wrest the county seat from it. Modesto, Merced, and Fresno (all eventually county seats) were also promoted by this line. Other small communities platted in Tulare County along this first line included Kingsburg, Traver, Goshen, and Tipton; of these, only Kingsburg currently even approaches Dinuba in size (Dinuba, 15,940; Kingsburg, 9,448). Several communities served by this line were already in existence: Cross Creek (Grandview), Tagus, and Pixley.⁹ Although growth proceeded rapidly in some of these platted communities, it was often at the expense of other communities nearby, which were drained of their populations. Preston also notes that, while the railroad effectively "built" these towns, it could just as quickly destroy

them with its actions, as was the case when it moved the railroad shops and roundhouse from Tulare City to Bakersfield, bringing business in Tulare City "to a standstill."¹⁰

During the late 1870's, development of surface irrigation works and more intensive, smaller-scale agriculture began to challenge the railroad's stranglehold on the development of the Basin. The Tulare Lake Basin was, in fact, the site of the first cooperative efforts to divert Central Valley streams for irrigation. These began in 1864 with the Cooperative People's Ditch, followed by the Lower Kings River Ditch (Lemoore Canal) and People's Ditch in 1872, and the Last Chance Ditch in 1873 (Figure 2). Private companies were also formed, such as the '76 Land and Water Company, the predecessor of the Alta Irrigation District which currently serves Dinuba. These companies sometimes promoted agricultural colonies, settlements of small (ten- to forty-acre) parcels to be served by the irrigation works. This irrigation development not only supported, but also required the development of small-scale, intensified agriculture (a combination of orchards, grain, and alfalfa) to make it pay.

Indeed, agricultural development arising from these irrigation works provided a principle stimulus for the laying of the second Southern Pacific line:

Expanded settlement and rising productivity brought a demand for new lines of communication. *In response to the spread of orchards along the eastern flank of the basin* and to the threat of a competing line in the area, the Southern Pacific built a second trunk line parallel to the original tracks. Completed in 1888, it ran from Fresno to Famosa and nearly duplicated the route of the old Stockton-Los Angeles Road.¹¹ (Emphasis added)

Along the second line, new railroad towns of standard design were platted at Dinuba, Monson, Exeter, and Lindsay; stations (but not towns) were established at Taurus, Kaweah Station, Terra Bella, and Orris. At Porterville (1888) and Plano (1889), standard plats were established adjacent to the existing towns, which were drained of both their func-

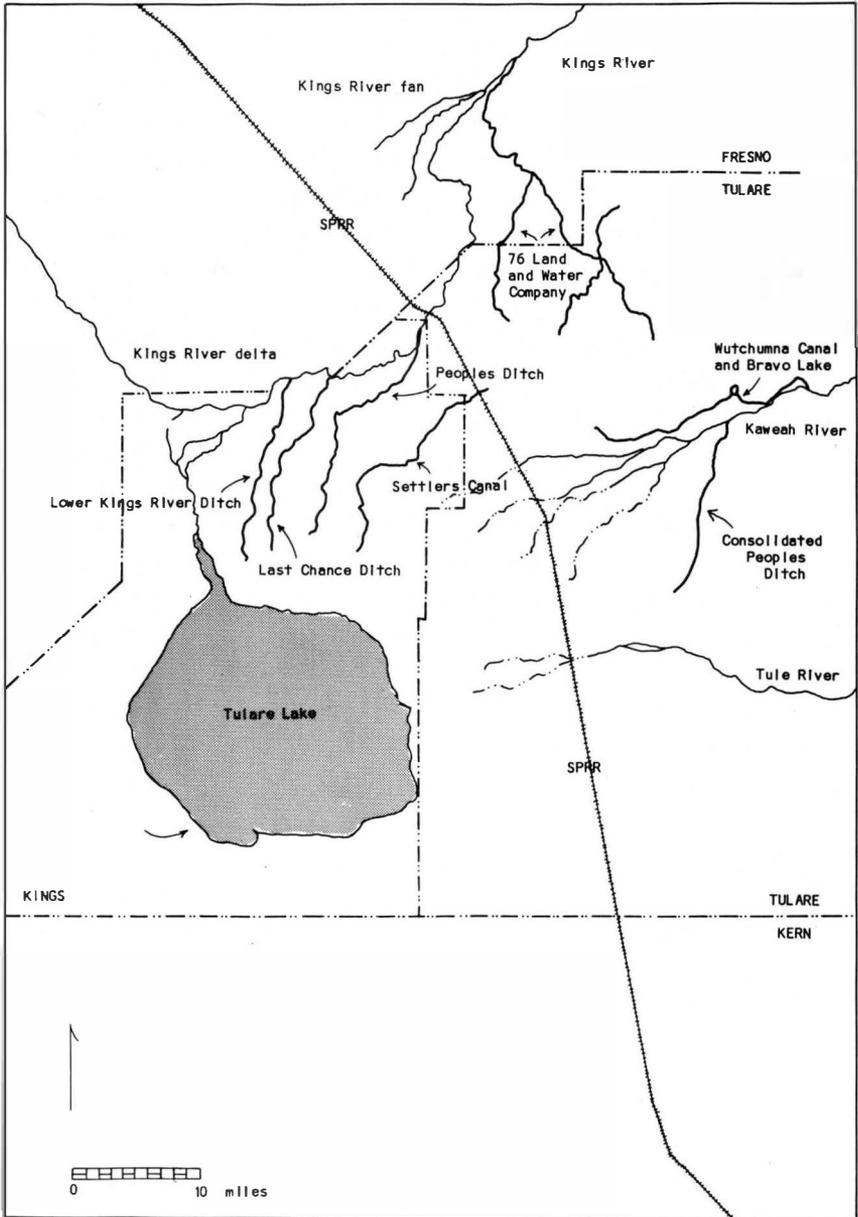


FIGURE 2. *Approximate Locations of early canals, Tulare and Kings Counties, 1870's (from Preston, 1981).*

tions and populations; SP subdivisions at Taurusa, Orris, and Terra Bella were unsuccessful. Independently of Southern Pacific's platting projects, community development also occurred in other parts of the region—at Poplar, Ducor, Orosi, and Lemon Cove, for example. Smaller communities, some of which emerged as shipping centers, included Hunscker, Bellville, Townsend, Cramer, Limekiln, Tagus, Yokohl, Frazier, Camp Badger, Cottage, Tokay, Auckland, and Milo (Figure 3).

It is certain that the presence of the railroad for shipping was a major stimulus to agricultural development in the Central Valley as a whole, but it is equally clear that not all of the railroad's community development impacts were positive. While the success of the railroad towns did not kill the larger independent towns, it certainly retarded their growth. Even more importantly for this discussion, promotion of the railroad towns along the second line severely eroded the economic position of those along the first.¹² The present-day existence of communities founded independently of Southern Pacific's promotion, such as Visalia, suggests that platting was not necessary for the development of communities in the Tulare Lake Basin. The rapid decline of some towns platted by SP demonstrates that it also was not sufficient.

The more important determinant of community viability was the development of small farms, even in those towns platted by Southern Pacific:

A new kind of settlement venture—the agricultural colony—arose as an outgrowth of railroad access and intensified farming in the basin. Large landholders and speculators began to subdivide tracts as large as 5,000 acres into small, ten- to forty-acre farms. They installed irrigation systems and advertised for settlers, often platting a central town as well . . . Some agricultural colonies failed to endure because of locational disadvantages or bad management, yet others flourished. *The most successful colonies served as foundations for the development of substantial communities* such as were soon found around Dinuba

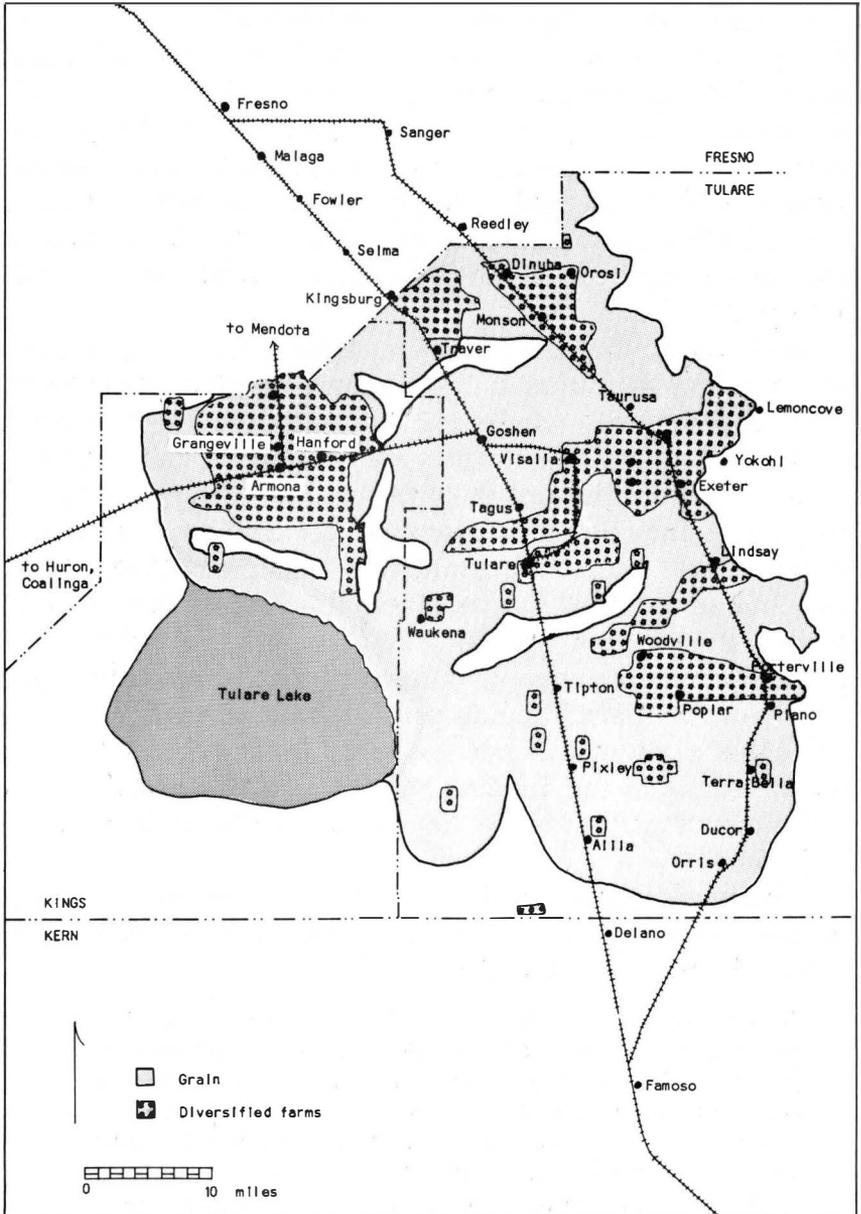


FIGURE 3. *Approximate locations of agricultural development, settlements, and railroads in Kings and Tulare Counties, 1894 (from Preston, 1981).*

and Waukena; densely settled, well-irrigated districts with closely spaced farmsteads. As such they represented an entirely new phenomenon in basin settlement. Often, though, the colony parcels were purchased by adjacent homesteaders or by speculators and so were never developed as independent farms.¹³ (Emphasis added)

In the case of Dinuba, it is clear that the town platting operations of SP contributed to its development. More importantly, however, it should be stressed that the prior development of small-scale, intensive, irrigated agriculture was the principal factor which prompted Southern Pacific's involvement in Dinuba in the first place. The developmental history of Tulare County shows that, where small farms did not develop, SP's community development operations were not sufficient to provide sustained growth of communities.

The Basin's developmental history also shows that the areas where SP was granted public land to subsidize construction are more sparsely settled and less developed than those areas in which public lands were initially open to settlers in their entirety.¹⁴ It is important to note that Southern Pacific was then—and still is today—one of the largest land owners in California, despite laws requiring the resale of railroad grant lands to settlers within three years of the grant.¹⁵ The effect of railroad land grants on rural development is seen more clearly in Kern County.

Kern Development: SP and Large Landowners

There are, of course, other questions relevant to Hayes and Olmstead's hypothesis regarding the developmental rôle of Southern Pacific. Why did the company fail to plat a town at or near Arvin? Why, instead of continuing south over already established routes, did SP bend its line eastward at Bakersfield, taking a longer path through Tehachapi Pass to Los Angeles? Pushing the developmental question further, why was Arvin settled so long after the initiation of agriculture in the region? Examination of land ownership

patterns and the development of irrigation in Kern County provides insight to these questions.

Early Patterns. Although Arvin's location in the south-eastern corner of the Kern River basin makes it appear to be a developmental backwater, the area was traversed in the 1770's by the first Spanish explorers skirting the swampy lands of the Kern River delta¹⁶ (Figure 4). In 1850, more than a decade before the Southern Pacific set its sights on the San Joaquin Valley, the Los Angeles-Stockton Road ran along the east side, from Los Angeles and San Fernando through Tejon Canyon to Stockton, passing within three miles of the present site of Arvin.¹⁷ In 1858 the Butterfield Overland Mail ran a stage route over the Los Angeles-Stockton road, passing through Sinks of the Tejon, no more than five miles from the present site of Arvin. In 1859 the stage station at Sinks of Tejon became further established when the post office was moved there from the Sebastian Indian Reservation.¹⁸

Alternative Routes. Despite the early development and longstanding use of the Los Angeles-Stockton road, Southern Pacific chose instead a longer route bending east from Bakersfield through Tehachapi Canyon into the Mojave, and from there to Los Angeles. One Kern County historian¹⁹ provides three reasons for this choice: first, the gradients in Tehachapi Canyon were deemed more favorable by civil engineers in early reconnaissances; second, Kansas Pacific's exploration of Tehachapi Canyon for its west-bound route to San Diego and San Francisco directed attention toward that pass (although its line was never built); and, finally, the possibility of capturing some of the trade with mining areas on the east side of the Sierra provided still more incentive.

While all of these were reasons in favor of the Tehachapi route, a fourth reason—implicit but not analyzed—provided an argument against the Tejon route: namely, the existence and size of landholdings there. During the previous century, a primary means of subsidizing a railroad's development was to grant alternate sections of public lands extending

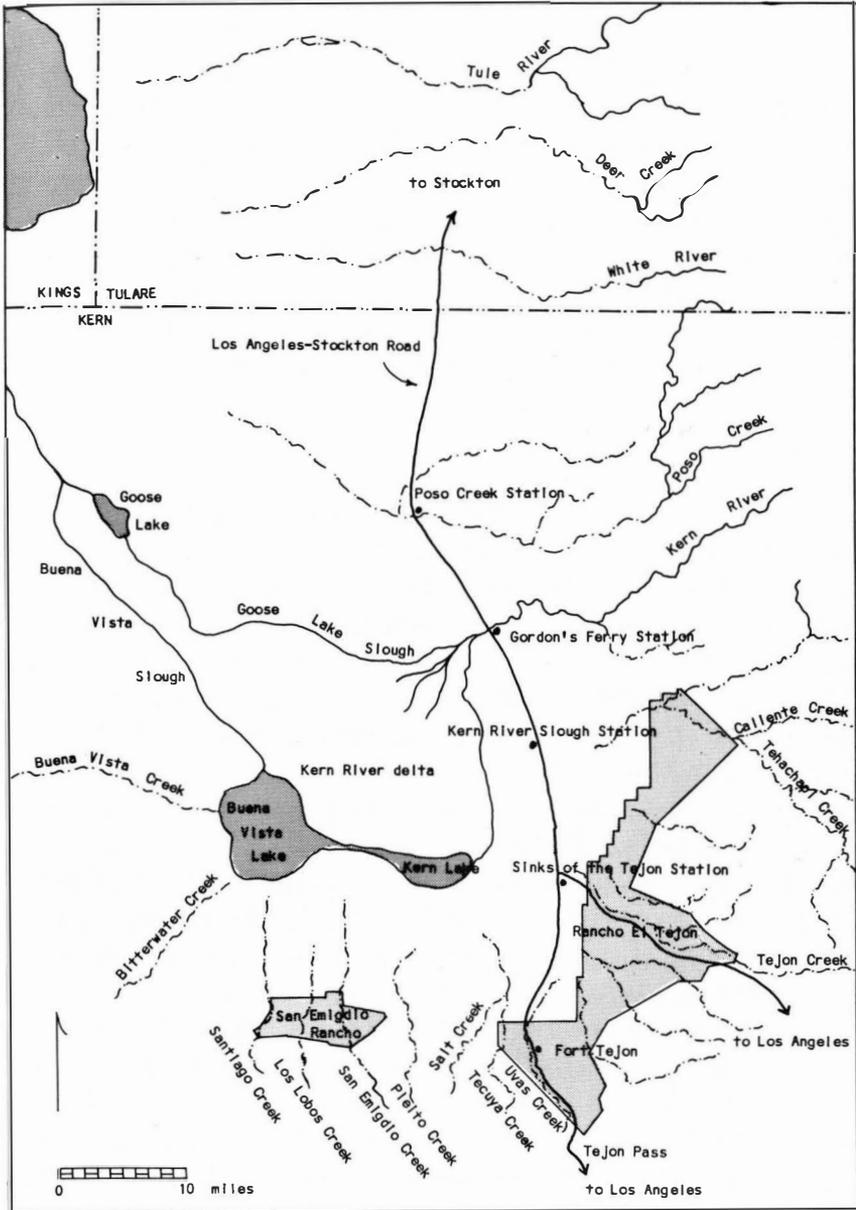


FIGURE 4. Map of early features, Kern County circa 1860 (after Boyd, 1972).

twenty miles in each direction along the course of its route. In Kern County, all of the lands in the foothills region, from the west side of the valley south of Buena Vista Lake, to Tehachapi Canyon at the northeast corner, were parts of Mexican land grants, the titles to which had been cleared by 1863. Thus by 1870, when the route was being determined, the only southern pass not already in private ownership was Tehachapi Canyon. Preston notes that the availability of public land for railroad acquisition and for townsites controlled the final, initial route selection through the Tulare Lake Basin.²⁰ There is little reason to doubt that this policy extended to Kern County as well.

In the Hands of Large Landowners: Kern County

The effects of large holdings were not limited to determining the route of Southern Pacific; they also had a major impact upon the form and location of both agricultural development and settlement patterns. Beginning with Edward F. Beale's questionable acquisition of several Mexican land grants, through public land acquisition schemes of San Francisco-based investors (Livermore and Redington, Miller and Lux, Haggin and Carr, and a few others), to the present day, Kern County development has been determined by only a few major landholders. The means by which this domination took hold is documented in Margaret Zonlight's investigation of the origin of Kern County landholding patterns and their effects upon the development of small farms and the county as a whole.²¹

Settlement. Zonlight describes three areas of initial settlement: Kern Island, Panama, and the Buena Vista Slough region. Kern Island was the site of the first white settlement in 1861; settlement began in earnest in 1869 and had reached fifty families by 1874. Government lands in the Panama district were entirely taken up by 1874, and government lands on Buena Vista Slough were settled between 1873 and 1876. Between 1870 and 1880, Kern County's population rose from

2,925 to 5,601, but the majority of that increase had occurred by 1876. Growth came to a standstill in the last three years of the decade, and probably declined between 1880 and 1886—years during which Fresno and Tulare Counties, by way of contrast, posted respective increases of 89 and 66 percent. Zonlight ascribes Kern's stagnation of growth to the combined effects of (1) loss of land once available for settlement—*i.e.*, public land which became concentrated in a few large private holdings, and (2) complete control of water resources by those same interests.

Land. By the year 1870, three potential sources of land were available for settlement: government lands (approximately 120,000 acres), lands reserved for the railroad grant (about 120,000 acres), and lands already in private ownership (221,117 acres, most of which belonged to a few great land holders). Since neither the railroad lands nor private holdings were ever made available to settlers, the figures cited mean that less than one-fourth of the land in Kern County was available for settlement. After the passage of the Desert Land Act in 1877, "private holders absorbed the remaining valuable lands of the Public Domain almost at a stroke. This closed the door completely on the chance that farmers could settle directly upon government land."²²

Railroad grant land inhibited settlement even on government lands. In 1870, odd-numbered sections of land were withdrawn from the public domain until Southern Pacific could determine its projected route. Southern Pacific did not receive title to these lands until 1876, which retarded settlement in two ways. On the one hand, settlers were reluctant to settle on odd-numbered sections for fear that they would be unable to obtain them from the company, despite assurances to the contrary. On the other, settlers were also reluctant to settle on even-numbered sections, because at a time when most of the land had not been surveyed the burden of proof that land was actually located within those sections was placed on settlers. There was yet another deterrent to

settlement, however. Reserved lands were free of tax assessments; hence the burden of financial support for county improvements fell on settlers and private landholders.²³

Local residents, who were well aware that reservation of lands was hindering the process of settling the county, suggested that the reservation should be revoked:

The lands set apart for the company in this section of the State are among the finest in the world. If they reverted to the Government, farms for homestead and pre-emption entry would be open to thousands of settlers, and the wants of trade would probably compel the building of a road in so short a time that little delay in this indispensable means of communication would be suffered.²⁴

Since "the wants of trade" motivated the laying of the second trunk line in Tulare County, the foregoing proposition was probably correct. Before the end of the decade, journalists were also noting the retarding effects on growth of high fares and excessive freight rates charged by Southern Pacific.²⁵

Had railroad reservation land been returned to the public domain, settlers probably would have paid an order of magnitude less for the land, thus greatly enhancing their survivability.²⁶ Probably more important, had the reserved lands been returned to the public domain, they could have been settled by small farmers. In fact, most Southern Pacific lands which were sold went to the largest landholders en bloc. James Ben Ali Haggin—and his local agent William B. Carr, who had once been a lobbyist for Southern Pacific—acquired the largest percentage of SP lands; over 100,000 acres of these were located north of the Kern River, outside its watershed.

Water. Just as in Tulare County, where the limits of the water resource were felt within two decades after the beginnings of settlement, obvious limits to flows of the Kern River were apparent by the mid 1870's. Unlike Tulare, however, locally-developed systems of minor canals—initiated

by small farmers and capitalists alike—did not lead to colonies or areas settled by family farmers, plans toward that end notwithstanding. Instead, they were co-opted and taken over by the largest of the large in a clash of titans over who would control the Kern River, and thus the development of agriculture in the county.

Cooperative Irrigation. The earliest irrigation efforts in Kern County were undertaken by individuals and groups of settlers. The areas of initial settlement (Kern Island, Panama, and Buena Vista Slough) originally had adequate water, which was distributed in canals dug by the settlers themselves.²⁷ These included the Pioneer Ditch (the canal of the Farmer's Irrigating Company) as well as the Beardsley and McCord ditches, all of which were built with the tools at hand and were lauded as an excellent example of "what may be done with co-operative labor, and [which showed] that where the will exists quite important things may be done without money."²⁸ Later newspaper accounts would characterize these local efforts as failures for want of capital, but Zonlight equates this to an official rationalization for the form of water rights and control over irrigation supplies that emerged:

Although it was true that irrigation posed difficult problems, it was never demonstrated that small farmers were incapable of solving them. They were given neither the time nor sufficient opportunity to put their plans for irrigation into effect. Most irrigation projects undertaken by small farmers came to an abrupt halt in 1874 and 1875. A new phase began and new relationships arose as cooperative irrigation was replaced by corporate irrigation.²⁹

Corporate Irrigation. Rapid transition to corporate irrigation occurred as several San Francisco investors became involved in various land development schemes. Miller and Lux—who illegally acquired huge tracts of land stretching over one hundred miles along the San Joaquin River and fifty miles along the Kern—claimed rights to the flows of

these two rivers through riparian doctrine derived from English common law. In 1877, the California State Agricultural Society noted that Miller and Lux had "commenced over one hundred suits against the farmers who attempted to divert the waters of the Kern River for irrigation purposes."³⁰ The Kern Island Canal, built by Livermore and Redington, exemplifies yet another corporate effort. This canal not only carried one of the first and most valuable appropriative water rights, but also was quite capable of diverting the entire flow of the Kern River, and thus depriving all downstream users of water, "including the majority of the small farms and Haggin's vast holdings."³¹ The Kern Island Canal constituted the essential centerpiece of a proposed agricultural colony that was, in effect, a last-ditch attempt to salvage what remained of earlier investments in Bakersfield businesses and large-scale cotton production. When the plan collapsed, however, the canal and its attendant water rights passed into the hands of Haggin and Carr.

Land acquired by Haggin north of the Kern River had no access at all to water. To remedy that situation, Haggin acquired Kern River water rights—directly and subversively—from the independent farmers' cooperative undertakings. Haggin's partner Carr would first convince canal companies to incorporate, and he and Haggin would then emerge with controlling interest in the stock. Through this means, Haggin gained control of the Buena Vista Canal, the Pioneer Canal, the Stine Canal, and other irrigation projects.³² With the addition of the Calloway Canal in 1876, Haggin gained full control of the appropriation rights to the Kern River, with negative results for settlers and thus development of the county as a whole:

There is much evidence to indicate that Haggin used his absolute control of the water to the detriment of small farmers . . . [M]any settlers were deprived of water after Haggin acquired control of the ditch companies which they had initiated; in one instance the water supply which an early settler had used for many years was completely cut off.³³

The story of San Emigdio settlers is particularly indicative of the "above the law" power exerted by Haggin in his land and water acquisitions. It also demonstrates the relationship between control of water and the ability to acquire land:

The school district of San Emigdio is not subject to irrigation from the river. It is a portion of an old Spanish grant, and a few families had lived there many years. A spring supplied them with irrigation. The spring was confiscated under the law of appropriation, and the water diverted to beneficial uses in a ditch past their lands. Offers were made to buy them out. These poor Mexican farmers refused. Here they had raised their families; here was the only world they knew; here they wanted to stay. The little seepage water which was allowed to escape the large ditches would do service in the support of their families. For the purpose of freezing them out cement was used to prevent even a drop of water escaping on to their lands, and the poor farmers succumbed, while the school with its average attendance of twenty-six children collapsed. The land passed into the canal owners' possession.³⁴

The mounting conflict over rights to the Kern River resulted in the infamous Miller & Lux vs. Haggin & Carr legal dispute of the "appropriationists" and the "riparianists," which determined the dual system of water rights still present in the state.³⁵ In the end the dispute was settled out of court, with Miller conceding water rights in exchange for the construction of a reservoir. The net result, however, was that the total flows of the Kern River were apportioned between the ranching empires, one-third to Miller and Lux lands, and two-thirds to Haggin's, with Buena Vista Lake converted into a storage reservoir for Miller.³⁶ In 1890, the Haggin-Carr-Tevis association was incorporated as the Kern County Land Company (KCLC). This company controlled 375,000 acres in Kern County alone, and over three-fourths of the county's water supply. In the late 1960's, the Kern County Land Company was purchased by Tenneco West; and in 1987 Tenneco West's lands (along with several other large-scale properties) were purchased by Castle & Cooke as

part of its bid to become the leader in global sourcing of fresh fruits and vegetables. Hence the pattern of large-scale dominance over land and water persists to this day.

KCLC Water Control and Arvin Area Development

Between the turn of the century and the 1940's—when Goldschmidt examined the development of Arvin—Kern County Land Company effected a major change in the hydrologic balance of the county. KCLC used Kern River surface flows to irrigate its northern lands, channeling water through the Calloway Canal. At the same time, KCLC lands in the Kern River Delta, which had been irrigated by surface flows, were shifted to irrigation sustained by the pumping of ground water. Exportation of a large percentage of Kern River flows to areas outside its watershed reduced the natural recharge of the ground water table. The initiation of ground water pumping in the Kern River delta, combined with reduced ground water recharge, resulted in the rapid lowering of the ground water table, including that of the Arvin–Edison area, which lies east, and upgradient, of the Kern River delta.

Examination of landholding patterns at the time settlement in Arvin was initiated reveals an interesting void. The area destined to become the Arvin–Edison Water Storage District in roughly forty years is literally the only area in the Kern River drainage basin *not* held in large landownerships (Figure 5). It is entirely surrounded by them, however, with the exception of the few agricultural colonies that have survived the dewatering of the Kern River delta. It is here asserted that alteration of the hydrologic regime to meet land development schemes of the Kern County Land Company created an *unnatural* water deficiency in the Arvin area—a deficiency which led to its somewhat later development relative to the rest of the county.³⁷

Ample evidence exists, as well, to indicate that large landholders, particularly KCLC, delayed development of

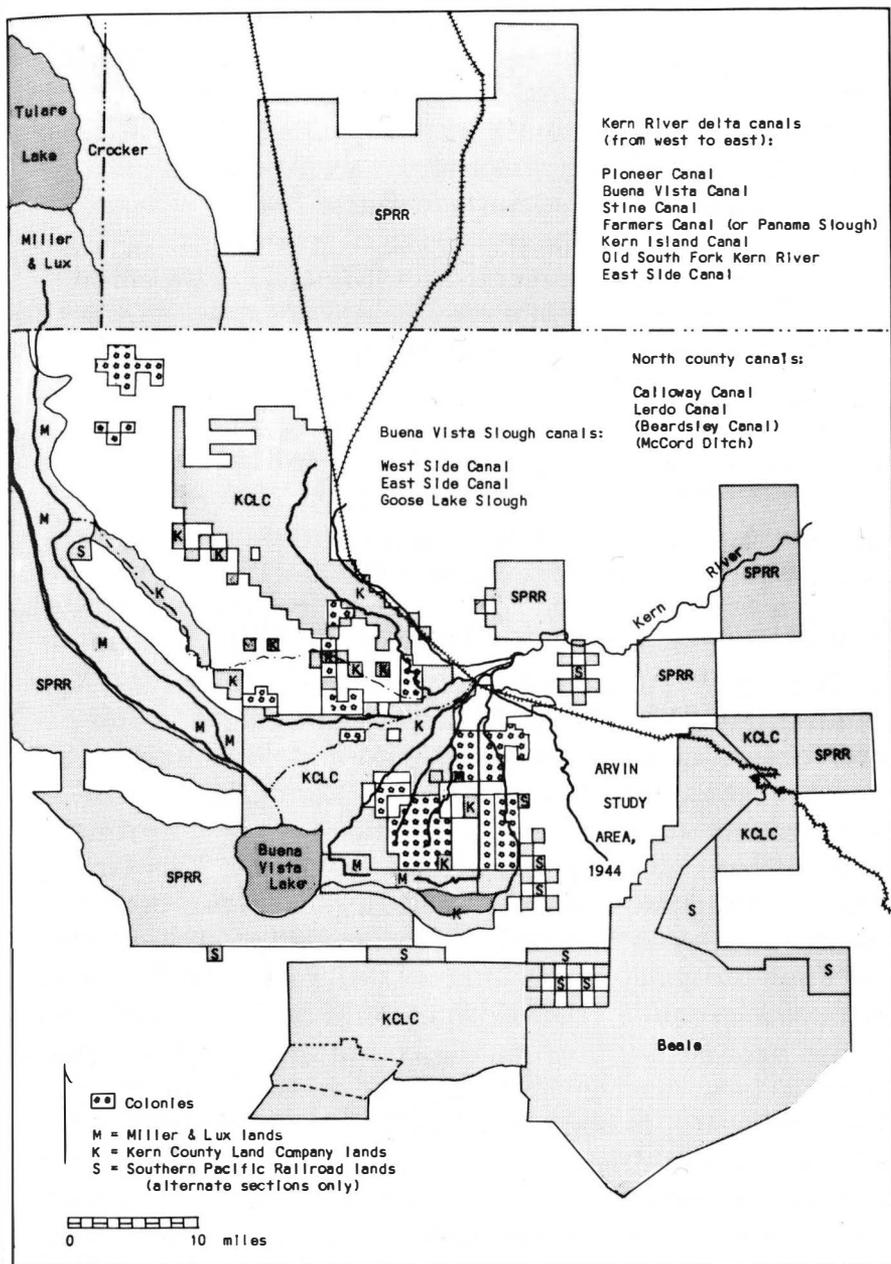


FIGURE 5. *Approximate locations of large landownerships and canals, Kern County, 1898.*

new surface water supplies for the Arvin–Edison area. Essentially, these landholders held the district hostage in order to guarantee cooperation of the Bureau of Reclamation in development of the Friant-Kern Canal without the threat of an acreage limitation. Senator Sheridan Downey, a stout defender of agribusiness interests, wrote in 1947:

Without the consent of the [Kern County Land] Company and its subsidiaries, the whole [Friant-Kern Canal] enterprise will be stillborn. One may think what one likes about the size of the Kern County Land Company's holdings; its legal, economic and physical position are unassailable. Deliberately and futilely to vilify and antagonize the Company, as the 160-acre champions have gone out of their way to do, strikes one as folly of the most willful and reckless variety—a folly that may well have tragic consequences for many of the farmers in the Arvin–Edison district.³⁸

The particular impacts of the Kern County Land Company on the development of the Arvin area must be noted.

Summary: Land Tenure and Historic Development

The regional developmental histories of Tulare and Kern Counties have been strongly influenced by land tenure patterns characterized by large-scale monopolization of public land by urban financial interests. In Kern County this monopolization was more complete, and was gained primarily through control of the surface water supply. This circumstance distinguishes it from the Kings/Kaweah portion of Tulare County in which Dinuba emerged. Though large holdings did exist in the Tulare Lake Basin, small farmers managed to gain a foothold there and become established, in the process supporting the communities which today have become rural towns and cities. In Kern County large landholders suppressed development of small farms, which eroded communities developing in the most fertile areas and left only the backwaters for any kind of independent rural development. Arvin grew in just such a backwater, made even more marginal by the exportation of its one key resource: water.

It is possible, then, to make the case that Dinuba's development (including its original platting by Southern Pacific) was the result of small-scale irrigation works and small-scale, intensive cultivation. In contrast, the relative lack of development in the Arvin area was the result of large-scale land and water ownership *beyond the community boundaries*. The primary and essential difference between the two regions is that small farmers were able to become established on the fans and deltas of the Kings and Kaweah Rivers *despite* the developmental intentions of Southern Pacific and other sources of urban capital. On the Kern River delta, they were not able to escape those sources of control. Consequently, all of the early indigenous efforts necessary for community development were lost.

Continuing control over water resources in the Tulare Lake and Buena Vista/Kern Lake basins effectively drained the various naturally well-watered upstream and upgradient regions which had been colonized by small farmers. This eventually resulted in construction of the Friant-Kern Canal as part of the Central Valley Project. The CVP itself was intended to replenish deeply overdrafted ground water tables on the east side of the upper San Joaquin Valley and stabilize water resources of the state. Unfortunately, both the CVP and its younger sibling — the California State Water Project — have also been employed to develop new lands in areas of large ownerships. Such developments have not only proven detrimental to the economic stability of the small farm areas, but also have overcommitted the available water supply.³⁹

In terms of the Goldschmidt hypothesis and its critics, the developmental history of Arvin and Dinuba very clearly underscores the importance of land tenure in regional development. It also effectively eliminates the single argument of any merit — the developmental influence of Southern Pacific — advanced against it by Hayes and Olmstead. More importantly, this history challenges current notions of com-

munity development processes as dependent on attracting outside investment interests, suggesting that the side effects of money trickling down may be more detrimental to a recipient community and its region as a whole than the slower and more organic process of indigenous, hand-built development.

Finally, the regional histories of Tulare and Kern Counties suggest the direction necessary for research on the relationship between land tenure and rural development. In their critique, Hayes and Olmstead failed to realize the nature of social science. The Arvin–Dinuba study was not a laboratory experiment, where a mistake in lab technique produces insupportable results; nor was it a legal case or a wrestling match, where the winner is determined by precedents or points. The Arvin–Dinuba study was an elaboration of the ethnographic model built in Wasco—a comparative examination of the intimate relations between land tenure, social structure, and the resulting economic facts of life. To disprove a model it is not enough to imply that some facts might not be right: contradictory relations must be shown. The reason why no study has been conducted attempting to show that large farms produce better towns is that all know it would a waste of time to try.



NOTES

1. Paul S. Taylor documented many of these tactics in his long and substantial law review articles from 1955 to 1975. Those which are pertinent to this region are: "The Excess Land Law: Execution of a Public Policy," *Yale Law Journal* 64, Feb. 1955; "Destruction of Federal Reclamation Policy? The Ivanhoe Case," *Stanford Law Review* 10, Dec. 1957; "Excess Land Law on the Kern?" *California Law Review* 46, May 1958; "The Excess Land Law: Legislative Erosion of Public Policy," *Rocky Mountain Law Review* 30, 1958; "Excess Land Law: Secretary's Decision? A Study in Administration of Federal–State Relations," *UCLA Law Review* 9, Jan. 1962. These and others are collected in: Paul S. Taylor, *Essays on Land, Water and the Law in California* (New York: Arno Press, 1979).

2. Walter R. Goldschmidt, *As You Sow: Three Studies in the Social Consequences of Agribusiness* (Montclair, New Jersey: Allanheld, Osmun & Co., 1978), pp. 475-479. See also: Paul S. Taylor, "Walter Goldschmidt's Baptism by Fire: Central Valley Politics," *Anthropology UCLA*, Vol. 8 (1976) pp. 129-140, which is also reprinted in Taylor, 1979.
3. See Goldschmidt's review of Richard S. Kirkendall's essay, "Social Sciences in the Central Valley of California: An Episode," *California Historical Quarterly*, Sept. 1964, in: Goldschmidt 1978, pp. 467-477.
4. Dean MacCannell and Gerald White, "Agricultural Land Ownership and Community Structure in California's Central Valley" (University of California, Davis: unpublished manuscript for 1981 California Policy Seminar, Dept. of Applied Behavioral Sciences). See also: Dean MacCannell and Gerald White, "The Social Costs of Large Scale Agriculture and the Prospects for Land Reform in California," in: Charles C. Geisler and F. Popper, eds., *Land Reform, American Style* (Totowa, New Jersey: Rowman and Allanheld, 1984); and Dean MacCannell, "Industrial Agriculture and Rural Community Degradation," in: L. E. Swanson, ed., *Agriculture and Community Change in the U.S.: The Congressional Research Reports* (Boulder, Colorado: Westview Press, 1988).
5. Michael N. Hayes and Alan L. Olmstead, "Farm Size and Community Quality: Arvin and Dinuba Revisited," *American Journal of Agricultural Economics*, Vol. 66 (1984), pp. 430-436.
6. For a discussion of the four points in question, see: Trudy Wischemann, "Arvin and Dinuba Revisited: The Relationship Between Resource Distribution and Community Development" (University of California, Berkeley: unpublished M.A. thesis, 1991), Chapter 1.
7. Op. cit., note 5, p. 432. A full reference to "Preston" follows in note 8.
8. William L. Preston, *Vanishing Landscapes: Land and Life in the Tulare Lake Basin* (Berkeley: University of California Press, 1981), pp. 122-125.
9. *Ibid.*, p. 147.
10. *Ibid.*, p. 129.
11. *Ibid.*, p. 146.
12. *Ibid.*, p. 161. Preston does not note that at least some of the shift

of population from Traver to Dinuba occurred in response to the rapid alkalization of Traver's soils from the irrigation of Dinuba's lands. See also: Goldschmidt, *op. cit.*, note 2, p. 298.

13. *Ibid.*, pp. 149-150.
14. *Ibid.*, p. 109. Preston notes that "the granting of land(s) to railroads delayed, rather than accelerated, their settlement."
15. Robert C. Fellmeth, *Politics of Land: Ralph Nader's Study Group Report on Land Use in California* (New York: Grossman Publishers, 1973), p. 10. For a concise review of railroad grant conditions requiring resale, see: Sheldon L. Greene, "Promised Land: A Contemporary Critique of Distribution of Public Land by the United States," *Ecology Law Quarterly* 5, 1976, pp. 707-751.
16. Pedro Fages entered the San Joaquin Valley through Uvas Canyon in 1772. Francisco Garcés entered through Tejon Canyon in 1776, emerging at Sinks of the Tejon, not more than five miles from the present site of Arvin. See William Harlan Boyd, *A California Middle Border: The Kern River Country, 1772-1880* (Richardson, Texas: The Havilah Press, 1972) p. 2.
17. *Ibid.*, p. 33.
18. *Ibid.*, pp. 24, 32.
19. *Ibid.*, pp. 118, 126.
20. *Op. cit.*, note 8, p. 122.
21. Margaret Aseman Cooper Zonlight, *Land, Water and Settlement in Kern County, California, 1850-1890* (New York: Arno Press, 1979).
22. *Ibid.*, p. 262.
23. *Ibid.*, pp. 286-288.
24. *Ibid.*, p. 289, citing *Kern County Weekly Courier*, Feb. 14, 1874.
25. *Ibid.*, p. 291, citing *Kern County Courier-Californian*, August 7, 1879.
26. *Ibid.*, p. 297. Under government land programs, an 80-acre homestead cost \$22 (27 cents/acre); 160 acres claimed under pre-emption cost \$400 (\$2.5/acre). In Tulare County, people who were encouraged by the railroad to settle on railroad lands in the early 1870's and promised a price of \$2.50/acre were charged—when Southern Pacific received title to the land—between \$17 and \$45/acre, reflecting improvements, including irrigation

canals, that the settlers themselves had made. See also: Lawrence J. Jelinek, *Harvest Empire: A History of California Agriculture*, Second Edition (San Francisco: Boyd & Fraser, 1982) p. 44.

27. Op. cit., note 21, pp. 293-294, citing the *Courier*, March 7, 1884.
28. Ibid., p. 294, citing the *Courier*, July 25, 1874.
29. Ibid., p. 296.
30. Ibid., p. 260.
31. Ibid., p. 303.
32. Ibid., pp. 298-300.
33. Ibid., pp. 321-323.
34. Ibid., p. 323.
35. See Joe S. Bain, Richard E. Caves, and Julius Margolis, *Northern California's Water Industry* (Baltimore: John Hopkins Press, 1966), pp. 62-74. See also: Thomas Edward Malone, "The California Irrigation Crisis of 1886: Origins of the Wright Act" (Stanford University: unpublished Ph.D. thesis, 1964).
36. Op. cit., note 21, p. 331, citing Fitzgerald, 1939, p. 26.
37. Hayes and Olmstead note the problem of Arvin's low and declining water table in the late 1930's, but ascribe it simply to over pumping (p. 433). They raise the question of water levels in order to rationalize Arvin's farm size (bigger farms to pay for higher water costs). They also claim larger farms there were a "natural" result of Arvin's later agricultural development (p. 435). Although these specific points are addressed in Wischemann (op. cit., note 6), the influences of large landowners presented in this paper and their effects on both aspects of Arvin's development should be noted.
38. Sheridan Downey, *They Would Rule the Valley* (San Francisco, 1947), p. 96.
39. Don Villarejo, *New Lands for Agriculture: The California State Water Project. A Report on Land Ownership and Land Use in the State Water Project Service Area of the Upper San Joaquin Valley* (Davis: California Institute for Rural Studies, 1981). See also: Don Villarejo and Judith Redmond, *Missed Opportunities—Squandered Resources: Why Prosperity Brought by Water Doesn't Trickle-Down in the California Central Valley* (Davis: California Institute for Rural Studies, 1988).

✻ Immigre

*Her skin is brown now
with splotches of green
oaks on round cheeks
veining down the clefts of creeks,
her lifeblood ✻ It is September ✻
The burn is off the heat, scorchwork done ✻
I am skimming the rolling surface of California
adoption home of natives from other places
and I look at her with the critical eye
of a step-daughter, askance
and genetically disinterested ✻*

*Two of them are bent over an ailing car,
a third stands with his thumb out ✻
I do not stop to help these brown-skinned
children from Mexico, my half-brothers,
though all they probably needed was a ride
though I am not inordinately pressed for time
and I am not afraid ✻
Fear is society's newsmedia cover
for a more niggardly form of self-preservation, the
conservation of undifference, the anti-evolutionary
resistance to change ✻ In this pseudo-competition
sharing my resources with them gives me an edge,
aiding their survival and my eventual demise ✻
As I approach and start to let up on the gas
white language whispers
I am a single woman travelling alone,
code words for the excuse of vulnerability*

*which my peers would use to convict me
 if violated and my aid efforts turned to horror ✽
 I give in to fear, not of rape,
 but of ostracism ✽*

*Her skin grows brown
 with splotches of tennis court green
 and pasty air-conditioned white ✽
 The names of their ancestors,
 their nouns and adjectives,
 their rolling r's and sonorous language
 are splattered across the state, carved in white
 on green freeway signboards
 and framing the entries of subdivisions
 but still we do not speak to them
 until necessary ✽*

*Our bulldozers gouge flat planes
 from her beautiful curvatures
 uniform beds for uniform streets and houses
 for a uniform population
 that does not exist, while the palms
 and eucalyptus, those imported monarchs
 from the first white waves of settlement,
 stand, indifferent ✽*

TRUDY WISCHEMANN
 September, 1988



THE DUBLIN SENSE OF PLACE: LANDSCAPE VS. LITERATURE

*Anne V. O'Connor**

Ted Relph points out that "we live, act and orient ourselves in a world that is richly and profoundly differentiated into places, yet at the same time we seem to have a meagre understanding of the constitution of places and the ways in which we experience them."¹ To achieve a deeper understanding of place, a variety of elements must be considered. Symbols, such as the Eiffel Tower or the Taj Mahal, are among the first clues to the identity of a particular place; but comprehension of place is not based solely upon such highly recognizable imagery. Arrangement of buildings and the spaces in between creates contextual awareness of place. Other, often less obvious components of place knowledge include an historical/time element; cultural representations of the human experience, such as art and literature; and human behavior within a landscape. Combining some or all of these aspects can enhance perception of place, or even result in an overall sense of place, which is more or less a consensus of perceptions.

Why should geographers bother to identify a sense of place? Two of the most important areas for which an under-

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standing of place is valuable are historic preservation and urban planning. For example, city planners should be able to interpret what impact a change—in the form of destruction, preservation, or modification of buildings or neighborhoods—will have on the sense of place for an area.

This paper explores the use of literature as an extension of current landscape interpretation methods to achieve a more complete concept of a sense of place in Dublin, Ireland. Contemporary human interaction within the environment is omitted, as that topic would necessitate a paper of its own. Dublin was chosen for a case study because of its history of occupation and the contrast in its class distinctions, both of which have helped to create an interesting, multi-faceted city.

Literature and Landscape Interpretation

Early landscape studies include various interpretations of the English landscape, such as those by Lowenthal and Prince² and later by Hoskins.³ These studies classify the landscape, discuss the English perception of landscape, and interpret landscape development. To give meaning to place, several geographers have evaluated ordinary landscapes throughout the world by concentrating on various elements, such as architectural forms,⁴ aesthetics,⁵ technological advancements,⁶ and landscape tastes.⁷ In particular there has been a focus on the cultural and symbolic significance of these landscape elements.⁸

All of these various interpretations lead to a better comprehension of the visual landscape. Although landscape interpretation can provide substantial insight, it stops short of a more complete understanding of place. It is an outsider's approach; the researcher interprets place with his or her own cultural biases and tastes. Biases of this type are a problem in any study, but they can be partially alleviated in the study of place by using literature, when available, to obtain an insider's viewpoint.

Salter and Lloyd argue for the use of literature in geographic research:

The strength of landscape in literature lies in its subtle human qualities, its potential for revealing the hidden dimensions of human meaning . . . the sensitivity of creative authors to allow them to capture the essence of vague dimensions of landscape experience, such as the perception or absence of the ambiguity of shared perceptions.⁹

The study of sense of place is well suited to the use of literature, since identification with place is crucial to many novels. According to Durrell, "what makes 'big' books is surely as much to do with their site as their characters and incidents."¹⁰ Some geographers have found a strong sense of place in works by authors such as D. H. Lawrence,¹¹ Thomas Hardy,¹² and William Faulkner,¹³ as well as Agatha Christie and Dorothy Sayers.¹⁴

Case Study: Dublin

Certain locations suggest a combination of landscape interpretation and literary imagery to create a greater consensus on sense of place. Dublin is such a place because its history of English occupation has been a major cause of the ongoing conflict between historic preservationists and other Irish citizens. Understanding Dublin involves the comprehension of a paradox of the city—its "terrible beauty." Some see the city as dirty, forsaken, and crumbling. Others see Dublin as having a significant architectural heritage which is worth saving,¹⁵ while yet others see the "Irishness" of Dublin in its people, rather than in its built environment. Brendan Lehane portrays this human quality of Dublin:

Like many women of the Irish countryside, Dublin is a great beauty wrapped in a tattered shawl . . . to the despair of aesthetic purists, Dublin refuses to turn herself into a museum. She is more heart than head . . . certain sights and smells seem to be eternal, incontrovertible essentials to the city's character: the reek of stale beer emanating from pubs . . . the tetchy moodiness of winds that rise suddenly from torpor and blow papers and

bags of discarded cigarette packets across open spaces . . . a pervasive untidiness and a universal leavening of dirt.¹⁶

During the late nineteenth century, one-third of Dublin's families lived in one-room apartments; the city's death rate compared with that of Calcutta; and its sewage was still being pumped into the harbor.¹⁷ Although conditions have improved, they are, unfortunately, still below modern European or American standards.

A persistent image of Dublin over the past 150 years is that of a grimy, economically unstable, deteriorating city. If this is accepted as a normative perception of Dublin, why do so many people, residents as well as visitors, have such affection for the city? One reason has to do with the dominant architecture of Dublin: the Georgian architecture which was brought over in the 1700's by the British when they designed and constructed the city. Most of the city was erected during the Georgian period, and very little of this construction has since been torn down. Therefore, it is the dominant form of architecture within the city. Another reason has to do with human reaction to the environment, a form of reaction which can be illustrated by examination of selected passages of Irish literature.

The Rôle of Architecture in the Dublin Sense of Place

Some geographic research on the Georgian architecture of Dublin provides interesting insights into the visual elements of the city.¹⁸ Georgian Dublin was designed and built between 1714 and 1830, a period of English Protestant settlement. The elegant homes, squares, and parks which the Protestants created were a symbol of beauty to other European people, and a symbol of British power to the Irish. It was as if the English had brought London with them to Ireland (Figure 1). In the early 1800's, the parliament governing Ireland moved from Dublin to England; and, therefore, many of the powerful and wealthy English moved back to London, leaving many Georgian structures vacant. As the

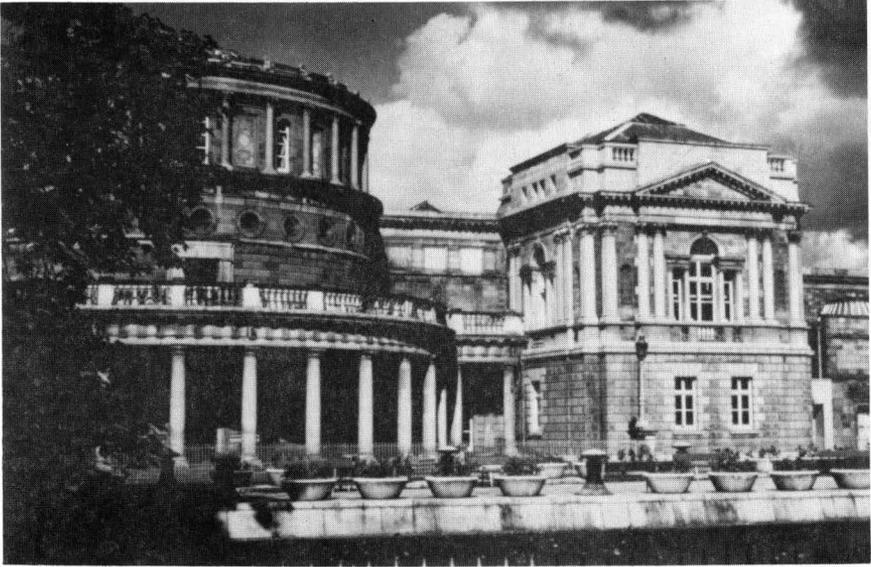


FIGURE 1. *Monumental Georgian Architecture.*

buildings no longer had regular upkeep they began to deteriorate. Greater degradation occurred during the great famine of the mid-nineteenth century, when many rural people moved to the city looking for jobs. The only housing which they could find was in tenements carved from the existing Georgian structures. The interiors were torn apart and restructured, and the people could not afford the upkeep of the exteriors. As more and more rural Irish moved to the city, the wealthier Anglo-Irish moved out to the suburbs. Most of these tenement conversions occurred in Northern Dublin, while in South Dublin "the Georgian squares and streets survived as pockets of respectability for the remaining nobility, gentry, and professionals in the city."¹⁹ Further deterioration occurred throughout the twentieth century, especially after Irish independence in 1921, as the economic structure of the city continued to stagnate (Figure 2).

Preservationists argue that the architecture is worthy of attention, not only because of its detail and beauty, but also



FIGURE 2. *Crumbling Georgian Architecture.*

because Dublin—although it has deteriorated—is one of the few places where the Georgian landscape has actually survived with little change or damage. Many buildings in London and other cities that went through major growth during the Industrial Revolution were torn down to make way for factories. Also, while other European cities were heavily bombed during World Wars I and II, Dublin escaped damage. One geographer's perception of the city is that

... the heart of present-day Dublin is still its Georgian core, the crowning architectural achievement of the eighteenth-century Anglo-Irish community that dominated life in the city during its Golden Age. The aesthetic splendour of the Georgian City, so evident to the discriminating observer, is lasting testimony to an age of refinement, formality, taste and wealth.²⁰

On the other hand, many Irish residents have difficulty caring for this "aesthetic splendor," since doing so means using British tastes as the norm for an Irish city.

Why have large numbers of Georgian buildings been

neglected for so long? Why have some been gutted and converted into office buildings, or demolished to make way for more modern offices? To many Irish, the Georgian structures symbolize the economic and political power of British Ascendancy; and the past is not easily forgotten in a nation that has suffered foreign domination for so long. A sense of duality has emerged within the city:

... the city of Dublin has something of a split personality which is well revealed when some Georgian square is threatened with demolition and the Dubliner's instinct to defend a thing of beauty is tempered by a feeling that he should not grieve at the disappearance of reminders of England's past ascendancy.²¹

There is a duality between the attractive appearance of well-kept Georgian architecture and the symbol of British control that it represents. In this sense, Dublin is struggling for an identity of its own—one independent of British aesthetics.

Some aesthetic and architectural purists urge the preservation of the Georgian architecture to include both form and functional integrity. A few private individuals have purchased and painstakingly restored some of the Georgian mansions to their original condition (Figure 3). They have spent tremendous amounts of time and money in restoring the interior and exterior to original detail. This is important work, but it cannot be expected to be carried out at a large scale. Many Irish residents' ambivalence toward the Georgian architecture and their immediate concern for adequate and inexpensive housing precludes extensive structural and functional rehabilitation.

A lack of understanding of these attitudes may stem from a purely visual landscape approach to the interpretation of Dublin. A walk through the city will reveal a mixture of crumbling Georgian tenements, beautiful, well-kept or restored structures, and modern box buildings. The simplified social solution is to ask why Dubliners do not just restore the rest of the Georgian buildings and make the city clean, neat, and uniform? If this were to occur, however,



FIGURE 3. *Restored Georgian Architecture.*

what would happen to the sense of place which is so emphatically tied to Irish history? A more holistic understanding of the city is needed to comprehend possible reasons behind the circumstance that most Irish still see Georgian architecture as a symbol of British Ascendancy, and therefore are reluctant to preserve the aesthetic and functional aspects of the buildings. A sampling of passages from Irish literature of late nineteenth- and early twentieth-century Dublin may help to provide needed insight into both the ambivalence toward Georgian architecture, and a more complete interpretation of sense of place in Dublin.

Irish Literature and the Dublin Sense of Place

Although some may feel that the "Irishness" of Dublin lies in its architecture, an examination of Irish literature will reveal that the "Irishness," in the eyes of Irish authors, lies in its people and in their reaction to the landscape. Authors James Joyce, James Stephens, and George Moore each had a



FIGURE 4. *Busy Grafton Street.*

talent for evoking a mental image of Dublin for the reader. James Stephens, for example, addresses the conflict within Dublin's "split personality." Some of Stephen's writing is a celebration of the beauty of the city, the nearby hills, or the sun glistening off the clouds. Yet, when he presents a more in-depth look at the city, the human and often darker side of Dublin is revealed. An excellent example of the latter is his 1916 poem entitled "The Street":

Two narrow files of houses scowl,
 Blackened with grime, on either side
 Of the road, and through them prowl
 Strange men and women, shifty-eyed
 And slinking, and a drink-shop throws
 Its glare of yellow light adown
 The cracked pavement. The gutter flows
 A turbid, evil stream. A clown,
 Drink-sodden, lurches by and sings
 Obscenely. A woman trails behind
 With old, bad eyes; her clothing clings

Rain-soaked about her. No daring wind
 Light-hearted, from the garden blows
 Its sweetness here from any rose.²²

The paradox in Stephens' work lies in the fact that he sees not only the sadness and frustration of the Irish lower class, but also the beauty in the city as a whole. "The mountains are near in Dublin, the sun is next door, and the clouds hang so low that they must be reckoned with the town; pre-war clouds they are, and the colours last and are forever delightful."²³ There are obviously two Dublins for Stephens, one of color and beauty when he looks at the sky, and one of filth and despair when he looks at the city streets. These are two extremes chosen to show the vast difference between the physical Dublin and the human Dublin in the mind of James Stephens, a disparity which still exists for many contemporary Dubliners.

George Moore, in his novel *A Drama in Muslin*, uses the technique of personification to reflect a human quality in the buildings:

The Dublin streets stare the vacant and helpless stare of a beggar selling matches on a doorstep, and the feeble cries for amusement are like those of the red gleam of a passing soldier's coat. On either side of you, there is a bawling ignorance of plaintive decay. Look at the houses! Like crones in borrowed bonnets some are fashionable with flowers in the rotting window frames—others languish in sill cheerfulness like women living on the proceeds of the pawnshop; others—those with brass plates on the doors—are evil smelling as the prescriptions of the threadbare doctor, bald as the bill of costs of the servile attorney. And the souls of the Dubliners blend and harmonize with their conatural surrounding.²⁴

One gets the feeling of people behind the facades. It is the people within the buildings who constitute the real substance of Dublin, not the buildings themselves.

James Joyce, in his novel *Ulysses*, was one of the first authors to use Dublin as a central character. Says Joyce: "I want to give a picture of Dublin so complete that if the city

one day suddenly disappeared from the earth it could be reconstructed out of my book."²⁵ In *Ulysses* he supplies a clue to the apathy of the Irish people by linking their indifference to their perception of being used by the British to build the city, but having no power or wealth themselves:

Cityful passing away, other cityful coming, passing away too; other coming on, passing on. Houses, lines of houses, streets, miles of pavement, piled up bricks, stones. Changing hands. This owner, that. Landlord never dies they say. Other steps into his shoes when he gets his notice to quit. They buy the place up with gold and till they have all the gold. Swindle it in somewhere. Piled up in cities, worn away after age. Pyramids in sand. Built on bread and onions. Slaves Chinese wall. Babylon. Big stones left. Round towers. Rest rubble, sprawling suburbs, jerrybuilt. Kerwan's mushroom houses built of breeze. Shelter, for the night. No-one is anything.²⁶

The masses are nothing in the eyes of the powerful, and the monuments to the powerful are nothing in the eyes of the masses.

The paradox which one encounters in a reading of James Stephens, is also evident in Joyce. A Joyce scholar, Donald Torchiana, sums up this paradox: "Young and old, Joyce the man reacted to Dublin in extremes—extreme disdain and extreme affection, sometimes both at once."²⁷ In the *Dubliners*, a lively collection of short stories which are "candid-camera shots of people caught up in life's everyday dilemmas,"²⁸ Joyce's theme is that of the "paralysis" of the city and its people. The paralysis is an economic one. The urban Irish have never known a continued prosperity. The characters are trapped in their economic and social positions, which they cannot hope to escape unless they leave Ireland. They tend to have very little control over their lives, since they are dominated by the wealthy, land-owning Irish. Joyce describes the "stagnant society"²⁹ of the ordinary middle-class of Dublin. For example, in "Eveline" the title character wants to leave her drunken, violent father and run away with her lover to Buenos Aires. As she is about to step onto

the boat, however, she is overwhelmed with guilt. Eveline had promised her departed mother that she would keep the family together. She is tied to Dublin by religious and moral guilt. For Joyce, religion is an important and constricting element on the lives of his characters. The people are bound to Dublin not only by guilt, but also by a sense of duty to family and God.

Farrington, in the story "Counterpart," is constricted as well, but by a dull, monotonous job. His only escape is into the pub every chance he can get. Many of Joyce's characters congregate in pubs to discuss the day's events and release themselves from their problems at work and home. Little Chandler of "A Little Cloud" is similarly frustrated as was Farrington. He has longed to be a writer and escape to London, but he has settled for an office job to support his family. While walking to meet an old friend who works for the London Press, he contemplates his life:

For the first time in his life he felt himself superior to the people he passed. For the first time his soul revolted against the dull inelegance of Capel Street. There was no doubt about it; if you wanted to succeed you had to go away. You could do nothing in Dublin . . . Every step brought him nearer to London, farther from his own sober inartistic life.³⁰

After drinking with his friend, Chandler eventually goes home and takes out his frustrations on his small son.

In one of her many articles on the *Dubliners*, Florence Walzl sets forth a perceptive summary of the collection of stories:

The lively throngs on the streets and in the pubs, the properties of the front parlors and the earthier realities of the dingy back parlors and kitchens, have a convincing credibility. Moreover, the book is founded on an accurate, detailed knowledge of Dublin's political, economic, social, and religious realities at the turn of the century.³¹

James Joyce used real places in his work—real streets, buildings, and businesses. At the time the *Dubliners* was pub-

lished in 1914, most readers had some knowledge of the places mentioned and of their significance. Today, investigation of the history behind the place names provides insight into the ambivalent attitude of the Irish toward certain locations and buildings.

For example, in "An Encounter," two boys play hooky from school and wander around Dublin headed for their destination, the Pigeon House, which though once a fort has been turned into a power station. Each location mentioned along their route had been a place of defeat for the Irish. Thus, the Pigeon House, while it was a fort, had been the landing place for many British leaders—Oliver Cromwell in 1649, Lord Berkeley the Viceroy in 1670, and King James II in 1690. The Pigeon House was also used as a British arms storage depot, beginning with the rebellion of 1798. The Irish tried to overtake it then, and again in 1864, but were defeated both times. The boys walk along the North Strand Road, where the Battle of Clontarf was fought against the Scandinavians. Although the Scandinavians eventually had to retreat due to a rising tide, it was not until after they had slain the great Irish leader Brian Boru and two of his sons. The two boys never reach their destination, the Pigeon House, but instead end up playing in a field that is the site of the first Scandinavian landing in Ireland. There, on the grounds where trials were held by the Viking invaders, they encounter a man. Each place that the boys visit exemplifies the Irish people's ineffective struggle for freedom. The boys, too, are unable to achieve their own independence. Thus they must eventually shed their dreams of adventure and go back to home and school.³²

In the story "Two Gallants," the Kildare Street Club—mentioned at the outset—is where British landowners sold and traded much of Ireland's land. The two main characters walk through Rutland Square, a place where the Anglo-Irish walk "on parade" on Sunday afternoons.³³ This is one of many references to remainders of the Ascendency. Each

specific place is mentioned not by chance, for Joyce wanted to show the significance of history to the characters' feelings about Dublin. Partly due to persistent domination by the English, the Irish of Dublin are unable to take control of their own lives, a circumstance which leads to many of their frustrations.

It is interesting to examine the kinds of places in which Joyce's characters spend their time. The work place is not a common setting; for if his characters have a job, it is usually that of a laborer or some similarly tedious occupation. They rarely go to cultural events such as plays or concerts; they don't eat out at fancy restaurants; nor do they spend time walking through the stately parks. Instead, they are often found at home dealing with family problems; or they may wander the streets chatting with friends. Places that are connected with the English are passed by rather quickly. The characters never enter any British clubs, buildings, or parks. They are more interested in places that have a sense of "Irishness," such as pubs, small businesses, or Catholic churches. The pubs and the streets are particularly people-oriented. The physical structures play a secondary rôle to the interaction of the people in terms of their own environmental significance. Joyce reveals that although the human-made environment of Dublin is important in terms of the reaction of the characters to that environment, it is the people themselves who are the essence of the city. Thus, it is the Irish and ordinary daily occurrences—far more than monumental events or buildings—that create the sense of place.

These authors, especially Joyce, through their lasting and well-respected works, had an impact on future generations of Dublin citizens. Their works may help to perpetuate the frustration and anger against the past repression by the British. Yet, because of the influence of the authors' interpretations, as well as their powers of observation, both the literature and the history of the nation add to and understanding of the sense of place in Dublin.

NOTES

1. E. Relph, *Place and Placelessness* (London: Pion, 1976), p. 6.
2. David Lowenthal and Hugh Prince, "The English Landscape," *Geographical Review*, Vol. 54 (1964), pp. 311-346.
3. W. G. Hoskins, *The Making of the English Landscape* (New York: Penguin Books, 1985).
4. Larry Ford, "The Burden of the Past," *Landscape*, Vol. 28 (1984), pp. 41-48; L. Ford, "The enduring Romantic Cottage: Rethinking Historic Preservation," *Landscape*, Vol. 29 (1986), pp. 17-23; Barbara Rubin, "A Chronology of Architecture in Los Angeles," *Annals of the Association of American Geographers*, Vol. 67 (1977), pp. 521-537; and Kevin Kearns, "Preservation and Transformation of Georgian Dublin," *Geographical Review*, Vol. 72 (1982), pp. 270-290.
5. Barbara Rubin, "Aesthetic Ideology and Urban Design," *Annals of the Association of American Geographers*, Vol. 69 (1979), pp. 339-361.
6. John B. Jackson, "The Domestication of the Garage," *Landscape*, Vol. 20 (1976), pp. 10-19; and Kate Bolton, "The Great Awakening of the Night: Lighting America's Streets," *Landscape*, Vol. 23 (1979), pp. 41-47.
7. James S. Duncan, "Landscape Tastes as a Symbol of Group Identity, a Westchester Village," *Geographical Review*, Vol. 63 (1973), pp. 334-355.
8. David Ley and Roman Cybriwski, "Urban Graffiti as Territorial Markers," *Annals of the Association of American Geographers*, Vol. 64 (1974), pp. 491-505; also Larry Ford and Ernst Griffin, "Chicano Park: Personalizing an Institutional Landscape," *Landscape*, Vol. 25 (1981), pp. 42-48.
9. C. L. Salter and W. J. Lloyd, *Landscape in Literature* (Washington, D.C.: Association of American Geographers, Resource Papers for College Geography No. 76-3, 1977), pp. 2-3.
10. Lawrence Durrell, *Spirit of Place: Letters and Essays on Travel* (New York: Dutton, 1969), p. 163.
11. P. Simpson-Housley and A. H. Paul, "Some Regional Themes in

- the Writings of D. H. Lawrence," *Canadian Geographer*, Vol. 28 (1984), pp. 63-67.
12. Douglas Pocock, "The Novelists' Image of the North," *Transactions Institute of British Geographers*, Vol. 4 (1979), pp. 62-75.
 13. C. S. Aiken, "Faulkner's Yanknapatawpha County: Geographical Fact into Fiction," *Geographical Review*, Vol. 67 (1977), pp. 1-21.
 14. Douglas McManis, "Places for Mysteries," *Geographical Review*, Vol. 68 (1978), pp. 319-334.
 15. Kearns, op. cit., note 4, pp. 270-290.
 16. Brendan Lehane, *The Great Cities: Dublin* (Amsterdam: Time Life Books, 1976), p. 8.
 17. Joseph V. O'Brien, *Dear, Dirty Dublin: A City in Distress 1899-1916* (Berkeley, Calif.: University of California Press, 1982), pp. 19-33.
 18. Kearns, op. cit., note 4; also, Kevin Kearns, *Georgian Dublin: Ireland's Imperilled Architectural Heritage* (North Pomfret, Vermont: David and Charles, 1983).
 19. Kearns, op. cit., 1982, note 4, p. 272.
 20. Kearns, op. cit., 1983, note 18, p. 12.
 21. Martin Wallace, *The Irish: How They Live and Work* (Newton Abbot, U.K.: David and Charles, 1972), p. 63.
 22. James Stephens, *Collected Poems* (New York: Macmillan Company, 1928), p. 207. [Reprint of 1909 original]
 23. ———, "Dublin: A City of Wonderful Dreams, Silent and Voluble Folk," *The Times* (Nov., 1919), p. 41.
 24. George Moore, *A Drama in Muslin: A Realistic Novel* (Gerrards Cross: Colin Smythe, reprint 1981), p. 158.
 25. Frank Delaney, *James Joyce's Odyssey: A Guide to the Dublin of Ulysses* (New York: Holt Rinehart and Winston, 1982), p. 10.
 26. James Joyce, *Ulysses* (New York: Vintage Books, reprint 1986), p. 10.
 27. Donald Torchiana, *Backgrounds for Joyce's Dubliners* (Boston: Allyn & Unwin, 1986), p. 263.

28. Florence Walzl, "Dubliners" in *A Companion to Joyce Studies*, eds., Zack Bowen and James Carens (Westport, Conn.: Greenwood Press, 1984), p. 170.
29. *Ibid.*, p. 167.
30. James Joyce, *Dubliners* (New York: Vintage Books, reprint 1986), p. 73.
31. Walzl, *op. cit.*, note 28, p. 168.
32. Torchiana, *op. cit.*, note 27, pp. 36-51.
33. *Ibid.*, p. 94.



ACKNOWLEDGMENT

A sincere "thank you" to Professor LARRY FORD, who supplied the photographs which grace this article.



FROM MEAN STREETS TO FREEWAYS: LOS ANGELES IN AMERICAN DETECTIVE FICTION

*Peter L. Russell**

For many of us, our earliest and most persistent images of Los Angeles came from the writers of detective fiction. We learned about both the City of Angels and its urban satellites through the ironic detachment of Raymond Chandler and his world-weary Philip Marlowe, or Ross Macdonald's equally careworn Lew Archer. Chandler was one of the pioneers of detective fiction set in Southern California. Private eyes and Los Angeles became nearly inseparable due to his writings.¹ Even if you haven't read Chandler, chances are you've seen his version of greater Los Angeles whenever you've watched a private eye punch, drink, smoke, and, occasionally, even think his way through a late-show movie. Chandler's dark vision simply undergirded Hollywood's conception of itself.²

As metropolitan Los Angeles has evolved, though, has its depiction in this popular genre evolved as well? What changes have occurred in the fictional landscape? What do they tell us about the *de facto* capital of the country's Pacific Coast?

The designation Los Angeles can identify several differ-

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ent areas, ranging from the downtown central business district, to the political city, to the megalopolis which blankets the Los Angeles Basin itself.³ Unless otherwise indicated, the megalopolitan scale is intended whenever "Los Angeles" is discussed.

This essay will demonstrate that Chandler, Macdonald, and others are not simply mystery writers. The best writers of detective fiction are also keen social observers who critically examine our culture and our environs. American detective fiction has sent its jaded gumshoes searching through all of Los Angeles and its surrounding environs; and they have returned with trenchant insights regarding social geography, urban processes, and architecture.

Geographers have often turned to novels to learn about and understand a place.⁴ Yet few, if any, urban geographers have considered the possibility of utilizing detective fiction as a way of comprehending the American city. Urban geographers especially could profit from hard-boiled mysteries. This genre strives to show metropolises in all their complexity; housing life cycles, migration patterns, transportation epochs, architectural trends, cultural tensions, political skulduggery, and other aspects of urban processes abound in detective fiction. Of course these hard-boiled novels are entertainment first and incisive social science second. So housing life cycles, migration patterns, various transportation epochs, and the like are not explicitly identified as such. Yet, they are present.

These processes—and the resulting landscape changes depicted by detective novels set in Los Angeles—constitute the focal points of this paper. Nearly a dozen books provide a framework for comparison of the city in Chandler's era, roughly 1939–1954, to novels written since 1986. A trio written by Ross Macdonald between 1949 and 1956 provides a bridge between the two periods.

Considered are six works by Chandler: *The Big Sleep* (1939), *Farewell, My Lovely* (1940), *The High Window* (1942),

The Lady in the Lake (1943), *The Little Sister* (1949), and *The Long Goodbye* (1954). The "bridge" works by Macdonald are: *The Moving Target* (1949), *The Way Some People Die* (1951), and *The Barbarous Coast* (1956). Recent works examined include: Robert Campbell's duo, *In La-La Land We Trust* (1986) and *Alice in La-La Land* (1987); Roderick Thorp's *Rainbow Drive*, and Robert Westbrook's *The Left-Handed Policeman* (both 1986); and Robert Crais' *The Monkey's Raincoat* (1987).

Detective fiction is intensely oriented to place. Philip Marlowe in New York City is simply as unthinkable as Nero Wolfe investigating crime in Los Angeles. Detectives observe the city and its denizens closely; these investigators help paint intimate portraits of their respective cities' landscapes. The private eye rarely strays from his own turf; indeed, he often becomes identified with it. A few examples of authors and their place-bound creations found outside of Los Angeles would include Dashiell Hammett's Continental Op and San Francisco; Tony Hillerman's Jim Chee and Joe Leaphorn, who range the Southwest's Four Corners country; and Robert Parker's Spenser, who prowls Boston.

The Los Angeles of Raymond Chandler, 1939–1954

Chandler set the tone for 1940's Los Angeles. He was among the pioneers of fictional portrayals of the Southland's chief city.⁵ Indeed, his influence is so pervasive that the designation "Chandlerstown" often stands for the metropolitan Los Angeles of that era. Among the authors examined in this article, Chandler has attracted a majority of the critical attention and scholarly analysis. Thus, unavoidably, secondary sources cited in this paper concentrate on his city, circa 1940.

In his essay "The Simple Art of Murder," Chandler wrote of the harshness of urban life and the paradoxical need for a man "to walk down these mean streets who is not mean himself."⁶ For Chandler, those mean streets represented all that was rancid in America's cities.

Typically, Chandler's novels feature Marlowe's Hollywood office and its surrounding environs throughout the Southland. In the following excerpt from *The Little Sister* he presents a vivid portrait of the seedier margins of Hollywood's then-vibrant central business district. Here, Philip Marlowe sardonically observes of his office building, located at 615 Cahuenga Boulevard in Hollywood:

The pebbled glass door panel is lettered in flaked black paint: *Philip Marlowe . . . Investigations*. It is a reasonably shabby corridor in the sort of building that was new about the year the all-tile bathroom became the basis of civilization.⁷

Though he was based in Hollywood, Marlowe's cases led to his making many trips into downtown Los Angeles, where he not only spoke with police and prosecutors, but also examined various records. In fact, after thirty years of robust development, the Los Angeles central business district of the 1930's was beginning to decentralize. Yet, the earlier core remained functional with all the elements of a classic downtown: department stores, theaters and movie palaces, jewelers, and clothiers. Indeed, 1930 saw 75 percent of the city's professional and commercial functions occur in the central business district. Even so, key merchants were beginning to flee the core. In 1929 Bullocks' opened a new department store on Wilshire Boulevard a few miles west of the central business district, a store that catered to the newly-important automobile via valet parking. Other retailers followed this growth west of the traditional downtown. The historic core muddled along until it was "rediscovered" in the 1950's and 1960's. During those decades, financial towers, ethnic enclaves, and civic centers combined to redefine the central business district (Figure 1).⁸

The atmosphere of that circa 1930 decline steals into the raffish downtown which Marlowe prowls. There are gaudy Art Deco skyscrapers (the Treolar Building in *The Lady in the Lake*), and there are also decrepit buildings with sleazy tenants, exemplified by the Fulwider Building of *The Big Sleep*:

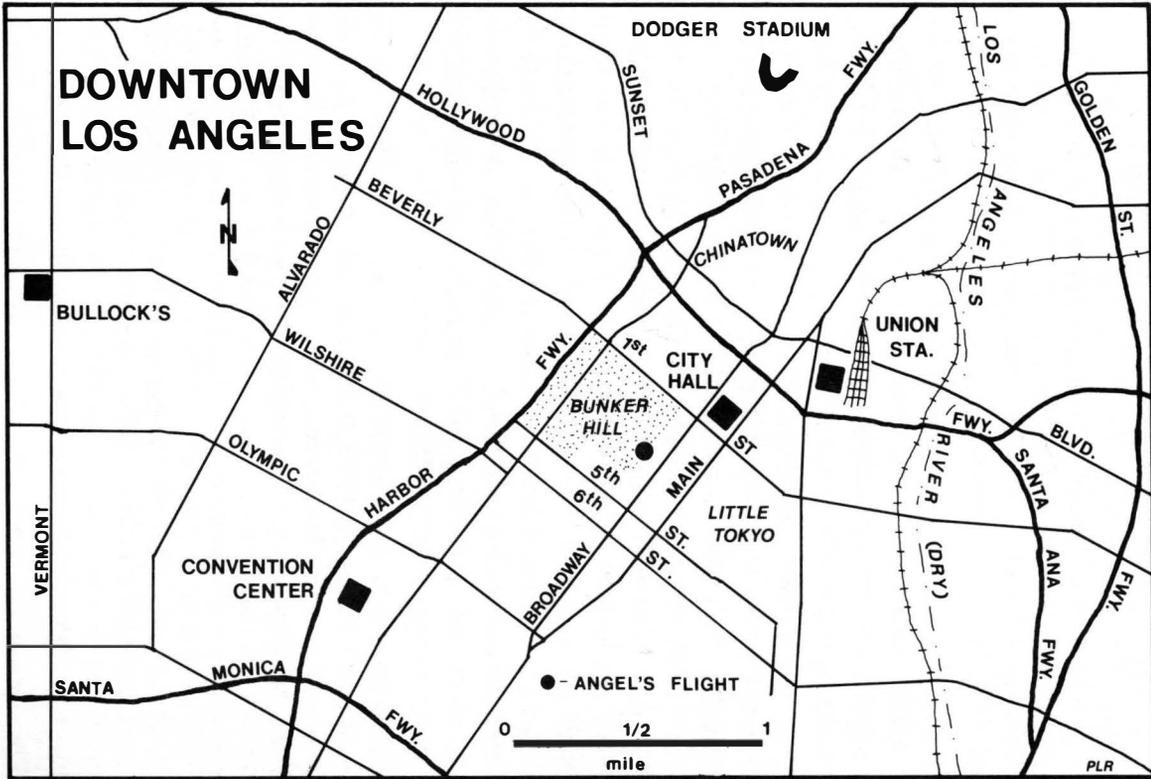


FIGURE 1. *Downtown Los Angeles.*

A single drop light burned far back, beyond an open, once gilt elevator. There was a tarnished and well-missed spittoon on a gnawed rubber mat . . . I shook the rain off my hat and looked at the building directory . . . Numbers with names and without names. Plenty of vacancies or plenty of tenants who wished to remain anonymous. Painless dentists, shyster detective agencies, small sick businesses that had crawled there to die . . . A nasty building. A building in which the smell of stale cigar butts would be the cleanest odor.⁹

Symbolically, the city's showpiece department store has physically removed itself from the core's decay. Marlowe looks out and sees the "violet light at the top of Bullocks' green-tinged tower was far above us, serene and withdrawn from the dark, dripping city."¹⁰

When Marlowe leaves his office on a job he never drives on freeways. Between publication of *The Big Sleep* in 1939 and the 1954 appearance of *The Long Goodbye*, Los Angeles went from having no freeways to slightly more than fifty miles of freeway.¹¹ Thus, Marlowe's trips give the reader a glimpse back into a Los Angeles with a transportation network which differed markedly from today's. Marlowe travels surface streets exclusively. Like other Angelenos, he drives to escape the tensions of his job, but sometimes finds that he increases them instead:

I drove east on Sunset but I didn't go home. At La Brea I turned north and swung over to Highland, out over Cahuenga Pass and down to Ventura Boulevard, past Studio City and Sherman Oaks and Encino. There was nothing lonely about the trip. There never is on that road. Fast boys in stripped down Fords shot in and out of traffic streams . . . Tired men in dusty coupes and sedans winced and tightened their grip on the wheel and ploughed on . . . toward dinner and home . . . Great double trucks rumbled down over Sepulveda from Wilmington and San Pedro and crossed towards the Ridge Route, starting up in low-low from the traffic lights with a growl of lions in the zoo.¹²

The lattice of roads and the resulting nascent sprawl of Los Angeles pervades Chandler's writings. Marlowe often drives great distances to meet clients, to question suspects,

to visit nightclubs and crime scenes. As one author noted, it is astounding how often the novel's setting shifts to the city's margins. The detective can be found in the foothills, at the ocean, and at the resorts in the mountains where the city dwellers transplant themselves.¹³ These journeys underscore the great spatial dimension of Los Angeles, a city that Marlowe repeatedly demonstrates is geared to automobiles.

Ironically, Los Angeles once possessed an excellent mass transit network. The Pacific Electric Railway began in 1901. Following a series of mergers, Pacific Electric's "Big Red Cars" rolled over more than a thousand miles of track by 1925, servicing approximately seven hundred square miles. The world's largest interurban system knitted Los Angeles and all its myriad satellite towns together (Figure 2). The relationship between land developers and the interurbans was as close as that of the trolley and the power line above.¹⁴ Marlowe noticed this in a rather gruff aside from *Farewell, My Lovely*: "We slid down a broad avenue lined with unfinished electroliers and weed-grown sidewalks. Some realtor's dream had turned into a hangover there."¹⁵

The roads and trolleys produced a widely-flung system of settlements. Marlowe's clients often come from these suburbs, particularly their wealthier sections. Expansive emerald lawns engulf their mansions, a vegetative lushness that belies the desert climate. Curiously, Chandler, via Marlowe, makes few references to canyon homes. The first is from *Farewell, My Lovely*, and the second is from *The Lady in the Lake*.

Montemar Vista was a few dozen houses of various sizes and shapes hanging by their teeth and eyebrows to a spur of mountain and looking as if a good sneeze would drop them among the box lunches on the beach.¹⁶

Altair Street lay on the edge of the V forming the inner end of a deep canyon . . . His house was built downwards, one of those clinging vine effects, with the front door a little below street level, the patio on the roof, the bedroom in the basement, and a garage like the corner pocket on a pool table.¹⁷

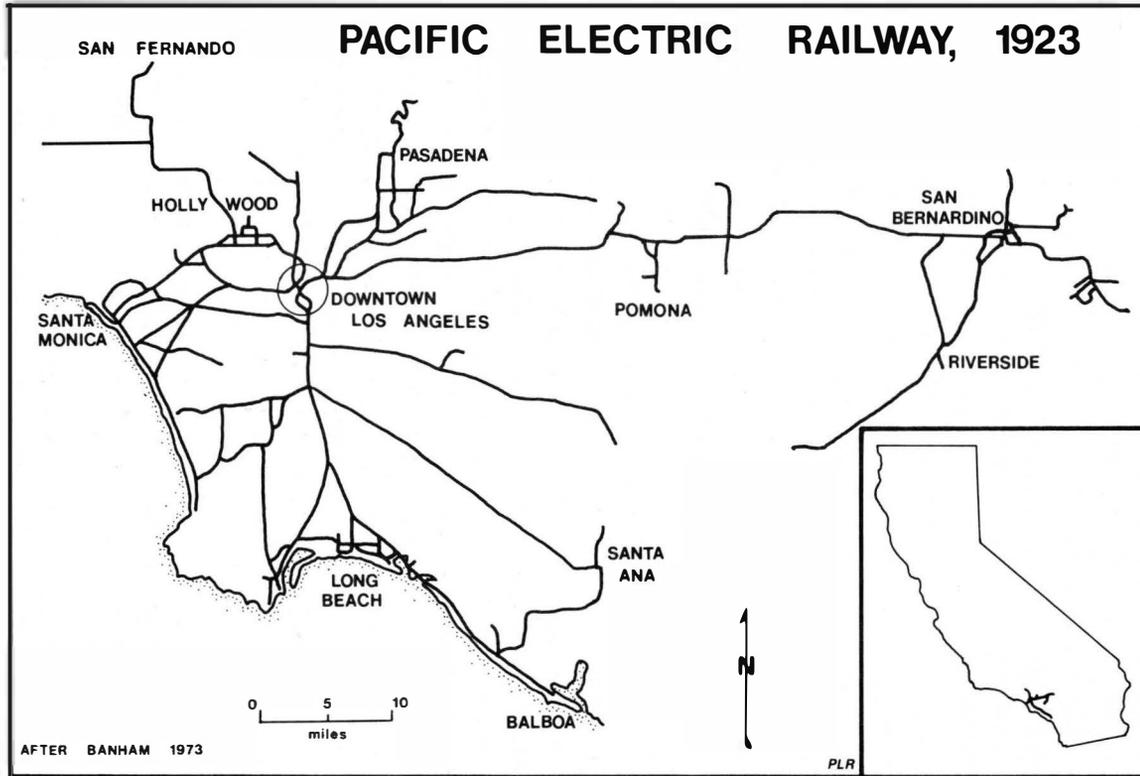


FIGURE 2. *Pacific Electric Company, 1923.*

Chandler's writings provide a sense of urban history, quietly pacing itself, as portions of the city lose their luster. Neighborhoods decline and once spacious homes become subdivided into cheap rooming houses. A passage from *The High Window* nicely captures the changing demographics:

Bunker Hill is old town, lost town, shabby town, crook town. Once, very long ago, it was the choice residential district of the city, and there are still standing a few of the jigsaw Gothic mansions with wide porches and walls covered with round-end shingles and full corner bay windows with spindle turrets. They are all rooming houses now . . .¹⁸

One geographer described Bunker Hill as a "topographic barrier whose slopes were not easily climbed by pedestrians. It long remained as a relic residential island . . ." ¹⁹ Businesses kept to the level lands that surrounded the knoll, which was bedecked with Victorian homes from the 1880's. Angels Flight, the funicular tramway that climbed Bunker Hill, adorned numerous postcards; but a 1959 redevelopment project scoured the by-then dilapidated houses from the hill, leveling this small piece of Chandler's world.²⁰

An aura of lost chances and poor choices hangs over Chandlertown like the smog which cloaks the modern skyline. Ultimately, almost a decade's worth of change caused Marlowe to explode:

I used to like this town. There were trees along Wilshire Boulevard. Beverly Hills was a country town. Westwood was bare hills and lots offering at eleven hundred and no takers. Hollywood was a bunch of frame houses on the interurban line. Los Angeles was just a big dry sunny place with ugly homes and no style, but good-hearted and peaceful. It had the climate they just yap about now. People used to sleep out on porches. Little groups who thought they were intellectuals used to call it the Athens of America. It wasn't that, but it wasn't a neon-light slum, either.²¹

The Social Milieu of Ross Macdonald, 1949–1956

By way of contrast, Macdonald's trilogy bypasses the central business districts of both Hollywood and Los An-

geles, except for a whimsical note in *The Way Some People Die* to the effect that “parking spaces in downtown Hollywood were as scarce as the cardinal virtues.”²² Instead, Macdonald often worked on a larger canvas. Archer moves among more rarefied circles than Marlowe. As one scholar stated, in Macdonald’s writings “rat-infested wharves have given way to private marinas, and opium dens to legally prescribed anti-depressants . . .”²³ Here, Lew Archer neatly dissects the economic topography of Pacific Point, a fictional suburb near Long Beach. To Macdonald social cleavages extend both horizontally and vertically:

Tourists and transients lived in hotels and motels along the waterfront. Behind them a belt of slums lay ten blocks deep, where the darker half of the population lived and died. On the other side of the tracks—the tracks were there—the business section wore its old Spanish facades like icing on a stale cake. The people who worked in the stores and offices inhabited the grid of fifty-foot lots that covered the next ten blocks. On the slopes above them the owners and managers enjoyed their patios and barbecue pits. Along the top of the ridge live the really wealthy . . .²⁴

As did Chandler, Macdonald provides a feeling for time passing. He also delves into larger societal changes and their refraction in the Southern California landscape.²⁵ Thus, in *The Barbarous Coast* a neighborhood undergoes a change in status and begins to decay both physically and morally:

The house was in Santa Monica on a cross street between the boulevards, within earshot of the coast highway and rifle shot of the sea. The street was the kind that people had once been proud to live on, but in the last few years it had lost its claim to pride. The houses had too many stories, too few windows, not enough paint. Their history was easy to guess; they were one-family residences broken up into apartments and light-house-keeping rooms converted into tourist homes.²⁶

The Modern Private Investigator

Have car, will travel; have home, will worry—In modern writings about Los Angeles two themes predominate: the

impact of the automobile, and home owners building in environmentally unsound places. A minor motif is architectural change, particularly in the central business district. Another lesser chord concerns the migration of new immigrants into the city and their struggles to be assimilated. All of these aspects address a melange of socio-cultural transformations that occurred in Los Angeles during the latter portion of this century. Robert Campbell's shamus is Whistler, who duly notes the automobile's influence on daily life in Los Angeles. In *Alice in La-La Land*, Whistler comments on the locals' adaptive response to the car culture and automobile-scaled growth:

L.A. is the kind of town where people leave changes of clothes at the office, the health club, or a favorite bar. Some even carry a spare wardrobe in the trunks of their cars. The distances are so great from work to playpen, the traffic such a killer, that hustlers of every persuasion on a tight schedule make provisions.²⁷

Characters in these contemporary novels rarely travel on surface streets. Instead, they drive along that signature showpiece of Los Angeles, the freeway. These concrete paths reinforce the low-density settlement patterns begun by the trolleys (Figure 3). Though freeways comprise just 4 percent of the total mileage of surface streets and highways, they carry more than 40 percent of the traffic in the Los Angeles Basin.²⁸ The Arroyo Seco Parkway opened in 1940, connecting downtown Los Angeles to the affluent suburb of Pasadena. (Later the road was renamed the Pasadena freeway). Cold War fears fostered interstate highways in the 1950's and 1960's; the highways would double as evacuation routes from cities under nuclear attack and form a network for high-speed, military movements of troops and supplies. The 1970's witnessed the end of the major road-building projects.²⁹

Today's freeways are overmatched by the sheer volume of the region's denizens. Roderick Thorp in *Rainbow Drive* speaks for many when his creation, Mike Gallagher, battles

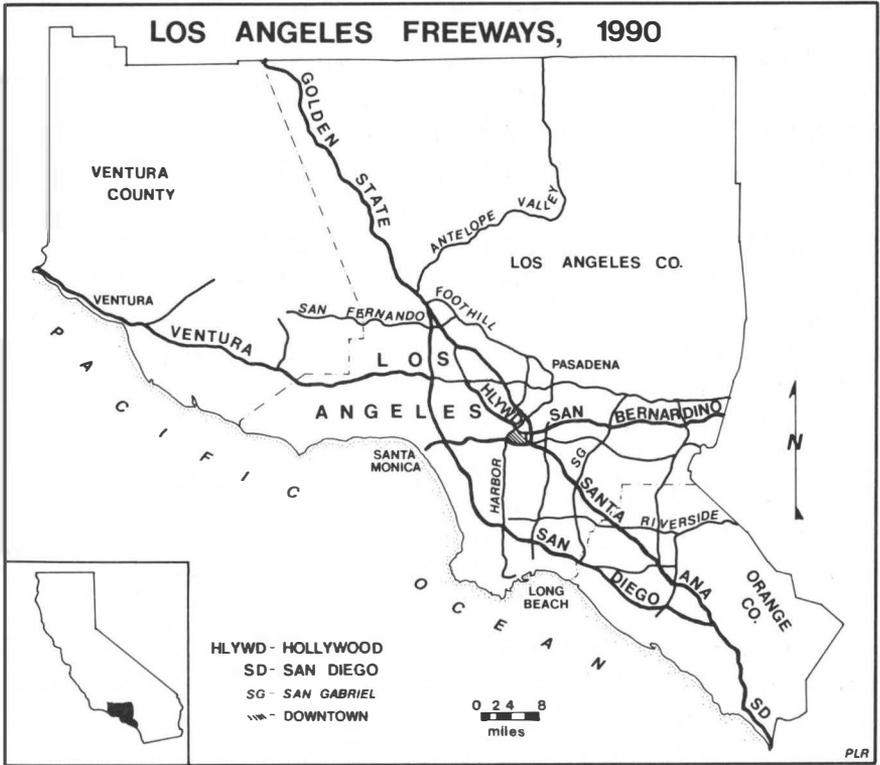


FIGURE 3. Greater Los Angeles Freeways.

along Interstate 5, which is better known to Southern Californians as either the Golden State or San Diego freeway:

Half an hour later, Mike was on I-5 downtown, passing County-USC hospital . . . and half an hour after that he was crawling past the Egyptian facade of the abandoned Firestone tire factory in the middle of the industrial corridor only a few miles south of the hospital. If there was a freeway in Los Angeles that was not a rolling traffic jam all through the daylight hours, Mike did not know of it . . .³⁰

These freeways dominate the landscape and compose a transportation web which is much larger than the complex of surface streets depicted in Chandler's novels. A sense of the freeways' expanse and the scale of the resulting com-

mercial suburbanization emerges in Robert Westbrook's *The Left-Handed Policeman*, as a kidnapper flees eastward toward the city's edge:

The freeway cut across the city from the northwest diagonally southeast; past fifty miles of shopping malls, gas stations, miniature golf courses, pizza parlors, cemeteries, and still more gas stations, still more shopping malls.³¹

The other noted feature is the houses that cling dizzily to the sides of canyons, where they are vulnerable to many natural hazards. Virtually all the recent novels mention this, and often follow up the observation with predictions of dire misfortune. Rising property values, the lure of a view, and cool maritime air masses combine to draw Los Angelenos up into the hills. Chandlertown rarely built here; instead the well-to-do generally lived in isolated suburbs with bucolic names, though a few resided high up in the hills. In the more recent novels, the middle class has elevated its station. For example, in Westbrook's *The Left-Handed Policeman*, they have infiltrated an area of the city that was formerly the province of privacy seekers. Lieutenant Rachmaninoff, the novel's hero, is the son of one of those privacy seekers. His father built a house in the manzanitas and oaks, but the area has lost its Bohemian aura since many other families moved in. Rachmaninoff lives

. . . high in the Hollywood Hills, in the last house on a road called Sunshine Terrace, which veered up at crazy angles from Laurel Canyon . . . [these hills] are covered with houses, many on long stilts, hanging over the cliffs at ridiculous angles in order to utilize every last square inch of ground.³²

He's not alone up there. Like many home-owning Americans, modern detectives have moved either to the suburbs at the edge of the city or to urban "oases" in Los Angeles' canyons. Marlowe may have lived for much of his fictional life in a downtown apartment, but his successors reside well above the city lights. In Robert Crais' *The Monkey's Raincoat*, private eye Elvis Cole describes his view and home:

Where the canyon flattened out into Hollywood and the basin beyond, the lights concentrated into thousands of blue-white diamonds spilled over the earth. . . . I'm in a rustic A-frame on a little road off Woodrow Wilson Drive above Hollywood. The only other house is a cantilever job to the east . . .³³

Other detectives aren't quite so sanguine about their location. A worried Whistler remarks in *Alice in La-La Land* that he lives in:

. . . a rickety bundle of sticks and glass built with only twenty feet of solid ground, the rest was on stilts overlooking the long drop down to Iris Terrace, which hugged the hillside above Cahuenga Boulevard and its river of automobiles.³⁴

Owning such an aerie is hardly free of peril. Whistler numbers the dangers and explains that he keeps the house only because he owns it. This demonstrates that he is a prisoner of the hyper-inflated real estate market that has gripped Southern California since the 1970's. Between 1970 and 1981 the national median price for a home increased from \$32,000 to \$74,000. During the same period in the five-county Los Angeles area, however, the market value exploded from \$32,000 to \$118,000.³⁵ Housing in greater Los Angeles wields a double-edged sword: it's pleasurable to sell and agonizing to buy. An entrapped Whistler wryly returns to the drawbacks of his canyonland home:

In summer, I'm afraid [of] the brushfires charging down the hill-sides. In winter, I'm afraid the rains will wash me down on top of traffic. In between, I'm afraid I'll walk in my sleep and take a dive off the balcony.³⁶

Police detective Gallagher explains the appeal of living on the angle of repose. First, the canyons of Los Angeles offer patches of wilderness within a vast concrete realm. Their contours form natural amphitheatres which "made for neighborliness on a grand scale."³⁷ Second, though these hillside perches do not make topographic sense, they do make sense on a microclimatic scale since a layer of marine air eases into the city nightly. This natural air conditioning reaches the higher elevations first, and then the heavier cool

air drains onto the valley floors, "which was why the rich had appropriated the hills all over Southern California."³⁸

These passages showcase the compromises modern Los Angelenos have made between hazards and home. They are aware of the environmental dangers of hillside fires and landslides, but they willingly run the seasonal gauntlet. The pull of a canyonland home—its view, status, and natural air conditioning—evidently outweighs the push of either being burned out of home or having home slide several hundred feet downslope.

The unsettling dislocation of modern life in Los Angeles also comes under scrutiny by current authors. They describe the city as a rapidly changing kaleidoscope—where cycles of urban renewal, suburbanization, and migration move through the City of Angels. Obviously, these changes are not always beneficial to all concerned, as Whistler points out in *In La-La Land We Trust*.

In the mid-thirties the Chinese in L.A.'s 'Old Chinatown' were moved out to make way for the Union Passenger Terminal. So they built China City just to the northwest. When that was burned out, the 'New Chinatown' rose up out of the ashes . . . And not only the Chinese [live there], but the Koreans, the Thais, the Cambodians, the Laotians, and Vietnamese, the whole damned troubled people of Southeast Asia crowding in where they're not wanted because they're not wanted even more elsewhere in the city.³⁹

At least the writers recognize that minorities exist and confront special problems. Chandler's novels contain few references to blacks or Hispanics. Even poor whites are few and far between in Marlowe's world.⁴⁰ Instead, the migrants to Los Angeles came from the Midwest and the East. This actual internal domestic migration in the first third of the century led to many jokes about Los Angeles being the port of Iowa. H. L. Mencken acerbically rebuked the city by dubbing it Double Dubuque.⁴¹

The massive number of Midwesterners gravitating to Los Angeles surfaces in Chandler's writings. Several major

characters claim roots in the nation's heartland, including Dubuque, Iowa, and Wichita and Manhattan, Kansas. These Midwesterners bring not only their architecture with them, but also "flowers, trees, shrubs, and even the weeds."⁴² At one point Marlowe notices a sideboard in the home of a woman he's questioning. He comments that it must have been "the admiration of Sioux Falls," and she softly corrects him—"Mason City."⁴³

As modern detective fiction notes, the suburbs in citrus groves—a vision of a suburban Arcadia which drew those migrants to Los Angeles in Chandler's time—have long since disappeared. Gallagher decries the loss of tree-lined suburbs pioneered thirty years ago. The rampant real estate market simply carries off the world of his childhood as easily as a Santa Ana wind whisks away a scrap of paper. As the detective drives into one of these doomed throwbacks, tellingly named Shadyglade, he ponders the changes in Los Angeles since his family moved here when he was a child:

The city had been declining ever since—growing larger, but declining . . . Now the Shadyglades were vestigial, these pretty streets, and Mike wondered if Laura Demming knew that the builders planned a high-rise office building that would block the street's view of the hill to the south. She probably did; Studio City had a homeowners' group—there were homeowners' groups in every section of the city, famous for losing their battles.⁴⁴

Conclusions

Taken collectively, these illustrative passages—set in the same urban realm, yet written forty years apart—provide an interesting comparison of greater Los Angeles then and now. The transportation mosaic has been dramatically altered in form and extent as freeways have displaced surface streets in both actuality and detective fiction. The change has social and environmental costs. Marlowe rarely mentions smog, although in *The Long Goodbye* he notices the stinging cloud which blankets the ground. "When you were in it you could taste it and smell it and it made your eyes

smart . . . Everybody was griping about it . . . Everything was the fault of the smog."⁴⁵ By contrast, his modern peers sit in their cars and fume about the air.

Developmental pressures disrupt lives throughout 1980's Los Angeles, issues scarcely discussed in Marlowe's world. The complex ethnic mix of modern Los Angeles also separates it from Chandlertown, with its handful of blacks and few Hispanics.

Changes in land uses constantly strike the reader. While Marlowe enjoyed driving through orange groves on the way to Pasadena, Cole and Gallagher mourn their passing. Condominiums stand where cowboys once shot Indians before the whirling cameras of the film industry.

As the collective citations amply illustrate, American detective fiction offers the astute geographer another potential source of material to help discern the patterns and processes in some of our larger urban centers. A critical examination of these novels reveals the various writers' acumen of Los Angeles, both in the past and the present. Many American cities have their own distinctive versions of the hard-boiled poet laureate. To cite only a few: New York City has Andrew Vachss' Burke; Cincinnati has Jonathan Valin's Harry Stoner; Loren Estleman's Amos Walker patrols Detroit; J. A. Vance's J. P. Beaumont reigns in Seattle; and Charles Willeford's Hoke Manley battles Miami's vice. These characters are all private eyes, except the last two; and each frequently reminisces about his city's past, allowing the reader a glimpse of how a particular city has evolved.

Whether the protagonist is a private eye or a police detective, the hard-boiled novel can present an overly gritty picture of our urban centers. However, by its overall stress on realism and detail to its localized setting, this genre often paints a rich portrait of its host city and can augment traditional data sources such as the federal census. While much of mainstream urban geography uses quantitative techniques to show us how cities are similar, detective fiction

offers many clues to help us understand what makes each city a unique place. Urban geographers should not overlook the possibilities inherent in these mysteries.



NOTES

1. David Geherin, *The American Private Eye: The Image in Fiction* (New York: Frederick Ungar Publishing Company, 1985), p. 76.
2. Reyner Banham, *Los Angeles: The Architecture of Four Ecologies* (Baltimore: Penguin Books, Inc., 1973) p. 101.
3. Rodney Steiner, *Los Angeles: The Regional City* (Dubuque: Kendall/Hunt Publishing Company, 1981) p. 4.
4. C. L. Salter and W. J. Lloyd, *Landscape in Literature* (Washington, D.C.: Association of American Geographers, Resource Papers for College Geography No. 76-3, 1977).
5. David Fine, ed., *Los Angeles in Fiction: A Collection of Original Essays* (Albuquerque: University of New Mexico Press, 1984), pp. 2-11.
6. Raymond Chandler, "The Simple Art of Murder," *Atlantic Monthly*, Vol. 174:6 (1944), p. 59.
7. ———, *The Little Sister* (New York: Ballantine Books, 1984), p. 1.
8. Howard J. Nelson, *The Los Angeles Metropolis* (Dubuque: Kendall/Hunt Publishing Company, 1983), pp. 189-198.
9. Raymond Chandler, *The Big Sleep* (New York: Vintage Books, 1976), p. 159.
10. *Ibid.*, p. 168.
11. David Brodsley, *L.A. Freeway: An Appreciative Essay* (Berkeley and Los Angeles: University of California Press, 1981), p. 127.
12. Chandler, *The Little Sister*, pp. 87-88.
13. Stephen Knight, "'A Hard Cheerfulness': An Introduction to Raymond Chandler," in *American Crime Fiction: Studies in the Genre*, Brian Docherty, ed. (London: Macmillan Press, Ltd., 1988), p. 85.
14. Brodsley, *op. cit.*, note 11, pp. 68-72.
15. Raymond Chandler, *Farewell, My Lovely* (New York: Vintage Books, 1976), p. 50.

16. Ibid., p. 38.
17. Raymond Chandler, *The Lady in the Lake* (New York: Vintage Books, 1976), p. 13.
18. ———, *The High Window* (New York: Vintage Books, 1976), pp. 53-54.
19. Nelson, op. cit., note 8, p. 190.
20. Ibid., p. 190, and p. 198.
21. Chandler, *The Little Sister*, p. 202.
22. Ross Macdonald, *The Way Some People Die*, in *Archer in Hollywood* (New York: Alfred A. Knopf, 1967), p. 29.
23. Geoffrey O'Brien, *Hardboiled America: The Lurid Years of Paperbacks* (New York: Van Nostrand Reinhold Company, 1981), p. 128.
24. Macdonald, *The Way Some People Die*, pp. 178-179.
25. Geherin, op. cit., note 1, p. 138.
26. Ross Macdonald, *The Barbarous Coast*, in *Archer in Hollywood* (New York: Alfred A. Knopf, 1967), p. 173.
27. Robert Campbell, *Alice in La-La Land* (New York: Pocket Books, 1987), p. 134.
28. Brodsley, op. cit., note 12, p. 9.
29. Ibid., pp. 89-131.
30. Roderick Thorp, *Rainbow Drive* (New York: Ivy Books, 1986), p. 309.
31. Robert Westbrook, *The Left-Handed Policeman* (New York: Warner Books, 1986), p. 291.
32. Ibid., pp. 19-20.
33. Robert Crais, *The Monkey's Raincoat* (New York: Bantam Books, Inc., 1987), p. 20.
34. Campbell, *Alice in La-La Land*, p. 25.
35. David L. Clark, "Improbable Los Angeles," in *Sunbelt Cities: Politics and Growth Since World War II*, Richard M. Bernard and Bradley R. Rice, eds. (Austin: University of Texas Press, 1983), p. 296.
36. Campbell, *Alice in La-La Land*, p. 26.
37. Thorp, op. cit., note 28, pp. 28-29.
38. Ibid., p. 117.

39. Robert Campbell, *In La-La Land We Trust* (New York: The Mysterious Press, 1986), p. 211.
40. Stephen Knight, op. cit., note 11, pp. 79-80.
41. Kevin Starr, *Material Dreams: Southern California in the 1920's* (New York: Oxford University Press, 1990), p. 125.
42. David Smith, "The Public Eye of Raymond Chandler," *Journal of American Studies*, Vol. 14:3 (1980), pp. 425-426.
43. Chandler, *Farewell My Lovely*, pp. 93-94.
44. Thorp, op. cit., note 28, pp. 165-166.
45. Raymond Chandler, *The Long Goodbye* (New York: Ballantine Books, 1984), p. 194.



HUMBOLDT COUNTY: ITS RÔLE IN THE EMERALD TRIANGLE

*Joseph Leeper**

In a recent issue of *Newsweek*, California was described as an "American dream, American nightmare."¹ It was suggested that California should be subdivided into five different states, each "characterized by [its] own heroes, cultural artifacts, and rates of growth."² One of these hypothetical "new" states, The Coast, would range from Oregon to the Mexican border along a narrow, longitudinal band of the Pacific Coast. The intent of this essay is to analyze an isolated part of this nominal, "new" California state relative to its largest cash crop—marijuana. This illegal crop helps define the region, and its impact has permeated not only all of California, but also parts of Oregon. Indeed, marijuana production in parts of the North Coast is a "local dream, local nightmare."

The Setting

For most Californians the name Humboldt County calls forth various images: intimate beaches, fishing, camping, hunting, logging, isolation, Bigfoot, the Samoa Cookhouse, the Carson Mansion and, most pervasively, the magnificent trees that make it the heart of the Redwood Empire. More recently, however, it has become associated with a new place

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name: the Emerald Triangle—along with Mendocino and Trinity counties as shown in Figure 1—the largest marijuana producing region in the United States.

Several factors contribute to the concentration of marijuana production in the northern part of "The Coast." Ray Raphael argues that the geographical setting of the Emerald Triangle contributes to its becoming the hub of marijuana production in California:

It's back country here, and it always has been. The rugged, disjointed, coastal hills of California seem to discourage any large concentration of human beings in a single space at a single time. It's a basic fact of geography . . . Throughout the years, the peo-

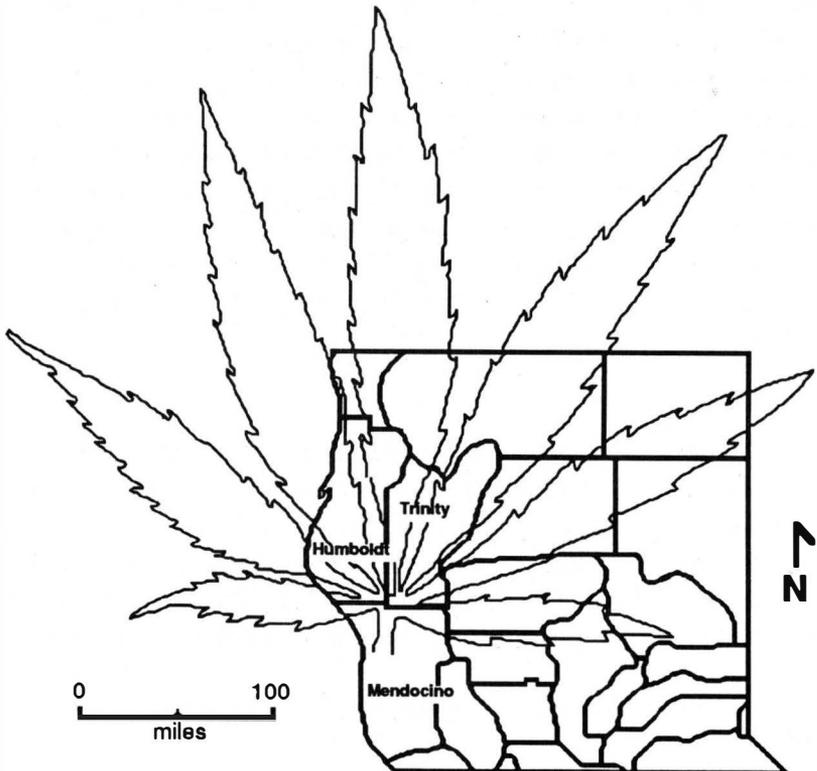


FIGURE 1. *The Emerald Triangle.*

ple here have lived an isolated existence on the edge of human society, and often on the edge of civility. It's tough here, tough country and tough people. Historically, that's our heritage and our mystique.³

Whatever its "mystique," Humboldt County has a very narrowly-defined economic base, a base heavily dependent on primary resources, such as timber, fish, and agricultural products. Its other main industries are government and tourism. A majority of these activities are seasonal, and the county's unemployment rate reflects this. Typically, the winter months have the highest rates of unemployment due to the inclement weather, while the summer to fall months bring peak employment (Table 1).

Regardless of the status of the local economy, Humboldt County's unemployment rates are usually 2 to 6 percent higher than those of either California or United States national averages.⁴ Humboldt's limited population (approximately 118,000) and its isolation (in both absolute and

**Table 1. MONTHLY UNEMPLOYMENT RATES
FOR HUMBOLDT COUNTY**

	1982	1983	1984	1985	1986	1987	Avg.
January	18.2	18.9	14.5	13.2	10.8	11.2	14.5
February	18.3	17.9	14.6	13.1	12.5	10.1	14.4
March	18.4	16.5	13.9	12.5	12.0	9.6	13.8
April	17.5	13.8	12.0	10.6	10.0	7.5	11.9
May	15.9	13.0	10.3	8.8	8.2	6.6	10.4
June	14.7	11.9	9.5	10.2	7.7	6.3	10.1
July	18.1	11.0	11.6	10.0	8.8	6.7	11.0
August	17.1	11.6	10.0	9.4	7.3	6.1	10.3
September	14.7	9.9	10.1	9.2	7.0	6.1	9.5
October	16.1	9.3	9.5	9.4	7.5	6.6	9.7
November	17.8	11.7	11.9	9.8	8.6	7.4	11.2
December	18.0	12.4	11.5	11.0	9.3	7.9	11.7

SOURCE: David Wagner, Job Service Representative, EDD, Eureka Field Office, Eureka, California, December 18, 1989.

relative terms) are also contributory factors in making it the capitol of marijuana production. Recently, local fisheries have been hurt by a shortened commercial season, while both local fishing interests and environmentalists have fought the threat of offshore oil drilling. The timber industry is facing a possible loss of timberlands, especially if spotted owl breeding lands are placed off limits to harvesting. The local employment situation has narrowed due to Louisiana Pacific's announcement that it will build a new drying mill in Baja California and barge Humboldt County timber there for processing. In short, it is safe to say that Humboldt County's historic, resource-dependent economic base has been eroding. Consequently, just as in a few other economically depressed regions of the United States, some people have turned to an illegal, but potentially lucrative, alternative economy—marijuana.

With that turn, a new thread has been woven into the agricultural tapestry of Humboldt County's economic landscape. In 1988, the county's total agricultural production exceeded \$200,000,000.⁵ There were just four "million dollar" crops: cattle and calves, nursery products, milk, and timber (Table 2). If one assumes that Humboldt County generates 37 percent of all marijuana produced in California (Table 3) and that the estimated annual value of state marijuana production is \$2.5 billion, then the value of county marijuana is just under \$1 billion.⁶ Even if this estimate is high, the value of marijuana in comparison to the value of all legitimate crops, including timber, is staggering.

Marijuana is derived from an annual, woody shrub, *Cannabis sativa*, which has dioecious flowers. *Cannabis*, commonly referred to as hemp, originated in Southeast Asia and subsequently has been widely diffused throughout the world. Traditionally, *cannabis* has been cultivated for three primary purposes:

1. Fiber—from which a variety of products are derived including twine, rope, cloth, and hats

Table 2. LEADING 1988 CROPS IN HUMBOLDT COUNTY BY PRODUCTION AND VALUE

1. Milk	\$25,947,353
2. Nursery Products	10,760,000
3. Cattle and Calves	5,366,000
4. Potatoes	910,000
5. Silage, all	769,000
6. Sheep, Lambs and Wool	734,000
7. Grass and Clover Hay	155,000
8. Alfalfa Hay	82,000
9. Apples	63,000
10. Beans (Green)	42,000
Timber Production	\$149,392,000

SOURCE: John E. Falkenstrom, *Humboldt County 1988 Agriculture Crop Report* (Eureka, Calif.: Humboldt County Department of Agriculture), p. 7.

2. Seed—from which a rapid drying oil for the arts is produced, and [for use as a] constituent in commercial bird seed
3. Resin—for the active principle in the resin in the dried, flowering tops of both staminate and pistillate plants⁷

Within Humboldt County and the Emerald Triangle, marijuana is produced exclusively for resin and its resultant hallucinogenic effects.

Indeed, Humboldt County has become notorious for its especially potent marijuana called sinsemilla. Various types of marijuana are often named after their places of production. Examples include "Acapulco Gold," "Colombian," "Panama Red," and "Maui Wowwie." These names are usually given to the "best" marijuana available (*i.e.*, chemically most potent, commanding high price) at a given time. Today, Humboldt County and sinsemilla are interwoven. Sinsemilla does not refer to a specific place, however, nor does it represent a new type of marijuana; rather it is the result of a new type of cultivation technique. The resultant product is most commonly referred to as sinsemilla.

Table 3. CAMP 1987 CUMULATIVE REPORT

Counties	Team Days	No. Plants	Wgt. Lbs.	Arrests	Sus-pects	Helo Hrs.	Camp Flts.
Butte	16	4,604	4,210	8	4	39.2	1
Colusa	2	400	340	0	0	10.6	
Del Norte	3	958	3,990	2	0	0	
El Dorado	1	228	150	0	0	2.8	1
Fresno	5	1,259	2,708	6	10	18.8	13
Glenn	2	1,768	5,590	1	0	6.4	
Humboldt	124	53,775	256,205	22	39	547.8	46
Lake	2	707	2,015	0	0	3.4	5
Lassen							6
Madera							3
Mariposa							1
Mendocino	87	40,245	106,639	23	15	339.4	22
Merced							1
Modoc	1	31	155	0	1	5.9	
Monterey	6	1,700	2,126	0	0	37	27
Sacramento	1	90	50	1	0	0	
San Luis Obispo	6	1,700	2,126	0	0	24	
Santa Clara							3
Siskiyou	4	625	1,550	1	3	18.3	2
Sonoma	15	6,287	11,095	10	2	51.7	
Stanislaus							3
Sutter	1	416	980	0	0	2.9	
Trinity	51	17,444	28,310	7	34	173	
Tulare							2
Yuba	3	1,152	1,680	0	0	8.2	1
TOTAL	343	144,661	489,250	83	115	1,341.3	151

SOURCE: *CAMP Final Report: 1987* (Sacramento: CAMP Headquarters, 1988), p. 17.

Sinsemilla Production

The Emerald Triangle as a whole is noted for production of sinsemilla, which in Spanish means "without seeds."⁸ This marijuana product results in an exceptionally high concentration of the mind-altering cannabinoid, delta-9 THC:

The technique, which has been tested successfully in many climates, is that a female marijuana plant puts out at least 40 percent of her energy into making viable (growable) seeds once it has been pollinated by a male plant. By not allowing the female plants to become pollinated, the plant becomes larger and does not yield seeds. Instead of producing huge amounts of seeds, the female plant will produce an inordinate amount of sticky, heavily laden THC resin, in an effort to have some male pollent stick to and pollinate it. This resin has the highest concentration of THC of any part of the plant. By forcing the female plant to continue producing resin rather than seeds, extremely potent marijuana can be produced.⁹

The potency of Humboldt County sinsemilla has gained it a high-profile notoriety and a consequent high price in the market. The technique results in a "high quality seedless variety of marijuana, deemed by many as the best pot to be found anywhere in the world."¹⁰

Though sinsemilla growers tend to favor individual cultivation methods and particular seed types, a more or less typical generic seasonal cultivation cycle would progress roughly as follows:

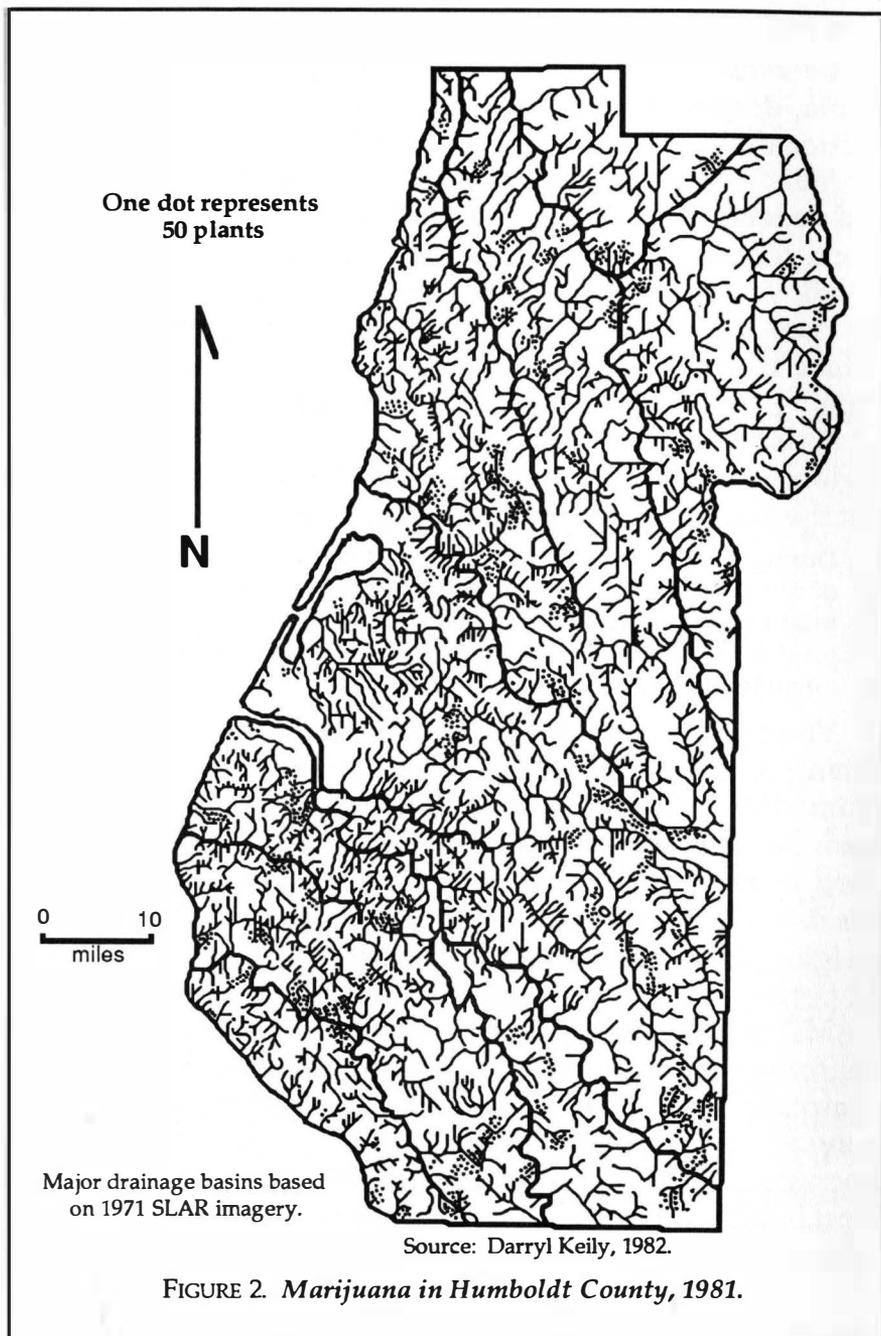
1. Seed Selection: in Humboldt County, seeds are usually of the indica type as they mature before major rains or early winter.
2. Preparation of Soil Mix (or "Recipe"): since marijuana plants are not deep rooted, special preparation of "recipes" is required.
3. Germination: there are various methods of germination, but most involve seeds that have been soaked in bleach, then sprouted on moist paper starting in early March.
4. Early Growth Period: plants are placed in locations that have maximum solar exposure and this period lasts from germination through May or early June.
5. Site Selection and Preparation: actual in field preparation for transplantation of seedlings.
6. Transplant Young Plants to Field Sites: done in May to early June.
7. Sinsemilla: to promote the growth of resin in female plants,

male plants are identified as early as possible and pulled out.

8. Water Cut-back: in late August, the amount of water given to each plant is reduced and typically, in mid-September, all watering is stopped entirely.
9. Harvest: usually in late September or early October.
10. Drying: branches are placed in dry areas and hung from rafters, clothes lines, or placed on drying racks.
11. Clipping, Manicuring, and Packaging: once the branches have sufficiently dried, final processing occurs.
12. Sales of Final Product.*

Although marijuana originated in Southeast Asia, it is readily adaptable to almost every Humboldt County climatic regime. Since *cannabis* needs substantial quantities of water, especially during the growing season, gardens are located as close as possible to water sources. Most gardens are nucleated; and, at least in 1981, large patches of fifty plants or more were the norm (Figure 2). This pattern has changed as law enforcement agencies have become more aggressive, especially in their use of aerial surveillance. Patches are now smaller, more camouflaged, and more widely diffused. Growers used to prefer southern aspects to maximize solar radiation, but this situation has changed as producers seek to avoid predictability on the one hand and the threat of exposure from law enforcement agencies on the other. Recently, growers have begun to use isolated areas of steep relief and to avoid locations close to roads or trails. The rugged, rural, mountainous nature of the Emerald Triangle greatly facilitates selection of suitable patch sites. Most growers prefer to use public land, such as United States Forest Service or Bureau of Land Management lands. If they use private land, growers tend to prefer land owned by the major timber companies. The rationale for this will be discussed later.

*For complete details, see: Edward E. Parsons, *Humboldt Home Grown: The Golden Age* (Eureka, California: Egret Publishing, 1985).



Law Enforcement Efforts

By value, marijuana is the number one cash crop in California, despite its illegal nature.¹¹ To combat this problem, California, in 1983, formed CAMP: the Campaign Against Marijuana Planting. CAMP is a combination of local, state, and federal law enforcement and resource agencies which work cooperatively toward their common goal, namely: "to diminish significantly the cultivation and trafficking of marijuana in California by seizing and destroying sinsemilla before it ever reaches the urban markets throughout the state."¹² Most of the state has been divided into five regional administrative units under CAMP (Figure 3). The number of regions and counties involved has changed through time, but the joint commitment has not wavered:

During its five years of operation, CAMP has eradicated a total of 651,179 sinsemilla plants weighing 3,013,682 pounds, with a total estimated wholesale value of \$1.6 billion. In addition, a total of 3,302 sites were raided, 957 suspects arrested and identified and 1,386 firearms confiscated.¹³

The major focus of 1987 CAMP raids was the Emerald Triangle, and the majority of raids were concentrated in Humboldt County (Table 3). Relative to the proportion of team days expended by CAMP, 36 percent of the total were used in Humboldt County. From a total of 144,661 plants confiscated, 37 percent came from Humboldt County. By weight, plants confiscated in Humboldt County comprised 52 percent of the total weight of all plants confiscated by CAMP in 1987. This is functionally related to the number of helicopter hours and CAMP raids in the Emerald Triangle as compared to the rest of the state. The percentage of fixed-wing aircraft flights by county are not available; but of seven operational CAMP raid teams in 1987, four were based in Humboldt County, two in Mendocino County, and one in Trinity County.¹⁴

The estimate of total known plants cultivated (Table 4), has dropped considerably since CAMP became operational.



Several important considerations relate to this. First, in terms of plants eradicated, CAMP has waged a successful campaign against marijuana. Second, growers who have managed to harvest their crops have reaped the benefits of higher prices. As fewer “buds” (processed parts of plant with resin) were available in the market place, the average price per pound of marijuana rose from \$2,000/lb. in 1983 to

Table 4. CALIFORNIA MARIJUANA STATISTICS

Year	Number of Plants Eradicated	Percent Known Sites Eradicated	Estimate Plants Not Eradicated	Estimate Total Known Plants Cultivated
1983	303,089	34.0	588,349	891,438
1984	256,976	74.4	88,421	345,397
1985	309,001	92.6	24,693	333,694
1986	223,529	87.0	19,447	242,976
1987	272,564	85.0	49,500	343,064

SOURCE: *CAMP Final Report: 1987* (Sacramento: CAMP Headquarters, 1988), p. 17.

\$3,100/lb in 1987.¹⁵ Third, growers have adapted to CAMP aerial surveillance. Today, more gardens are planted under existing trees, while others are camouflaged to avoid detection. Gardens also tend to be located in more isolated areas of steep relief, and most outdoor patches tend to have fewer plants. In addition, growers are experimenting with new crop types, especially those that mature earlier in the hope of avoiding accidental discovery once the deer hunting season has opened. Finally, growers are trying to develop smaller plants, with the intent of minimizing possible detection from the air. Smaller plants are also more adaptable to being kept in buckets or plastic bags and moved around, rather than being planted in permanent holes. CAMP raiders have even reported some plants being suspended from branches—or located in the forks of tree branches—as high as fifteen to twenty feet above the ground.¹⁶

Violence has been, and continues to be, associated with marijuana growing. CAMP raiders have encountered many garden sites which were booby trapped. Some of the devices used include pungi stakes, rat traps with shotgun shells, fish hooks, razor blades, hypodermic needles, pipe bombs, dynamite, and even a steel cable stretched across the landing zone used for CAMP helicopters. Not all of the violence, however, is directed toward law enforcement officials. Not

infrequently, violence is directed at other growers, at "patch pirates," or even at people—who purposefully or accidentally—find gardens. Many "patch pirates" want to obtain marijuana, process it, and then market it without undertaking the many months of work and risk involved in its cultivation. Other "patch pirates" are hunters who find a garden while stalking game. Some of these simply destroy the gardens by cutting off the buds from which resin is extracted. Whatever the rationale of "patch pirates," some growers have resorted to drastic methods of protecting their crops; and many violent incidents go unreported.¹⁷

Retrospect and Prospect

Despite the efforts of CAMP, Humboldt County continues to be the hub of California marijuana production. Indeed, production of marijuana actually rose during 1987. This occurred as some growers sought to profit from higher prices of marijuana which resulted from CAMP's success in eradicating plants.¹⁸ Humboldt County's population base is unlikely to increase in the near future and its narrow economic base is unlikely to broaden. Timber production is up, but the remaining mills have become more automated and need fewer workers. Accordingly, jobs which pay an adequate salary are hard to find in the county (Table 5). It bears noting that starting a marijuana patch does not require in-depth agricultural knowledge, a significant amount of capital, or even one's own land. Consequently, at contemporary prices of \$2,800 to \$3,200/lb. for sinsemilla, a small investment of capital, occasional inputs of seasonal labor, and the successful avoidance of legal authorities and "patch pirates" can produce a very lucrative, albeit illegal, return.

CAMP's activities have prompted some movement of marijuana production to other communities, especially north into Oregon. Oregon authorities have reported more gardens in recent years, and Oregon does not yet have any organization comparable to CAMP. Some authorities in

**Table 5. JOB OPENINGS LISTED WITH THE EUREKA
OFFICE OF EMPLOYMENT DEVELOPMENT
DEPT., JULY 1987 THRU JUNE 1988**

Number of Jobs	Percent Total	Salary
1,562	48	\$3.35 to \$4.00
900	28	\$4.01 to \$5.00
510	16	\$5.01 to \$7.00
126	4	\$7.01 to \$9.00
113	3	\$9.01 and above
55	2	Other than salary

SOURCE: David Wagner, Job Service Representative, EDD,
Eureka Field Office, December 18, 1989.

counties adjacent to the Emerald Triangle have, in fact, criticized CAMP for being too effective and thereby forcing growers into their counties. The alleged phenomenon of growers moving their operations from the Emerald Triangle to Shasta or Tehama counties is called displacement. "The number of total arrests reported by the surveyed counties and the number of non-residents arrested," however, "does not support the displacement theory. Of the total of 388 arrests only 35 (9.9 percent) were non-residents of the county in which they were arrested."¹⁹

Despite higher contemporary production levels, the impact of marijuana is actually less obvious today than it was several years ago. Back then, after harvest time, many stores and restaurants in the small towns of Humboldt County posted signs indicating that they would not handle transactions involving bills in denominations of \$50.00 or higher. At the start of a new year, these signs would be taken down. If one looks carefully, however, a few signs of marijuana's local impact are still discernible. Some stores regularly stock sandwich baggies which have the outline of a marijuana leaf pattern imprinted on them. Another popular sandwich bag

has the logo "Product of Humboldt County" imprinted on it. Typically, once it has been trimmed and manicured after drying, marijuana is packed in one-ounce baggies. A brand of small scissors used during the preparation process has its highest sales volume in the early fall, a time when many local merchants stock this particular scissor near their check out stands. Garden shops often feature specific types of exotic fertilizers, PVC pipe, small pumps, and generators. Recent trends support increased sales of indoor gardening equipment, such as full spectrum lighting with CO₂ injection, as well as sophisticated hydroponic growing equipment. Local, rural school districts report high absentee rates during harvest time. Car salespeople frequently mention prepaid, cash orders for four-wheel drive vehicles with special, custom equipment.

Discussions with alleged growers, à la Studs Terkel, yield interesting commentary, especially about evolving techniques to avoid CAMP raids. Many producers complain about the need to move to ever more isolated areas of steep relief. Some now utilize several smaller and more scattered patches, instead of the large multi-plant patches depicted in Figure 2. Some use less fertilizer and smaller holes to minimize disturbance and avoid detection from aerial surveillance. Many plants are kept under heavy natural vegetation; and while this helps avoid detection from above, it also cuts down on the amount of sunlight available to plants, thus reducing the number of buds produced per plant. Most growers—fearing forfeiture of land and personal property under federal law that allows authorities to attach assets connected to the cultivation and sale of illegal drugs—will never use their own land, hence the preference for public lands and large tracts of corporate-owned land. Many large-scale growers fear the IRS and try to avoid showing large amounts of unexplained income.

Growers have become much more sophisticated in utilizing techniques aimed not only at achieving higher prices,

but also at avoiding detection by a state-wide, mobilized, inter-agency campaign against marijuana planting. The resulting interplay between growers and the law has generated a rapid evolution of patch size, location, techniques, and—most regrettably—a higher confrontational level in the form of lethal booby traps. As a topic, marijuana production needs considerably more research in a number of veins, including botanical and biogeographical lines, comparative production methods, distributional systems, civil liberties, and legal aspects.



NOTES

1. Jennifer Foote and Michael Reese, "California: American Dream, American Nightmare," *Newsweek*, Vol. CXIV, No. 5 (July 31, 1989), pp. 22-29.
2. *Ibid.*, p. 25.
3. Ray Raphael, *Cash Crop: An American Dream* (Mendocino, Calif.: The Ridge Time Press, 1985), p. 5.
4. *Annual Planning Information: Humboldt County: June-1989* (Sacramento, Calif.: Economic Development Department, Employment Data and Research Division, Northern Area Labor Market Information Group, MIC 57, 1989), pp. 3-7.
5. John E. Falkenstrom, *Humboldt County 1988 Agriculture Crop Report* (Eureka, Calif.: Department of Agriculture, County of Humboldt, 1988), p. 1.
6. K. A. Estabrook, Jr., and Dave Kirkman, "Camping in the Emerald Triangle," *Osprey*, Vol. 1 (Fall, 1987), p. 11.
7. John Rosevear, *Pot: A Handbook of Marihuana* (Seacacus, New Jersey: The Citadel Press, 1967), pp. 16-17.
8. *Sinsemilla: Public Awareness Program* (Sacramento: Department of Justice, Bureau of Narcotic Enforcement, June, 1984), p. 1.
9. John T. Maher, *Cannabis sativa* (Washington, D.C.; U. S. Department of Justice, Drug Enforcement Administration National Training Institute, September, 1976), p. 1.
10. *Op. cit.*, note 6, p. 11.
11. *Op. cit.*, note 1, p. 22.

12. *CAMP Final Report: 1984* (Sacramento: CAMP Headquarters, 1985), p. 1.
13. *CAMP Final Report: 1987* (Sacramento: CAMP Headquarters, 1988), p. 3.
14. *Ibid.*, p. 17.
15. *CAMP Final Report: 1986* (Sacramento: CAMP Headquarters, 1987), p. 26.
16. *Ibid.*
17. *Op. cit.*, note 13, p. 19.
18. *Ibid.*, p. 21.
19. *Ibid.*

California Geographer BOOK REVIEWS

THE CALIFORNIA WINE ECONOMY: NATURAL OPPORTUNITIES AND SOCIO-CULTURAL CONSTRAINTS — A REGIONAL GEOGRAPHIC ANALYSIS OF ITS ORIGINS AND PERSPECTIVES. By Cees D. Eyseberg. Amsterdam/Utrecht: Knag/Geografisch Instituut Rijksuniversiteit Utrecht, 1990. Maps, charts, 267 pp. Paperbound. ISBN 90-6809-121-2. Dfl 29,75.

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Cees D. Eyseberg, a member of the geography faculty of the University of Utrecht, has a long-standing interest in the United States, particularly California. During 1984-1985, he was a Fulbright Exchange Professor at California Polytechnic State University, San Luis Obispo; and in 1987, a research associate in the Geography Department at the University of California, Berkeley. During these periods, Eyseberg completed the field work for a study on the California wine industry. The culmination of that research comprises the subject of this review—a volume illustrated with more than fifty maps and many graphs and tables.

Eyseberg's investigation focuses on three questions, the first being why the California wine industry remained so

small throughout most of its history, before beginning to grow rapidly during the 1960's and 1970's. California's much more southerly location, in relation to either the wine producing districts of central and northern France or the valleys of the Moselle and Rhine, would seem to suggest some physical limitation. Eyseberg specifies, however, that no such limitation exists for California's coastal valleys, whose marine-moderated microclimates provide nearly ideal growing conditions, whereas the cooler temperatures of Europe's premier producing areas often necessitate the addition of sugar to the wine. (It is true that 80 percent of California's production comes from the hot San Joaquin Valley and is destined for lower quality bulk wines. Eyseberg's study—though inclusive of the state as a whole—focuses on the coastal valleys, which in general produce higher quality table wines.)

While acknowledging the early-day isolation of the state, and thus the high cost of California wine in the East, Eyseberg attributes the historically low level of wine consumption within the United States primarily to culture. He argues that there was a "manifest antagonism to wine" (p. 89) and that American "*petit bourgeois* values" (p. 88)—a phrase he uses repeatedly—led to the "fanatic vigorism of the anti-alcohol movement . . . inspired by fundamentalism" (p. 87). This attitude culminated in Prohibition, which dealt a severe blow to the fledgling California wine industry.

From the mid-twentieth century to about 1980, American per capita wine consumption rose significantly, a response Eyseberg attributes to increased levels of education and sophistication. By the 1980's, per capita consumption of table wine had stagnated, while that of dessert wine (along with beer and spirits) was falling. In a brief paragraph, he dismisses this development as caused by a "fanatic fitness cult" and "the problem of drunken driving," concluding that these phenomena "stirred up a new anti-alcohol sentiment, where Prohibition is just under the surface" (p. 89).

The second major question addressed by Eyseberg concerns the effect of recent distributional changes in the California wine industry. These include the inauguration of premium wine production along the Central Coast, especially in San Luis Obispo and Santa Barbara Counties, and statewide, the shift from red to white grape varieties, reflecting a major change in consumer preference.

The physical and economic factors limiting the expansion of California viticulture constitute the final major point of investigation. In addition to the uniquely American societal concerns over alcohol abuse in general, Eyseberg points to the growing competition for water and land between agriculture and urbanization. He then goes on to note that within agriculture, the expansion of wine grape acreage typically results in the loss of rangelands, causing "an abrupt confrontation . . . between the classical cultural landscape of Bacchus and the young wild west" (p. 185).

Considering that Eyseberg is not writing in his native language, his English is clear. There are relatively few instances where either grammatical constructions or word choices are unusual.

From the standpoint of California geography, however, Eyseberg's use of the designation "South Coast" is a bit confusing. As employed throughout *The California Wine Economy*—in both text and maps—the appellation includes the counties of San Benito, Monterey, San Luis Obispo, Santa Barbara, and Ventura. Three of these counties—Monterey, San Luis Obispo, and Santa Barbara—are traditionally defined in California as the Central Coast.

In spite of this misnomer and of the author's pervasive presumption of European cultural superiority, *The California Wine Economy* is a useful work, placing an important topic in a broad physical, cultural, and historic context and making many insightful parallels with the European wine industry.

In sum, Eyseberg has produced not only a well-researched treatise, but also one which makes a significant

contribution to an understanding of the California wine industry.

- ◆ CALVIN WILVERT
California Polytechnic State University
San Luis Obispo

1990 ANNUAL MEETING

University of Southern California, May 11-12

The University of Southern California's campus in central Los Angeles provided the setting for the Society's 1990 Annual Meeting. Opening day activities included a barbecue dinner (served in the Faculty Center) and a guest presentation by Dr. David Hornbeck (California State University, Northridge) entitled: "Selective Remembrances of California's Past Geography." Special Sessions included separate Roundtables for Community College Instructors and Department Chairs.

The Annual Banquet was held in the USC Faculty Center. Guest speaker for the banquet was Professor Larry Ford (San Diego State University). Dr. Ford spoke on the topic: "Urban Design and a Mature California."

CGS President Richard Hough (San Francisco State University) handled presentation of the 1989-1990 round of California Geographical Society Awards. The Distinguished Educator Award went to Bruce Bechtol (California State University, Chico) and the Distinguished Service Award was presented to Donald R. Floyd (California Polytechnic State University, San Luis Obispo).



PRESENTATIONS

JAMES P. ALLAN, California State University-Northridge), **Migration Flows To and From California Counties.**

GREG BARKER, Thousand Oaks High School, **Popularizing Geography or Making Geography an 'In' Discipline.**

CAROLINE BERGHOUT, California State University-Chico, **Regional Geography of the Honey Lake Basin.**

JOHN A. CARTHEW, Los Angeles Pierce College, **Learning Geography the Geocart Way.**

- JULIE CUNNINGHAM, California State University–Chico, **Control or Conservation: Historical Perceptions of the Sacramento River.**
- RICHARD A. ELLEFSEN, San Jose State University, **Inventorying Biomass in the South Coast Air Quality Management District from Large Scale Air Photos.**
- MITCHELL FAMIGHETTI, California State University–Hayward, **Riding High No More: The Bay Area's Elevated Freeways After the October 17 Earthquake.**
- BRYAN GARCIA, the California State University–Hayward, **Northern California Sport and Commercial Fishing Industry: Economic and Environmental Problems.**
- SUSAN HARDWICK, California State University–Chico, **The Religious Geography of Russian Pentecostals in California and Oregon.**
- WILLIAM HELMER, California State University–Chico, **A Frontier Trail Region: The Mojave Desert Transect of the Spanish Trail, 1826-1873.**
- DAVID H. HENDRICKSON, Fresno City College, Retired, Palau—**Timeless Paradise or Eternal Trust Territory?**
- GAIL HOBBS and BILL RUSSELL, Los Angeles Pierce College, **Population Patterns: A Student Project for Mapping and Analyzing Data.**
- CHRISTINA B. KENNEDY, the California State University–Hayward, **A Phenomenological Experience of Landscape in the Eastern High Sierra: Twenty Lake Basin.**
- SUSAN MALUSA, the California State University–Hayward, **From the Klamath to the Kern: A History of California's Whitewater Experience.**
- KATHERINE NASHLEANAS, California State University–Hayward, **Treasure Island: Symbolic Landscape, Artifact of Technology.**
- GEORGE NASSE, California State University–Fresno, **The Arbereshe: Recognition of an Ethnic Group.**
- THOMAS PAGENHART, the California State University–Hayward, **The Anatomy of an Urban Creek Restoration Project: Sausal Creek, Oakland.**
- BRUCE PANACCIONE, the California State University–Northridge, **The Maps of California's "Black Gold" Rush.**

- MEG PERRY, the California State University–Northridge, **Neighborhood Transition, Invasion and Succession, and Residential Segregation of Boyle Heights, Los Angeles, California.**
- PAMELA POSEY–GILGERT, California State University–Chico, **Environmental Education: Values for Global Citizenry.**
- WILLIAM L. PRESTON, California Polytechnic State University–San Luis Obispo, **The Tulare Lake Basin: An Aboriginal Cornucopia.**
- JOHN W. SPRING, Orange Coast College, **Japan: A Paradigm for Success.**
- JUDY WALTON, San Diego State University, **“Bulkification” in Coronado: Pattern and Process of a New Urban Housing Phenomenon.**
- SCOTT WILEY, the California State University–Hayward, **Castro Valley Creek: A Case in Habitat Restoration.**
- GLORIA B. WOELFEL, San Diego State University, **Landform Modeling.**

