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Prestige among Peasants: A Multidimensional Analysis of Preference Data¹

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This paper examines the prestige hierarchy among peasants. A rank ordering of nine peasant types is analyzed using paired comparisons data from a probability sample of 531 Costa Rican peasants. Through the use of a multidimensional point-vector analysis it is found that two dimensions (security-insecurity and legality-illegality) underlie the data. Variations in the prestige heirarchy are shown to be largely the result of remoteness from central locales, a finding which supports the work of Haller, Holsinger, and Saraiva (1972) on Brazil. An explanation for the finding is cast in terms of Costa Rican social history and the importance of security in peasant society. It is concluded that previous research emphasizing the uniformity of prestige hierarchies needs to be reexamined in the light of these findings.

The establishment of stratification hierarchies has been one of the central areas of investigation of modern sociological inquiry. However, stratification research is beset by at least three major shortcomings. One is that it has concentrated on urban occupations, largely ignoring, or treating only superficially, those of the rural sector. Despite the worldwide trend toward increasing urbanization, it is still the case, as Shanin (1971a, p. 17) has pointed out, that "peasants are the majority of mankind." It would seem appropriate therefore, to undertake research on rural prestige hierarchies so as to understand better the peasant sector of society.

A second difficulty with stratification research is that unidimensionality has often been assumed but not tested for. In fact, most of the research leaves the question of dimensionality implicit; hierarchies are presented, but the underlying dimension or dimensions which give rise to them are not discussed. If research in the area of stratification is to evolve beyond a mere description of the hierarchies, more attention must be paid to the question of dimensionality.

A final problem with stratification research is that, since the focus has been almost exclusively on urban areas, little attention has been paid to

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intrasocietal variations within prestige hierarchies. Hence, it has been frequently reported that hierarchies vary only minimally from city to city within nations and even across nations (Inkeles and Rossi 1956; Hutchinson 1957; Ramsey and Smith 1960; Carter and Sepulveda 1964; Hodge, Treiman, and Rossi 1966; Lin and Yauger 1975; Treiman, in press). New research, however, is beginning to cast doubt on these findings. For example, studies of prestige hierarchies in Brazil (Haller, Holsinger and Saraiva 1972), Costa Rica and Japan (Haller and Lewis 1966) have found that rankings in remote areas differ substantially from those in more central locales.

This article represents an effort to deal with all three of these failings of stratification research, using as its focus peasants in Costa Rica. First, this study attempts to overcome the failing of urban-based prestige hierarchies by taking a close look at rural society. Second, the problem of assuming the unidimensionality of the ratings is dealt with by using an analytical technique designed to search for the underlying dimensions of the data. Finally, rather than assume that the stratification hierarchy obtained from the dimensional analysis was universal across the entire spectrum of rural society, the data were analyzed for intrasocietal differences within the hierarchy.

The Dimensions of Peasant Prestige: Land or Security?

Just as occupational type has dominated the literature on urban prestige hierarchies, land tenure has been a central concern of those who have studied peasant societies. In the countryside, occupation is primarily a constant—all peasants are, by definition,² cultivators—but land tenure has

² Although there is no universal agreement on the definition of "peasant," there is some agreement on the major frameworks of analysis which have been used in the definitional process (Shanin 1971a, pp. 1-14; Powell 1972). A major problem is whether to limit the definition to peasants who have access to land-either owned, rented, or sharecropped (Shanin 1971b, pp. 240-45)—or to broaden it to include landless agricultural laborers or various types, often called rural proletarians or semiproletarians (Powell 1971, p. 11). Mintz (1973, p. 95) has shown that it is difficult to separate analytically the landed and landless peasants: ". . . peasantries commonly live in close association with landless, wage-earning agricultural workers whose economic relations incline us to define them more as rural proletarians than as peasantries. The extent to which a rural proletariat justifiably may be segregated analytically from a peasantry will, of course, depend on many environing factors. For that part of the world with which the writer is most familiar-the Caribbean region-it is difficult to specify the characteristics of either such 'type' without reference to the other." Because of the inseparability of the two major categories it was decided to treat them together in this research project. For this reason the definition provided by Landsberger and Hewitt (1970, p. 560) best fits the purpose of this study. They state that ". . . we shall use the term 'peasant' to refer to any rural cultivator who is low in economic and political status." Such a definition separates the individual who personally works the land from the large landowner who never personally works it. It also emphasizes

considerable variation. Since the days of Marx, analyses of peasant society have focused on the relationship of peasants to the means of production, in this case land, as a crucial demarcator of peasant "classes" (Stinch-combe 1966; Béteille 1969; Wolf 1966; Myrdal 1968; van Es and Whittenberger 1970; Paige 1975). Indeed, as Ernest Feder (1971a, p. 83) has pointed out, "in predominantly agricultural societies the ownership of land is the main source of economic, political and social power." In a similar vein, Solon Barraclough and Arthur Domike (1966, p. 398) have noted, "Ownership or control of land is power. . . ." Thus, a peasant's relationship to the land has been viewed as the primary determinant of his social status and prestige within his community.

Recent research, however, has begun to challenge the role of land in determining peasant prestige. It is now being argued that security is an overriding concern for those who live at the margin of subsistence. A study on Brazilian peasants finds that "there is little question that the basic organizing principle in the peasant sector of the economy is the maximization of security and the minimization of risk" (Forman 1975, p. 131). In rural Ecuador (Harris 1971, pp. 478–79), it has been demonstrated, taking risks in order to achieve a more comfortable existence is simply too dangerous for the agricultural poor. One researcher emphasizes:

Peasants at the margin of subsistence can never forget that they have no possessions or wealth to cushion them from a stroke of bad luck. Even without some calamity such as bad weather or disease, they watch helplessly as they and their children lose weight each year before the new harvest begins. The uncertainty of the weather, the chronic shortages of cash and food, and an insecure relation to the land are matters over which the poor peasant has no direct control. He has no reasonable alternative but to respond by emphasizing his own security even when he must sacrifice pride and profit to do so. [Johnson 1971a, p. 149]

Peace Corps Volunteers and foreign aid technicians alike have all been frustrated by widespread resistance to the adoption of new technology, but have sometimes come to recognize that if the technology fails it is the peasant who may suffer irreparable harm (e.g., the loss of a child through starvation). Research in Brazil (Johnson 1971a, 1971b), Costa Rica (Saenz P. and Knight 1971) and elsewhere (Wharton 1971) has confirmed the importance of security in peasant society.

The basis for rural stratification has been said to be either land or security. Perhaps this distinction is an artificial one; it may well be that it is security which marginal people seek and that land ownership is one

the underdog nature of the peasantry in both economic and political terms. Economically, the peasant has little capital, little land, and limited control over production and distribution. Politically, he has little or no access to political power centers and, therefore, precious little influence on the allocation of scarce resources. Most important, however, the definition is sufficiently broad to include landed and landless types alike.

means to achieving that end. For example, a peasant who owns a piece of land from which he can eke out a living is not totally dependent upon the whims of the local *hacendado*, whereas the landless peasant whose entire income depends upon wages is. However, landownership is not the only means to achieving security in the countryside. Peasants who do not own land can achieve some security by working on a plantation in which the work force is unionized. What is being suggested here is that land may operate as a means for obtaining security, but that landless peasants can obtain a certain degree of security in ways other than through landownership.

The dimensional analysis in this article will focus on the questions of land and security. In addition, it will probe the data for the existence of other dimensions which might also influence the stratification hierarchy in the countryside.

THE DATA

The Setting: Costa Rica

Costa Rica is the most prosperous country in Central America, although in comparison with the United States it is quite poor. Its gross domestic product per capita at the time of the study (1973) was \$710 compared to the \$484 average for Central America and \$6,200 for the United States. Despite more than a decade of considerable effort to industrialize its economy in concert with the other nations of the Central American Common Market, success has been limited (Seligson 1973). and the country still remains heavily rural and agrarian. According to the 1973 census (Dirección General 1975), 59% of the population lives in rural areas and 35% of the economically active population is engaged in agriculture. Thus, Costa Rica is a country with a large peasant sector, not unlike many other nations in Latin America. Additional details concerning peasants in Costa Rica are contained in Seligson (1972, 1974, 1975a, 1975b, 1977; and Booth and Seligson 1976).

Types of Peasants in Costa Rica

The first stage of the stratification research treated here began in mid-1972, with an effort to determine the types of peasants existing in Costa Rica. It was necessary to conduct informal interviews with peasants in order to find out what they considered these types to be. In asking the peasants for their opinions, I was hoping to avoid difficulties in the second phase of the project in which peasants would be asked to rate the types. Fortunately, the procedure worked well and little difficulty was encountered in the second phase.

When the informal interviewing process was completed nine separate types of peasants were clearly identifiable: three landed types, two tenant types, and four landless types. The approximate English translations³ are: landed—landowner with title, landowner without title, and squatter; tenant—renter and sharecropper; landless—steady plantation laborer, steady nonplantation laborer, day laborer, and migrant laborer.

These types require definition. To begin with, the fact that three types of peasants in Costa Rica possess land does not mean that they hold it with the same security of tenure. To the North American, the term "landowner without title," for instance, may seem like a contradiction since nearly all private land in the United States is titled to the owner. In Latin America, however, many peasants who have obtained their plot of land through legal means (inheritance or purchase) do not have title owing to the complexity of the titling laws (Saenz P. and Knight 1971) and the substantial costs which must be borne (Hill, Quintero, and Alfaro 1964). In Costa Rica, it is estimated that over half the land outside of the oldest areas of settlement is untitled (AID 1970) and that in some remote regions 91% of the farms lack title (Saenz P. and Knight 1971). The untitled owner is, nevertheless, in complete control of his land and, like the titled owner, makes all decisions regarding planting, harvesting, and sale of the crop. In addition, the untitled owner is required to pay the same property taxes which are applicable to the titled owner. Both titled and untitled owners, therefore, are owners of the means of production. However, the

³ The Spanish (i.e., original) expressions for these nine types, in the same order as presented in the text are: dueño de finca con escritura; dueño de finca sin escritura; precarista o parásito; agricultor que paga alquiler de tierra con efectivo; agricultor que trabaja a medias o a tercios; peón fijo por las compañías bananeras; peón fijo de un solo patrón (de hacienda); peón suelto u ocasional; peón ambulante que anda atrás de las cosechas. It should be noted that in some cases a descriptive phrase was used in the interviews rather than, or in addition to, the standard Spanish term, and in other cases two terms were used. The reason for this is that in talking with peasants from different regions of the country it was found that in some cases more than one term was used to define the same type. For example, in some regions of Costa Rica the term "peón suelto" was more frequently heard than the term "peón ocasional." Although both terms were readily identified in all regions, it was felt that providing the greatest number of cues to the respondent as to the type of peasant being referred to would reduce confusion to a minimum. It should be noted that these nine types correspond to categories proposed by numerous other researchers who have focused on Costa Rica (Norris 1952; Castillo 1954; Goldkind 1961). It was found that, with one major exception, the types of peasants found in Costa Rica are similar to those found elsewhere in Latin America (Ford 1955; Wolf 1955; Barraclough and Flores 1965; Schulman 1966; Smith 1970; Feder 1971b; Stavenhagen 1975; Whyte and Alberti 1976). The category of serflike peasant variously called inquilino (Chile), colono (Peru), and huaspingero (Ecuador) is not found in Costa Rica. Such peasants, legally bound to the land, are required to work on hacienda lands for a low or nonexistent wage for a fixed number of days per year. The absence of this type of peasant in Costa Rica is attributable to historical reasons. The scarcity of Indians at the time of the colonization in Costa Rica meant that the encomienda, a royal grant of Indians to favored colonists, never took hold (Seligson 1974, pp. 22-26).

position of the untitled owner is an uncertain one; he can be dispossessed of his land if challenged by a claimant with prior title. Not infrequently such claimants appear with fictitious titles prepared by unscrupulous lawyers and judges. Ciro Alegría's novel, El mundo es ancho y ajeno (1941) movingly portrays the plight of peasants caught in this kind of dilemma in Peru. In Costa Rica Fabian Dobles's prize-winning novel, El sitio de las abras (1970) makes the same point. The squatter, the third type of landed peasant, not only does not have title to the land, but, because he has taken it illegally, has no right to it at least initially and can be evicted at any time. Yet, while he is occupying the land he is in complete control of it and therefore operates the farm in a way not unlike that of the titled and untitled owners, except that he has a tendency to avoid planting permanent crops (e.g., coffee) since his future is so uncertain.

Renters and sharecroppers have considerably less control over their plots. They are permitted to work the land only so long as the owner is willing to continue the contractual arrangement, which is typically an unwritten one. The owner usually retains the right to determine the kind of crop to be planted and the manner in which the soil is to be cultivated. Renting, an arrangement in which the tenant pays a specified sum of cash to the owner, is usually more common in cash crop farming areas (e.g., vegetables), whereas sharecropping, a system whereby a portion of the crop is paid to the owner, is more typical in subsistence areas.

The landless peasant category has been divided into four types—two fixed and two floating. In a discussion of the two fixed types it is necessary to distinguish between "steady plantation" and "steady nonplantation" laborers because of the very different nature of the economic systems of which they form a part (Seligson 1974, 1975a). Plantation workers are represented by those peasants who work on large, capital-intensive farm operations usually owned by foreign companies, such as the United Fruit and Standard Fruit in Central America. Nonplantation workers are those who have steady work on farms which, regardless of their size, are capitalized at a much lower level than are banana plantations and are usually owned by nationals. This group of workers includes ones with steady jobs on large haciendas as well as ones with steady jobs on family-sized farms. Plantation workers are almost invariably paid at much higher rates than are their nonplantation counterparts and usually are provided better housing, better recreational facilities, and more accessible medical treatment. Finally, plantation workers are more often than not members of unions, whereas nonplantation workers are rarely organized.

Floating types of landless peasants are composed of those workers who do not have steady work on any one farm and are forced, as a result, to search for work opportunities. Day laborers usually live in one village most of the time, whereas migrant workers are constantly on the move

following the harvests around the country. During the harvest time the migrant worker can earn considerably more than the steady nonplantation worker, but his income is very irregular and usually he lives in the worst housing available. Furthermore, because he is so mobile, his children rarely finish any given year of school.

METHOD

The Ranking of the Types: The Method of Paired Comparisons

What is the prestige hierarchy among these nine types of peasants? To answer this question 531 male Costa Rican peasants were interviewed in late 1972 and early 1973 by the author and his wife. A stratified and clustered area probability sample design was used employing the exceptionally accurate maps that the Costa Rican census bureau had prepared for the 1973 decennial census.⁴ The sample was designed to include a wide cross section of the Costa Rican peasantry on all of the nine types for which data was being sought. A total of 66 villages were included in the sample, distributed among 28 distritos, the distrito being the smallest administrative subdivision in Costa Rica. The 531 peasants interviewed included: 21.7% landowners with title, 16.9% landowners without title, 10.9% squatters, 2.3% renters, 5.2% sharecroppers, 16.9% steady plantation laborers, 12.1% steady nonplantation laborers, 10.9% day laborers, and 3.1% migrant laborers.

Even before the fieldwork was begun it was recognized that the respondents would have difficulty responding to a question which required them to rank order a fairly long list of categories. Since it was known that a substantial number of the respondents would be illiterate, the idea of using some sort of paper-and-pencil check list was abandoned. Rather, what was done was to simplify the task greatly by using forced-choice paired comparisons (David 1963; Burton 1972, p. 65). Under this procedure the respondent was confronted with only two peasant types at a time, rather than with the entire list of nine, and asked to rank one higher than the other. The procedure was repeated until each of the possible 36 nonredundant pairs had been examined. In order to reduce respondent fatigue groups of pairs were interspersed throughout the questionnaire, instead of all pairs being placed together. A preference rank ordering for each respondent was derived by summing, for him, the number of times he chose any one type over another. Thus, if the category of "landowner with title" was chosen by a respondent over every other type with which it was paired, that category was assigned a summated preference score of eight. In order that the rank orders correspond to the nine peasant

 $^{^4}$ A fuller description of the sample and information about the socioeconomic characteristics of the respondents are contained in Seligson (1974, pp. 248–308).

types, one point was added to each rank ordering and then the order was reversed so that the ranks would range from a low of nine (least preferred) to a high of one (most preferred). If the respondent did not indicate a preference between the two elements of a pair, that pair was scored a zero and thus nothing was added in the summing procedure. Only 1% of all pairs that were rated were given a score of zero. A total of 26~(4.9%) with unacceptably high levels of inconsistency in their responses (see Appendix) were eliminated from the analysis.

Multidimensional Analysis of Preferences: The Model

In order to analyze the dimensionality of the data obtained by the paired-comparison questions it is necessary to use a model appropriate for rank-order preference data. Such a model is the "point-vector" model, a special case of the more general and better known "unfolding model" developed by Coombs (1964). The computer program utilized is MDPREF.⁵ Since the program has not, to my knowledge, been employed before in published social science research, it is necessary to spend some time explaining, in a nontechnical way, what it does.

The program takes as input a preference score matrix in which the rows reflect each subject's rank ordering of the stimuli (peasant types).6 The goal of MDPREF is to produce a spatial configuration of points in a given dimensionality which best represents the position of the stimuli, while at the same time plotting into this configuration a vector for each subject. When the stimulus points are projected onto the subject vectors, the order of the projected points on the vectors will correspond optimally to the order of the preference given by each subject. In an analogy to factor analysis, the position of the stimuli (peasant types) is indicated by the factor loadings, and the position of the subjects (respondents) is indicated by the factor scores. A major difference between the two models is that MDPREF does not employ the distributional metric assumptions used by factor analysis and, therefore, is appropriate for direct application to rank-order preference data of the type obtained in the present investigation. This explanation will become clearer when the actual data are examined.

In figure 1 the dimensional results of the MDPREF analysis are portrayed. Four different kinds of information are conveyed by this one con-

⁵ The method was developed by Slater (1960) and Tucker (1960a, 1960b), and elaborated by Carroll (1964). The program was prepared at Bell Telephone Laboratories by Carroll and Chang (1969). In its original form it was able to handle no more than 64 subjects, so it had to be rewritten in order to handle the entire sample of over 500 peasants interviewed in the peasant study. The program was run on the University of Arizona's DEC 1099 computer.

⁶ It is also possible to input the raw paired comparisons into the program, but the results are the same.

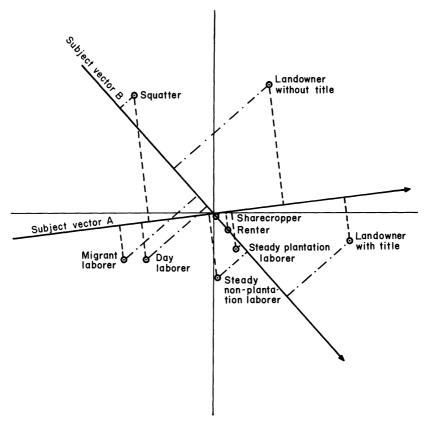


Fig. 1.—Two-dimensional plot of preferences

figuration. First, there are nine points representing the nine different peasant types which were rank ordered by the respondents in the study. These points are called the "stimulus points," since they are the stimuli to which the subjects were asked to react. The location of each stimulus point should be examined relative to its location on both the horizontal and vertical axis. These axes represent the second kind of information portrayed in the figure. Each axis can be thought of as representing a dimension which underlies the rank-order data.

The third type of information represented in the figure is the position that each respondent (i.e., subject) has in the space. These positions are indicated by directed line segments (called "subject vectors") drawn through the origin of the configuration. In figure 1 only two subject vectors are drawn in (the others are eliminated so as not to confuse the plot unnecessarily). Each subject vector should be thought of as pointing in the direction of a respondent's preference in regard to the stimulus points.

The arrowhead of the vector points in the direction of the most preferred position. Thus, an examination of subject vector A drawn in figure 1 indicates that this respondent's most preferred category was titled landowner, then untitled landowner, then steady plantation laborer, then renter, then sharecropper, then steady nonplantation laborer, then squatter, then day laborer, and finally migrant laborer as the least preferred. This preference order information is obtained by projecting the stimulus point onto the subject vectors (as is shown in fig. 1). The subject whose preference ordering is indicated by vector B orders his preferences quite differently. This individual prefers the titled landowner, then steady nonplantation laborer, then steady plantation laborer, then renter, then sharecropper, then day laborer, then migrant laborer, then untitled landowner, and, last, squatter. It can be seen from these two examples that a single arrangement of stimulus points in the space can accommodate a very wide range of preference orderings. It should also be noted that for nearly all of the individuals the end points of the vectors are located in the right-hand side of the horizontal continuum.⁷

The final kind of information conveyed in figure 1, related directly to the subject vector positions discussed in the preceding paragraph, is the weight that each subject gives to each dimension. This is indicated by examining the cosine of the angles which the subject vector forms with the axes. The angle which subject A's vector forms with the horizontal axis is quite acute (an indication that this dimension is given a heavy weighting by this respondent—i.e., it is very important to him), whereas the angle this vector forms with the vertical dimension is very obtuse (an indication of a low weighting of this axis—i.e., the respondent attributes comparatively little importance to this dimension).

7 The vector model representation of the subjects assumes that a respondent's preferences are infinite; that is, the more of the preferred quality, the better. An alternative is the Coombsian (1964) unfolding model in which ideal points can be placed either in the center or at the extremes of the space. Thus, the vector model is a special case of the more general unfolding model (Carroll 1972). In order to determine which model would be more appropriate for my peasant data I used Carroll's PREFMAP program. It was not feasible to reprogram PREFMAP to handle in any one pass over the data more than its design limit of 49 subjects; thus, several runs had to be made, using repeated random samples of the data. The program was run in both its metric and nonmetric versions. The metric version consistently produced root mean square values over .80, and the nonmetric version yielded values over .90. Squaring these values to convert them to "variance accounted for" shows that the metric version accounts for over 70% of the variance and the nonmetric version over 90%. While the more general unfolding model will always explain more of the variance than the vector model, the former did not explain significantly more of the variance than the latter, hence the more parsimonious vector model is to be preferred. At the individual level, the F-ratio between the unfolding and vector phases of the program suggests that only a small number of cases are fitted better by the former model than by the latter.

FINDINGS

Multidimensional Analysis of Preferences: Results

The MDPREF analysis of the data yields two clearly interpretable dimensions: the secure/insecure and the legal/illegal. Figure 2 portrays these dimensions with the axes labeled⁸ and representative vectors indicated by arrowheads denoting their end points.⁹ The solution presented is centered.

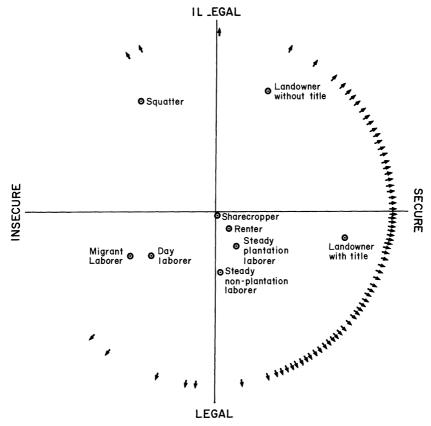


Fig. 2.—Two-dimensional plot of preferences and subjects

⁸ As in all scaling techniques of this nature the naming of the dimensions is done extrastatistically; that is, the researcher must examine the spatial configuration and determine for himself the nature of each dimension. The determination, of course, may be challenged by researchers who see a different interpretation. The configuration displayed in figure 2, however, is so clear-cut that I feel confident in labeling it the way I have.

⁹ Only representative vectors could be indicated because of the impossibility of including all 505 vectors on the plot. In many cases more than one subject provided an identical or near identical rank order.

Principal axis and varimax rotations were performed but had only a slight impact on the configuration and no impact on the interpretation. The solution yielded a very good fit to the data; the first dimension explained 56% of the variance in the rank orders. The second dimension explained an additional 16% of the variance for a total explained variance of 72%. The proportion of explained variance not only reveals that the solution makes a good fit with the input data, but also testifies to the need for a two-dimensional rather than a unidimensional interpretation of the stratification hierarchy. Using the Kaiser criterion as a rule of thumb, both the first and second dimensions are meaningful, since each one explains considerably more variance than any one stimulus alone (the variance explained by a single stimulus is 11%). Interpreting the data in a unidimensional way would result in discarding a significant amount of the variance which MDPREF is capable of explaining. While the variance figures help avoid a unidimensional interpretation of multidimensional data, they also guard against overinterpreting the dimensionality of the data. Hence, the variance figures provide a convenient cutoff point; the third dimension explains only 9%, which is less than is explained by any single variable and is therefore dropped. Of course, each of dimensions four through nine explains a successively smaller portion of the variance and therefore is ignored.

It is quite clear that the horizontal dimension cannot be interpreted as a landed/landless one. This is so because there are certain anomalies in the location of types which make the landed/landless interpretation unacceptable. Most important, the squatter, a landed type, is located on the left-hand (i.e., "landless") side of the continuum and far removed from the two landed types. A second reason for the inappropriateness of the landed/landless label is the location of the two steady worker types on what would be the landed side of the continuum, mixed in quite closely with the tenant types.

A careful examination of the horizontal axis reveals that the peasant types are actually arrayed along a continuum from more to less secure. It is seen that the titled landowner is placed at the extreme right-hand end of the continuum as the most preferred type. This type is followed by the landowner without title. Next, located near the center of the plot, comes a tightly knit cluster composed of the two tenant types and the two steady worker types. Finally, at the extreme left-hand side are the three types least preferred: day laborer, squatter, and migrant laborer. As one moves from right to left on the dimension the types become progressively less secure. Hence, titled owners constitute the most secure type while at the other extreme the unsteady workers, migrant laborers, and squatters are the most insecure. The unsteady worker and the migrant laborer can never be sure of their next day's work while the squatter lives

in fear of losing his land. The types of peasants in the center of the plot have an intermediate level of security which is derived from different sources. The untitled owner is aware that he could lose his land in a legal dispute. Thus, although he has the security of owning a piece of land, that security is limited by his lack of title. The two steady worker types are secure in that they have permanent jobs, while the tenant types obtain their security from the land they till. These five types, however, are not nearly as secure as the titled landowner type, since workers can lose their jobs (and often do) and untitled owners and tenants can lose their rights to the land. Thus, the security of this intermediary group is often ephemeral.

Looking next at the vertical axis in the plot it can be seen that the nine types are divided cleanly into what I will term the "legal" and "illegal" types. Thus, only the untitled owner and squatter are categories of peasants whose legal status is at issue, whereas the other types have no illegal connotation. Figure 2 shows that the two illegal types are grouped together at the top of the vertical axis whereas all the other types are clustered together near the center of the plot. Thus, the MDPREF analysis has indicated a clear-cut second dimension of stratification in rural Costa Rica.

Prestige among Peasants: An Explanation

It has now been shown that there are two dimensions in the prestige preference data. It is assumed in scaling methods of this type that the different dimensions are a result of intersubject variation in preferences. Decause of this variation it should be possible to examine the preference orders of the individual subjects to find out whether certain background characteristics affect the choice of one preference order over another.

While it would be an impossibly complex task to examine the 505 subjects' rank orderings individually, it is quite feasible to examine the clustering of vector end points illustrated in figure 2 to detect overall patterns which might lead to some substantive explanation. Figure 2 shows that nearly all vector ends are grouped on the right-hand side of the space. Hence, nearly all the peasants prefer the secure types to the insecure types, a finding not at all unexpected. To varying degrees insecurity is a problem for all of the respondents in the sample: even the landed peasants fear the disastrous impact of a crop failure.

While there is very little variation in the position of the vector ends

¹⁰ If a subject shifts his or her rationale for ranking the stimuli in the middle of the process then the data will exhibit intrasubject variability. Unfortunately, there is no way for scaling techniques to deal with this type of data. For this reason the most "inconsistent" respondents were eliminated from this analysis (see Appendix).

on the horizontal (security-insecurity) dimension, there is considerable variation of the vector positions on the vertical (legality-illegality) dimension. In particular, it can be noted that a substantial number of vector ends are located far above and far below the zero point on the vertical axis. What is the difference in the rank ordering provided by a subject whose vector is located far above the zero point on the vertical axis compared to one whose vector is located far below that point? Looking back at vector B on figure 1, we see an example of a subject whose vector end point is located far below the line. His rank ordering differed from that given by subject A primarily in his placement of the two illegal types. Thus, subject B ranked the untitled owner and the squatter far lower than did subject A. If the reader can visualize a vector drawn in figure 1 whose end point would be located far above the zero point on the vertical axis. he or she will realize that such a subject would provide a considerably more favorable evaluation of the two illegal types than did either subject A or B. The variability of the vector ends on the vertical dimension is primarily determined, therefore, by the subject's ranking of the two illegal types of peasants; the higher on the vertical axis a vector is located, the more favorably the illegal types are ranked, whereas the lower on the axis the vector is located, the less favorably these types are ranked.

A further examination of figure 2 reveals that there is a continuum of vector ends on the vertical axis which ranges all the way from those subjects who are very positive toward the illegal types to those who are very negative toward them. In order to find out what differentiates the respondents along this legal/illegal dimension, the spatial coordinates of the vector end points on the vertical dimension have been correlated with a number of the background variables in the study. Since the rank order information has been "up-graded" by the MDPREF program to orderedmetric level data (Green and Carmone 1970, pp. 9–10), the use of the Pearsonian product-moment coefficient is appropriate here.

A wide range of variables from the interview schedule has been correlated with the subject vector coordinates. These variables include socioeconomic indicators, such as income, education, and land tenure, as well as many attitudinal indicators. None of these have produced sufficiently high correlations to warrant mention. However, positive findings do emerge from testing the remoteness hypothesis suggested by Haller et al. (1972). The correlation between the distance of the dwelling unit from San José (the capital of the country) and the subject vector coordinates on the legal/illegal dimension is .36, significant at P < .001. Thus, the present investigation supports what the Haller team found—namely, that the

¹¹ The coordinates on the horizontal (secure/insecure) dimension were also analyzed, but, owing to the lack of variation on this dimension, no substantive findings appeared.

prestige hierarchy in more remote areas differs significantly from that found in more centrally located areas. The positive correlation between the remoteness variable and the legal/illegal dimension indicates that the peasants living in more remote areas of the country are more favorable to the two illegal categories than are those who live in more central areas. Thus, the greater the distance from the capital, the higher on the vertical axis of figure 2 is the end point of the subject vector likely to be located. To understand why this is so requires a brief discussion of Costa Rican social history.

Costa Rica was one of the poorest colonies in the Spanish empire because it had a small Indian work force and almost no precious metals. As a consequence, nearly all of the early settlers became small farmers with a plot of land. After independence, coffee cultivation began in earnest as lucrative export markets were developed. Since by then there was virtually no Indian work force, an acute shortage of labor developed. Furthermore, since coffee would only grow well in the tiny highland region known as the *meseta central*, a shortage of land developed as well. The wealthier coffee growers needed both land and labor to increase their export earnings and therefore began to pressure small farmers into selling their plots. While the details of how this land transfer occurred are too complex to go into here (see Seligson 1974, 1975a, 1975b, 1977) the end result was that many lost their land, some of them preferring to leave the comfortable *meseta* area to strike out for new lands in uninhabited zones.

Ever since the late 19th century there has been a steady migration of peasants to these new lands. Because of the complexities and costliness of the land titling procedure, only a small portion of the new settlers were able to obtain title. Furthermore, many newly landless *meseta* peasants squatted on lands owned by powerful coffee growers of the *meseta* who were too preoccupied with their affairs to do much checking up in the remote countryside. Consequently, because of these historical factors, peasants in remote Costa Rica are today more sympathetic toward untitled owners and squatters than are peasants who live in centrally located areas.

SUMMARY AND CONCLUSIONS

This paper finds that two dimensions underlie the rank orders of prestige among Costa Rican peasants. These are a security/insecurity dimension and a legal/illegal dimension. The security/insecurity dimension results from the multiple insecurities of peasant life. Remoteness from the capital city, which produces a more favorable attitude toward the squatter and the untitled landowner, is responsible for the second dimension. Clearly, these two dimensions are related. Peasants who are concerned about the

question of legal tenure status are also troubled by the broader question of security.

Peasants typically live at the margin of subsistence. Their lives and those of their families are continually threatened by starvation. Peasants who lose their land or their jobs have much to fear. In contemporary rural Costa Rica these fears have been heightened. Owing to a rapid expansion in population (the country's growth rate, which has recently slowed, was among the highest in the world in the 1950s and 1960s [Dirección General de Estadística y Censos 1974]), intense pressure has been placed upon the arable land area. Further, modern technology has reduced the demand for labor in the countryside, especially on the large plantations (Adams 1967). Finally, industrial growth in the cities has been unable to provide sufficient numbers of jobs to absorb the rural unemployed. The International Labor Office's recent study (1972) predicts that unemployment rates, which averaged between 4.1% and 6.9% in the period 1950-63, will reach 23% in the period 1970-90. Underemployment, a chronic problem in rural Latin America, makes the unemployment problem that much more serious.

The landless, unemployed peasant has little recourse other than resorting to squatting if he wishes to survive. By 1967, the latest year for which figures are available, it was estimated that 11.4% of all rural families in Costa Rica were squatters (ITCO 1967). In the early 1970s there were increasing numbers of squatting incidents involving violence, and there were officials within the land reform agency who felt that a major crisis was in the making (Seligson 1974, 1975a, 1977). Since 1974, however, strong efforts have been made by the government to reduce squatting through a revitalization of the land reform program. Nevertheless, the limited amount of land available and the increased population pressure may doom these efforts to failure. All of this suggests that the investigation of prestige among peasants can tell us something about the major cleavages and tensions in a modernizing society. At a minimum, the present study has provided empirical evidence for the existence of the security dimension among peasants. The importance of security should be recognized by those who wish to better understand peasant society.

A more general conclusion to be drawn from the evidence presented in this paper is that the literature has too frequently stressed convergence of prestige hierarchies. While it is probably true that in the urban areas of most parts of the world quite similar hierarchies may be found, this paper demonstrates that isolation from the center of society can significantly alter the ranking of occupational types.

APPENDIX

The Problem of Inconsistency

While the paired-comparisons method used to elicit the data in this study has the advantage of greatly simplifying the rank-ordering task (by asking the respondent to retain in his mind only two peasant types at a time) it does create a problem in the calculation of the rank orders. The problem arises because the paired-comparison procedure permits the respondent to express inconsistent preferences which are not possible under a rank-order method. Inconsistency arises when, for example, A is preferred to B, B is preferred to C, and C is preferred to A. In this situation each of the three stimuli would be given a point (having been preferred to one of the three stimuli) and thus all three stimuli would tie for first place. When such ties occur we obtain no useful information, whereas, had we simply asked the respondent to order the three stimuli, he might well have provided a ranking.

The fact that inconsistency is a possibility in the paired-comparisons procedure but not in the rank-order exercise would appear, at first glance, to be a factor in discouraging its use as a technique of data collection. Further consideration, however, suggests that all that is done in the rank-order procedure is to make it impossible for the respondent to provide an inconsistent response even if such a response is quite reasonable. An illustration of such a situation is provided by David (1963, p. 11). He develops a situation in which successive pairs of three athletic teams meet in a tournament. In the first encounter team A beats team B. In the second encounter team B wins over C. But in the final match, team C beats team A. This type of situation is a common occurrence because certain strengths that one team has when playing another become weaknesses in playing a third team (e.g., height may be necessary to beat one team, but speed to beat another). David points out that the most extreme illustration of this phenomenon occurs in the popular game of stone. scissors, and paper.

Thus, the so-called inconsistencies of judgment made in the paired-comparisons situation may be a result of the fact that the respondent is focusing on different attributes of the stimuli when he examines different pairs. Thus, the responses are not genuinely inconsistent but reflect an accurate evaluation on the part of the respondent, since there is more than one valid order. There are, however, other reasons why such seemingly inconsistent judgments can appear. One is that the judge may be guessing when he states his preferences. Such a situation could occur when the stimuli have little salience for or are unfamiliar to the respondent. It could also occur when the stimuli are in fact highly similar and therefore difficult to rank order with precision. An illustration of this situation

occurs when respondents are asked to judge color chips in which the color varies by one shade. Of course, the "inconsistency" may be produced by an error in judgment on the part of the respondent or by his failure to cooperate with the investigator. The last situations are perhaps the only ones to which the term "inconsistency" can be appropriately applied.

From the paired comparisons data alone the researcher is unable to determine the cause of inconsistent judgments. He is left with a tied ranking due to either legitimate (rationally based) or illegitimate reasons. Despite the valid reasons respondents may have for their inconsistent judgments, it is necessary to eliminate some respondents because of the many tied ranks which several inconsistencies produce. Therefore the researcher needs some way of determining which respondents are so inconsistent that they should be dropped from the analysis.

An objective criterion for dropping respondents with highly inconsistent pairs has been developed by Maurice Kendall (1948, p. 121–38). Kendall suggests a "coefficient of consistence" and a method for calculating the statistical significance of this coefficient.

The consistence coefficient for the entire sample of 531 respondents was determined and resulted in a mean of .921. Perfectly consistent responses were given by 39.7% of the individuals and 73.3% had consistence coefficient levels over .90. The χ^2 test of significance, which tests to see whether a respondent allotted his preferences totally at random, indicates that none should be excluded from this study owing to inconsistency of response.

The difficulty with accepting χ^2 values as the criterion for deselecting inconsistent respondents is that it is not stringent enough. In order to be excluded from the study, using this criterion, a respondent would have to have produced more than 27 out of a possible maximum of 30 circular triads ($P \leq .05$). Thus, a respondent with any consistency at all would not be excluded. This would mean that the respondent who produced 27 out of the possible 30 circular triads in this study would be considered sufficiently consistent to be included. Since the reason why the χ^2 values were calculated was to "clean" the data of respondents who were inconsistent, the χ^2 criterion is of no use in the present situation where no respondents were totally inconsistent.

Since the χ^2 criterion proved unsuitable for cleaning the data in the present study, it was decided to use the consistence coefficient alone as the criterion and to eliminate all respondents whose coefficient was more than two standard deviations lower than the mean. The mean consistence coefficient is .921 and the SD is 0.107. Thus, respondents whose coefficient is less than .707 were excluded. Using this criterion for cleaning the data results in the elimination of 4.9% of the cases, or a total of 26 cases.

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