The California Geographer

Annual Publication of the
California Council of Geography Teachers
Robert A. Kennelly, *Editor*
1965

THE CALIFORNIA GEOGRAPHER

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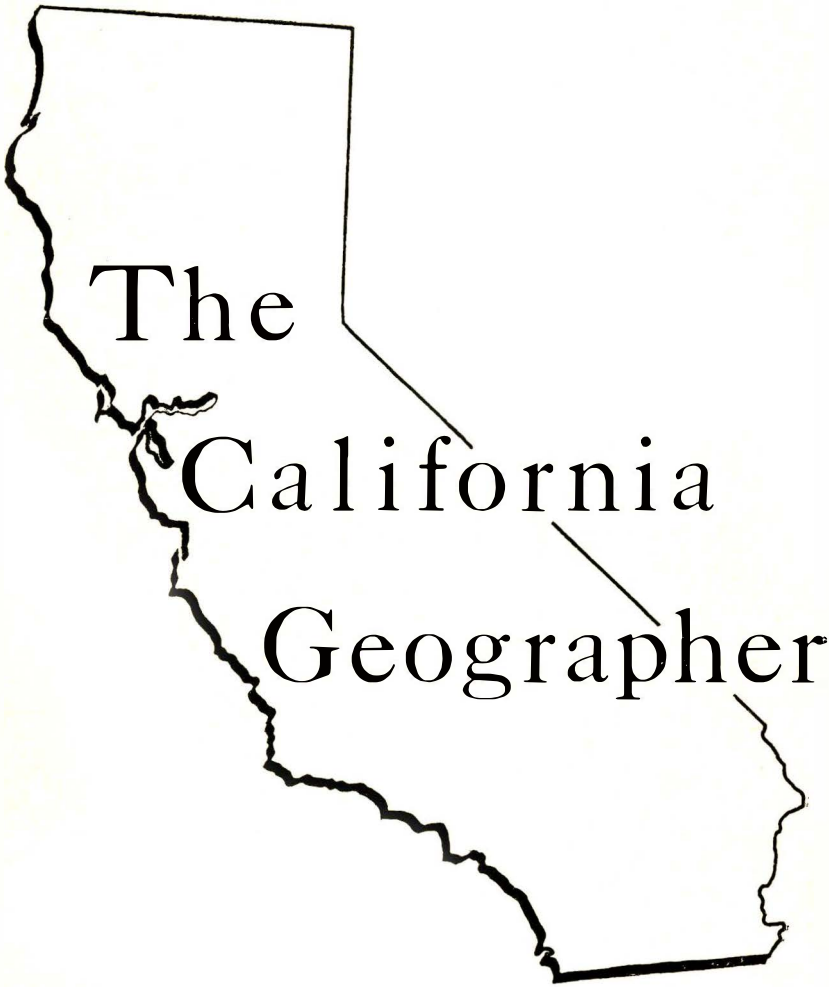
CALIFORNIA COUNCIL OF GEOGRAPHY TEACHERS

ROBERT A. KENNELLY, *Editor*



The California Geographer

TABLE OF CONTENTS

VOLUME VI 1965

Subscription rate: $2.00 per year. Address all correspondence to Robert A. Kennelly, Editor, *The California Geographer*, California State College, Long Beach, California.

OPPORTUNITY STILL KNOCKS AT THE DOOR OF THE GEOGRAPHER*

EMILY V. BAKER
Formerly San Bernardino Schools

There is little need for me to suggest to a group of professional geographers that the subject to which they devote their time and, no doubt, considerable affection should occupy a place of importance in the public school curriculum. Probably there is little need for me to say that the place allotted to geography is actually smaller than some current trends seem to indicate. In a recent publication to which I shall refer later, the word "geography" is used an impressive number of times, but the illustrations of its use which run through the book reveal that geographers must still work to give meaning to that term.

You know, too, that teaching credentials will be granted this spring to many college graduates whose only experience in geography has been acquired in such cover-all courses as were described to me recently in writing in these terms: "Our course in elementary education that includes the geography is one entitled *Curriculum, Methods and Materials* which encompasses the curriculum of the social studies and the audio-visual materials and equipment."

But the picture is not all dark. We know that there are many administrators and curriculum workers who are making a sincere effort to include geography as they plan the curriculum. From the efforts being made we can see that this is a time of opportunity. We can see, also, something of the nature of the work to be done.

Let us look at a few specific happenings which illustrate the current concern.

1. *The Social Studies Framework for the Public Schools of California* prepared by the State Curriculum Commission and released by the California State Department of Education in 1962. Four columns are spread across two pages through much of the book. The first is headed *Geography;* the second, *History;* the third, *Civics;* the fourth, *Related Areas.*
2. The provision by the State Department of Education for geography textbooks for pupils. Some are excellent. Some are so-called "combination books." The adoption of the latter as social studies books underlines the need for a knowledge of geography on the part of the teachers who served on the evaluating committees.
3. The availability of many attractive trade books on regions of the world. Our libraries are well supplied with these books.
4. The generous provision of tools needed to learn geography—maps, globes, films, and charts.

* This was the opening paper of the 1964 Annual Meeting of the California Council of Geography Teachers held at the University of the Pacific, Stockton, Calif., May 1, 1964.

5. Credit-bearing workshops in geography for teachers in summer school (some of them in schools which provide no work in geography during the regular academic year) and in-service workshops for teachers.
6. An opportunity which may or may not result in increased work in geography—the requirement of five years' preparation for the elementary credential.

Justifiably, you may say that none of these efforts or changes assure the teaching of geography in an acceptable manner. I must counter with the contention that only you and your colleagues throughout our state and throughout our nation can in the last analysis assure the teaching of geography in an acceptable fashion. In the efforts cited above we can see some opportunities. The door is ajar, but, as I see the situation, geographers will, in the foreseeable future, enter the elementary school only on the terms of the elementary administrator, curriculum worker, and teacher. Nevertheless, you can modify the terms under which they will let you enter.

Had all of these people had work in geography in their elementary, secondary, and college years and had they kept up with the times, we could rest assured that geography would occupy a worthy place in the curriculum they build. But since not all have background work in geography we must work within the framework of the current situation in order to get through the door of the elementary school.

Let me cite a few examples to support this point of view:

1. Confronted with the State *Framework* which calls conspicuously for geography, although not as we might wish to have it included, what do loyal people do?
   a. San Diego State College Laboratory School released in August, 1963, a curriculum guide entitled *Working With Generalizations in Social Studies, An Interpretation and Implementation of the Social Studies Framework for the Public Schools of California.*

How was this curriculum guide developed? The campus laboratory school faculty and a consultant from the Department of Education worked together in deciding how the State *Framework* was to be implemented. No mention is made of calling in subject matter specialists to help.

This group saw in their task of revising their social studies program the need to organize units which encompass the various areas of the social studies—geography, history, political science, economics, and anthropology. Their reasons for organizing units as a means of fulfilling their obligation are given on page 29:

> The social studies program in the various grades reflect [sic] the procedures recommended in the professional literature; i.e., an activity oriented program in the primary grades and an information-process oriented program in the upper grades.
>
> The classroom supervisors in the primary grades tend to interpret social studies as meaningful activities within a broad area of study. Those in the upper grades tend to regard social studies as acquiring information about a broad topic through the wide use of references.

b. A more recent publication, a work sponsored by the National Education Association, *Guiding Children Through the Social Studies,* 1964, supports the teaching of large units. This little book makes a strong case for the belief that only by organizing the work of the social studies in large units which draw upon all of the disciplines of the social sciences can social understandings be acquired by children in a manner that is meaningful to them.

If you would enter that door into the elementary school curriculum laboratory, I beg you to study this pamphlet thoughtfully for in it is expressed in a powerful fashion and in a few pages the philosophy which gives direction to many schools in California. All of the members of the writing committee which produced the book are from California, among them Miss Helen Heffernan of the State Department, Dr. John Michaelis of the University of California, and several from San Bernardino County.

There is much in the *Framework* and in these recent guides which is open to question. An example is the teaching of Japan and Africa in the fourth grade, an age level at which children can acquire only a superficial knowledge which is likely to be misleading and detrimental to the cause of international understanding. Nevertheless, all of these publications indicate the type of thinking which must be studied and respected if geography is to enter that door to elementary teaching.

2. The selection of materials is another important area in which lack of geographic background conditions the work in the schools.
   a. Textbooks have been provided by the state at great cost, but not until teachers see value in geography will the books become useful sources of information in the hands of the children. For example, sets of excellent fifth grade geography textbooks entitled *The United States and Canada* have been known to lie long unused in book rooms and closets because, as a highly respected teacher who does much demonstration teaching says, they do not fit the unit on colonial life in America.

What better time is there than when studying early New England to consider the rocky soil and the rigorous climate which beset the hardy settlers? These geographic features are discussed briefly in this book which is provided by the state. Of course, many would say that to stop to consider such topics might be too much of a digression. Possibly so, but is it really a digression if the children are seeking to understand, if the teacher is helping the children see the relationship between geographic conditions and human activities? In a program in which geography is taught only as a phase of the social studies when will the geographic factors be studied if not at such times? When we examine the social studies units taught, we find that many have an historical approach. This approach is not to be wondered at when all teachers are required to study history. Bertrand Russell, as quoted in the *New York Times Magazine,* gave us something to think about when he said:

> It is because modern education is so seldom inspired by a great hope that it so seldom achieves a great result. The wish to preserve the past rather than the hope of creating the future dominates the minds of those who control the teaching of the young.

b. Earlier I gave as one sign of increased interest in the teaching of geography the fact that many schools are very generous in supplying the tools for learning. Since maps and globes are the most necessary tools, I have compiled some test results as one means of indicating the very specific nature of the help needed by many teachers if these tools are to be used effectively.

In keeping with legislative edict, schools must submit to the State Department of Education the results achieved on standardized tests by the pupils of grades five, eight, and eleven.

From one district whose results on the October, 1963, test I have had an opportunity to study, I obtained data in which you may find implications for your consideration.

The California Achievement Test used in grades four, five, and six, Form W, includes in the Reading Test a section on reference skills. In this section are six multiple-choice items on map reading, namely:

Item number 85: In what state are there mountains?
Item number 86: How far is it from Dogwood to Cherry?
Item number 87: What city is on a lake?
Item number 88: There is a number on each side of the map. In which direction does the arrow by number 4 point?
Item number 89: What city is northwest of Ash?
Item number 90: Between what two states does a river form part of the boundary?

The results on these six items are presented in Table 1.

Table 1. California Achievement Test Results: Reference Skills—Grades Four, Five and Six

	Item Number	*Number of Cases*	*Number Correct*	*Percentage Correct*
Grade 4	85	122	43	35
Grade 5	85	136	87	64
Grade 6	85	189	151	80
Grade 4	86	122	9	8
Grade 5	86	136	39	29
Grade 6	86	189	95	50
Grade 4	87	122	20	29
Grade 5	87	136	73	53
Grade 6	87	189	145	77
Grade 4	88	122	21	17
Grade 5	88	136	44	32
Grade 6	88	189	95	50
Grade 4	89	122	14	11.6
Grade 5	89	136	35	26
Grade 6	89	189	66	35
Grade 4	90	122	7	5.6
Grade 5	90	136	38	28
Grade 6	90	189	71	43

The California Achievement Test Form W for the seventh, eighth, and ninth grades provides in the Reading Test a 5 x 6½ inch map of Switzerland and the surrounding area. Five test items are based on this map. You may not be satisfied with the map and the test. However, I should advise you of the fact that approximately two-thirds of the eighth grade pupils used this test in 1962 and it is reasonable to assume that a similar proportion used it in 1963 and that a similar proportion of the seventh grade pupils used the test in each of the two years. Moreover, we can assume that this is the only standardized means used to test any phase of the geographic learnings of these pupils.

The multiple-choice items run as follows:

Item number 97: One of the following rivers flows through Lake Constance. Which one is it?

Item number 98: The west end of Lake Constance is located near what degree of longitude?

Item number 99: Which of the following regions is *not* to be found in Switzerland?

Item number 100: One of the rivers draining the central plateau is the _____?

Item number 101: The Rhine and the Rhone rivers have their sources in one of the following areas. Mark the number of the correct area.

In another section of the test are two items which test knowledge useful in using maps, namely:

Item number 65: Latitude is the measure of distance north or south of the equator. Mark the letter of the following ship's reading which indicates latitude.

Item number 74: The scale of miles shown in the above drawing is forty miles to one inch. Determine the distance from Point A to Point C. Mark the number which shows the correct mileage below.

The results are given in Table 2.

Table 2. California Achievement Test Results: Reference Skills—Grades Seven and Eight

	Item Number	*Number of Cases*	*Number Correct*	*Percentage Correct*
Grade 7	97	297	181	61
Grade 8	97	266	210	79
Grade 7	98	297	101	34
Grade 8	98	266	128	48
Grade 7	99	297	110	37
Grade 8	99	266	174	58
Grade 7	100	297	68	23
Grade 8	100	266	62	23
Grade 7	101	297	71	24
Grade 8	101	266	106	40
Grade 7	65	297	190	64
Grade 8	65	266	209	70
Grade 7	74	297	116	39
Grade 8	74	266	128	48

Ability to use maps efficiently is not the whole of geography by any means, but the results on items that test basic concepts about direction, about rivers and other physical features, and about scale can be taken as illustrative of the pupils' ability to engage in geographic thinking. Think how meaningless much of the class discussion must be to the 76 per cent of the seventh grade pupils herein considered when the teacher or a classmate makes some comment about the source of a river. Think how meaningless discussions on current boundary changes must be to the 57 per cent of the sixth grade pupils who failed to find the two states which are separated, in part, by a river? If there were no more comprehensive test available to school administrators, supervisors, and teachers, I would feel less concern. But there is a test, *The Iowa Test of Basic Skills,* which uses 89 items to test the ability to read and interpret maps. The test is designed for use in grades three to nine. However, fewer than 10 per cent of the fifth grade pupils and fewer than 6 per cent of the eighth grade pupils used this test in 1962.

What can we do to increase awareness of the value of geography in the curriculum followed by children and young people? I suggest that we accept the fact that much good, solid geography can be learned through an elementary-school curriculum organized on the basis of social studies units. I trust that you will excuse a personal reference or two. Once upon a time, I carried on a little research project in which, on the basis of standardized test results, I demonstrated to my own satisfaction and to the satisfaction of some college professors that it can be done. Later, while teaching children in a situation in which the Iowa Tests were used regularly, the children, year after year, stood in the neighborhood of the nintieth percentile.

If the teachers know geography, no type of curriculum organization will keep geography out of the curriculum. If they are not acquainted with the fundamental concepts of geography we can hope for nothing more than a mechanical following of a textbook or curriculum outline. We cannot legislate geographic thinking into a school curriculum. It is for this reason that I would say again that securing greater emphasis on geography depends, in the last analysis, on those who share in any way in the program of teacher education.

I realize that some geographers see in Jerome Bruner's philosophy support for teaching geography as a separate subject. As you know, he tells us we learn the subject matter of a given area of knowledge best by becoming acquainted with the structure of that area of knowledge. I accept Dr. Bruner's premise rather as an intermediate goal than as a starting point. Let us realize that recognition of the structure can come about as a result of experiences in the subject and that awareness of the structure comes about in the same manner in which generalizations are formulated — by following observations and experiences, often through a period of years. Children will have the experience necessary for recognizing the elements of the structure for which Clyde Kohn pleads if their teachers are aware of that structure. If children have sound experiences in geography as a phase of their social studies in grades one to six, it seems to me to be reasonable to

expect them to be aware of the geographic structure in terms of which the great movements of mankind are taking place by the time they reach junior high school or, certainly, before they leave junior high school.

As one who works with teachers and children, I should like to offer the following suggestions for the consideration of the California Council of Geography Teachers:

1. Paramount at this time is the need to take steps before college programs become firm to see that the fifth year of college now to be required of those preparing to be elementary teachers allows for an increase in solid subject matter. Such was the intent of the legislature, but unless steps are taken quickly to see that that intent is recognized, the law may be circumvented. Geographers, organized, can help give direction to the five-year program.

Helping teachers acquire knowledge of subject matter areas while they are acquiring their general education is essential to establishing a frame of reference — a knowledge of the structure, if you will — in terms of which they can profit all the rest of their lives through in-service activities. In-service experiences are needed by all of us, but they are at best only inadequate substitutes for basic work studied in an organized fashion.

2. Now I shall seem to contradict myself when I say that we should increase the in-service offerings. They are needed to inspire and keep up-to-date those already well-grounded and to inspire and challenge those whose background is limited. *But,* and for this suggestion I may be "ruled out of the party." Unless the members are selected, we should simplify the approach.

We must be mindful of the fact that we have in our schools teachers who, through no fault of their own, have never had a course in geography in their lives. We must remember, too, that there is considerable rather highly technical content in geography. I expect to hear some such content discussed during this conference. I fear I shall not understand all of it. Specialists in a given subject matter area tend to use a highly specialized vocabulary. Many of the terms geographers use freely are unintelligible and frightening to teachers. We must be mindful of the fact that elementary teachers are responsible for art, music, mathematics, reading, language, spelling, health, science, and recess, noon duty, and yard duty, parent conferences, etc., *in addition* to the social studies. The sum total of their capabilities is considerable, but because they can hardly go into great depth in any one subject, many of them sit in awe in the presence of specialists in a subject matter field.

Geographers who would help elementary teachers become proficient in geography might consider the approach made by some mathematicians, especially those in the School Mathematics Study Group. They have included elementary teachers who are not majors in mathematics on their writing teams. When I asked the late Dr. Morgan Ward about this procedure he told me if they took only teachers strong in mathematics they would not find out what they needed to know to help teachers.

On request, mathematics teachers in colleges and universities have organized courses which introduce elementary teachers to the principles of modern mathematics in a relatively simple fashion. The purpose is to prepare teachers to teach children what they want them to learn. Some mathematicians want nothing to do with these courses, but others realize that if mathematics is to be taught in the elementary schools as they want it taught, they must work with the teachers and supervisors in the situation as it exists. Dr. Ward, formerly head of the mathematics department at the California Institute of Technology, visited fourth and fifth grade classes with me and held conferences with the teachers.

Since financing in-service experiences is a problem with colleges and public schools, you may want to offer more of the kind of opportunity Northwestern University has provided with the help of publishers during its summer sessions. The university provides the housing and the accreditation while the publishing company provides the teaching staff and the tuition for the students. I know that the Rand McNally, Nystrom and Denoyer-Geppert Companies have provided this kind of service through Northwestern University. Doubtless, you are acquainted with other similar situations.

3. You may want to affiliate with groups of professional educators who have responsibility for curriculum building. The California Association for Supervision and Curriculum Development has working committees, one of which is the social studies committee and another is the teacher education committee. All concerned with curriculum problems are welcome in the organization. Participating acquaints one with the philosophy operating in the social studies program. Experience has shown that requests for geographers to contribute follow opportunities to become acquainted. The Southern Section of the CASCD will meet next week-end. I do not have a full program, but I am sure the group will work at matters of concern to all of us.

4. Try to spot elementary teachers, supervisors, and administrators who show interest. Encourage them to join CCGT and attend its meetings. As the service committee extends its activities these people will see that they have a stake in this organization. In this connection I might call attention again to the mathematicians. A few years ago an elementary teacher could find little if anything designed for her at their conventions. In the national meeting to be held at Long Beach next week-end nine sections are planned especially for the elementary teacher.

5. To break the ice for those students who have had little or no work in geography, set up a course labeled *Geography for Elementary School Teachers*. Examine the content and the activities of the units commonly taught in the elementary school. Organize the content which could be used to advantage in teaching these units, and in the course of teaching make frequent reference to the places in the units at which certain geographic principles can be developed. This would be a content course, however, not a methods course, with the content selected and organized especially for the elementary teacher. Some feel this kind of course unworthy of recognition or credit. However, this is essentially what the mathematicians have done and they are reaping a tremendous reward.

I feel very humble, although you may think I am very presumptuous, in presenting these suggestions which seem to respect our favorite subject too little. It is because I want our subject to make its contribution to the education of our children *and their teachers,* that I have been so bold in expressing these thoughts based on observations and close contact with teachers. Geographers have stayed too long apart. In connection with our problem a thought from the Scriptures comes to my mind: "For whosoever will save his life shall lose it." The prevailing practice is to teach geography as a phase of the social studies. If geographers would find their subject they must, at least for the time being, be willing to have it included within the larger framework of the social studies.

A BRIEF HISTORY OF THE CALIFORNIA COUNCIL OF GEOGRAPHY TEACHERS 1946-1964

ARTHUR CARTHEW
Los Angeles City College

With the retirement last year of Calvon McKim, who played a leading role in the establishment of the California Council of Geography Teachers, and the not-too-distant retirement of others who were active in the early days of the organization, it seems opportune to record the details of the founding and the early years of the organization while the facts can still be recalled. Furthermore, the council having functioned for eighteen years, a summary of activities is in order, both for the sake of recording the facts and providing a basis for review which could be useful to charting the future course of the organization.

The initial move in the establishment of the California Council was a letter from Calvon McKim, chairman of the Geography-Geology Department at Fresno State College, to Clifford Zierer, chairman of the Geography Department at U.C.L.A., suggested the possibility of establishing a state council and proposing a meeting in Los Angeles to which interested parties might be invited. Clifford Zierer replied favorably and designated Henry J. Bruman to make arrangements for the meeting. Letters were sent to various schools, calling attention to the meeting scheduled for Saturday, December 7th, 1946, in Royce Hall at U.C.L.A. A general discussion of the functions of geography in education in the California schools was planned for a morning session. Luncheon for the group was arranged at a tearoom in Westwood Village. Following the luncheon an organizational meeting was held at which the California Council of Geography Teachers became a reality.

There were many factors which favored the creation of a California State Council at this time. The National Council was anxious to have active councils in all states and urged McKim to take the initiative in establishing one in California. With the ending of the war there was a mass return of G.I.'s to the universities and colleges. Geography had attained an important status during the war, and its adherents were eager to preserve and extend the position of the subject in the school program. Only through organization could a subject hope to maintain its status in a competitive curriculum. Although an existing organization, the Association of Pacific Coast Geographers, served to bring together geographers from the western section of the country, it was felt by many that its aims were directed primarily at the college level and were designed to emphasize research rather than concern with the problems of geography in education at all school levels.

At the organizational meeting Calvon McKim was elected president and Walter Willey of the El Rodeo School in Beverly Hills was elected secretary-treasurer, a post which he capably held for a number of years. The adopted constitution provided for an annual meeting to be held in conjunction with the Association of Pacific Coast Geographers meetings when they were held in California, as was the case in 1947 when the meetings were held in San Diego.

The first annual meeting of the Council was held on Saturday, June 21, 1947, in the San Diego Hotel. Homer Aschmann took charge of local arrangements. Reports were submitted by the president on the membership drive and by the secretary on public relations. Lauren Post discussed the topic, "A Geography Field Trip in San Diego County," illustrated with slides. The next meeting was set for Berkeley the following June.

A more extensive program of papers was presented at the second annual meeting held at the University of California at Berkeley. Local arrangements were made by John Kesseli with Walter Hacker, president, serving as chairman. An afternoon field trip over the hills of San Francisco proved to be an elimination contest with, so 'tis said, only the leader's car completing the tour.

By the third meeting the organization attracted a fine turnout at Ventura Junior College with Rex Brittingham responsible for local arrangements. As the Association of Pacific Coast Geographers was meeting in another state, the first weekend in May was selected as a more suitable time than June for the annual meeting. Featured at the meeting was a display of maps and textbooks by publishers, a practice which has been continued, especially by the map publishers, through the years. Langdon White, who from the very beginning gave enthusiastic support to the organization, was the principal speaker at the noon luncheon. Arthur Carthew served as president and chairman.

After the success of the Ventura meeting the constitution was amended to the effect that meetings were no longer to be held in conjunction with the Association of Pacific Coast Geographers. A policy of shifting the meetings between the northern and southern sections of the state was adopted, and the fourth meeting held at Stanford University with Alfred Sumner in charge of local arrangements. Robert Pease served as president and chairman and George McBride gave the dinner address. A distinctive feature of the meeting was an aerial field trip covering the Bay region.

Returning to the southern section, U.C.L.A. hosted the organization for the fifth annual meeting with Benjamin Thomas, president, in charge of local arrangements. Ruth Baugh presented the luncheon paper. Following the success of the air trip the previous year, David Jennings organized an aerial excursion which covered a segment of the San Andreas Fault as well as the Los Angeles metropolitan area.

Under the presidency of Chester Cole, the sixth annual meeting was held at Fresno State College. The central location in the state brought an exceptionally large turnout and featured Carl Sauer as the luncheon speaker. A field trip to the Russell Giffen Ranch on the west side of the Valley proved a great success under the leadership of Chet Cole.

Returning to San Diego State College, the seventh meeting was conducted by President David Lantis with Robert Richardson in charge of local arrangements. A highlight of the affair was a field trip led by Lauren Post through the fascinating San Diego hinterland to the mountain community of Julian.

Moving to the farthest north location ever selected by the organization, Chico State College served as the host institution for the eighth annual

meeting. Alfred Butz served as president with Bruce Ogilvie in charge of local arrangements. Samuel Van Valkenburg gave the banquet address. The meeting was climaxed by a field trip through the Sutter Buttes led by Fred Neumann and Tom Rodgers.

The only non-college level institution to host the organization, Santa Monica High School, was chosen for the ninth meeting. Bruce Ogilvie served as president with John Ives in charge of local arrangements and with George McBride presenting the banquet address. An aerial field trip, this time devoted to the urban areas of Orange and Los Angeles counties, was again a feature of the meeting.

Shifting north, Sacramento Junior College hosted the council at the tenth annual meeting with Clarissa Kimber in charge of local arrangements. David Jennings presided over the well-attended meetings. The most comprehensive program of field trips offered at any of the meetings was scheduled, with emphasis on flood problems in the Sacramento area.

Under the presidency of Adolf Stone, with David Lantis in charge of local arrangements, the eleventh meeting was held at Compton College. David Jennings gave the banquet address under the intriguing title of "Adventures in Serendipity."

Santa Rosa Junior College served as the host institution for the twelfth meeting. Robert Johnson presided with Alfred Butz in charge of local arrangements. The Pacific Northwest was drawn on for luncheon and banquet speakers with Granville Jensen of Oregon State and Douglas Jackson of the University of Washington performing the honors. The field trip at this meeting was a tour through the apple country to the coast.

Attracting an exceptionally large attendance, the thirteenth meeting was held at Long Beach City College with Adolph Stone in charge of local arrangements. Robert Eidt presided over the meetings, which featured Walter Willey as luncheon speaker. C. Langdon White presented the banquet address. A field trip through Long Beach harbor on the boat "Shearwater" proved a special delight.

The fourteenth meeting was held at San Jose State College with Walter Olson presiding and William Steele in charge of local arrangements. Huey Kostanick presented the banquet address.

Anxious to show off its new, large, beautiful campus, San Fernando Valley State College invited the council for the fifteenth annual meeting. Robert Durrenberger took charge of local arrangements. Howard Nelson presided, with Joseph Spencer serving as banquet speaker. A unique field trip and social affair featured a visit to the Anheuser-Busch Brewery.

Returning to Fresno State College, the sixteenth meeting was presided over by John Crosby with Chester Cole and Roger Ervin responsible for local arrangements. A Friday night social affair featured a dinner with a wine-tasting prelude. Ned Munger presented the banquet address.

San Diego State College hosted the seventeenth meeting, the third time in the organization's history that San Diego had served in this capacity. A social affair on a tropical island provided a delightful interlude. Lauren

Post presided over the meetings and a most cooperative staff shared in providing the local arrangments. Hugo Fisher, head of the State Resources Agency, gave the banquet address. A particularly successful feature of the meeting was a panel on high school geography, organized by William Pattison.

The eighteenth annual meeting was held at the University of the Pacific at Stockton with James Blick in charge of local arrangements. Ray Stanley presided over the well-attended meetings. Arthur Carthew gave the luncheon address and Richard Logan addressed the evening banquet.

Following the meetings Long Beach State College invited the Council to meet in Long Beach in 1965, under the leadership of President Sheldon D. Ericksen.

In addition to the annual meetings featuring the presentation of papers, committee reports, business sessions, field trips, social affairs, luncheon and banquet speeches, the organization embarked on a limited program of publications. The first publication was the *Newsletter,* first edited by Lauren Post, followed by David Lantis and Chester Cole. It was issued several times a year in mimeographed form, with such items of news as a president's message, annual meeting programs, and department information. Once a year a membership list was included in some of the early numbers, and a few research studies were printed such as Valene Smith's "Report on the Legal Status of Geography Instruction in California." Reference to this article were later to prove useful to some schools seeking to expand their geography offerings.

November, 1953, saw the inauguration of the *Bulletin of the California Council of Geography Teachers* under the editorship of Chester Cole. This was a somewhat larger and more inclusive publication than the *Newsletter* and included room for a few manuscripts, generally drawn from papers presented at the annual meetings. After six years of devoted work by Cole, Robert A. Kennelly took the editorship in 1959 to, in turn, pass on the assignment in 1960 to Robert Lamb who continued until 1964, when Stanley Ross took over.

Starting in 1960 a printed yearbook publication, the *California Geographer,* was inaugurated under the editorship of Robert A. Kennelly. The majority of the articles are drawn from papers presented at the annual meetings. The Los Angeles Trade-Technical College Printing Department is responsible for the printing of the publication for which the Council is most grateful.

Committee work has made important contributions to the activities of the council. Perhaps the most important single contribution was made by the Committee on Teacher Certification under the able leadership of Lauren Post. Following passage of the Fisher Bill by the state legislature in 1961, which provided for a new teacher certification program in California, the council took steps through the appointed committee to see that geography would be adequately represented in the program. Meetings were held with the responsible officials in the State Department of Education, and geographers throughout the state were asked to submit suggestions for a desirable program. The final program was conveyed to the proper authori-

ties and has probably made a positive contribution to assuring geography a firm position in the new credentialing program, although at this writing implementation of the final program has not been completed. Certainly without a spokesman in its behalf, geography could have been relegated to a very minor role in the teacher certification program which would in turn affect its status in the entire education program of the state.

Through the years there has not always been unanimous agreement regarding the work and function of the council. In 1960 quite a move developed to change the name of the organization and to place more emphasis on basic geographic research and less on geography in education. In a spirited election, the membership went on record as emphasizing the educational aspect of geography in the council program and retaining the name of California Council of Geography Teachers.

In reviewing the history of the organization, it is only proper to point out some failures and shortcomings as well as successes. Failure to recruit a larger membership from the ranks of elementary and high school teachers has been regrettable. Most of the membership has consisted of college and university personnel. Perhaps young geographers, particularly graduate students, have not been sufficiently well indoctrinated in the need for organization, nor have they been encouraged to join. The annual meetings have, on occasion, been characterized by quite inferior programs, made up of volunteer papers with perhaps no central theme organization. Not enough emphasis has been given to improving geographic instruction at the various levels, including the college and university. Some of the "big names" have not given the active support to the organization that professional responsibility should expect, although several such individuals who expressed skepticism regarding the council at its organization have come around to lending active support to the program.

On the positive side, geography in California has an organization, which every subject in the highly competitive educational curriculum needs in order to hold its own. No subject can expect individuals not trained in its discipline to fight its curricular battles. The annual meetings have yielded rewards not measurable in papers and reports, by providing personal contacts, opportunity to exchange ideas, constructive gossip, and, perhaps most important, have helped create a geographic fraternity with a group of educators committed to an ideal and joined in a feeling that they have something important to contribute to the education of the students of our state.

Perhaps some additional suggestions might be in order for the future, in addition to improving the established program. Interim meetings, in addition to the annual meeting, might be scheduled on a regional basis. Such meetings could be of a seminar nature with discussion panels on which local teachers are drawn on for ideas and demonstrations. Perhaps the council could exert influence on schools and communities with inferior geography programs, by communications and suggestions to improve or add geography instruction. In-service programs should be proposed to local school systems with competent people available to staff them. There are still colleges in California training teachers which do not offer a single course in geography! The meeting programs should be better planned, with

qualified individuals asked to share in at least part of the program, possibly in a panel type of presentation. A topic of genuine interest and importance should be developed. Possibly certain non-geographers should be invited to give points of view which could contribute to better understanding. The excellent field trip programs have greatly enriched the knowledge of our state on the part of those participating, and, if the setting of the meeting justifies it, field trips should be scheduled and carefully organized. The fine social affairs which have characterized many of the annual meetings should be continued and the Denoyer-Geppert Company deserves congratulations for its fine contribution to the success of past affairs. The many young geographers should be encouraged by their member institutions to join and take an active role in the council.

In addition to those whose names have been mentioned serving as president, arrangements chairmen, speakers and editors, credit should be given to others, especially the treasurers who commonly held office for two or more successive years. William Byron, Howard Brunson, and Delmas Bugelli helped keep the organization solvent through the years. Undoubtedly many others whose names cannot be recalled at this writing have also made their contribution, serving on committees and assisting with the annual programs. Only the limitation of space and memory makes it impossible to do justice to all who have shared in the function of the organization throughout its life.

With a record reaching over eighteen years and with a bright future ahead, the California Council of Geography Teachers deserves the continued support of the profession.

THE ROLE OF TRANSPORTATION IN CHOCO CULTURAL AND ENVIRONMENTAL CHANGE

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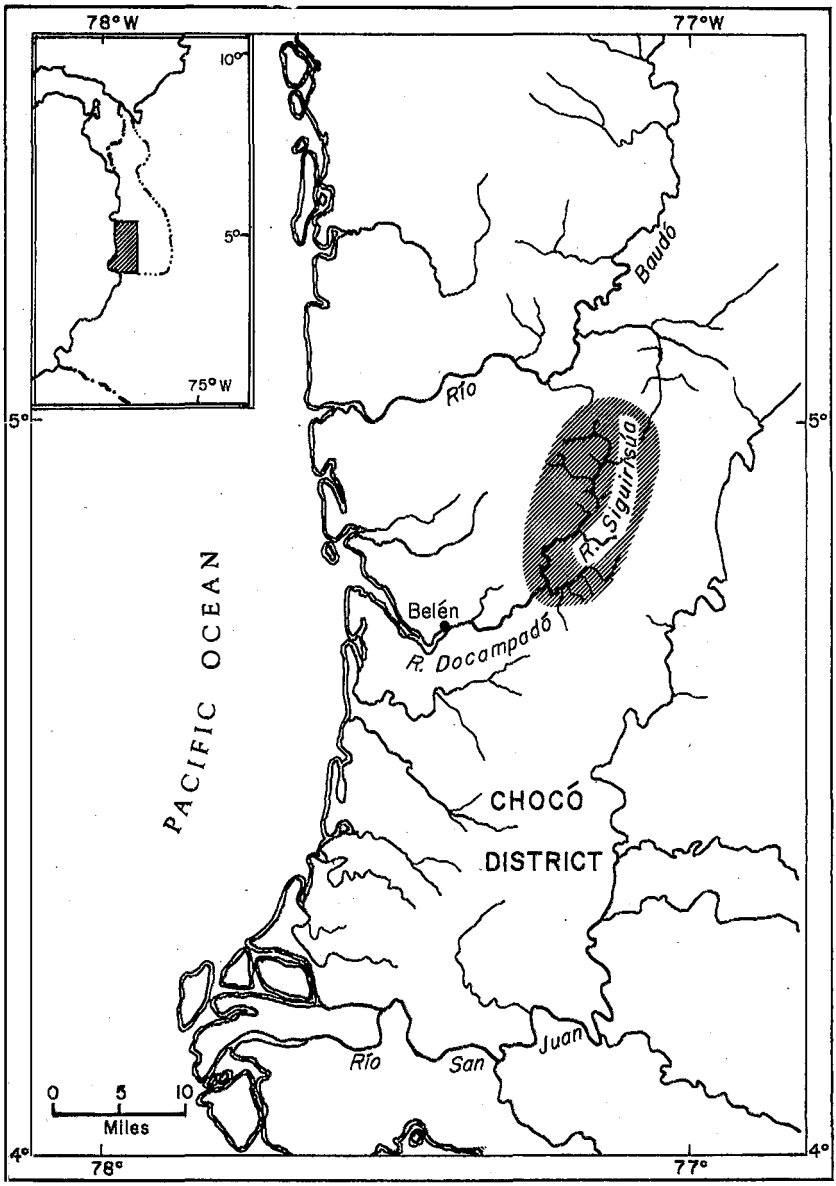
The region of the Chocó, along the Pacific Coast of the Republic of Colombia, is a legendary land of wealth. The Chocó was one of the fabled *tierra ricas* of conquest and colonial days, and continues to be thought of as such today. Even though located near that historic crossroad of mainland passage, the Isthmus of Panama, the Chocó remains today one of the lesser known regions of the Americas.

The Chocó is one part of the mosaic that is the tropical lands of the world. It is a lowland covered with verdant equatorial rainforest and fringed by tidal mangrove. The landscape is not a plain, but a dissected hill land. These forest-clad hills are the product of numerous cooperative physical processes, the most significant of which may well be the tropical climate. Temperatures rarely fall below 70° or rise above 90°F.; high relative humidity and large amounts of precipitation are characteristic. The Chocó is the rainiest place in the Americas. The core of the region, the Atrato-San Juan depression around Quibdó, receives slightly over 400 inches of rainfall annually; the regional average is over 120 inches. Rivers flow year-round with high water following the frequent rains and low water occurring during occasional three- to five-day rainless periods. At high water the rivers are charged with sediments; and as a consequence strips of fertile alluvium line the valleys. On the hills less fertile tropical latosols prevail. The natural fauna, prior to the last few decades, ran the gamut of tropical American species.

Within this physical milieu Indians developed unique patterns of culture, unique ways of life. These patterns were inscribed on the landscape as the Indians occupied their territory and pursued their livelihood. Over the inhabited portions of the surface of the earth, both in dwelling and carrying on his economy, man has uniquely modified the landscape in correlation with his technology and cultural attitudes. This is one of the few working hypotheses geographers have extrapolated from their centuries of observing man-land relationships. The Indians of the Chocó have also left their marks on the land.

The purpose of this paper is threefold: first, to describe in brief the Indian culture, placing emphasis on the economy in its ecological context; second, to delineate the changes that have modified this way of life, with resultant changes in the landscape, and, third, to assess the role of the traditional mode of transportation, the Indian dugout canoe, in these changes. These observations concerning culture change, landscape change, and transportation are based on a short period of field work in the summer of 1961.[1]

[1] This paper is the partial result of field work supported by the Geography Branch of the Office of Naval Research, Contract 388 067, with the Department of Geography, University of California, Berkeley. The writer wishes especially to acknowledge the assistance of Dr. James J. Parsons and Dr. Carl O Sauer, University of California, Berkeley, and Dr. Richard F. Logan, Dr. Joseph E. Spencer, and Mr. Martin Diskin, University of California, Los Angeles.



Map 1. Choco District, Western Colombia

Habitation of the narrow river valleys of the western lowlands of the Chocó is pre-Columbian.[2] The Noanamá, one of the Indian groups of the Chocó, have traditionally occupied the central slopes of the region. Today they dwell in number only along the Río Siguirisúa, a tributary of the Río Docampadó (See Map 1). This is the group and the area on which the paper will focus.

The Noanamá live in dispersed, raised-platform, extended-family houses on valley terraces and hilltops (Figure 1). The river fringes are the limits of human occupancy and the interior lands are uninhabited. The focus of livelihood is hunting, fishing, gathering, and shifting cultivation of a non-burning variety. In this system in pre-Columbian times stone tools were used to girdle trees and crops were planted in their decomposed material. Large amounts of energy were required to clear small forest plots. Crop growing was associated with the river margins, where trees were absent and soils rich. The dibble was used to plant the major root crop, sweet manioc or *yuca*. Maize, the staff of life, was broadcast over the mulch-covered fellings. The seeds of tree crops (the peach palm, the coconut, the cacao, and the calabash) were purposefully planted or casually tossed aside. In either case, the plants germinated, matured, and produced usable fruit. The Noanamá obtained the largest part of their protein and calcium from hunting, fishing, and gathering. Folk tales indicate these labors formerly occupied a more prominent position in the economy than they do at present.[3] The bow and arrow, the blow-gun and poisoned dart, and the stout spear were the primary hunting tools before the introduction of firearms. Stealth and a consummate knowledge of the habits and sounds of the prey were the hunter's techniques then. The dog, most important of the few domesticated animals, was used as a hound. Fishing produced the most constant source of meat and was carried on with spear, poison, and hook and line.

The pre-conquest patterns of Noanamá occupancy and economy on the landscape were distinct. Isolated houses were surrounded with small patches of crops, in view of the plantings near the river (Figure 1). According to legend, animal sounds came from the surrounding forest, and there were fish in the river. The variety of plants and animals consumed by the group was wide. The impact of the Noanamá, not "natural men" in the Rousseauan sense, on their resource base was less specialized and destructive than it is at present.

One of the prime characteristics of the inhabitants of the Chocó has been their mobility and riverine orientation. The Indian dugout, fashioned from a *chachajo (Anibo,* spp.*)*, or *cedro (Cedrela,* spp.*)*, is the most important mode of transportation in the Pacific lowlands from Ecuador to Panama. Before the introduction of European tools, the dugout was hollowed with stone or wooden tools or, perhaps, with fire. Today it is shaped

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[2] Robert C. West, *The Pacific Lowlands of Colombia: A Negroid Area of the American Tropics*. Louisiana State University Press, Social Sciences Series, No. 8, p. 88.

[3] Field notes from Martin Diskin, Department of Anthropology, University of California, Los Angeles. These folk tales were recently presented as a Master of Arts thesis, unpublished, 1963.

Figure 1. The circular pile dwelling, or bohio, is located atop a hill and surrounded with plantings of plantains and bananas. Note the primitive steps and the means of anchoring dugouts in the river.

Figure 2. On a shingle beach in the mid-portion of the river this Noanama uses the sharp, steel hand adz to finish hollowing the dugout. Note the boy with his toy canoe.

with the ever-present axe and machete, and finished with a sharp steel adz (Figures 2 and 3). A sleek, tapering watercraft, 15 to 18 feet in length and from 1½ to 2 feet in breadth, the dugout is propelled against the current by poling or with the current by guiding with the paddle. The Noanamá are a riverine people and a great part of their lives is spent in dugouts. The movement of individuals and groups from river valley to river valley is totally dependent upon this watercraft. The challenge of the river is met with gusto and real enjoyment, as well as with considerable skill. Patterns of mobility along the rivers to local or distant goals, possibly as far as the upper Río Atrato, were well established prior to the Conquest. Some of this mobility necessitates overland transit. Foot trails from the headwater of one navigable stream to another tie the region together. However, the utilization of such trails is decidedly less frequent than travel along the "streets" of the rivers. Prior to contact with Old World ways the interchange of tools, techniques, and ideas took place within a discrete circuit. Noanamá technology was in tune with the neigboring cultures of the tropical lowlands of the Chocó.

The initial contact between the Spanish *Conquistadores* and the Noanamá was in the late sixteenth and early seventeenth centuries. Contact was later than in other areas of the Chocó because the territory of the Noanamá was between the points of oceanic contact and to the west of the route of overland travel. A few raids against the port of Buenaventura in the first decades of Spanish control earned the Noanamá the title *indios de guerra.* The Indians attacked the port after traveling along the coastal mangrove channels, or *esteros,* in their dugouts. Occasional raids by the Spanish into Noanamá territory resulted in pacification, and by the middle of the seventeenth century royal tribute was being collected. The Indians paid their assessments with food and by producing dugouts.[4] In traveling to the centers of Spanish control the Noanamá likely came into contact with Old World crops, such as sugar cane, plantains, and bananas. Without doubt, they encountered Old World domesticated animals, tools of iron and steel, and a myriad of new sights and sounds.

In the early seventeenth century importation of African Negroes as slave labor for the gold placers of the Chocó was initiated.[5] The Noanamá thereby met still another and different set of beings. This newly-arrived population brought a distinct gene pool, some African tropical diseases, new crops, and a highly-developed spiritual and oral tradition. Largely dispossessed of material culture traits, the Negro or *Libre* (the freed one, as he has come to be known) borrowed the bulk of his paraphernalia from the Indian. Crops and methods of cultivation, styles of house construction, and weapons for hunting and fishing were adapted, as well as the traditional transport craft, the dugout. The production of these latter items has never been fully mastered by the Negro. They are mainly purchased from the Indian. Such economic relations have been among the small number of intergroup functions. The growth of Negro population resulted in an un-

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[4] *Archivo Histórico Nacional de Colombia, Bogotá.* Protocolos XXV., f. 9 vols. (1605-1810).

[5] *Archive Histórico Nacional de Colombia, Bogotá. Minas del Cauca V.,* f. 362 (1690).

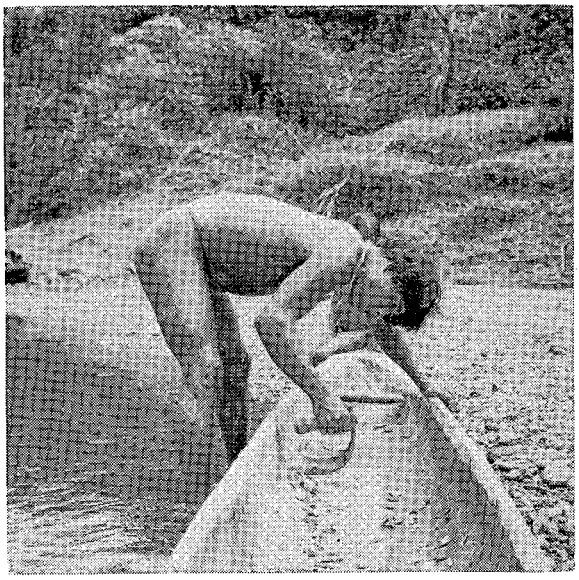

Figure 3. Short, chopping strokes with the sharp, steel hand adz are used in the final stages of the hollowing process. A smooth surface is the result.

Figure 4. These Noonama men have just completed felling the surrounding forest with axe and machete. This is the final step in the regional system of non-burning shifting cultivation.

precedented imposition of man on the landscape. Negroes built their houses in isolated clusters on the margins of the main streams. They opened new lands to cultivation, and they hunted and fished in forest and stream. Through natural increase the *Libre* has become the dominant racial group in the Chocó.

With the ascendancy of Negro numbers and areas of occupancy, the Noanamá and other Indians of the Chocó retreated up the tributaries to the headwaters of the river networks. This was a matter of choice, not force.[6] Rather than dwell near people they despised, the Indians moved upstream.[7] As a result of these spatial constrictions, the migration of Indians very likely began to the Darien of Panama. For those who remained in Colombia, their resource range lessened with their isolation. Their "ecological elbow room" tightened in the upper drainage basins, where fish and game were limited in numbers. Though the pot remained full, vegetable foods became more important to the diet. The plantain sufficed for meat. The axe and machete were used to open greater tracts of forest for planting (See Figure 4).

By the early nineteenth century, dugout travel to the local trading post was commonplace. Occasional trips were made to the regional centers of Buenaventura and Quibdó. In traveling to and from these settlements new tools, techniques, ideas, and cultural attitudes were encountered. Machined cotton textiles, twopenny nails, axes, and machetes were the desired goods. By the twentieth century, shotguns and smallbore rifles, pots and pans, matches and carbide lamps, and muslin netting could be purchased. By the 1950's, even with the restrictions on firearms imposed by the Colombian government, few Indian houses were without such weapons. Negro *compadres* showed the Noanamá how to twine fish nets. These new hunting weapons, fishing tools, and associated techniques, gained through contact via the dugout, have resulted in a regional depletion of fish and game. Both the black spider monkey (*Ateles,* spp.), and the red howler monkey (*Alouatta,* spp.) and birds, such as the toucan (*Rhamphastus,* spp.), which were too high to be killed with poison dart or arrow, were exterminated with steel shot and .22 calibre bullets. One of the important economic species of fish (*Sabalo, Brycon,* spp.) has been all but eradicated through the unwise use of nets. Food growing has increased not only in area, but in economic and dietary importance. Plantings are now found the distance of a twenty-minute walk from the river, and there are more of them. Changes in technology, the same that are affecting the economy, diet, and landscape, have brought about the abandonment of many traditional institutions, attitudes, and modes of production. Social structure, patterns of authority, land tenure, folklore, religion, and household arts and crafts have changed. An interest in *pesos* to purchase matches, kerosene, carbide, or other western goods is rampant. The movement from

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[6] This is in direct contrast to the ideas expressed by Robert C. Murphy, "Racial Succession in the Colombia Chocó," *Geographical Review,* Vol. 29 (July, 1939), p. 469.

[7] This sentiment was expressed by Indian informants. It was verified and had its landscape impact in three places where Indian houses had been abandoned close to recently-settled Libres.

the traditional economy, based on subsistence and barter, toward a money economy is in progress. The transition may take the Noanamá, in the future, from the status of a primitive, traditional society to a peasant society or, perhaps, to disintegration. These changes will be reflected in an ever-increasing impact on the resource base of the Noanamá.

In conclusion, the mechanism behind cultural and environmental change among the Noanamá of the Chocó, as elsewhere in much of Latin America, has been contact with new tools, techniques, ideas, and cultural attitudes. Changes began with the contact between Indian and Spaniard and were furthered by contact between Indian and African. The most striking changes have occurred in the last half century with the contact of Indian and western culture. Within the humid tropical land of the Chocó the avenues for contact in the past, as in the present, have been the fluvial "streets." These have been the routes of cultural connectivity. The mode of transportation in aboriginal times, as today, has been the Indian dugout. The motivations then, as now, were primarily economic, social, and ceremonial. Though the pattern and range of mobility has increased little, and the frequency of movement is not radically different, what lies at the ends of the lines has drastically changed. The dugouts have been the receptacles; they have carried the seeds of cultural change, and thus environmental change, back to the headwaters of the rivers, the centers of Indian occupancy.

In many other parts of the culture region of Latin America new tools, ideas, and ways of doing things are brought to the inhabitants by traditional and modern modes of transportation and communcations. The role of these techniques of movement of goods and ideas in the modification of the cultures and environments of Latin America is largely undetermined; it presents numerous topics for further consideration.

PLANTATION FARMING: ITS WIDER APPLICATION IN AGRICULTURAL CLASSIFICATION

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Agricultural classification schemes have traditionally assigned plantation farming to predominantly tropical areas. Yet the Agricultural Revolution continues to favor, on an increasing scale, most or all of those characteristics long considered most typical of the plantation, *viz.*, crop and areal specialization, highly rationalized cultivation and harvesting techniques, large operating units, management centralization, labor specialization, massive production, and huge capital investments. Many farms, therefore, have been rapidly acquiring plantation characteristics and in areas well beyond the low latitudes. Meanwhile, the older, and more "traditional," plantations have been further rationalizing their operations. Why this lag of classification behind actual events? It would seem that the principle reason is too rigid a plantation definition. Economic forms are rarely static; modification is the rule, and the rate of modification has been constantly quickening. The plantation, as one of the most rational of economic forms is therefore especially susceptible to change. What is needed, then, is a more flexible concept of the plantation, one that will recognize its dynamic nature and not consign it to decline as soon as it deviates from classification criteria set up in a particular historical period. Although there has never been complete agreement on a definition of the plantation, there are several commonly-held biases.

BIASES IN THE PLANTATION DEFINITION

Perhaps the oldest of these biases is the view of the plantation as a solution by the white man to his supposed inability to do manual labor in the tropics. Not until the last world war was this view, which was rooted in the skepticism of eighteenth-century European philosophers concerning possibilites of overseas colonization by Europeans, authoritatively contradicted by research.[1] This was the work of the physiological climatologists, who, in effect, concluded that there are no climates in which man cannot work effectively. Nor do past and present plantation areas show a strict correlation with tropical climates. Plantations were first developed in Iran and the Mediterranean Basin and are not unimportant there today. Plantation farming also is a thriving occupation in the southwestern and southeastern United States and in certain sections of Australia, Chile, and the Republic of South Africa. Plantations also have been recorded for areas well beyond the subtropics, such as Iceland, Ireland, and parts of colonial New England. Today many fruit, vegetable, sugar beet, tobacco farms in the northern United States and sugar beet farms in northwestern Europe

[1] Jean Gottmann, *La Politique des États et leur Géographie* (Paris: Armand Colin, 1952), p. 35. Also D. H. K. Lee, "Physiological Climatology," in *American Geography: Inventory and Prospect*, eds. P. E. James and C. F. Jones (Syracuse, N.Y.: Syracuse University Press, 1954), pp. 470-483.

display marked plantation characteristics. Certain Soviet *kolkhozes,* specializing in crops like sugar beets and cotton, are about the nearest equivalent to the California "factory farm."

Another climatic bias, but more influential indirectly, is the common restriction of the plantation classification to those large-scale farms producing tropical or subtropical crops. Waibel narrowed the restriction further by labeling as a plantation only those enterprises raising crops that required complicated processing, this being necessary to preserve the product on its long trip from lower to higher latitudes.[2] Both of these restrictions have lost much of their meaning in the last several decades, again particularly since the second world war. Numerous traditionally middle-latitude crops are now being cultivated extensively by plantation-type enterprises. Probably the best single example is that of California, where sugar beets, vegetables, and deciduous fruits are grown in quantity. Advances in crop selection have also made possible advances of normally tropical or subtropical crops into cooler zones, as shown by the northward extensions of cotton, tea, grapes, and citrus fruit in the Soviet Union. Technological advances also continue to make ever more tenuous the association by Waibel of complex processing with low latitude location of plantations. Industrial methods, from sorting, packing, washing, and waxing by machine to vacuum-packing and freezing, are being applied to a growing number of crops heretofore not considered the plantation type and not necessarily located in the low latitudes. Nor do all crops raised in the plantation manner need complex processing, as illustrated by bananas.

Crop biases in the plantation definition also show in the prominence given to monoculture. Plantations, however, have never been strictly monocultural in that food crops have commonly been raised for plantation personnel. Then, as soil deterioration and unsettling of the biological balance have become problems, remedying crops (in particular, legumes) have taken their places beside the money crop. More recently, marketing problems have been encouraging the addition of one or more money crops. Another reason for this move in some areas is, surprisingly enough, mechanization. Although one of the most potent forces favoring one-crop cultivation, it also makes available more area and cultivating time, not all of which necessarily has to be given to the one crop. Also, the longer machinery is used, the quicker its costs can be amortized.

Crop biases in previous agricultural classification schemes have also encouraged the underestimation of the extent of plantation area. Engelbrecht's "Die Landbauzonen der Erde,"[3] which has strongly influenced German and American geographers to this day, emphasized crop regions, not agricultural systems, and restricted plantation activity to those crops that were thought "typical" of plantations, *i.e.*, low latitude crops. Whittlesey's "Major Agricultural Regions of the Earth,"[4] still considered by most

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[2] Leo Waibel, "Probleme der Landwirtschaftsgeographie," *Wirtschaftsgeographische Abhandlungen,* Nr. 1 (1933), p. 18.

[3] Hinrich Engelbrecht, "Die Landbauzonen der Erde," *Petermanns Geographische Mitteilungen, Erganzungsband* 45 (1930), pp. 286-297.

[4] Derwent Whittlesey, "Major Agricultural Regions of the Earth," *Annals, Association of American Geographers,* 26 (1936), pp.199-240.

American geographers as the definitive agricultural classification, was based on more criteria; yet it, too, assigned plantation farming mainly to tropical crops ("Plantation Crop Tillage"). Even Eduard Hahn, who was one of the first to concern himself with the plantation form and who was much more system-oriented than either Engelbrecht or Whittlesey, maintained that the tropical zone location was the most important characteristic of the plantation.[5]

Still other views on the nature of the plantation face revision as major changes take place in its character. No longer are plantations restricted to a single-owner, capitalistic type of operation. Now they may be run also as a stock company or as a cooperative with management decisions made by a private company or by the state. Plantations in several areas are also reducing their dependence on foreign markets by concentrating more on home demands, while others actively pursue both outlets. Plantations are also reducing their dependence on labor by extensively mechanizing. Labor is becoming increasingly more expensive as people move to the cities in search of opportunity, a movement strong in both developed and underdeveloped areas. In underpopulated areas, mechanization is promoting the spread of plantation farming into areas previously thought unsuitable for agriculture. Nor can the traditional view of plantation labor as a poverty-stricken and ruthlessly exploited group be uniformly defended. Despite such social contrasts as the Soviet *kolkhozian* and the South African Negro, forces are working everywhere toward the formation of a worker who is better paid, provided with health and security services by the government, trained in machinery operation, and imbued with the attitudes of an industrial worker. Ethnic differences between labor and management groups are also being obliterated as workers move into supervisory positions and buy plantations from former owners.

Plantation Typology and Terminology

The wide distribution and numerous variations of the modern plantation make for a rich typology. The continuing spread of farming technology makes increasingly difficult a primary classification of plantation types based on the peculiarities of geographic region, but it does sharply differentiate plantations as to the complexity of processing operations and the nature of the associated capital equipment. Walter Gerling has been the first to construct a plantation typology using these two criteria,[6] although technological advances since his proposals make it necessary to add many more plantation types to his original list of seventeen. These additions have come about in two ways: new crops being raised and processed in the plantation manner, and new types of preparation being applied to crops that have already been contributing to plantation production (*e.g.*, freezing).

A further addition to the Gerling typology that seems necessary is a secondary classification based on social structure. Although production is

[5] Eduard Hahn, "Die Wirtschaftsformen der Erde, "*Petermanns Mitteilungen,* 38 (1892), pp. 8-12.

[6] Walter Gerling, *Die Plantage* (Wurzburg: Verlag der Stahel'schen Universitatsbuchhandlung, 1954), p. 47.

the principal object of the plantation, an inseparable by-product is a way of life. Three categories can be recognized: the individual, or corporate, plantation, based on a free economy; the state, or government, plantation, with a strictly planned economy; and the cooperative plantation, which is managed by the government but depends on the world market.

The application of the term "plantation" to all these varieties of large-scale farms practicing intensive agricultural operations is not approved by all. Some would substitute "industrial farm," but its newness, its contradiction in terms, and the practice in many sections of applying the term to any farming system extensively employing rationalized procedures reduce its usefulness. Binns has suggested "estate,"[7] but for many the word suggests leisurely, rather than highly commercialized and rationalistic, farming. Other terms have also been suggested but none is so widely known as "plantation," despite the social connotations often associated with the word. "Plantation" also has a natural and historical basis as a term that is largely and objectively economic, *i.e.*, one that refers to an area of cultivated crops, often large. Expansion of this meaning on the economic level would certainly seem more appropriate than selection of an entirely different term which may be more pertinent at the moment but would have far fewer users.

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[7] Bernard O. Binns, *Plantations and Other Centrally Operated Estates*, FAO Agricultural Studies, No. 28. (*Rome: Food and Agriculture Organization of the United Nations*, 1955), p. 8.

RECLAMATION SEQUENCE IN THE SACRAMENTO-SAN JOAQUIN DELTA

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University of Illinois

Just over a century ago the Sacramento-San Joaquin Delta was a great fresh-water tidal marsh. Tules (*Scirpus lacustris L.*) occupied all but the deeper ribbons of water and thin corridors of shrub and woods covered the natural levees. The hygrophytic plants overlaid a body of decomposed organic matter which at the western apex of the delta had a maximum vertical development of 50 or 60 feet. The peat, overlying a mineral substratum of alluvial and lacustrine origin, accumulated during a period of prolonged areal subsidence.[1]

The bulk of the 535,000 acres which comprise the delta is enclosed by the 10-foot contour (Figure 1). Over half of the area is at or below sea level.[2] An account of the transformation of the swamp into an intensively farmed landscape is the purpose of this paper.

CALIFORNIA'S SWAMP AND OVERFLOWED LAND

The delta embraces about 20 per cent of the total swamp and overflowed land which the United States awarded to California from the public domain.[3] The granting of such lands was provided for in the Arkansas Act, which Congress passed on September 28, 1850. The state in accepting the land also accepted responsibility for directing revenue derived from

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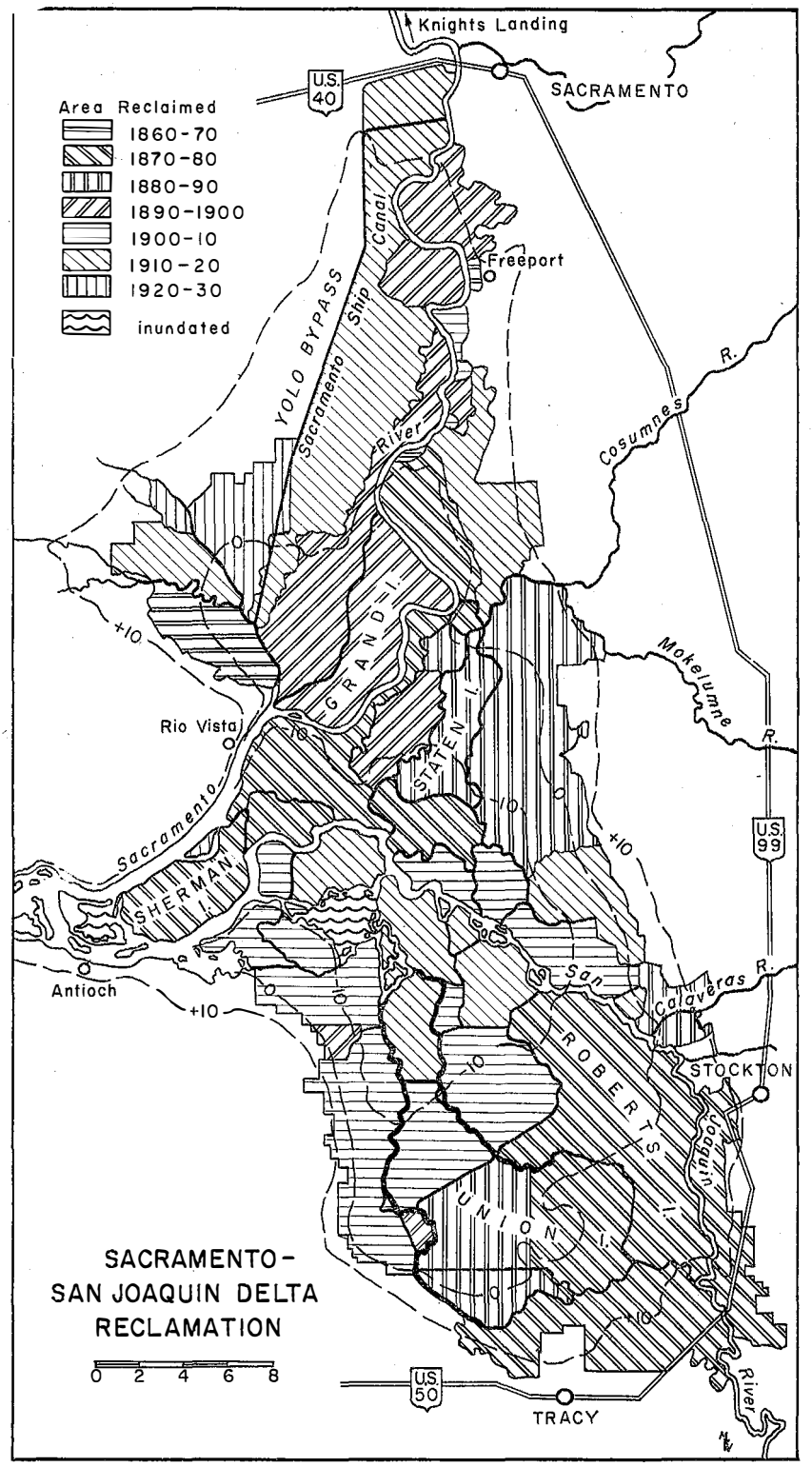
[1] Andrew C. Lawson, "The Geomorphogeny of the Coast of Northern California," University of California, Department of Geology, *Bulletin,* I (November 1894), pp. 265-266; F. Leslie Ransome, "The Great Valley of California," *ibid.* (April 1896), p. 415; California, Department of Public Works, Division of Water Resources, *Report of Sacramento-San Joaquin Water Supervisor for the Period 1924-1928,* Bulletin No. 23 (Sacramento: 1930), p. 361; U.S. Department of the Interior, Geological Survey, *Geology and Water Resources of the Mokelumne Area, California,* Water Supply Paper No. 619, by H. T. Stearns, T. W. Robinson, and G. H. Taylor (Washington: 1930), p. 32; U. S. Department of Agriculture, Bureau of Plant Industry, and University of California Agricultural Experiment Station, *Soil Survey of the Sacramento-San Joaquin Area, California,* Series 1935, No. 21, by Stanley W. Cosby (Washington: 1941), pp. 17-18.

[2] At least since 1869 the contour has been recognized to embrace a floodplain segment with subaerial deltaic features. Sherman Day, "Report," in Tide Land Reclamation Company, *Fresh Water Tide Lands of California* (San Francisco: M.D. Carr and Co., 1869), p. 15; California, Commissioner of Public Works, *Report . . . to the Governor of California,* containing "Report of Consulting Engineers," by Marsden Manson and C. E. Grunsky (Sacramento: 1895), p. 8.
Bureau of Reclamation water-use investigators adopted the five-foot contour, but added higher lands that were irrigated from delta channels. U.S. Department of the Interior, Bureau of Reclamation, Project Development Division, "Delta Report," by John A. McKeag (Sacramento: 1954), unpaginated manuscript.

[3] U.S. Department of the Interior, Bureau of Land Management, "Report of the Director, 1950," with Statistical Appendix (Washington: n.d.), p. 126, Mimeographed; California, Surveyor General, *Statistical Report . . ., for the Years 1869, 1870 and 1871,* in Appendix to Journals of Senate and Assembly of the 30th Session of the Legislature (Sacramento: 1872), pp. 6-7.


Knights Landing
SACRAMENTO
U.S. 40
Area Reclaimed
1860-70
1870-80
1880-90
1890-1900
1900-10
1910-20
1920-30
inundated
Freeport
Sacramento Ship Canal
YOLO BYPASS
River
Cosumnes R.
GRAND I.
STATEN I.
Mokelumne R.
Rio Vista
Sacramento
SHERMAN I.
U.S. 99
Antioch
San Joaquin
Calaveras R.
ROBERTS I.
STOCKTON
Stanislaus
UNION I.
SACRAMENTO-
SAN JOAQUIN DELTA
RECLAMATION
0 2 4 6 8
U.S. 50
TRACY
River

swampland sales into reclamation.[4] Relatively little revenue resulted, however, and whatever was used for reclamation was insufficient for the job. Nevertheless, the state's permissive legislation and its post-1910 Central Valley flood control program contributed enormously to the ultimate success of reclamation.

The history of swamp and overflowed land measurement and transfer to the state is a morass, which may be appropriate. Years elapsed before federal and state agencies agreed on segregation lines or surveying procedures.[5] Cooperation in surveying became effective after 1859, but there was no mechanism to review contested surveys until 1866 and the Secretary of the Interior did not agree to all of California's claims until 1871.[6] By that time the state had sold nearly all of the swamp and overflowed land anyway.

Reclamation Initiated

Reclamation was begun in the early 1850's by individual settlers who, acting independently, constructed low earthen barriers to withstand exceptional tides and seasonal floods. The levees on given tracts were joined gradually and an attempt was made to dress them to uniform specifications. Most such work was performed by brigades of Chinese, other Asiatics, and Hawaiians equipped with shovels and wheelbarrows.

In 1853 there were low discontinuous levees along the Sacramento River between Rio Vista and Freeport, on the lower Mokelumne, and in the vicinity of the Calaveras River mouth.[7] Levees appeared on southern Roberts Island at least by 1856. The San Joaquin's east bank opposite Roberts Island, parts of Union Island, mainland patches to the east of Anti-

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[4] *84 U.S. Statute at Large* (1845-51), IX, 519; California, Swamp Land Commissioners, *First Annual Report . . ., December 15, 1861,* in Appendix to Journals of Senate and Assembly of the 13th Session of the Legislature (Sacramento: 1862), p. 9.

[5] For a detailed description of the involved situation see the writer's "The Settlement Geography of the Sacramento-San Joaquin Delta, California (unpublished Doctoral dissertation, Department of Geography, Stanford University, December 1957), pp. 185 ff.

[6] California, Surveyor General, *Annual Report . . . for the Year 1860,* in Appendix to Assembly Journals for the 10th Session of the Legislature (Sacramento: 1861), pp. 14-15; *ibid., Biennial Report . . . from December 4, 1871, to August 1, 1873,* in Appendix to Journals of Senate and Assembly of the 20th Session of the Legislature (Sacramento: 1874), p. 12; W. W. Robinson, *Land in California* (Berkeley: University of California Press, 1948), p. 192.

[7] Julian Dana, *The Sacramento: River of Gold* (New York: Farrar and Rinehart, Inc., 1939), p. 159; *An Illustrated History of San Joaquin County, California* (Chicago: The Lewis Publishing Co., 1890), p. 222; California, Commissioner of Public Works, *Report . . . to the Governor of California,* (1894), in Appendix to Journals of Senate and Assembly of the 31st Session of the Legislature (Sacramento: 1895), p. 14; California, Swamp Land Committee, *Evidence Taken before . . .,* in Appendix to Journals of Senate and Assembly of the 12th Session of the Legislature (Sacramento: 1861), p. 8; "Up the Sacramento," *San Francisco Call,* October 16, 1877, in *Bancroft Scraps,* Set W 3, p. 1064; "San Joaquin News," *San Francisco Alta,* December 12, 1852, *loc. cit.,* Set W 4, p. 1412.

och, and Sherman Island were being protected by levees by 1859.[8] At the time a big levee stood 2 to 4 feet above a base that was 6 to 8 feet broad.[9]

State Leadership

Although some settlers hesitated to make improvements on swampland during the 1850's because of uncertainties in titles, the chief problem was to develop accord among landowners on reclamation plans and financing. The legislature attempted to solve this problem in 1861 by creating an agency to supervise reclamation. The agency was empowered to direct reclamation in districts expressly created upon petition of owners of one-third "of the land susceptible of being reclaimed together, and contained within natural boundaries" (interpreted to be natural levees and/or high land).[10] That owners of one-third of the land in given area were so privileged was not approved universally. The state's assumption of responsibility for reclamation was far ahead of the times, notwithstanding the Arkansas Act.

The supervisory State Board of Reclamation Commissioners approved the formation of reclamation districts, drew up and partially executed levee and drainage plans, and devised tax programs for 1) all of the backswamp east of the Sacramento River between the capital and the Cosumnes; 2) a tract flanked on three sides by the Mokelumne; 3) an area between the San Joaquin River's east bank and the road linking Tracy and Stockton; 4) Grand, Staten, and three or four adjacent islands, and 5) the entire backswamp between Rio Vista and Knights Landing. The latter project failed with the bankruptcy of the major contractor. All centrally-directed work halted in 1866 upon the legislature's dissolution of the controversial board.[11]

By 1870 not more than 15,000 acres were moderately secure from flood.[12] The artifical levees usually rose 2 to 8 feet from bases up to 30 to 40 feet wide. Such reclaimed strips occupied natural levees along the Sacramento above Rio Vista, along the Mokelumne and Calaveras, and flanking

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[8] *History of Sacramento County, California* (Oakland: Thompson and West, 1880), p. 220; Commissioner of Public Works, *Report* . . . (1894), pp. 12-13, 16, 17; *Illustrations of Contra Costa Co., California* (Oakland: Smith and Elliott, 1879?), p. 30.

[9] Dana, p. 161; Commissioner of Public Works, *ibid.*, p. 14.

[10] 352 *California Statutes* (1861), p. 355; Swamp Land Commissioners, *First Annual Report* . . ., p. 116.

[11] Ibid., pp. 10-11, 13-15, 18; California, Board of Swamp Land Commissioners, *Report . . . for the Years 1864 and 1865*, in Appendix to Journals of Senate and Assembly of the 16th Session of the Legislature, Vol. II (Sacramento: 1866), pp. 4,6, 10-13; *ibid., Second Annual Report* . . ., cited in "History and Present Status of Reclamation Districts in California," California, Department of Public Works, Division of Water Resources, *Financial and General Data Pertaining to Irrigation, Reclamation and Other Public Districts in California,* Bulletin No. 37 (Sacramento: 1931), p. 135; California, Surveyor General, *Annual Report* . . . (1862), in Appendix to Assembly Journals for the 14th Session of the Legislature (Sacramento: 1863), pp. 12-13, 21; California, Controller of State, *Annual Report* . . ., *for the Fifteenth and Sixteenth Fiscal Years, 1864 and 1865*, in Appendix to Assembly Journals for the 16th Session of the Legislature, Vol. I (Sacramento: 1866), p. 10; *History of Sacramento County, California, loc. cit.; Illustrations of Contra Costa Co., California, loc. cit.*

[12] The writer concurrs with the California Division of Water Resources estimate. *Variation and Control of Salinity in Sacramento-San Joaquin Delta and Upper San Francisco Bay,* Bulletin No. 27 (Sacramento: 1932), p. 158.

the San Joaquin River to the south of Stockton. Drained and broken, such land increased in value twelve to eighty times. It was worked by self-employed and tenant farmers who raised wheat, potatoes, beans, onions, and deciduous fruit. Except for wheat, operations tended to be on a small scale by present standards.[13]

Independent Large-scale Reclamation

After 1866, when the Board of Reclamation Commissioners ceased to function, matters pertaining to swamp and overflowed land became the responsibility of county agencies. Acreage limitations were removed in 1868,[14] and land agents and development companies flourished. Reclamation became a matter of speculation for capitalists from San Francisco and elsewhere. The actual work was pursued independently and with vigor, but with slight comprehension of the complexities involved.

The individuals who dominated reclamation activity after 1866 employed labor, draft animals, and machinery on a large scale. They had remarkable success at first, but in the decades following 1871 floods were experienced annually somewhere in the delta. General disasters in 1878 and 1881 shattered fortunes and, for many people, stilled hopes that reclamation could succeed. The persistent men recognized that existing levees were too low and thin, that due regard had not been paid to their placement, and that something had to be done to check the enormous volume of mining debris carried into the Central Valley from the Sierra Nevada.

A variety of techniques and tools were employed to achieve reclamation and to reduce costs. Peat blocks and fill for levee construction, originally obtained inside the tracts, were dug from borrow ditches outside the artificial levee at least by 1869, though the practice was not general for some years. Levees up to 25 and 30 feet high and 100 feet across at the base were being set behind broad berms after 1875; drainage canals and steam pumps were introduced around 1870 and were in general use by 1875. The clamshell dredge, without which reclamation could not have been sustained, was employed after 1879. This dredge moved more fill more rapidly and at lower cost than any other piece of equipment.[15]

Expansion of Reclaimed Acreage[16]

Large-scale operations resulted in the more or less successful reclamation or about 110,000 acres during the 1870's (See Map 1). Most of the

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[13] Commissioner of Public Works, *Report . . .* (1894), p. 13; *History of Sacramento County . . .*, p. 188; I. N. Hoag, "Farmer's Gardens," California, State Agricultural Society, *Transactions . . .*, During the Years 1870 and 1871 (Sacramento: 1872), p. 340; Swamp Land Commissioners, *First Annual Report . . .*, p. 13; *ibid., Report . . . for the Years 1864 and 1865*, pp. 9-10. For a description of reclamation, island by island, see Thompson, pp. 468-509; for details on costs and land prices see pp. 282-286.

[14] 215 *California Statutes* (1867-68), p. 507; Division of Water Resources, *Financial and General Data . . .*, p. 111.

[15] The foregoing discussion based largely on contemporary newspaper and magazine reports, development company brochures, Federal and State documents. See Thompson, pp. 218-286, 446-456.

[16] Thompson, pp. 468-509, traces the expansion. For general data see Division of Water Resources, *Variation and Control . . .*, p. 158.

tracts lay in the west-central delta between the Sacramento and San Joaquin Rivers and between Stockton and Tracy. Apparently west-central tracts were favored because of their accessibility to main waterways and because of relatively low local flood crests. The more southerly islands possessed unusually well-defined natural levees and the land was close to Stockton.

Some 70,000 acres were reclaimed during the 1880's and 60,000 acres in the 1890's. The earlier levee enclosures were made in the eastern-central, southern, and Calaveras River areas. The Sacramento River districts were slower to complete reclamation for various reasons. Flood crests were especially high along the debris-choked and levee-constricted river. Serious wave erosion on back levees occurred whenever water flowed through the broad Yolo depression west of the Sacramento River. Moreover, diffuse land ownership handicapped policy making and execution. Elsewhere in the delta land tended to be owned in large parcels.

Reclamation of the western-central and eastern-central delta occurred between 1900 and 1920. About 88,000 acres were reclaimed in the first decade and 94,000 acres in the second. It was a period when farm mechanization, crop specialization, contract planting, labor contracting, and marketing procedures developed into modern forms. The virgin land that was drained at this time produced splendid potato crops, and it was reclaimed largely for this purpose. Since a fungus problem rendered peat lands unprofitable for potato production after three years, there was a steady demand for fresh soil. Beans, asparagus, barley, and alfalfa were major crops too. Onions, sugar beets, field corn, and celery occupied lesser acreages.[17]

The feasibility of swampland reclamation on either side of the Sacramento was greatly enhanced after 1910 by flood control works developed through federal and state cooperation. The river was widened and deepened below Rio Vista, and the Yolo Bypass was lined with great levees.[18]

Some 24,000 acres were reclaimed in the 1920's to the north of Rio Vista. The area lies within the Yolo Bypass and is subject to periodic flooding.

Conclusions

An incalculable price has been paid to reclaim the delta. It may be estimated that no three-year period passed between 1852 and 1911 during which some improved land was not inundated by flood or high tide. Regional disasters occurred in 1852, 1861-62, 1878, 1881, 1904, 1906, 1907, and 1909. Although there were no inundations between 1911 and 1925, there have been levee breaks in some part of the delta on an average of once every three and a half or four years since. Most of these are limited to single tracts, some of them in the Yolo Bypass.[19]

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[17] Thompson, pp. 234-237, 313-315, 330-335.

[18] U. S. Congress, House, *Reports on the Control of Floods in the River Systems of the Sacramento Valley and the Adjacent San Joaquin Valley,* California, 62nd Congress, 1st Session, House Document No. 81 (Washington: 1911), pp. 14-15, 21-23; "Report of Assistant Engineer H. H. Wadsworth," in *ibid., Control of Floods on the Mississippi and Sacramento Rivers,* 64th Congress, 1st Session, Report No. 616 (Washington: 1916), Appendix B, p. 114. Thompson, pp. 176-184.

[19] For an account of the hydrography of the delta and an historical description of floods see Thompson, Chapter I, Appendix A and B.

The permanent loss of once-reclaimed land has occurred in areas west and south of Sherman Island and near the center of the delta. Here flooding occurred between 24 and 34 years ago, and owners did not choose to recover their land.

It is unlikely that there will be additional permanent losses and the incidence of floods should diminish sharply now that the state and the federal governments plan to raise massive levees along the Sacramento and San Joaquin Rivers. The delta will continue to be a major beneficiary of the political and engineering triumphs that mark California's water supply, flood control, and reclamation experience.

SOUTH AFRICA'S BANTUS[1]

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Among the some 37 independent governments of the world's fastest changing continent, the Republic of South Africa rates special attention for two reasons.

Occupying only 472,000 of the continental total of 11,500,000 square miles, the republic is the undisputed "workshop of the continent." Seventy per cent of the free world's gold comes from her mines and 75 per cent of Africa's steel from her mills. Fifty per cent of all the motor vehicles, railroads and telephones operating in the continent are additional proof for South Africa's economic strength. The resulting national income surpassed $7 billion or $420 per capita already in 1963 and 1964 which is not only an African record but compares favorably with countries like Italy or Greece. Of this total, incidentally, an estimated $300 million is used for military preparedness.

The Republic of South Africa stoutly defends the proposition that Africa is not the exclusive preserve of any one race but "multi-national." The continent's largest white community, consisting of 3,106,000 Afrikaans- and English-speaking descendants of Dutch and British settlers, considers South Africa its homeland. This is still a minority within the country's total population of 16,222,000, but nowhere else in Africa is the white segment that large or as significant a percentage of the total.

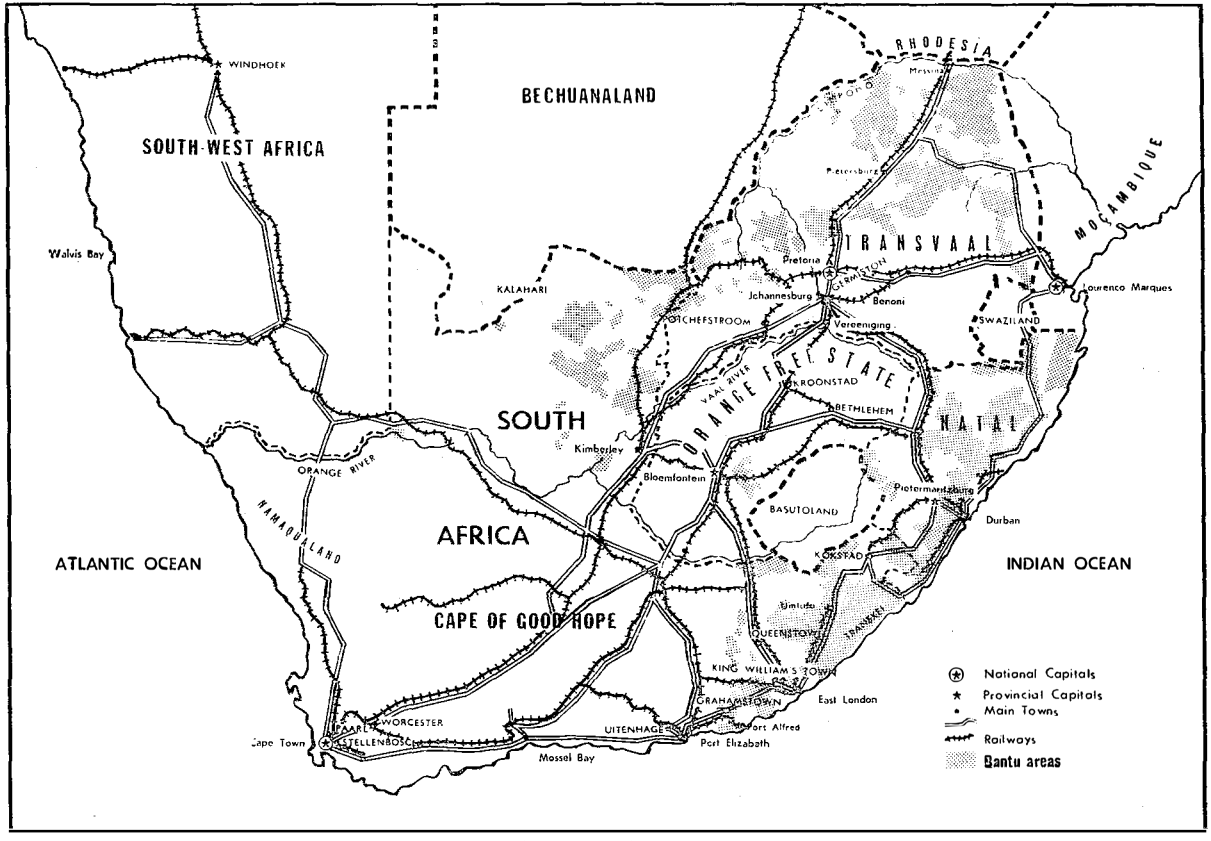
South Africa's majority people are 11,007,000 black Bantus. In addition, and separated from blacks as well as from whites are 1,502,000 Coloreds,[2] and Mulattos, offspring of racial mixtures of previous centuries, and 487,000 Asians who are mostly Indians.

Official South Africa is firmly convinced that the only realistic way for the four population groups to live and let live side by side is complete segregation. *Apartheit,* as this is called in their language, is the law of the land. Under it each population segment remains a separate social unit and the few inter-group contacts are strictly regulated. White leadership is assured by excluding the three non-white groups from the right to vote, to bear arms, or even to organize interest groups such as labor unions.[3] In comparing their policy of *Apartheit* with integration efforts in the United States, South African officials point out the following differences: The U.S. Negro is westernized while most of the Africans are tribalized; the ratio of black to white in the United States is only 1 to 10 but in South Africa it is 4 to 1; the three million whites have a record of more than three centuries of survival and development in Africa, and racial problems in the United States or in any other western democracy do not ease their apprehension about the consequences of multi-racialism of South Africa. Official South Africa does not interpret segregation or

[1] Much of the information offered here was gathered during a sabbatical leave spent in the Republic of South Africa.

[2] The term "Colored" in South Africa does not identify a Negro.

[3] A limited franchise for Bantus will be discussed under "Bantustans."



Source: Department of Information, Republic of South Africa, Private Bag 152 Pretoria, South Africa

Map I

Apartheit as discrimination but rather as a coordination of black and white, which permits each its own development according to culture and social background. In order to make this system work, the white minority for the time being must maintain a "benevolent" guardianship over the non-white groups and especially over the 11,000,000 Bantus.

The Bantus

The term Bantu refers to the common language and tribal heritage of the black majority population in all of southern Africa. In the Republic's everyday usage it goes beyond that and covers anyone and any part of the multitudes of black-skinned people.

An important fact of South African life, from home to factory, is cheap Bantu labor. The reasons for it are not hard to find. Without the right to vote or bargain, the black man must depend on representatives who are appointed by the white man's government.

A special "Department of Bantu Administration and Development" regulates his everyday life.[4] It sets all standards for housing, training, job classifications, etc. Under the directive, under which it operates, a Bantu can neither live nor work alongside a white person. The obvious result is that the earnings of dark-skinned people remain lowest on the scale. Only in facilities which serve exclusively a non-white clientele, from government offices to hospitals and schools, may black and white work together. But even here the pay scale favors whites by a considerable margin. Government data indicate that about 10 per cent of the national cash income is received by the 66 per cent of the population which is black. However, such a figure is not conclusive because in South Africa's Negro employment the paternal type of compensation from company or government housing and feeding to all kinds of social services is still the preferred practice.[5] In deviation from that in 1963/1964 some 30 private industries, lead by Rembrandt Tobacco and O.K. chain stores, came out with new hourly minimum wages "for the benefit of greater Bantu purchasing power." The point that Negroes would be the sole beneficiaries of this revolutionary move was so obvious that the printed announcements did not even elaborate on it. Thousands of fortunate Africans now earn about $300 annually. This is still below the already-mentioned national average of $420. It also seems skimpy by United States standards, but it is far above the scale of any other African country. In evidence for it, one million black laborers from South Africa's independent neighbors annually seek employment in the republic in spite of the many social and political disadvantages. After serving for a contracted period they plan to take their wealth home but more often they return richer only in the experiences offered by an industrial society.

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[4] Parallel departments exist for the two other non-white groups, the Coloreds and the Indians.

[5] A chain of employer-subsidized super kitchens with up to 50,000-meal capacity each was started in the Republic's metropolitan areas. The purpose is to provide Bantu workers with their "diet needs" and thus increase their productivity by as much as "30 per cent" (South African Digest, July 17, 1964).

Unfortunately, the biggest employer of black labor, the Department of Bantu Administration, rejected this new minimum scale as not in accordance with productivity. One far-reaching result is that young black people prefer the better pay of industrial jobs to professional or semi-professional services. Only the government can employ Bantu teachers, nurses, civil servants, and their money rewards are still lower than $2.80 per day.

Bantu Aid

Basically all branches of the government in Pretoria, the capital city, struggle with the Bantu problem. Over the years their efforts have resulted in the Native Land Act of 1913, its amendment of 1936, the Native Building Workers Act of 1951, the Bantu Education Act of 1953 and similar laws. Each in its name implies the area in which it was meant to improve the African's living standard. The land act prohibited the sale of tribal lands and its amendment returned already sold tracts to tribal ownership. The building act was a dual breakthrough. Not only was it an attack on slums, but "in order to reduce construction cost" it permitted Bantus for the first time in history to qualify as bricklayers carpenters and other artisans, of course only on native projects. The education act created a complete Bantu state school system.

Now with both prosperity prodding from within and animosity from without, the government of Prime Minister Verwoerd decided to coordinate all these efforts in a first five-year plan which started in 1961. It was preceded by a thorough survey, published as the Tomlinson report. Its realization is a compromise between the survey's recommendation and the ability and willingness to finance it.

The plan is heralded as South Africa's own brand of Negro "emancipation without chaos" and is the largest Bantu aid program in existence. The black people are to progress "under the guidance, tutelage and trusteeship" of the whites towards self-sufficiency and self-government. It is not anticipated that the program will be completed by 1966 and, by the looks of things, maybe even not in the second millenium. Nevertheless, official Pretoria professes righteousness and will go to great lengths to defend its program.

Bantustans

The primary task of the plan is to create special and autonomous districts for the black population. The always-controversial issue as to who has more historic rights to the land in South Africa is settled to the disadvantage of the Bantus. The white man claims that when his ancestors moved from the Cape to the interior, they found Bantus in full occupancy only in certain eastern and northern sections (see Map 1).

In a move towards "positive Apartheit" the government, lead by Prime Minister Verwoerd, now guarantees the Bantu's "inalienable" rights to these areas to the full exclusion of white ownership. Along these historic lines South Africa is being divided into homelands for black and for white people, but under one white-managed central government. With the help of the already-mentioned Land Repurchase Act of 1936, these

so-called Bantustans will eventually be rounded out to 65,625 square miles. Thus, 13 per cent of South Africa is set aside for the black 66 per cent of the people. It is claimed that the Bantu lands are more fertile than other parts of the republic and that 100 acres there compares with 147 acres in the white man's region. So far only 41.7 per cent of the 11 million Africans live in these homelands. Pretoria, of course, is not blind to the impossibility of moving all black people into Bantustans. The argument that such a step might rob South African industries of labor would not be decisive any longer in the age of automation.

In order to preserve the "historic ethnical division" the various Bantu tribal groups, the Xhosas, Zulus, Southern and Northern Sotos, the Tswanas, Venda and several others will all have their own Bantustans. Even if the intent of this division is not politically but only culturally inspired it, plus the geography, will assure permanent close cooperation between the black states and their paternal white associates.

A First Bantustan, the Transkei

Dr. Verwoerd would have liked to affiliate the Bantu-inhabited Basuto-, Swazi- and Bechuana-lands with his Bantustan scheme, but these three are British protectorates on their way to full independence. Thus, the government concentrates on the largest Bantu land within South Africa, the Transkei, home of the Xhosas. "The Transkei was the first Bantu homeland to enjoy the benefits of Western Civilization and has therefore reached a higher stage of development than any other Bantu area." [6]

In November, 1963, the Xhosas within the Transkei as well as those who live and labor in other parts of South Africa voted for a first Transkeian parliament. A precedent was thus established. Even urbanized Bantus who are several generations and hundreds of miles away from the old tribal grounds become automatically "internal" citizens of a specific Bantustan. They must pay taxes to it and for that they will be represented in their residence locations by a so-called "ambassador". The supreme law for all, of course, will remain the constitution of the republic.

Within the new black states the law of the tribes based on common land ownership is to prevail. It requires the preservation of a strong chief-in-council system, the traditional tribal aristocracy. Already decades ago Negro chiefs became salaried South African civil servants. All this is now incorporated into a new Transkeian constitution. A paramount chief is still the highest authority in his region and his salary can not be superseded by that of a member of his Bantustan government.

Tribalism also dominates the new Transkeian parliament. Of its 109 members 64 are uncontested chiefs and only 45 are elected. This legislature selects the chief minister and his cabinet to whom Pretoria turns over portfolios in stages. Education, for instance, is already in the hands of a Bantu minister, with a white secretary in assistance. Post and telegraph will have to wait, and defense and foreign affairs remain permanent domains of the Pretoria government.

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[6] "South African Quiz," Department of Information, Pretoria, 1962, p. 30.

The economy of the Transkei is tribal-agricultural with the vast majority of the Xhosas still living in kraals with few modern facilities. For betterment the forementioned five-year plan offers "reclamation and rehabilitation." In a compromise between tribal customs and modern needs the 70 per cent of the acreage which is still *common* grazing land is being fenced in by sections. The purpose is to withdraw part after part from usage for contouring and soil recuperation. It is claimed that the land is so good that nature alone will restore fertility after contour plowing. On the cultivated 30 per cent of the land the people are taught to use fertilizer and to leave one out of four plots fallow.

The opinion of the white principal of the Transkei's one agricultural college illustrates the persisting difficulties. After 30 years of assistance he feels that the Xhosas are still so close to the tribal cattle-equals-prestige concept, that they are best served with a triple purpose animal. Without even the benefit of hayfeeding a Xhosa cow must yield milk and meat and also serve as a beast of burden.

Industry in the Transkei is not even in its infancy. A scheme for lumber and sisal production has been started and a lumbermill is combined with a Bantu school furniture factory. A small spinning and weaving mill operates more as a training school for black housewives than as a market producer. All others including garages, trucking, carpenter shops, small restaurants and the like are secondary industries with a 1963 total gross output of $2,250,000 or $1.50 per capita. In keeping with the announced goal of an all-black economy, Pretoria does not permit the investment of any outside, meaning white, capital in the Transkei or in any other Bantustan. The existing embryo enterprises are financed by a government-sponsored Bantu Investment Corporation. However, the country's big industries are urged to build new plants along Bantustan borders. The hope is that the labor can commute and yet management's influence can be kept out of the affairs of the black state.

Of course, the Transkei has towns, which, in contrast to rural kraals, have electricity, running water and sewerage. But they are still inhabited by white people. Since in principle only Africans can reside in a Bantustan, the government works for removal of all "white spots" in urban as well as rural areas. White farmers are actually bought out by the "Native Land Trust." But the townspeople are organized constituents with a general franchise. Therefore, even in Umtata, the capital of the Transkei, where the new black parliament and government functions, hotel and restaurant facilities are still off limits to Negroes. Likewise, residential areas and services such as the post office, banks and railroads remain segregated.

Bantu Townships

Of the roughly one-half of the Bantu people who are not inhabitants of Bantustans, 28.7 per cent are the urbanized Negroes. Like underprivileged peoples everywhere they occupied slums and shantytowns until Pretoria started a rehabilitation program within the framework of the Bantu Aid plan. For an appreciation of the need and magnitude of

the job it should be remembered that in South Africa, Africans form the majority population in all metropolitan areas.

Johannesburg, for instance, the republic's largest city, has twice as many black as white people. Hence, the well-to-do found it necessary to install burgar alarms, secure windows and doors with iron bars and stay off the streets in residential areas after dark.

Supported by matching funds of the central government and by taxes levied upon employers of "native labor," the municipalities presently are engaged in huge slum clearances. The goal is to have all Africans living in publicly-built townships. South West Township or, for short, Soweto, six miles outside of Johannesburg, is already South Africa's fourth largest city with 467,000 inhabitants. The philanthropic value of this project unfortunately is diluted by numerous *Apartheit* clauses. Africans, even wealthy businessmen or doctors, by law now are transferred to these townships as quickly as housing becomes available. There they become tenants of the municipality with, at best, a thirty-year option but never the right of ownership. Thus the government ends all African private or group property rights, the so-called "freeholdings," in all areas but the Bantustans. All real estate of black people must be sold and the only court recourse the seller has is over the amount of compensation. Africans who can not or do not wish to move to the tribal reservations live now at the complete mercy of a government which is elected by white voters only.

Residence rights in townships depend upon opportunities for employment, which is to say, on the need for African labor. All black people must carry the hated passbook which contains a work record.[7] This not only requires red tape for employer and employee alike, it also makes the passbook holder anxious to remain on the job no matter what the pay. Cases where the loss of employment tears a family apart and sends a member to a Bantustan are not infrequent.

In addition, the central government also wishes to make the townships "projections of the Bantu homelands." They are subdivided according to ethnical divisions. Thus, even an urban Bantu in a township does not get away from tribal grouping. If his wife's tribal classification is different from his, troubles are endless. The effect is containment of all black population under tribal leadership in a liaison between townships and Bantustans. Even as improvements over shantytowns, the native townships remain 20th century ghettos. Between them and the "white" city must be a no-man's land. All roads and means of transportation leading to and through it are off-limits to white people unless the visitors have special permits.

Houses in the towns are of a low-cost construction (from $420 up), but clean. Rents are cheap under a government subsidy. Improvements such as sewers and running water are available as a rule but the people seem to be reluctant to shoulder the cost of home installation since no

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[7] Since the unfortunate Sharpeville incidents, police checks on passbooks have eased up considerably.

ownership rights go with it. For the same reasons the grounds show little landscaping. Churches, shopping areas, youth clubs and other centers of diverson are available. Entertainment, such as movies and beergardens, is adjusted to tribal taste. A license for a second cinema in Soweto was refused as being discordant with tribal culture.

Foremost among the problems is that the cost of providing the barest necessities for a township crash program is so staggering that additional developments just have to wait. Hardly a street is paved, planned parks remain weed lots, and a public high school has to get along without electricity.[8]

Americans will appreciate the transportation problem which is caused by the sudden growth of towns in what only yesterday were mining dumps. The new suburbanites are all commuting workers and only very few have cars. "Non-white" buslines and trains are put into service and new roads are being built. Yet the average Bantu has to leave his house at 5 a.m. to be at his place of work between 8:00 and 9:00 a.m. Equally time consuming is the homeward trek with endless waiting at "2nd class" bus stops and in "non-European railway stations. In metropolitan Johannesburg about 100,000 Negroes still lived in shantytowns in 1964 compared to half a million that had been already resettled.

Bantus on the Job

Another 100,000 Bantus in Johannesburg alone and equivalent numbers in other cities are the live-in servants in homes, hotels and offices. Their *separate* quarters must satisfy very specific ordinances and their meals are popularly known as "boy's rations." In South Africa's surburbias the servants' huts are easily recognized landmarks. These domestic helpers are such an important and also convenient segment of the republic's economy that eventually they might be the only remaining Negro residents of "white cities." Consequently, their permits are most difficult to get. Employee as well as employer are reluctant to make changes.

For major projects industry and government recruits black men or women, but never married couples or entire families, directly from tribal areas. For the duration of the "contract" these Bantus are housed in two types of accommodations—the hostel or the compound.

Hostels are mass housings, a kind of labor camp, where the single dwellers take care of their own meals but with all other facilities provided. When hostels are located near Bantu townships, they naturally become sources of unrest and make increased police protection necessary. On the other hand, the control of 25,000 tribal people (the number of hostel residents in the Johannesburg area) away from families and transplanted into westernized surroundings becomes equally difficult in some isolated spot.

Compounds are provided by South Africa's most important industries, the mines. Here thousands of Negroes are housed, fed, clothed, treated when sick, etc. The mining companies are pioneers in the process of

[8] Morris Isaacson School, Box 10, Javoon-Soweto, Johannesburg.

integrating Bantus fresh from the reserves into the modern labor process. They offer training, scientific diets, recreation, facilities for saving and sending money home, modern hospitals and numerous other services. One result is that the returned miner's prestige back in the Kraal is about as high as that of a young man who comes home with a college diploma.

The remaining 29.6 per cent of the 11 million Bantus are rural dwellers. They are literally serfs, often supplied by the courts or the police as farm labor in lieu of punishment. Their tenancy depends on their usefulness to the white farm owner. They have the poorest conditions of all. Their homes are imitation kraals in some proximity to the farm house. Their clothing is a combination of tribal garments and western discards. Their work is the same herding and plowing which their ancestors have done for generations but they don't own the cattle or the land. Thus, they are equally away from the advantages of tribal and western life.

In a step towards betterment the government offers financial assistance to those farmers who permit the construction of schools for their employee's children. In 1963, 2,000 such Bantu farm schools were in operation.

Bantu Education

As everywhere else in Africa, mission schools were the first institutions which offered formal education to South Africa's Bantus. A government-sponsored survey, named after its author, Eiselen, recommended that the government take over for better educational results. In spite of some church resistance, Pretoria accepted the Eiselen report in 1954 as a policy basis. By 1958 all personnel, curriculum matters, certification and examination in schools for Negroes were centralized in the Department of Bantu Education. Lay school boards have only advisory capacity. Since then, it is claimed, so much progress has been made that in 1963 65 per cent of all African children and 83 per cent of those between the ages of 7 and 14 were in school.

Bantu education is not compulsory as yet. Reasons frequently given for this status, aside from taxes and cost, are that African tradition assigns to children certain full-time obligations such as cattle herding and similar chores. Where this presents a conflict school enrollment should be persuasive only.

A centralized Bantu curriculum is coordinated with that of the compulsory white schools. Regionally adjusted programs might be more suitable. However, officials insist, "it would be labeled inferior by Bantu parents and therefore rejected." Thus, children from kraals and native townships compete in subject matter and examination with their more generously endowed distant white classmates. The one difference in background is that Negro pupils start at the age of seven and white students at six. An expert in Bantu education, the white rector (president) of the Bantu University College of the North summed up the situation: "Black students have no more or less upstairs than whites, but environmental factors require more adjustment from them."

Since taxes from Bantu income would not even begin to support a school system, money must come from the budget of the central government. A result is that Bantu school plants are not on a par with those of white districts. Double sessions are still frequent and the distance from home to school is very great in some instances without the availability of any type of transportation. All over South Africa one sees black school children walking on the soft shoulder of highways to and from school. More complete school facilities would probably be inconsistent with or even clash with the pupils' home surroundings. One black high school principal explains optimistically that, in spite of certain limitations, "We have no discipline problems and our children at the age of 14 accept instructions in three languages, Bantu, English and Afrikaans." Yet only a small Bantu minority remains in school at the end of primary education and only two per cent of the pupils attain the two top high school grades which lead to University entrance. For the others continuation and adult evening programs are available, but not to the extent needed. The more capable can attend schools for agriculture, police work, training in nursing and similar occupations. Colleges for Bantu primary teachers, where the need is especially great, are a combination of years of higher general education with one or two years of special training in a subject matter major and teaching methods.

A South African specialty are two colleges for the sons of tribal chiefs. They illustrate the intent to perpetuate a loyal tribal aristocracy, especially in the Bantustans. Their elite student body, coming from the best homes of the tribal homelands,[9] is served by an excellent faculty which writes its own manuals instead of having to use prescribed textbooks. The curriculum combines a top selection from western and African culture. The highest place in the Bantu school system is held by three universtiy colleges.[9] They are distributed among the Bantustans "in accordance with the needs of the ethnical groups." Faced with the task to provide top leadership for 11 million people, these academic institutions must offer *all* the courses which lead to a variety of bachelor's and master's degrees. They are expanding with large government and private endowments. The second of the three, University College of the North in Turfloop, in the Transvaal's Soto region, was opened in 1960. It compares favorably with any beginning college in the United States. With a student body of 245, it had six graduates in 1963. Combined enrollment for all three schools in 1963 was 624. To that can be added 1,200 Africans in correspondence courses of the University of South Africa.

Less than 2,000 Bantus then are preparing for the high echelon positions needed for the emancipation of 11 million fellow Africans, and behind them are only 3,000 high school students in the two senior grades preparing for the difficult matriculation tests in 1964 and 1965.

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[9] As colleges, rather than full universities, they are under the tutelage of the University of South Africa.

Pretoria urges the many white officials in Bantu administration and education to speed up the training of their black replacements. Also, the three university college faculties should be the very foundation of such a program. So far they have only two Negro professors.

"Our students have plenty of jobs waiting, but we can only guide and not force them," explains an academic official. His expressed hope is that the government, as a step in the right direction, will follow the mentioned example of private industry and raise Bantu professional salaries.

Big, Not Little, Apartheit

By way of explaining inequality in earnings, the argument is advanced that South Africa's Negroes live in a subsidized world of their own. They pay less rent, less fare on native busses, lower admission in non-white cinemas. In other words, the government maintains for them a discount living standard.

The Bantu's answer is that this social climate more than anything else accounts for his general lack of ambition and his apathy towards education. He has a "what is the use" attitude. An African teacher in a letter to a newspaper asks, "Do you do good by educating black children? Isn't it better to be dumb and black and sleep through the night?"[10] The Republic of South Africa does not have a single integrated beach, pool, parkbench, public restroom, to say nothing of hotel or restaurant. Even a small Bantu school with only one white teacher on the faculty must maintain separate staff facilities. The "whites only" signs are still the most obvious man-made feature in the landscape. They spell out discrimination for everyone to see.

Officials in Pretoria are sensitive to the point of bitterness if they are criticized about it. They challenge the observer to take a good look at their long range efforts in the Bantustans, townships and compounds. There they spend hundreds of millions of dollars on what they consider a workable solution of the race issue. Their unchangeable philosophy is segregation and they believe that it can be achieved with respect and dignity for both black and white. They call it *Big* Apartheit in deference to the insulting signs expressing *Little* Apartheit.

The future Commonwealth of South Africa, they claim, will be a place of coexistence in which all signs of discrimination will disappear because there will be no need for them. Bantu leaders on the receiving end are not quite that optimistic. They accept the economic betterment plans of their white government for lack of an alternate. They know that all the African summit meetings, short of an all-out war, will not make a dent in Pretoria's determination. They hope that once a measure of economic stability is reached for South Africa's black population, social and political freedom will become unavoidable. Most white officers in the republic's Bantu administration agree with this prediction.

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[10] Johannesburg "Star" of November 13, 1963.

THE FUTURE OF MANUFACTURING IN STOCKTON, CALIFORNIA

JAMES A. ROBERTS
California State College, Los Angeles
and Meteorology Research, Inc.

Only a gifted oracle could accurately predict the structure of manufacturing in Stockton for the year 1980. The continuously evolving nature of our society, the normal evolution of manufacturing practices, and the vagaries of the men who manage the development and operation of manufacturing concerns preclude all but the most tenative predictions based on analysis of the best available information. The structure of manufacturing in the past has experienced innumerable unpredictable changes which have led to the industry of the present (Table 1).

EMPLOYMENT IN MANUFACTURING IN STOCKTON
1856 to 1962

Industry	1856	1878	1949	1962
Food and kindred products	48	91	6,560	6,200
Paper and paper products	18	28	1,300	1,500
Lumber and wood products	5	7	1,130	1,500
Stone, clay, and glass products	10	10	585	(1)
Apparel	18	44	(1)	(1)
Leather and leather products	18	85	(1)	(1)
Transportation equipment	30	35	155	(1)
Machinery, except electrical	20	84	655	1,300
Metal work	45	27	655	680
Miscellaneous manufactured products	8	16	425	1,900
Total	220	427	11,465	13,000

(1) No data available; included in figure for miscellaneous manufactured products.

Table 1

There is no reason to assume that similar unpredictable events will not occur in the next 20 years. Furthermore, the changes which may occur do not necessarily have to originate in Stockton to affect Stockton. Stockton was located far from the battlefields of World War I, but the war's effect on the Holt Manufacturing Company was dramatic. Similarly, the distant fighting of World War II had effects on the city's shipbuilding industry. But lest the reader assume that the effects on manufacturing of the caprices of mankind and the changes brought by evolution of raw materials and markets are limited to the catastrophic changes wrought by world wars, let us consider the impact of the shift of wheat raising in the California Central Valley to the Northwestern States. The effect of this change was dramatic, because after the shift in the location of wheat raising, flour milling in Stockton declined to virtually nothing.

A number of courses of development might be postulated for the next two decades. A study of manufacturing in Stockton, completed in 1962, indicates that not a *single* diagnostic parameter but rather three trends provide bases for predicting the status of manufacturing in the city in 1980. These trends are:

1. The continued growth of manufacturing at the rate experienced during the 1950 to 1960 decade,
2. The pre-eminence of the disadvantages of industrial location, and
3. The maximum utilization of the natural and cultural locational advantages of the Stockton area.

Out of these diverse trends will emerge a single pattern of manufacturing in 1980.

Present Rate of Growth

Present progress of manufacturing is one basis for an analysis of future manufacturing. One measure of this progress is the rate of growth during a specified period of time. Therefore, the first trend that can be logically assumed as a basis for predicting the status of manufacturing in Stockton in 1980 is a continuation of the rate of expansion of the manufacturing industry of Stockton during the last decade (Figure 1).

In the period 1950 to 1960, agriculture was the dominant aspect of the economy of the Stockton metropolitan area. Although some industrial diversification occurred, development in the major portion of manufacturing and most other industries paralleled the increase in agricultural employment. Agricultural employment increased approximately 21 per cent from an annual average of 20,783 to an average of 25,383. Employment in all industries reached a total of 101,319, a growth of about 19 per cent for the decade. Manufacturing employment reached a high of 12,800, which also constituted an increase of 19 per cent.

Population, which reached 249,938 in April, 1960, a growth of 25 per cent over the 1950 figure, and employment in the Stockton area are likely to follow the trend established in the 1950-1960 decade. Furthermore, the manufacturing industries are likely to continue to reflect the importance of agriculture. Hence, as at the present time, in 1980 nearly one-half of the annual average number of wage and salary workers in manufacturing will be employed in the food and kindred products industries. Canning and preserving of fruits and vegetables will account for one-quarter of the average annual employment and for over half of the total number of employees during the period of peak employment.

Pre-eminence of Locational Disadvantages

The possibility exists that the disadvantages of location in Stockton could become so great that a number of manufacturers may find it both advantageous and necessary to leave the city. Although this occurrence is not probable, should the companies elect to move, the effects on the over-all structure of manufacturing would be significant. Postulating that Stockton does not experience a major increase in the number of man-

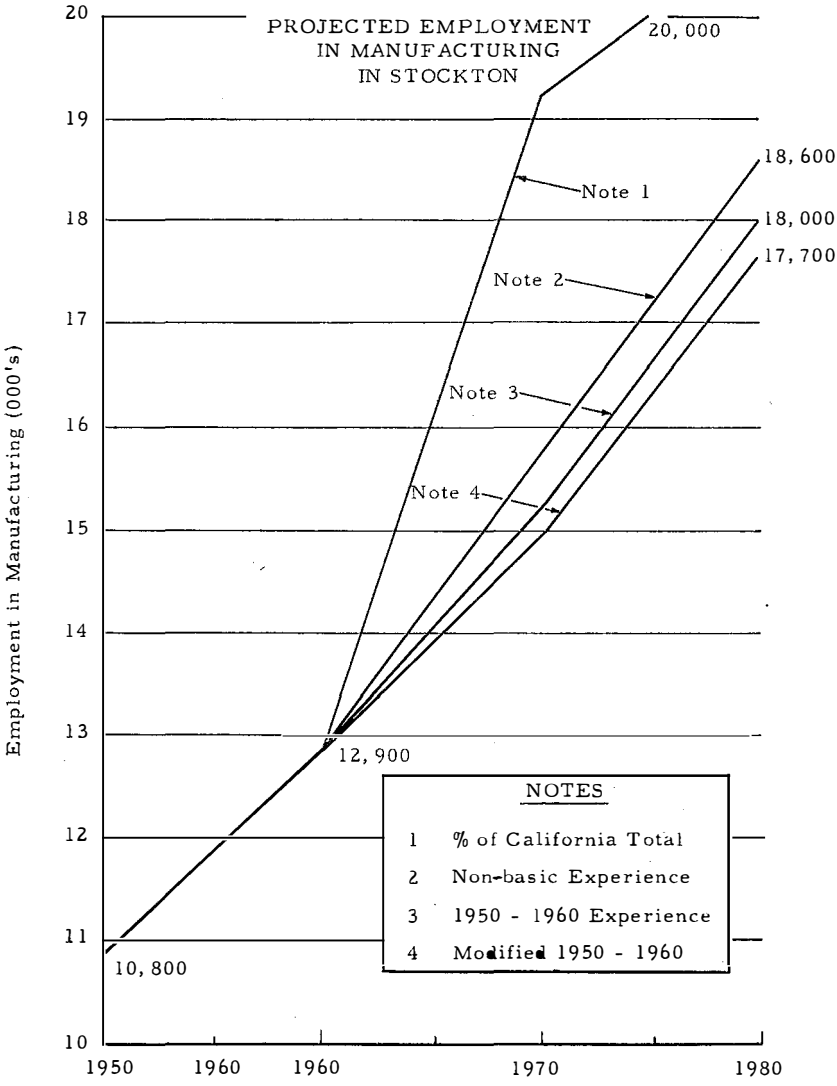

PROJECTED EMPLOYMENT
IN MANUFACTURING
IN STOCKTON
20,000
18,600
18,000
17,700
Note 1
Note 2
Note 3
Note 4
12,900
10,800
NOTES
1 % of California Total
2 Non-basic Experience
3 1950 - 1960 Experience
4 Modified 1950 - 1960
Employment in Manufacturing (000's)
20
19
18
17
16
15
14
13
12
11
10
1950
1960
1960
1970
1980

Figure 1

ufacturing concerns nor in manufacturing employment, the decrease caused by the departure of as few as seven companies could cause a direct decrease in manufacturing employment of over 1,500.

Several reasons may lead manufacturing concerns to leave both their present sites and the Stockton area; these same reasons may keep other companies out. Lack of adequate space for expansion, comparatively high tax rates (Table 2), waste disposal problems, untrained labor, and a possible lack of general community interest in manufacturing may act singly or in concert to influence the future of manufacturing in Stockton.

PROPERTY TAXES, ASSESSED VALUATION RATIOS, AND EFFECTIVE TAXES IN SELECTED CALIFORNIA CITIES, 1961-1962 (1)

City (County)		Tax Rate on $1,000 Assessed Valuation	Assessment Ratio (2)	Effective Tax on $20,000 Real Value (3)
Statewide Comparison				
Walnut Creek	(Contra Costa)	$105.90	27 %	$571.86
Concord	(Contra Costa)	104.32	27	563.33
STOCKTON	(San Joaquin)	102.48	28	573.89
Hayward	(Alameda)	100.00	24.1	482.00
Alameda	(Alameda)	96.60	(4)	508.33
Central Valley Comparison				
STOCKTON	(San Joaquin)	$102.48	28	$573.89
Fresno	(Fresno)	92.76	24 (5)	464.45
Tracy	(San Joaquin)	92.28	28	516.77
Modesto	(Modesto)	91.60	20	366.40
Merced	(Merced)	86.20	(4)	479.00
Sacramento	(Sacramento)	81.95 (6)	(4)	485.75

(1) From *California Tax Reporter*, Volume 3, "City Taxes; The Law; New Matters and Case Tables," Commerce Clearing House, Inc., 1961.
(2) Per cent of real value used for assessment purposes.
(3) Calculated by the author from Tax Rate and Assessment Ratio assuming $20,000 total real value of which $10,000 is land only.
(4) Different city and county ratios; both used for effective tax calculations.
(5) Average of ratios shown in *California Tax Reporter*.
(6) Average city tax rate of rates shown in *California Tax Reporter*.

Table 2

Each of these factors is important to manufacturing. However, because the significance of community interest, or disinterest, is often neglected and because of the importance of this factor to Stockton's past and future development, the discussion of the location disadvantages is focused on this one factor.

Farming is big business in the Stockton area. Without the abundant supply of agricultural products and the demand for farm implements, few, if any, manufacturing concerns presently located in Stockton would prosper. For more than a century agriculture has been the backbone of

Stockton's economy. People in the area were raised as farmers, they banked as farmers, and those who have left the farms for the city maintain their contacts with the farming community. Indeed, agriculture is the foundation on which Stockton's manufacturing industry has been built and on which it stands at the present time.

Part of the cement that holds this foundation together is based on personal desires to perpetuate the importance of agriculture. This desire may serve to retard the expansion of existing manufacturing facilities or to prevent the development of diversified manufacturing activities in Stockton.

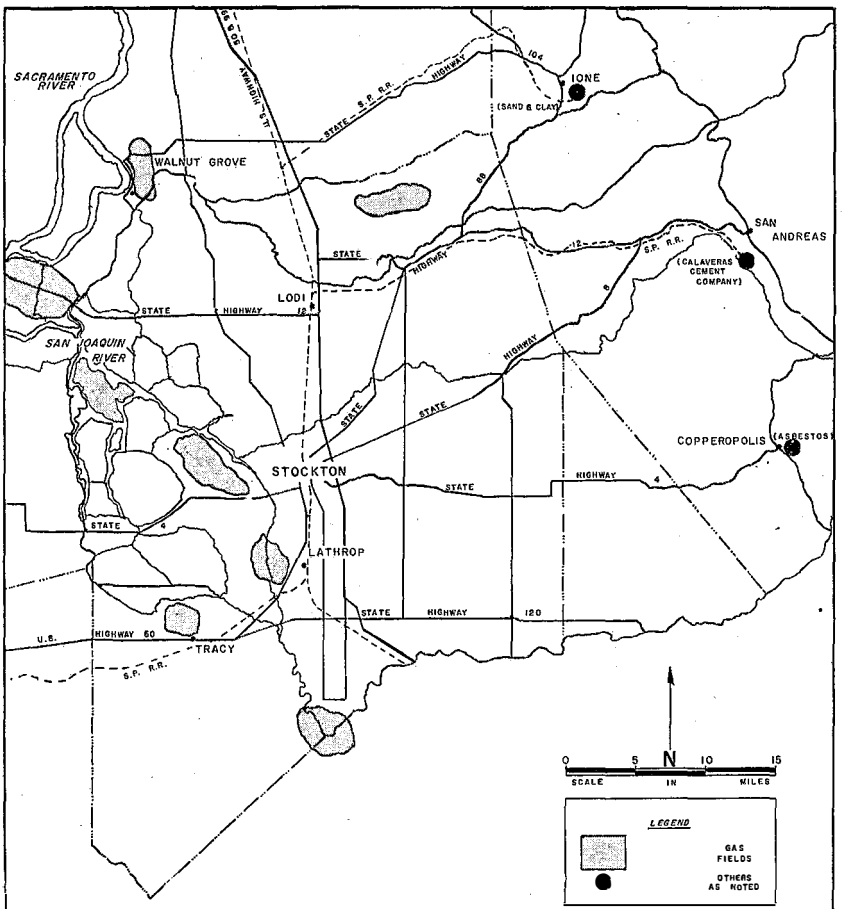
To what extent the diversification of the manufacturing industry of Stockton has been controlled by the influences of agriculture cannot be documented without a thorough and personal understanding of the community and its leadership. Suffice it to say, either by choice or through lack of understanding, the city's financial and political leaders may have retarded the diversification of Stockton's manufacturing industry. The role that the "human factor" may play in the development of manufacturing in a city is one of the more interesting questions for future study in Stockton, other cities in Calfornia's inland empire, and other agricultural centers throughout the United States.

No one can predict with absolute certainty that the firms which might leave their present locations would not find adequate sites in Stockton, but several basic arguments for their leaving the area altogether cannot be overlooked. The canneries may find it advantageous to select locations centrally located to fruit and vegetable crop production. The lumber products company may find a desirable location near the source of wood. Companies located along the Stockton Channel which may lose their sites to other land uses, may find that the virtually unlimited number of sites on San Francisco Bay or the new facilities along the Sacramento River, together with the large number of suppliers and ancillary manufacturers that are in these locations, may be advantageous locations for their operation.

Maximum Utilization of Locational Advantages

Another possible trend which the development of Stockton's manufacturing may take during the next twenty years is toward maximum utilization of the area's locational advantages. Stockton has a major inland port and is the focal point of an extensive road and railroad network. The city is well located with respect to agricultural and other raw materials (Figure 2) and has a large and expanding market for consumer products. Of these factors, market is possibly of greatest significance.

Stockton is in an excellent market location. The city serves a population of nearly 300,000 in San Joaquin County and is located at the approximate center of California's agricultural production. Stockton is located about sixty miles from the San Francisco Bay area and fifty miles from Sacramento with its burgeoning population, with access to these markets over rail, highway and water routes. Three intercontinental railroads and a complex of state and national highways connect Stockton with markets in the East. Furthermore, the deep water Port of Stockton provides a suitable avenue for direct international marketing.



PRINCIPAL SOURCES OF
SAND, CLAY, CEMENT, ASBESTOS AND NATURAL GAS
USED BY STOCKTON'S MANUFACTURERS

Figure 2

At the present time, the local market is not as important for Stockton's manufacturing industries as it may be in the future. As is summarized in Table 3, over 70 per cent of the products of all but one category of manufacturing, for which data are available, is marketed outside of the Stockton Metropolitan Statistical Area. Based on retail sales estimates, it would seem that the local population would support the expansion of manufacturing of consumer goods, particularly home furnishings and appliances, apparel, and wood products, and a wider variety of electrical and non-electrical machinery than are now manufactured in the city.

MARKETS FOR PRODUCTS MANUFACTURED

IN STOCKTON, 1962 (1)

Industry	Non-Local Markets	Local Market (3)
Food and kindred products	85 %	15 %
Paper and paper products	4	96
Lumber and wood products	90	10
Stone, clay, and glass products	89	11
Apparel	(2)	(2)
Leather and leather products	(2)	(2)
Transportation equipment	81	19
Machinery, except electrical	78	22
Metal work	78	22
Miscellaneous manufactured products	71	29

(1) Based on information received in response to questionnaire, September 1962.
(2) No data returned in response to questionnaire.
(3) San Joaquin County.

Table 3

From an analysis of the present manufacturing in Stockton, in which few household appliances, furniture, and clothes are produced, it appears that the largest expansion of manufacturing may be in the production of consumer goods for the local market. As stated previously, during the last decade the population of the Stockton Metropolitan Area has grown by about 25 per cent. Based on this growth rate the projected population in 1980 will be 390,607. Assuming (1) that the expansion of employment in the manufacturing of consumer goods for the local market will be approximately proportionate to the population increase, (2) that the non-basic manufacturing is that which meets the demands of the local market, and (3) that the relative importance of each of the non-basic manufacturing industries will continue at about the same level as at present, employment in manufacturing would increase by 1,960 in 1980. This increase would occur in all segments of manufacturing. However, the present structure of manufacturing indicates that an even greater increase in the production of consumer goods than that derived from the above assumptions may be possible.

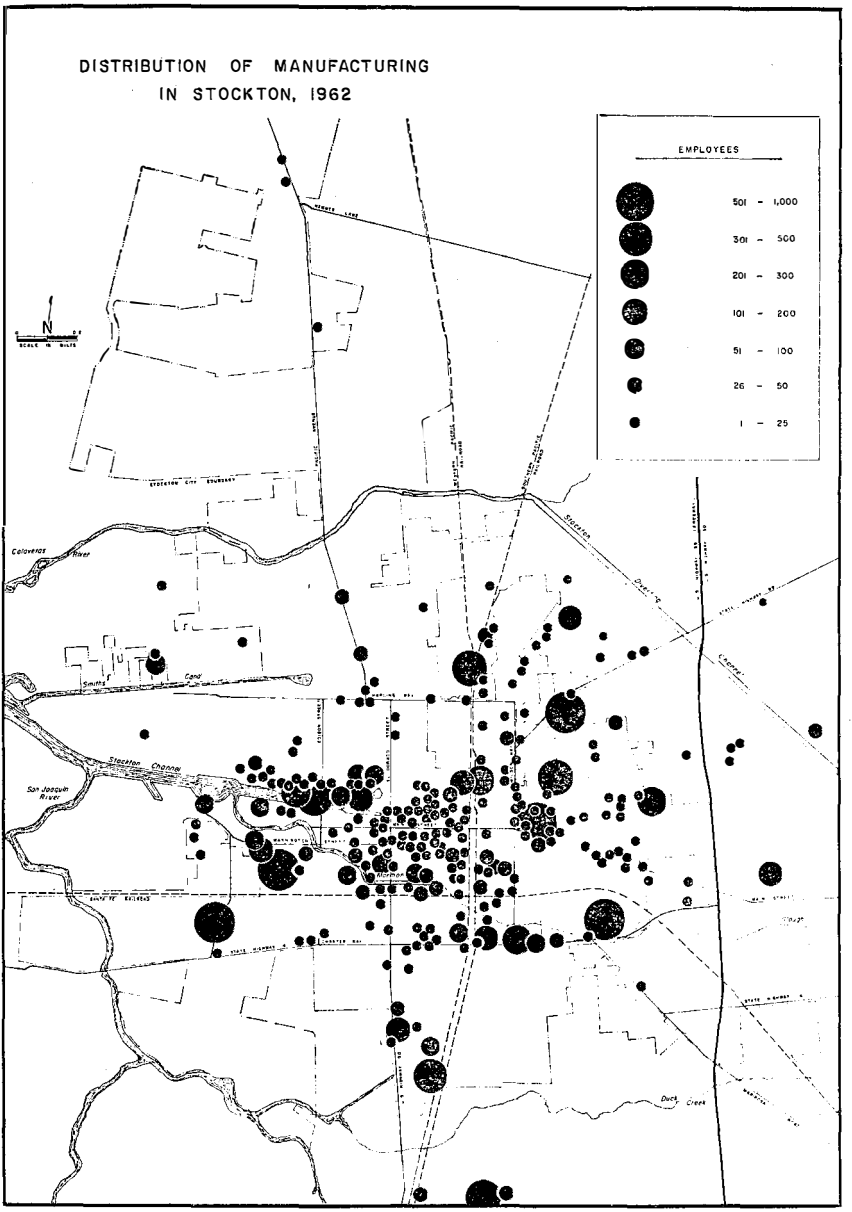

DISTRIBUTION OF MANUFACTURING
IN STOCKTON, 1962
EMPLOYEES
501 - 1,000
301 - 500
201 - 300
101 - 200
51 - 100
26 - 50
1 - 25
N
Calaveras River
Smith's Canal
Stockton Channel
San Joaquin River
Stockton Diverting Canal
Duck Creek

Figure 3

Stockton manufacturers also could produce goods for consumers in the Sacramento and San Joaquin valleys, the San Francisco Bay area, and Nevada. All of these areas are linked to Stockton by roads and railroads which could facilitate the delivery of manufactured items. Hence, production of consumer goods for export could support a substantial increase in manufacturing. It is possible that an increase in employment in the manufacture of export consumer goods could equal the increase in production to meet local demands.

A Pattern of Manufacturing in 1980

From these diverse trends may come as many predictions as there are predictors, but in 1980 only one pattern of manufacturing will exist. One pattern which appears to be a distinct possibility is based on three assumptions:

1. The non-basic component of Stockton's manufacturing, the producers of goods for local consumption, will grow at a rate paralleling the rate of increase in the area's population.
2. The basic component of manufacturing will continue to grow at the rate which has prevailed during the last ten years.
3. The increase of basic component will be offset somewhat by the movement of two wood products manufacturers, and two metal working concerns out of the Stockton area. It is also assumed that the possible multiplier effect of the decrease in basic employment will not cause a reduction of non-basic employment because of rapid expansion in the latter segment of the manufacturing industry.

Based upon the foregoing discussion, in 1980 a total of 17,700 persons will be employed in manufacturing. The principal industry will still be the manufacture of food and kindred products, followed by paper and paper products, non-electrical machinery and lumber and wood products. Modest diversification will continue as evidenced by the increase in the production of miscellaneous manufactured goods. As in the years preceding 1962, the canning industry will continue to account for most of the employees both on an annual average and during the peak fruit and vegetable processing seasons.

The pattern of Stockton's manufacturing in 1980 will be virtually the same as at present (Figure 3). With three exceptions, the absence of manufacturers along the Stockton Channel, the absence of manufacturing at a few isolated "island" areas in the northeastern quadrant of the city, and the intensified use of several outlying manufacturing areas, the pattern of manufacturing in Stockton will be the same in 1980 as it was in 1962.

Many changes have occurred in Stockton's manufacturing since the city's early beginning as an entrepot to the Southern Mines. But the changes which may make the present city of Stockton a manufacturing city still appear, as they did to many of the city's inhabitants in the 1850's, "just about to be."

THE CHANGING LANDSCAPE OF THE SAN FERNANDO VALLEY BETWEEN 1930 AND 1964

RICHARD E. PRESTON

San Fernando Valley State College

Peripheral expansion in the form of low-density living areas is a trait commonly associated with most cities in the United States at the present time. Growth of this type, often referred to as "suburbanization," has taken place on a large scale in the Los Angeles area since World War II, and, consequently, several locales within that vast urban region afford excellent opportunities for the examination of various landscape sequences which mark the change from rural to urban. In this inquiry an attempt is made to consider a succession of landscapes which have developed within the San Fernando Valley section of Los Angeles between 1930 and 1964. During that period the valley evolved from an area of intensive field and orchard agriculture to a functional and morphological extension of the rapidly expanding urban-industrial nucleus of Los Angeles.

This study is based upon an analysis made from population distribution maps, developed from Federal Census and local planning statistics, and land use maps, based mainly on air-photographs and field observations. Such maps were created in an attempted reconstruction of the cultural landscape of the San Fernando Valley approximately as it was in 1930, 1940, 1950, 1955, and 1960, and provide the point of departure for the following description and analysis of changes in population and land utilization.

BACKGROUND

An outlier of the Los Angeles lowland, the San Fernando Valley is located 12 to 15 miles northwest of downtown Los Angeles. It is almost completely enclosed by mountains and embraces approximately 235 square miles. The valley floor is quite flat and is practically all suitable for intensive development. Also, it is crossed by major inland and coastal connections between Los Angeles and central and northern California. Therefore, because of proximity to central Los Angeles, the inviting nature of its physical setting, and the presence of major routeways, the San Fernando Valley has for many years attracted the attention of man as a site for agricultural and urban settlement. In fact, its evolution reflects every major cultural stage in history of southern California.[1] Attention, here, however, will be given only to a segment of this development, namely, that of the past three decades. For it was the period since 1930 which witnessed the valley's transformation from rural to urban.

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[1] Frank M. Keefer, *History of San Fernando Valley* (Glendale: Stillman Printing Co., 1934), pp. 9-115.

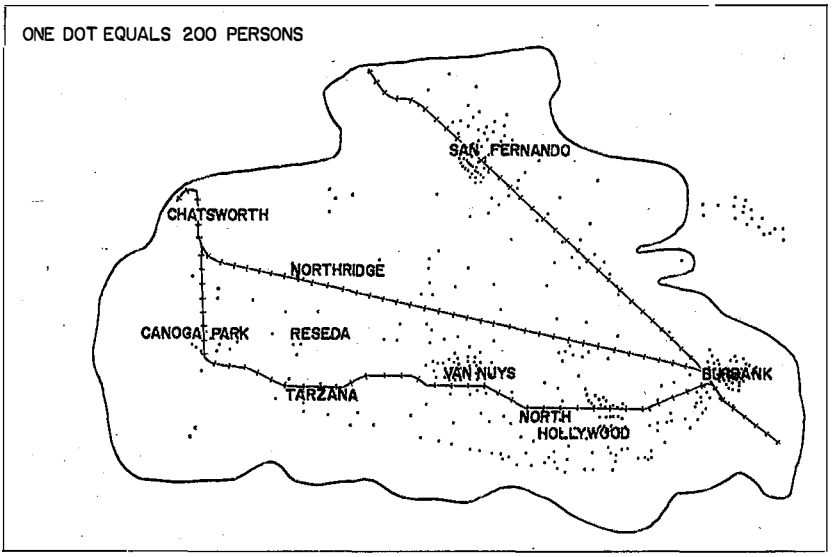

Figure 1. Population distribution, 1930. Source: Map prepared by the Los Angeles City Planning Department, January, 1942.

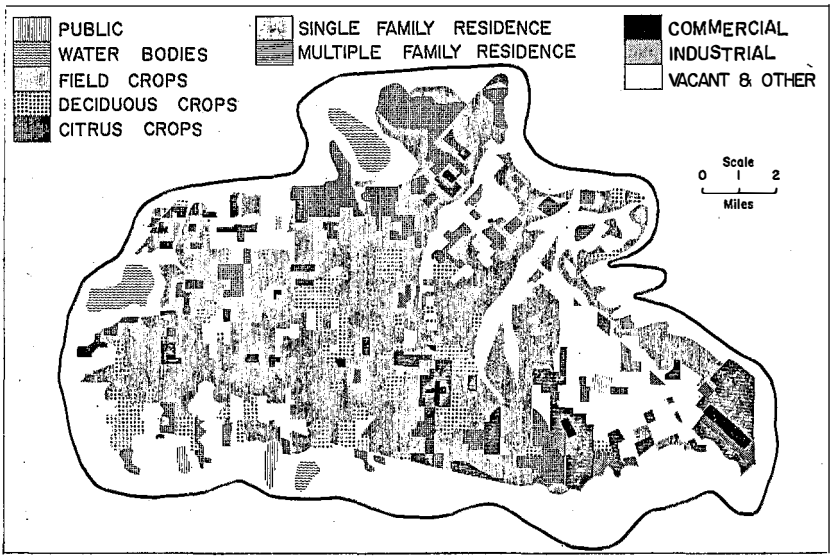

Figure 2. Land use, 1928. Source: Fairchild Aerial Surveys Inc. Air photographs of the San Fernando Valley taken during May, 1928.

The 1930's

The 1920's marked the end of a momentous era in valley history, an era which began around 1910 and included: (1) annexation of most of the area by the city of Los Angeles; (2) initiation of intensive agriculture based on large-scale irrigation; (3) establishment of widespread subdivision and community building, and (4) an increase in population from approximately 20,000 in 1920 to 78,479 in 1930.[2] All of these events were associated in some way with the expectation and realization of abundant water, and all played major roles in shaping the present cultural landscape.

During the 1930's the economy was overwhelmingly agricultural, and settlements were concentrated in the east and southeast where four towns had developed: San Fernando, Burbank, Van Nuys, and North Hollywood (Figures 1 and 2). Each functioned primarily as a market center for surrounding farming areas, and was characterized by a small commercial nucleus encircled by a limited area of subdivided land. San Fernando and Van Nuys also served as the principal service centers for the agricultural west valley, where only scattered farming communities existed. Even there, however, new communities were beginning to provide services and to attract population, for example, Canoga Park, Chatsworth, Reseda, and Tarzana.[3]

The valley's overall land use pattern had three outstanding aspects: field crops, fruit and nuts, and dairy and poultry raising.[4] Field crops such as alfalfa and beans, plus miscellaneous truck products, were dominant areally and were concentrated in the central and west valley. Citrus holdings were concentrated in the north and northeast, with lesser plantings in the west. Most groves were situated on relatively frost-free ground, were owner-operated, and consisted of tracts of 10 to 15 acres. North of San Fernando considerable acreage was devoted to olives, deciduous fruit and walnut trees were distributed over the valley floor, and poultry raising and dairy farming were concentrated in the west.

Industrial activity prior to World War II may be summarized by three terms: agricultural processing, motion pictures, and Burbank. Agricultural processing industries developed in most of the small towns and handled crops produced locally; centers with rail access usually

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[2] Population figures cited in this study are based on the following sources: 1920, estimate prepared by the Los Angeles City Planning Department; 1930, United States Bureau of the Census; 1940, United States Bureau of the Census; 1945, estimate prepared by the Los Angeles Regional Planning Commission; 1950, United States Bureau of the Census; 1955, estimate prepared by the Research Department of Security First National Bank; 1960, United States Bureau of the Census; and, 1964, estimates prepared by the City Planning Departments of Los Angeles, San Fernando, and Burbank.

[3] Paul A. Ewing, *The Agricultural Situation in San Fernando Valley, California* (Washington D.C.: United States Department of Agriculture, 1939), p. 25.

[4] *Ibid.*, pp. 47-48; Lewis H. Height, "Settlement Patterns in San Fernando Valley" (unpublished Master's Thesis, University of California, Los Angeles, 1953), pp. 92-99.

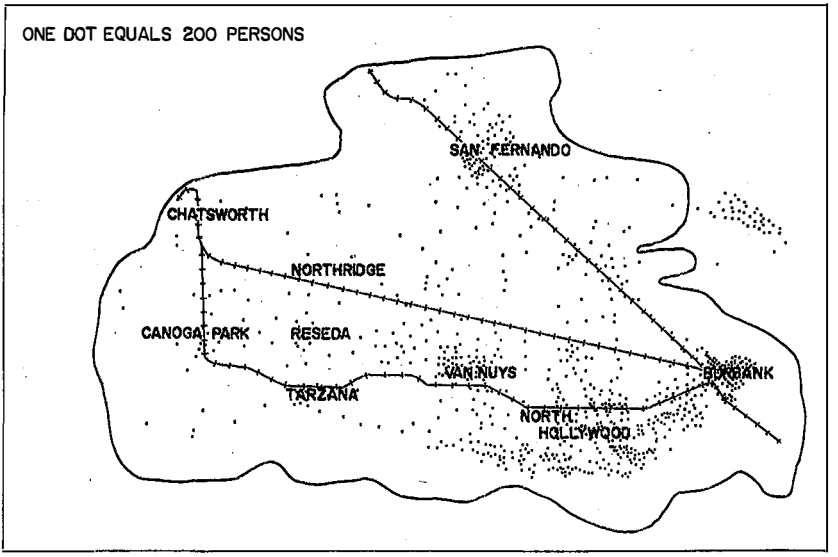

Figure 3. Population distribution, 1940. Source: Map prepared by the Los Angeles City Planning Department, January, 1942.

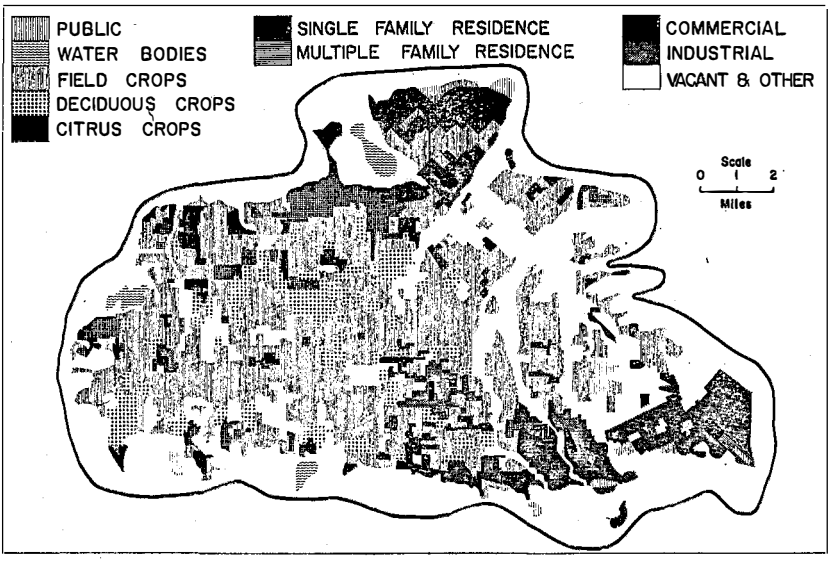

Figure 4. Land use, 1938. Source: United States Department of Agriculture. Air photographs of the San Fernando Valley taken during June, July, and August, 1938.

developed shipping facilities near the plants. With the spread of town-building in the southeast during the 1930's these industries began to disappear, and their total elimination proceeded rapidly after World War II. The motion picture industry was attracted by the presence of large tracts of cheap land, a very high proportion of sunny days, and a variety of natural settings. This industry expanded rapidly in the southeast between 1915 and 1930, and has been important ever since. By 1917, the outstanding activity in Burbank was manfacturing. With an emphasis upon aircraft and motion picture production, it was the only valley town which was industrialized prior to the Second World War.

The decade of the 1930's ushered in a period of stepped-up settlement, an era still in its heyday. The increasing use of the automobile. the construction of fairly good highways, and the presence of abundant land for a reasonable price all were important factors. Such development was especially evident in the southeast, where proximity to the Hollywood section of Los Angeles fostered unmistakable signs of suburbanization. The west valley, however, remained much the same as in the 1920's as distance proved detrimental to conditions other than agricultural. The general significance of building during the 1930's may be summarized by the fact that 56 per cent of the housing present in the valley in 1940 was constructed during the previous decade.[5]

The 1940's

By 1940 the population of the San Fernando Valley had increased to 155,443, an addition of approximately 77,000 since 1930. Even so, the pattern of settlement and land utilization was basically the same as in the early 1930's (Figures 3 and 4). The greatest area of change was the southeast, where the once-independent urban nuclei were beginning to coalesce, and where significant development was beginning to project westward along major streets. Although settlement thinned-out rapidly toward the west, the new communities located there were nevertheless attracting population, especially Canoga Park, Reseda, and Tarzana.

During World War II the valley's economy continued to be dominated by agriculture, which was concentrated in the western section. There, a large expanse of land stretching from the built-up east to Canoga Park was devoted mainly to general field crops. Scattered throughout this area were orchards, citrus and olives in the north, and walnuts and deciduous fruit in the west and south. Livestock ranching was limited, and generally involved breeding rather than large-scale animal production. In the urbanizing southeast only truck gardens and an occasional orchard remained in operation; however, large tracts of land once used for agriculture stood vacant, awaiting conversion to urban uses.

By the end of the Second World War, Southern California (especially Los Angeles) was, and still is, experiencing a marked expansion in employment, population, and real estate sales. This boom had great impact upon the San Fernando Valley, where population increased by

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[5] Earl Hansen and Paul Beckett, *Los Angeles: Its People and its Homes* (Los Angeles: Haynes Foundation, 1944), p. 48.

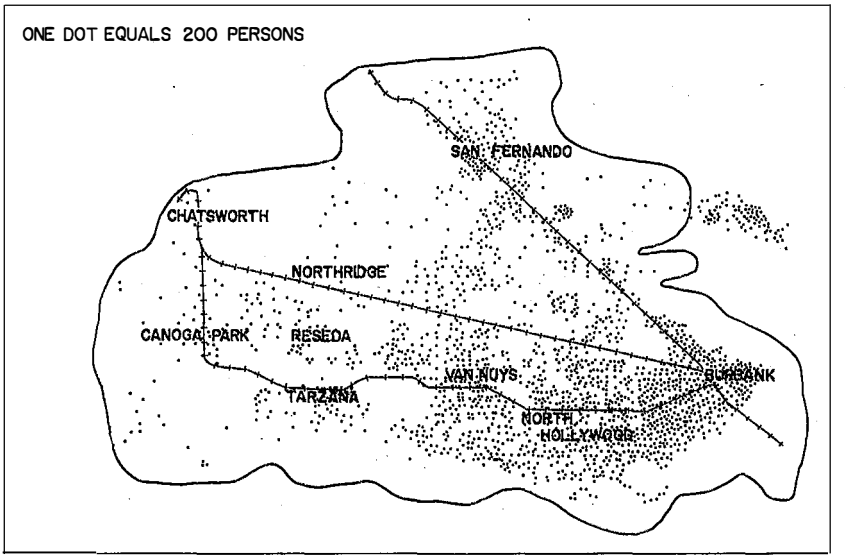

Figure 5. Population distribution, 1950. Source: United States Bureau of Census, Census Tract Statistics, April, 1950.

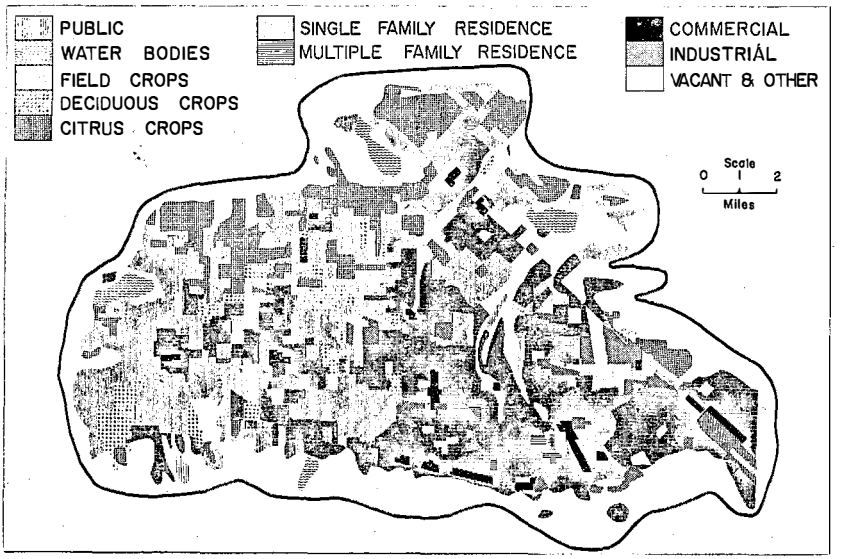

Figure 6. Land use, 1949. Source: Fairchild Aerial Surveys Inc. Air photographs of the San Fernando Valley taken during May and June, 1949.

approximately 73,000 from 155,443 in 1940 to 228,734 in 1945. Population growth was aided by the location of industry in valley towns both during and after the war, and by heavy utilization of the new highway through Cahuenga Pass, which eased travel between the North Hollywood area and central Los Angeles. Improved access accelerated the coalesence of the older communities in the southeast into a continuous suburban sprawl, and, all along the western periphery of the contiguous built-up area, there began a rapid retreat of agriculture before the invasion of low-density, tract-type, residential construction.

Also, the economy was diversifying, with industrial growth taking place primarily in the southeast adjacent to the railroads, and secondarily along the rail line running through the west valley. Of greatest importance were aircraft and aircraft parts manufacturing, both of which were concentrated in and around Burbank. Motion picture production continued to be important, and General Motors provided a notable addition in the form of an assembly plant which covered a large acreage in Van Nuys. The impact of the war was sharply illustrated by the fact that defense work accounted for an overwhelming proportion of the jobs in the valley during the middle-1940's.

The decade 1940-1950, especially the latter half, witnessed the beginning of a new era of intensive valley-wide settlement along highly urban-industrial lines. During that decade, the arrival of approximately 250,000 people boosted the population to 402,538 in 1950. This represented a net gain greater than that for its entire previous history. Also, it has been estimated that the number of persons employed in the valley increased from 29,000 to approximately 120,000 during the same period.[6] The era of unchallenged agricultural supremacy which had endured until during the Second World War was rapidly coming to an end, and the San Fernando Valley, by becoming one of the most impressive suburban growth areas in the United States, had begun to undergo a pattern of overall development which was to continue at least through the 1960's.

The 1950's

By 1950 the tide of urban land use, consisting mostly of tract houses and commercial string-development had moved westward halfway across the valley floor (Figures 5 and 6). In addition to this westward and northward spread, subdivision was taking place actively on the periphery of the urban nuclei in the west. The late 1940's and the early 1950's also witnessed the first large inroads made into the best agricultural lands in the south-central and western sections, as well as extensive building-up of the canyons and hillsides along the southern margin. No part of the valley escaped some new construction, and the majority of the new homes were mass-produced. It appears that a constantly improving highway system, an abundance of open and relatively cheap land, a fairly small population, and the prolific development of dispersed communities greatly assisted the rapid spread of an automobile-oriented, suburban landscape.

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[6] Security First National Bank, *The Growth and Economic Structure of the San Fernando Valley, 1960* (Los Angeles: Security First National Bank, 1960), p. 26; News item in the *Valley Times Today*, October 10, 1961.

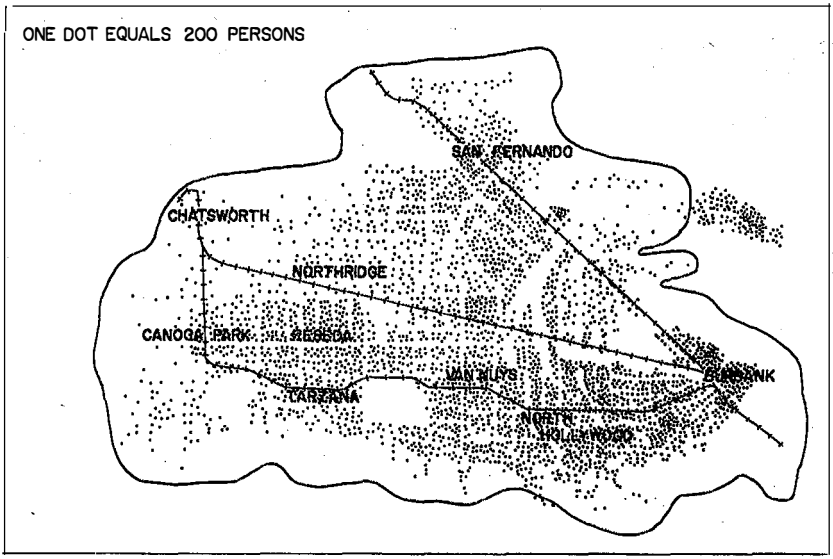

Figure 7. Population distribution, 1956. Sources: United States Bureau of the Census, Census Tract Statistics from Special Census of Feb., 1956; Population statistics for the balance of the Valley estimated by the Research Department of the Security First National Bank.

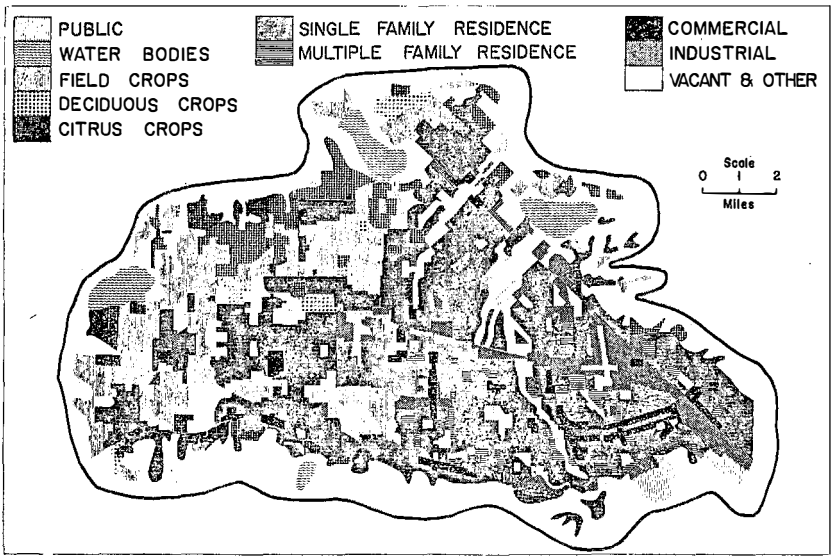

Figure 8. Land use, 1954. Sources: "Land Use Map of San Fernando Valley in 1954," in Los Angeles City Planning Commission. San Fernando Valley, 1955: Master Plan Restudy, reprinted from Los Angeles City Planning Commission, "Accomplishments —1955"; United States Department of Agriculture, Air photographs of San Fernando Valley taken during November, 1954.

By 1955, population had risen to 633,076, an increase of approximately 230,000 over 1950, and tract homes were successfully invading the walnut and citrus orchards (Figures 7 and 8). Agriculture had become vestigial throughout most of the area, but where concentrations remained citrus was the chief crop in acreage. The variety of field crops found in the early 1940's were also present but their acreages were drastically reduced. It has been pointed out that by the late 1950's four agricultural-type areas were to be found on the valley margins: namely, the area of truck and field crops in the southwestern-central portion; the area of mixed truck, field, and orchard crops in the western section; the area of orchard "hold-out" and large private holdings in the northwestern region; and the area of specialty crops and residential agriculture in the northeastern part of the valley.[7] Only in the extreme southwest and northwest was agriculture practiced on anything that approached large-scale.

Until the late 1950's, commercial development (aside from the commuter-oriented buildup along Ventura Boulevard) was confined mainly to concentrations at the major intersections of each valley community. The principal function of the individual centers was to meet the immediate needs of local residents. Only in the southeast, with its concentrated population, was there a more intensive commercial pattern including both nuclear and ribbon-like forms. Such development was especially pronounced in the larger commercial centers of Burbank, North Hollywood, San Fernando, and Van Nuys.

General mushrooming of tract housing, the rapid invasion of agricultural land, and the growth of industry were, therefore, the most notable aspects of settlement during the late 1950's. The end of that decade marked the finish of the valley as a significant agricultural area, and despite considerable commercial and industrial development, it was clearly established as suburban-residential. Three new trends, however, appeared during the latter part of the decade; namely, the expansion of employment in the valley, the construction of an increasing number of multi-unit dwellings in the southeast, and the development of the first segments of a freeway system paralleling the southern foothills.

The 1960's

Valley population was 840,500 in 1960, an increase of approximately 438,000 over 1950. During the same period the overall population density rose from 2.7 per acre to 5.6.[8] Highest densities were associated with the older built-up areas in the southeast where extensive apartment construction was taking place. In general, however, home-building was continuing to spread like a wave from east to west, cutting into the remaining agri-

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[7] Herbert W. Eder, "Some Aspects of the Persistence of Agriculture in the San Fernando Valley" (unpublished Master's Thesis, University of California, Los Angeles, 1960), p. 123.

[8] Security First National Bank, *op. cit.*, p. 58.

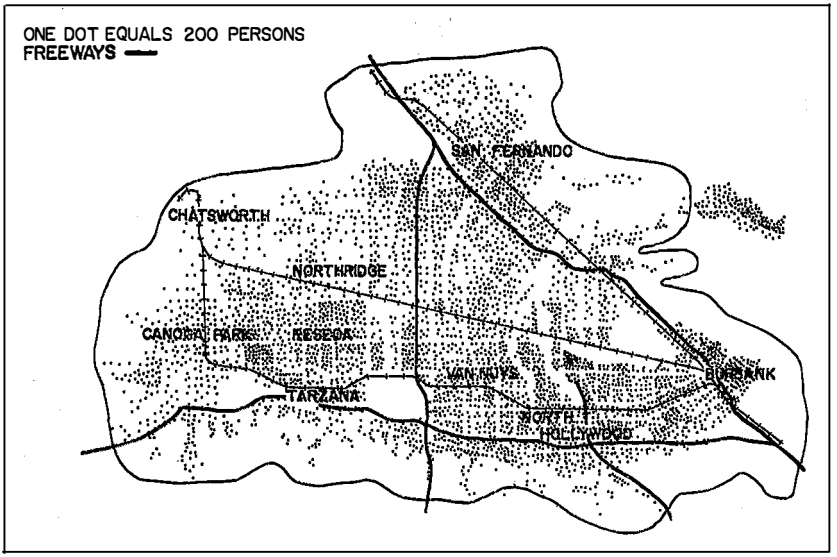

Figure 9. Population distribution, 1960. Source: United States Bureau of the Census, Census Tract Statistics, April, 1960.

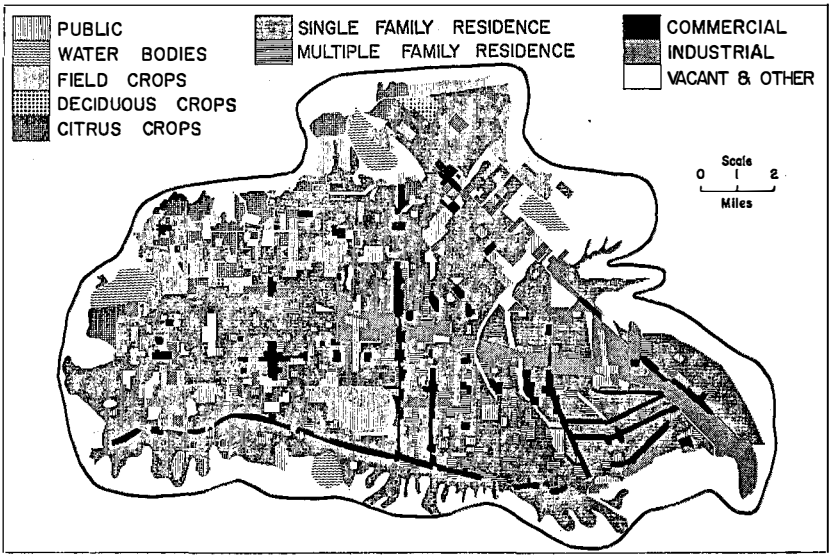

Figure 10. Land use, 1960. Source: Fairchild Aerial Surveys Inc. Air photographs of San Fernando Valley taken during May and June, 1960.

cultural and vacant lands on the periphery, into the hills, and into the vacant enclaves (Figures 9 and 10).

Traditionally there have been more workers than jobs in the San Fernando Valley, and therefore, a consequent outflow of commuters in the morning and inflow in the evening. This condition was extreme in 1940 when approximately 47 per cent of the employed people living in the valley worked there;[9] however, the proportion of jobs available in the valley has greatly increased. In 1960 the California Department of Employment estimated that about 300,000 gainfully employed persons lived in the valley, and that employment there was about 240,000, or approximately 80 per cent.[10] Obviously, this is not the entire story; the San Fernando Valley is but one part of a vast metropolitan complex, and not only do many of its residents work in other sections of the city, workers from other sections are also employed in the valley.

Industry, as in the past, is largely dependent upon defense and space contracts. The missile-aircraft industry is the largest single employer, with the associated fields of electronics, atomic energy, rocketry, and research and development also being important. In general however, the valley's employment profile has begun to take on a mature look, and may be approximated on a percentage basis as follows: manufacturing, 35 per cent; services, 26 per cent; wholesale and retail trade, 20 per cent; and contract construction, 8 per cent. The remaining 11 per cent is divided among agriculture, mining, finance, insurance, real estate, and government.[11] On the basis of 1960 employment figures, the leading industrial centers in the valley were, and probably still are, Burbank, Van Nuys, Canoga Park, and North Hollywood.

With only a few notable exceptions, factories are located along the principal rail lines or in industrial parks. Future industrial expansion will probably exhibit a greater orientation to planned-industrial districts; in fact, it has been strongly suggested that full utilization of the three large industrial tracts which currently exist in the west valley (covering 787,400, and 1,000 acres, respectively) will be necessary if a substantial percentage of the area's growing labor force is to be employed in the valley in the future.[12]

The population of the San Fernando Valley in the 1960's is literally "on wheels," that is, there are at least 1.4 automobiles per household, and approximately 45 per cent of the households have two cars or more. This situation is a response to several conditions, at least some of which are: affluence; a dispersed pattern of jobs, shopping, and cultural opportunities; and lack of efficient public transportation facilities. Also, valley residents are still dependent upon central Los Angeles for numerous specialized commercial and cultural needs. To accommodate this mobile population,

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[9] *Valley Times Today, op. cit.,*

[10] Security First National Bank, *op. cit.*, p. 26.

[11] *Valley Times Today, op. cit.,*

[12] Dave Siddon, "Industry Sites Demand Rises," *Valley Times Today,* October, 10, 1961.

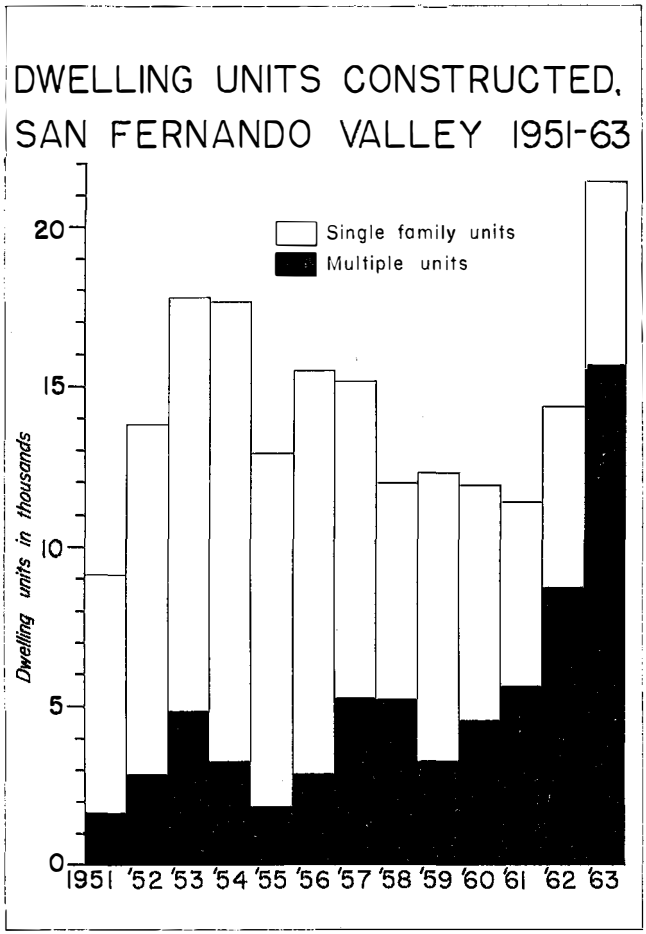

Figure 11. Source: Building Departments of Los Angeles, San Fernando, and Burbank.

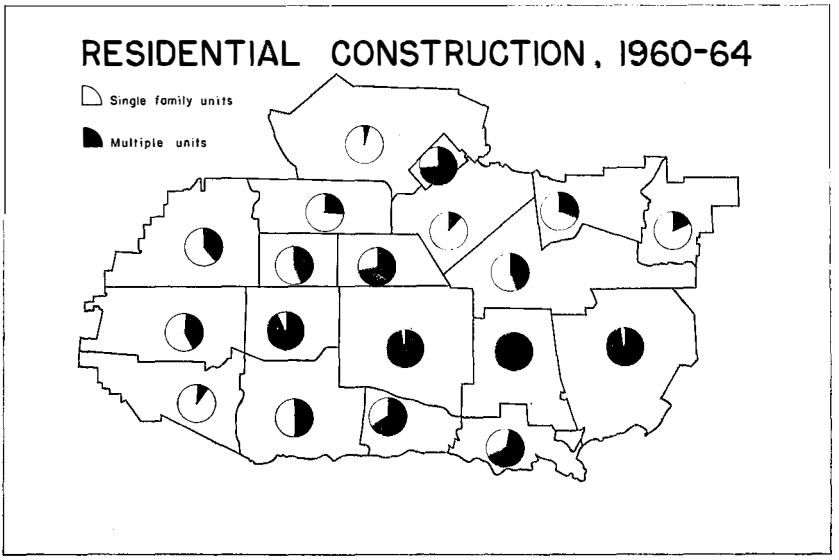

Figure 12. Source: Los Angeles City Planning Department. Population Estimates January 1, 1964; Building Departments of Burbank and San Fernando.

as well as through traffic which is present because of the major regional highways which traverse the valley, there now exists within the San Fernando Valley approximately 41 miles of a projected 83-mile freeway network.[13] These freeways are well integrated into the projected regional system.

Virtually all normal shopping needs can now be met within the valley, and commercial land use is taking on nuclear and sophisticated proportions, often in the form of large, modern, planned shopping centers. Also, the traditional pattern of strip-shopping districts continues to expand, but the establishments tend to be smaller and less permanent than those in the large shopping centers. Moreover, the strip-developments are feeling competition from the increasing number of major planned shopping centers, and the result is a serious vacancy problem in the strip-shopping districts, especially the older ones. This condition is certainly related to the estimated presence of approximately four-times as much commercial zoning in the valley as the population can reasonably be expected to support.[14]

Perhaps one of the most significant trends to appear thus far became clearly evident in 1961. That was the building of apartment houses. By 1961, the construction of such units equalled that of single-family dwellings for the first time; that is, one apartment unit was constructed for each single dwelling. However, during 1963, the ratio changed so that for each single-family dwelling there were 3½ apartment units constructed (Figures 11 and 12).[15] It appears that rising land costs, higher construction costs, less available near-in land, and more young married couples have combined to accelerate the building of apartment houses rather than single-family dwellings.[16] Like the preceeding major land use changes, apartment houses are crossing the valley from the southeast. Thus far apartment construction has taken place along primary surface streets or on secondary streets with ready access to freeways, with the greatest concentration being in the southeast.

Population growth has not abated; people have poured into the valley at a rate of approximately 30,000 per year since 1960.[17] There is no foreseeable letup; on the contrary, it is estimated that there will be approximately 1,600,000 persons in the San Fernando Valley in 1980.[18] By this time, the transformation from a scene of intensive field and orchard agriculture to a rapidly maturing urban-industrial landscape should be quite complete.

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[13] Estimate by the Freeway Department of the State Division of Highways, April, 1964.

[14] Haig Keropian, "Program of Survival Outlined to Retailers at Valley Conference," *Valley News and Valley Greensheet,* May 14, 1964.

[15] Gordon Grant, "Recent Growth to Continue: Valley Construction Sets Fast Pace During 1963," *Los Angeles Times,* December 29, 1963; Building Departments of the Cities of Los Angeles, Burbank, and San Fernando, Spring, 1964.

[16] City of Los Angeles, Department of City Planning, *Population Estimates* (Los Angeles: Research Section of Department of City Planning, January 1, 1964).

[17] Population estimates provided by the City Planning Departments of Los Angeles, Burbank, and San Fernando.

[18] Security First National Bank, *op. cit.,* pp. 3 and 9.

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BOOK REVIEW

Day Tours: Geographical Journeys in the Los Angeles Area, Los Angeles Geographical Society Publication No. One, by Glenn Cunningham, editor (Palo Alto, Calif., Pacific Books, 1964. 207 pp.).

This book, long in the making, fulfills one of the early objectives of the Los Angeles Geographical Society. From its inception the Society has served as a link between professional geographers and the lay public interested in a more sophisticated look at the world than that normally afforded by career travelogists. This role, always dangerously ambiguous, has been both a strength and a weakness. Certainly the efforts of the Society in promoting geography are unique in Southern California, and the Society has come very close to succeeding in the best traditions of its European models.

Days Tours is an important contribution. It is a masterful elaboration of the walk-about books associated with such places as New York and Australia. There is a problem, of course, in that there is no walking tradition in Southern California. The book thus is designed for a motorized public used to the trauma of Los Angeles traffic.

The book describes fourteen journeys of one day's duration each, originating from the Civic Center, and spilling out in all directions through the diversity of conditions for which Los Angeles is famous. The adventurer bent on seeing all that is described will log at least 2199 miles at an average of 157 miles per trip. He will observe many of the salient features of the larger Los Angeles lowland as well as the nearby mountains and deserts. With the exception of getting to and out of the Civic Center, he will not retrace his course from journey to journey.

Although the book was written by thirteen different geographers, each charged with a specific tour, there is a remarkable uniformity in the way in which the chapters are written. To the credit of the editor, there is not the unevenness of style commonly associated with multiple authorship. Each tour attempts to point out the items of concern to geographers, assuming that the readers have at least a latent interest in every conceivable aspect of the larger landscape. Old houses, new settlements, museums, colleges, farms, rock types, and vegetation features are described as they come into view. The emphasis obviously varies from tour to tour depending on the nature of the country being traversed.

From the reviewer's point of view it is a paradox that the strongest chapters are those concerned with the non-urban areas. Perhaps geographers are more at ease in describing the works of nature than they are the impress of urban man. In any event, the urban chapters tend to enumerate the obvious features, whereas the mountains and deserts are treated in a broader perspective. This is not to say that the descriptions of the city lack information. There is something for everyone in every tour, and there are new things to be learned no matter how long one has been a resident of any of the tour regions.

For the most part the integrity of the information presented is beyond reproach—and the book is filled with information. In a few instances, however, statements are made which are subject to question. For example, Sunland and Tujunga can scarcely be described as having a "high elevation" where snow is "not uncommon" (p. 153). Hemet's buildings are really not "uniformly modern" (p. 247). Long Beach was not necessarily is perhaps less significant to note that Placentia means "pleasing site" (p. 195) than it is to observe E. G. Gudde's *(California Place Names)* conclusion that the community was probably named after a town and bay in Newfoundland.

Without question, *Day Tours* is an heroic effort to provide the reader with a special kind of tour of Los Angeles. It is recommended for anyone with even a passing interest in Southern California. Its weaknesses lie in the uneasy ground it occupies between the professional world of geography and the lay public, and the overwhelming size of the regions portrayed. Walking tours provide time for reflection which driving tours do not. One should not attempt any of the urban tours without a detailed map of the city and without at least one colleague to assist in locating the places described. Passengers will appreciate the tours; but pity the driver.—William G. Byron, California State College, Los Angeles

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