

Comparison of Scores by Country:

Stability over Time

In order to compose scores by country I had to control for occupation. The composition of occupational groups by sex and age varies only marginally among subsidiaries of HERMES, which makes it unnecessary to control for sex and age once we have controlled for occupation.

The scores to be composed by country are either mean scores on five-point quasi-interval scales or percentages of answers on nominal scales. The country comparison used only data from the marketing and service division of the corporation, not from product development or manufacturing. The marketing and service division was surveyed twice: in 1967-1969 and in 1971-1973. For each of the two surveys, a country score was computed as the arithmetical mean of the scores for seven occupational categories:

- (1) managers (all levels), country head office;
- (2) managers (all levels), branch offices, including sales, service, and technical managers;
- (3) technical experts, branch offices;
- (4) sales representatives B (highly qualified), branch offices;
- (5) service technicians B (highly qualified), branch offices;
- (6) service technicians A (moderately qualified), branch offices; and
- (7) administrative personnel, country head office, including clerks and professionals.

Each of these seven categories carries equal weight in the country score regardless of its actual number of respondents. The computer program used for data bank information output (Figure 2.2) did not print results for groups smaller than eight respondents. The use of smaller groups was seen as a threat to the anonymity of respondents, but it is also statistically undesirable. Many of the smaller subsidiaries, however, had less than eight respondents in one or more of the seven occupational categories. As a minimal criterion for including a country in the analysis, I used that at least four out of the seven categories should have eight or more respondents and therefore have data printed out. Data for missing occupational categories were extrapolated: (a) If data for this category were available in 1971-1973 but not in 1967-1969, the earlier data were derived from the later data by correcting for the mean shift which occurred in the country's other occupational categories between the two surveys; and vice-versa if data were available in 1967-1969 but not in 1971-1973; (b) if data for this category were missing in both surveys, they were derived from the other categories' data correcting for the occupational differences found in the total world data.⁴ In this way, scores for 39 out of the 66 countries in the HERMES data bank could be used, from which 30 have been surveyed twice. Yugoslavia was the fortieth country. The total number of respondents involved is 31,218 for 1967-1969 and 40,997 for 1971-1973; the minimum per country per survey is 37 (Pakistan 1967-1969) and the maximum 7907 (Germany 1971-1973).⁵

The data from countries which were surveyed twice within a four-year interval allow a test of the stability of the between-country differences. It was argued that only questions should be retained for which the differences in score level from country to country would be relatively stable from the first to the second survey round (from about 1968 to about 1972), because:

- (1) The purpose of the analysis is to find value differences among countries and to relate these to characteristics of the countries; we cannot expect to find meaningful relationships for measures that are not more or less stable over time.
- (2) Country score levels reflect in general both the collective state of mind of the respondents and the collective situation in which these respondents find themselves. We are interested in the first more than in the second. Collective states of mind of the type that interests us change slowly; the situation, however, may change much faster, such as through a change in market conditions, company policy, or management practice. By weeding out questions for which score levels are unstable over time, we avoid such situationally determined issues.

The stability coefficients were computed as (Spearman) rank correlations of mean country scores (based on seven occupations) between the first and the second survey rounds. They vary from .12 to .95. Arbitrarily, I consider scores as reasonably stable if the coefficient exceeds .50.⁶

Based on the stability coefficients, five questions with stabilities between .35 and .12 have been immediately excluded from further analysis. For the remaining questions, the stability coefficients range from .39 to .94, with a median of .76. Five questions with stability coefficients between .39 and .49 have been provisionally retained (two of them were dropped later; see below). For the questions that were retained, country scores were computed as means between the values found in the two survey rounds. From a comparison between the two survey rounds, it became clear that there had been worldwide shifts on some questions (I shall go deeper into this in Chapter 8). For the countries surveyed only once, either in the first or in the second round, it was necessary to correct for these shifts. Scores for countries surveyed only once were therefore corrected, with half the worldwide shifts between 1968 and 1972 based on the countries surveyed twice. In this way, for all countries the country scores can be assumed to approximate as well as possible the situation around 1970.

Eclectic Analysis: The Power Distance and Uncertainty Avoidance Index Formation

From the earliest surveys onward, it had been clear that questions dealing with hierarchical relationships received systematically different answers in different countries. An early publication (Sadler and Hofstede, 1972) explored the differences in preferred and perceived leadership styles in six countries. Later, for conceptual reasons related to Mulder's Power Distance Reduction Theory (Mulder, 1976, 1977), the question "How frequently are employees afraid to express disagreement with their managers?" was chosen as a central question measuring "Power Distance." Country scores on this question were correlated with those on six other conceptually related questions. Based on these ecological correlations, the three questions mentioned above were selected to form a Power Distance Index (the exact computation of the index is described in Chapter 3).

The Uncertainty Avoidance Index was developed in an analogous way. I had an early theoretical interest in the phenomenon of stress which was measured by the question "How often do you feel nervous or tense at work?" but in stress differences by occupation rather than by country (Hofstede, 1978c). It then appeared that stress

led to many questions being related to "power distance." We were, however, naive with regard to issues of formal organization, which led to a lack of questions related to "uncertainty avoidance." The third risk of a statistics-first approach is that results rarely will be confronted with theory; once the results of the analysis are there, the researcher is seriously constrained in his search for theoretical clarification by his "findings" and tempted to be quickly satisfied with a few superficial interpretations. Studies of this kind often show remarkably little synergy with other studies.

The Analysis of Work Goal Importance Data

A potentially rich source of information was available in the "work goal importance" questions, which form a self-contained block. The 1968-1971 surveys contained 22 such questions; after that the list was reduced to 14 (A5 through A18). A fundamental problem with these questions is that their answers are strongly affected by *acquiescence*. Acquiescence is the tendency to give a positive answer to any question, regardless of its content ("yesmanship"). In general, we find that the lower the status and educational level of a group of respondents, the stronger their acquiescence. This is clearly demonstrated in Figure 2.4.

For 38 occupations, gross mean work goal importance scores were computed taking 15 European countries⁸ and all 22 work goals together (1968-1971 data). A low gross mean indicates that people in this occupation tend to score *all* goals more frequently as "of utmost importance" or "very important." We see in Figure 2.4 that gross means for the 38 occupations vary from 1.82 to 2.28, and that the rank correlation of the gross mean with the occupation's mean years of formal education is as high as .83. That is, the tendency of rating everything more important is for $.832 = 69$ percent a matter of the occupation's educational level.

Greater acquiescence by less-educated, lower-status employee categories is probably due to both a desire to please the (higher-status) author of the questionnaire and to a less differentiated "cognitive map" in the respondents: They distinguish less clearly between goals. Acquiescence not only varies among occupations; it also varies among countries. The gross mean work goal importance score across 14 goals has been taken as the measure of acquiescence for each of the 40 countries. In Chapter 5 we shall see that it correlates negatively with Individualism.

Acquiescence is an interesting phenomenon *per se*, but it is irrelevant for determining the importance of a particular work goal for a certain category of respondents. It tends to distort the answers. In general we can say that the *absolute* importance score of a single goal is irrelevant: It is as meaningful as the sound of one hand clapping. Importance becomes meaningful only when we can compare at least two goals.⁹ Earnings and cooperation are both important for almost anyone; only the relative importance of one over the other tells us something about the values of a person or group. This means that work goal importance scores for single goals should not be shown in their raw state—they should be shown relative to other goals. The simplest way to achieve this is replacing the mean importance scores for the different goals by rank numbers: 1 for the goal with the lowest mean (most important), 14, 22, or *n* for the goal with the highest mean (least important). In the ranking process, however, the information about the relative distances between the goals is lost. I have therefore used a more sophisticated procedure: *standardizing* the mean scores for each group across the *n* goals.¹⁰ In standardizing, we express the scores in

scores varied much more by country than by occupation (compare Figure 2.3). A subsequent analysis of stress differences by country showed these to be highly significantly correlated with anxiety factor scores based on national statistics from 18 countries, calculated by Lynn (1971). The ecological correlation of stress scores with power distance was weak enough (.30) to suppose that stress scores would reflect another ecological dimension. The search for this other dimension was guided by theoretical reasoning based on the findings of the Aston group in Great Britain (Pugh, 1976; Pugh and Hickson, 1976) with regard to dimensions of organizational structure. The Aston group found two main dimensions of structure: "concentration of authority" and "structuring of activities." The first is conceptually related to power distance; I argued that the second could be related to stress. A search in the HERMES questionnaire revealed three questions which could express structuring of activities, of which, however, only one showed stable country differences over time: the belief that "company rules should not be broken—even when the employee thinks it is in the company's best interests." Country scores on this question proved significantly correlated with country stress scores. A final search of the ecological correlations of both "stress" and "company rules should not be broken" with all other questions for which country scores had proved stable over time led to the discovery of a third question for which country scores were correlated with both. This was, "How long do you think you will continue working for this company?" The combination of stress, need for fixed company rules, and need for continuing with the company was interpreted as expressing a level of "uncertainty avoidance" in the country, among other things conceptually related to the Aston "structuring of activities." Country scores on these three questions were then used to form an Uncertainty Avoidance Index (for a further explanation of the concept of Uncertainty Avoidance, as well as for the exact calculation of the index, see Chapter 4).

The phase of the analysis in which the Power Distance Index and Uncertainty Avoidance Index were developed can be called "eclectic" because questions were selected on the basis of theoretical reasoning (with one exception only), and statistics (ecological correlation analysis) was used only *after* theoretical reasoning had singled out certain questions as potentially relevant. That is, theory preceded the use of statistics. This as opposed to an alternative approach which simply would have taken all available questions regardless of their theoretical relevance and subjected their country scores to an ecological factor analysis right away. As I shall relate below, I did use an ecological factor analysis, but only at the very end of the analysis process, in order to fit the total picture together. The difference between using heavy statistical treatment (factor analysis) at the beginning or at the end of the analysis may look trivial, but this is not so: the atheoretical, statistics-first approach carries three substantial risks which the theory-first approach avoids. The first risk is that potentially important nuances in data are overlooked. The second risk is the operation of a kind of Gresham's Law according to which "bad data drive out good": Many trivial variables in a factor analysis cloud the meaning of a few crucial ones. Finding a "strong factor" just means that many variables are intercorrelated, not that they mean anything (the correlation may be due to response set); a weak factor may hide an essential variable for which the questionnaire had no correlates due to the cultural bias of the people who composed it. For example, as authors of the HERMES questionnaire, we were strongly concerned with employee-manager relationships which

FIGURE 2.4 Comparison Between Educational Level and Mean "Importance" Scores Across 22 Work Goals for 38 Occupations, Europe or Worldwide, 1968-1971 Data (n = 48,895)

Identification No.	Occupation	Mean Formal Educational Level Years	Mean Work Goal Importance Score Over All 22 Goals
21	Unskilled Plant Workers B	10.4	1.86
46	Unskilled Plant Workers A	10.5	1.82
49	Unskilled Auxiliary Plant Workers	10.9	1.86
47	Skilled Plant Workers	11.0	1.87
11	Branch Office Service Managers A	11.2	2.02
12	Branch Office Service Technicians A	11.3	1.98
50	Plant Technicians	11.5	1.97
51	Plant Clerks	11.5	2.01
19	Plant Managers A	11.6	1.96
64	Laboratory Clerks A	11.6	2.04
31	Office Typists and Secretaries	11.7	2.04
14	Branch Office Clerks	11.8	1.98
7	Branch Office Service Managers B	11.9	2.14
63	Laboratory Technicians A	12.1	2.09
8	Branch Office Service Technicians B	12.2	2.13
9	Sales Department Managers A	12.3	1.90
74	Laboratory Clerks B	12.3	2.13
10	Sales Representatives A	12.4	1.90
18	Data Processing Operators	12.4	1.98
73	Laboratory Technicians B	12.7	2.15
26	Head Office Clerks	12.9	2.00
41	Plant Managers B, First-line	13.3	2.09
13	Branch Office Administration Managers	13.3	2.10
24	Head Office Managers	14.1	2.08
43	Plant Professionals	14.3	2.13
15	Data Processing Managers	14.4	2.09
42	Plant Managers B, Higher Level	14.4	2.10
25	Head Office Professionals	14.8	2.09
17	Data Processing Professionals	14.9	2.13
2	Sales Representatives B	15.6	2.11
1	Sales Department Managers B	15.6	2.16
62	Laboratory Professionals A	15.6	2.22
61	Laboratory Managers A	15.6	2.22
5	Branch Office Technical Experts	15.8	2.15
6	Trainee Professionals	15.9	2.19
71	Laboratory Managers B	15.9	2.27
72	Laboratory Professionals B	15.9	2.28
82	Research Professionals	16.5	2.27
	Mean of 38 Occupations	13.2	2.07
	Spearman rank correlation with educational level		.83**

Throughout this book, significance levels will be indicated as follows:
 *** .001 level ** .01 level * .05 level

the distance from their common overall mean, measured in terms of their common standard deviations. Raw scores are now replaced by standard scores. The information about the relative distances of scores between goals is retained, but acquiescence is eliminated. The overall mean of the standard scores for the *n* goals for each group is zero.

The necessity of ranking or standardizing work goal importance scores before comparing them, unfortunately, is not always recognized in the literature; quite a few studies have obtained misleading results by comparing nonstandardized group means of work goal importance scores (see Chapter 5).

Standardizing as a way of controlling for acquiescence has been used only for the work goals questions. It is, of course, possible and even likely that the other questions will also show some acquiescence response set. However, most other questions have a clear midpoint on their answer scale (for example, "undecided" between "agree" and "disagree"). This provides more objective anchoring of responses than the very subjective "importance" scale (every respondent measures importance by his or her own standards); such anchoring reduces response set. Standardizing for the other questions was also difficult to carry out because they use varying answer formats which may be differently affected by acquiescence. Only the "general beliefs" have the same format. The problem here is that because most of these questions were optional there are many missing country data; but one cannot standardize if there are missing data. I have therefore left these other question scores in their raw state.

In Chapter 1 I dealt with the problem of changing the level of analysis when comparing cultures rather than individuals. In the study of the HERMES data the need for changing the level of analysis has become particularly clear for the block of first 22, then 14 work goal importance questions. The issue is how to meaningfully reduce the amount of information contained in 22 (14) questions to a smaller number of underlying dimensions. In the earlier phases of the research we had used factor analysis of unstandardized individual within-country, within-occupation work goal importance scores. We usually met six factors, related to job content, reward, interpersonal relations, security, comfort, and company; sometimes—especially for less-educated employee categories—two or more of these factors collapsed into one. The selection of 14 goals made in 1972 aimed at achieving adequate representation of five dimensions of goals: job content, reward, interpersonal relations, security, and comfort (Hofstede et al., 1976: 48). These more or less fit the categorization of Maslow's (1970) hierarchy: self-actualization, esteem, belongingness, safety, and physiological needs. The "company"-related goals were not selected in 1971, although they did form a factor of their own; but they did not fit our paradigm of human needs, which had been strongly influenced by Maslow.

At that time I had not yet grasped the implications of changing the level of analysis from individuals to countries. I tried to use the five dimensions—job content, reward, interpersonal relations, security, and comfort—for comparing occupations and for comparing countries, drawing occupation and country profiles according to the relative importance of the five. The resulting picture was more easily understandable for occupations than for countries. Occupations could be interpreted as operating at different levels of the Maslow hierarchy (professionals near the top,

clerks in the middle, unskilled near the bottom). As will be clear from this book (especially Chapter 5), I no longer interpret the data in this way, but at least this interpretation seemed to make some sense then. A theoretical base for the country comparisons was missing: geographically close countries, for example, those in Scandinavia or Latin America, produced similar profiles, but a Maslowian interpretation led nowhere.

Considerable progress was made after a methodological exploration with the help of the Department of Psychology of the University of Leyden, the Netherlands (Hofstede and Van Hoeseel, 1976). For the first time, we recognized that factors based on between-group correlations might be different from those based on within-group correlations. We took (unstandardized) work goals data for 3600 respondents divided into 18 one-country, one-occupation groups, together covering eight different countries and nine different occupations and did factor analyses on three levels: total data, within groups, and between groups. The total and within-group factor analyses gave very similar results; the six factors we knew already explained about 50 percent of the variance. The between-group or ecological factor analysis was less clear; it took nine factors to explain 46 percent of the variance, and the factors were only partly similar to those in the total and within-group analyses. What we learned from this exercise was that between-group factors are different from within-group factors. The unclear between-group structure afterward appeared to be due to the fact that we used unstandardized data and that we had taken groups which differed according to two criteria (country and occupation) at the same time. It became evident that ecological correlations between countries are not the same as ecological correlations between occupations, and that if one mixes the two, chaos can result.

The next step was repeating the ecological factor analysis of the work goals data, but this time separately for occupations (controlling for country) and for countries (controlling for occupation). Data were available for 22 work goals in 38 occupations, for 22 work goals in 19 countries surveyed in 1968 and 1969, and for 14 work goals in all 40 countries. This time all data were standardized. The factor analyses are discussed in Chapter 5, showing that a Maslowian framework makes some sense for comparing occupations but not at all for comparing countries. Countries do not group themselves according to Maslowian categories: Their goal patterns can be classified according to two dimensions, an Individual-Collective dimension and an Ego-Social dimension. Basing myself on the 14 goals, 40 countries ecological factor analysis, I used the factor scores of the 40 countries on the axes corresponding to these two dimensions for constructing the indices of Individualism and Masculinity. The number of ecological dimensions in the data had thus been increased to four: Power Distance and Uncertainty Avoidance (each measured by an index composed of the scores on three questions) plus Individualism and Masculinity (both measured through factor scores in a factor analysis of 14 questions). The meaning of Individualism is explored in Chapter 5; of Masculinity, in Chapter 6.

An Ecological Factor Analysis of All Items: Putting the Picture Together

The four dimensions of Power Distance, Uncertainty Avoidance, Individualism, and Masculinity were derived from partial studies of the data. Other dimensions did

not readily offer themselves from the data, nor could they be inferred from theory. As a final check on whether the four dimensions adequately explain the ecological variations in the data, I ran a factor analysis¹¹ of all data using 32 values questions that showed acceptable stability over time (see earlier in this chapter).

The analysis of the 32-variable matrix produced three factors, together explaining 49 percent of the variance, using an orthogonal rotation. The following rotated factors were found (all loadings of .35 and over are shown):

Factor 1 (factor variance 24 percent)	
.82 A18	Importance personal time
.82 B53	Interesting work <i>not</i> as important as earnings
.78 B52	Corporation <i>not</i> responsible for employees
-.76 A55	Low percentage perceived manager 1 or 2
.75 B46	Employees <i>not</i> afraid to disagree
.74 A54	High percentage preferred manager 3 (1967-1969)
.69 B59	Staying with one company <i>not</i> desirable
.63 B56	Employees should <i>not</i> participate more
-.62 A12	Low importance physical conditions
-.61 A9	Low importance training
.59 A13	Importance freedom
.59 B55	Employees <i>don't</i> lose respect for consultative manager
.59 B24	Does <i>not</i> prefer foreign company
-.58 A17	Low importance use of skills
.41 A5	Importance challenge (second loading)
.37 B58	Corporation <i>not</i> responsible for society
-.35 A15	Low importance advancement (third loading)
Factor 2 (factor variance 13 percent)	
-.71 A16	Low importance manager
.68 A7	Importance earnings
-.67 A8	Low importance cooperation
.60 A11	Importance recognition
.54 A5	Importance challenge
-.53 A6	Low importance desirable area
-.51 A14	Low importance employment security
-.46 A37	High stress (second loading)
-.45 B57	Individual decisions better (second loading)
.43 A17	Importance use of skills (second loading)
.39 A15	Importance advancement (second loading)
-.35 B52	Corporation responsible for employees (second loading)
-.35 B58	Corporation responsible for society (second loading)
Factor 3 (factor variance 12 percent)	
.76 B60	Company rules may be broken
.62 A37	Low stress
.59 A43	Continue less than five years
.56 B9	Prefers manager rather than specialist career
-.50 B57	Individual decisions better
.49 B44	Does <i>not</i> prefer manager of own nationality
.49 A58	Low overall satisfaction
.46 A15	Importance advancement

- .46 B55 Employees lose respect for consultative manager (second loading)
 .45 B54 Competition *not* harmful
 -.43 A9 Low importance training (second loading)
 -.35 A10 Low importance benefits

All variables show a loading of at least .35 on one of these three factors.

Factor 1 represents an Individualism-low Power Distance factor: it includes the Individual-Collective dimension of Work Goals (questions A18, A12, A9, A13, A17, and A5) and Power Distance with a negative sign (questions A55, A46, and A54). In addition, it shows loadings for six "beliefs" (B53, B52, B59, B56, B55, and B58, all with a positive sign) and with two other questions (B24 and A15). In spite of the fact that Power Distance and Individualism load on the same factor, I shall continue treating them as two dimensions because they are conceptually distinct; see Chapters 3 and 5.

Factor 2 is a Masculinity factor (with questions A16, A7, A8, A11, A5, A6, A14, A17, and A15). It has collected only four second loadings from other questions. This factor will be explored further in Chapter 6.

Factor 3 corresponds to Uncertainty Avoidance, again with reversed sign. The three highest loading items are the ones which together form the Uncertainty Avoidance Index. This factor will be explored further in Chapter 4.

Comparing HERMES Data with Data from Other Sources

The result of the analysis of the HERMES data is the identification of four dimensions of national culture, plus index scores which locate each of 40 countries on each of these dimensions. All this is only moderately interesting unless it can be shown that the same dimensions can be found in non-HERMES data. My interest was not in HERMES employees as such, but in HERMES employees as narrow but extremely well-matched samples of their countries' middle class. Earlier in this chapter, I related how I collected additional data at IMEDE Management Development Institute in Lausanne, which showed that the same differences between country scores could be reproduced at least partly on a different population—and without translation of the questionnaire. After this encouraging start, I set out to look for other data that could be hypothesized to correlate with the HERMES dimensions.

The search for other data led me through the literature of all the disciplines listed in Chapter 1. I only considered those studies and sources which were somehow conceptually related to issues covered by the four HERMES dimensions and which yielded quantitative measures for a number of countries also represented in the HERMES sample. They were of three different kinds: (1) survey studies of other narrow but matched samples of populations, such as university students; (2) representative sample polls of entire national populations, and (3) characteristics of countries measured directly at the country level, such as government spending on development aid. All in all, I found data from 38 other studies comparing between five and 39 countries to be significantly correlated with one or more of the four dimensions; these studies are described in Chapters 3 through 6 and summarized in Chapter 7.

For comparing the country scores from these other studies with the HERMES country scores, I used either the Spearman rank correlation coefficient or the product moment correlation coefficient. For scores on scales of unknown properties, the

Spearman rank correlation coefficient gives the safer estimate of a relationship, since individual observations cannot play an overpowering role in the result. However, the product moment correlation coefficient offers the possibility to compute a multiple regression (showing the relationship of the other data with all four HERMES indices together) and to follow a stepwise regression (showing how much more of the variance in the other data can be explained by adding one more HERMES dimension at the time). In cases where a multiple and stepwise regression looked desirable, I have therefore used the product moment correlation coefficient. As an emergency solution, for cases in which Spearman rank and product moment correlation led to considerably different results (which was rarely the case), I have used the fact that if we replace all observations by their rank numbers, the product moment and Spearman rank correlation coefficients are identical. In these cases I therefore first transformed all data into rank numbers and then carried out product moment correlations and multiple and stepwise regressions. This was the more justified because I am more interested in the *order* in which the four indices appear in the stepwise regression than in the precise level of their contribution to predicting the other data.

In Chapters 3 through 6 I shall also explore the relationships among the four dimensions (Power Distance, Uncertainty Avoidance, Individualism, and Masculinity) and a number of geographic, demographic, and economic indicators of the 40 countries. On the basis of a literature search, I have selected seven indicators:

Wealth (GNP per capita) is the most common measure of a country's economic development. It is a debatable measure (Morgenstern, 1975) but retained for lack of a better one. The same applies to *Economic growth* (GNG: 10-year average growth in GNP per capita). *Latitude* (LAT: determined for the country's capital city) is an unambiguous measure of the country's geographical position and a crude measure of climate (tropical-moderate-cold). *Population size* (POP) is an obvious demographic measure which in various factor analytic studies has appeared to be related to social and political variables. In view of its skewed distribution among the countries studied, it has been measured on a *logarithmic* scale. *Population growth* (PGR) is an obvious complement to population size. *Population density* (PDN) appears as an explanatory variable in various theories of cultural behavior. Its distribution is fairly normally shaped except for the two city-states Hong Kong and Singapore. In order to prevent these countries' data from dominating all correlations, the values for Hong Kong and Singapore were divided by eight, which puts them at the top of the list but within the range of values for the other countries. The variable *Organization size* (ORG) has been added because it is reasonable to suppose that attitudes in a HERMES subsidiary could be determined more by the demographics of that subsidiary than by any nationwide indicators.

The correlations of these seven indicators with the HERMES indices complement the correlations between HERMES indices and other data in Chapters 3 through 6; a summary is presented in Chapter 7.

NOTES

1. Hermes is the Greek god of commerce. McClelland (1961: 301ff) sees in him the personification of achievement motivation.

Chapter 3

POWER DISTANCE

2. In a random sample of 100 five-point frequency distributions from the HERMES data, the median could be shown never to differ more than .10 points from the mean; the mean difference between the two was .02 points (the median lower).
3. This analysis was made possible by the kind help of Professor Dr. Klaus Brockhoff of Kiel University, Germany, and his computer staff.
4. For the "work goals" and "general beliefs" this was simplified by substituting the data of occupational category 1 for 2 or 2 for 1 if either were missing; 3 for 4 or 4 for 3, and 5 for 6 or 6 for 5.
5. See Hofstede (1980b: Appendix 2). The data from Pakistan 1969 are exceptionally based on only three occupational categories, the remaining ones being extrapolated back from 1972.
6. In this case the reliability of the measurement of country differences based on the mean of *both* surveys, according to the Spearman-Brown formula, will be .67.
7. The 1967 laboratories survey used 26 goals; the 1967 Asia-Pacific-Latin America survey, 16 goals.
8. For manufacturing and product development, the available occupation data are worldwide data (excluding the United States). In these, however, European countries dominated strongly numerically.
9. This argument applies to values in general. It even applies to the concept of "value" in economics. Pareto pointed out that for economic value, only ordinal utility, not cardinal utility, is relevant (Bannock et al., 1972: 310).
10. The standardization across the *n* goals can be carried out on the scores of individuals or on the mean scores of groups. The result is not necessarily the same: Standardizing individual scores before calculating a group mean in general will lead to a somewhat different rank order of goals than calculating a group mean first, before standardizing. Ritti (1964: 317-318) recommends *double* standardization of individual scores as a preparation for factor analysis: first across goals, then across individuals (the reverse makes no sense, because the subsequent factor analysis starts with a correlation matrix which is invariant to standardization across goals). Ritti states, however, that single standardization across individuals has largely the same effect as double standardization (1964: 307). In my analysis I have single-standardized group means across goals (first calculating group means, then standardizing) because this is much simpler to carry out; also, I am interested in eliminating acquiescence as a *group* phenomenon, before comparing groups, not as an individual phenomenon.
11. In various phases of the research I have tried other methods of multivariate analysis: for example, cluster analysis and smallest space analysis. As these led to very similar results as factor analysis, I continued to use the latter, with which I am most familiar. See also Chapter 7.

SUMMARY OF THIS CHAPTER

The first of the four dimensions of national culture which the HERMES data reveal is called Power Distance. The basic issue involved, to which different societies have found different solutions, is human inequality. Inequality can occur in areas such as prestige, wealth, and power; different societies put different weights on status consistency among these areas. Inside organizations, inequality in power is inevitable and functional. This inequality is usually formalized in hierarchical boss-subordinate relationships. According to Mulder's Power Distance Reduction theory, subordinates will try to reduce the power distance between themselves and their bosses and bosses will try to maintain or enlarge it. The present study, however, suggests that the level of power distance at which both tendencies will find their equilibrium is societally determined. It can be expressed in a Power Distance Index (PDI), which is derived from country mean scores on three questions in the HERMES survey. These questions deal with perceptions of the superior's style of decision-making and of colleagues' fear to disagree with superiors, and with the type of decision-making which subordinates prefer in their boss. PDI scores differ strongly across occupations as well, especially in countries where the country PDI is low. Differences on PDI between the sexes are inconsistent. The meaning of PDI is validated against a number of other survey data: other questions in the HERMES survey, the same questions used at IMEDE, and other questions used with other populations. From this a description has been distilled of the "Power Distance norm" as a value system held by the majority of a country's middle class. Correlations of PDI with geographic, economic, and demographic country indicators, comparisons of

educational systems, and consideration of historical factors lead to a suggested causal chain for the origins of national differences. An analysis of political systems, religious life, and philosophical and ideological thinking in various countries shows differences which are interpreted as consequences of power distance norm differences, but which feed back into the norm and support it. Finally, the consequences of PDI differences for organizations are explored; the Power Distance dimension is associated with the "concentration of authority" dimension in the Aston studies of organization structures.

INEQUALITY AND POWER DISTANCE

On Animal and Human Inequality

A pet food manufacturer keeps 30 cats as a consumer panel. At the time of feeding, the cats cue up in a definite order, always the same. Only when a new cat enters is there some disorder: It tries to take a place in the cue and is bitten by every neighbor until it has found a place where henceforth it is tolerated.

Similar orders of inequality expressed in "dominance behavior" have been found among chickens (hence the term "pecking order") and among many other animals: species of apes, birds, and fish. On the other hand, some species do not show consistent dominance behavior: for example, gorillas, ducks, and carp (Bohannan, 1969: 164).

From a biological point of view, the human species belongs to the category that shows dominance behavior. Human pecking orders are part of the "universal" level of human mental programming (Figure 1.1). How the basic fact of dominance is worked out in human social existence, however, varies from one society to another and from one group to another: It belongs to the "collective," cultural level. Some societies have elaborate formal systems of dominance; others go to great lengths to deemphasize dominance. The great diversity of forms in which human societies deal with inequality and stratification has been described for nonliterate societies by anthropologists and modern societies by sociologists. The general conclusion to be drawn from these descriptions is that stratification systems are extremely culturally dependent and that we should be very careful about extrapolating experience from one culture or subculture to another.

Inequality is one of the oldest concerns of human thinking. The following is a quote from Plato's *The Laws* written about 350 B.C.:

[E]ven if you proclaim that a master and his slave shall have equal status, friendship between them is inherently impossible. The same applies to the relations between an honest man and a scoundrel. Indiscriminate equality for all amounts to *inequality*, and both fill a state with quarrels between its citizens. How correct the old saying is that "equality leads to friendship"! It's right enough and it rings true, but what kind of equality has this potential is a problem which produces ripe confusion. This is because we use the same term for two concepts of "equality" which in most respects are virtual opposites. The first sort of equality (of measures, weights and numbers) is within the competence of any state and any legislator; that is, one can simply distribute equal awards by lot. But the most genuine equality, and the best, is not so obvious. . . . The general method I mean is to grant much to the great and less to the less great, adjusting what you give to take account of the real nature of each. [Saunders, 1970: 229-230].

The ambiguity of "the real nature of each" is precisely the reason why equality before and after Plato has always remained problematic. It is striking that Plato already plays on two meanings of the word "equality," which points to a semantic confusion which has forever existed and sometimes been exploited, as immortalized by George Orwell in *Animal Farm*: "All animals are equal but some are more equal than others." (In)equality is a multifaceted phenomenon.

Inequality in Society

Inequality can occur in a variety of areas:

- physical and mental characteristics—this is a basic fact of human existence;
- social status and prestige,
- wealth;
- power;
- laws, rights, and rules—"privileges" are private laws.

Inequality in these areas need not go together: Social inequality is multidimensional (Runciman, 1969). Successful athletes, artists, or scientists who show unique physical and/or mental characteristics usually enjoy status, but only in some societies do they enjoy wealth as well, and rarely do they have power. Politicians in some countries can enjoy status and power without wealth; businessmen, wealth and power without status. In general, in every society we can distinguish two opposing forces. One tries to eliminate status inconsistencies between the various areas (Lenski, 1966: 86). Sportsmen become professionals to gain access to wealth; politicians exploit their power to achieve the same; in some traditional societies, whoever is strong and smart gains prestige, wealth, power, and privileges. The counterforce tries to maintain equality by offsetting rank in one area against another. The stress in the Christian Bible and in Buddhism on the merits of poverty is a manifestation of this force,¹ so is Marx's plea for a "dictatorship of the proletariat." Universalistic legal systems deny privileges on the basis of status, wealth, or power.

The battle between the two forces—status consistency versus overall equality—is one of the basic issues in any human society. We find it in the quote from Plato above, in which he clearly defends status consistency. The opposite point of view is taken by Rousseau in his *Contrat Social* (1762[1972]):

[L]e pacte fondamental substitue . . . une égalité morale et légitime à ce que la nature avait pu mettre d'inégalité physique entre les hommes, et . . . pouvant être inégaux en force ou en génie, ils deviennent tous égaux par convention et de droit.²

Rousseau proposes a distinction between "moral" and "natural" inequality, and he rejects the first while accepting the second as a fact of human existence. Bétéille (1977: 10, 166) shows that this does not resolve the problem, because natural inequalities acquire meaning only by a process of evaluation which is culturally defined; it differs among societies and among epochs in history.

In a country in which people were not equal before the law (eighteenth-century France), Rousseau expected too much from establishing this formal legal equality. For a modern discussion of the same topic, consider the following quote from a U.S. newspaper:

Societies differ in the implications of rank inequalities for social functioning. Bohannan (1969: 198ff) distinguishes between caste, estate, and class. *Castes*, as existed formally in preindependence India, are organized associations of extended families, membership in which determines a person's rank in all areas of life. In modern India castes formally have been abolished; but they continue to affect daily life very deeply (Srinivas, 1969; Bèteille, 1977: 28ff). *Estates*, as existed in feudal Europe (nobility, yeomanry, and serfs), are legal categories of people with specific rights and obligations but without organizations uniting members of the same category. *Classes* in modern sociology are categories of people who are not necessarily organized as such (Marx wanted them to organize) or legally identified but which share characteristics on which they can be ranked: prestige, wealth, power. Class members are usually identified by their economic activity and/or educational background, and they can be shown to share the same values, forming subcultures. Aron (1969) distinguishes between a "nominalist" definition of class, which is typical for U.S. sociology, and a "realist" definition, which is typical for French sociology. In the nominalist definition, the central concept is the "deference" present in the mind of the individual member of the lower classes. In the realist definition, there is a collective consciousness of the members of a class of belonging together. Behind this difference in definitions is a difference in societies; "class" in France is much more a reality than in the United States.

Inkeles (1960) has reviewed data on attitudes and values from a large number of studies, each comparing different classes within one society from a variety of societies, and concludes, "the average proportion of persons holding particular view may be distinctive of a given country, but within all modern societies the order or structure of response is the same, following the typical status ladders of occupation, income, and education" (1960: 1). Parkin (1971: 81ff) distinguishes between a dominant value system, a subordinate value system (which is accommodating to the dominant one and held by the nonelites; both support the status quo), and a radical value system which promotes opposition to the existing inequalities.

Castes, estates, and classes represent more or less integrated systems; one class presupposes other classes. However, societies may also contain unintegrated groups. Bohannan (1969: 183) calls these the "pariahs" after the untouchables of India. Racial minorities or even majorities may be such pariahs; the migrant workers in Western Europe (12 million in 1976) represent another pariah group. "Pariahs are, by definition, kept outside the recognized major institutions of the social structure, although they usually have an economic link with them" (1963: 184). In the case of pariahs, the inequality is total.

Inequality in Organizations

Within organizations as units of society, we inevitably find inequality of members' abilities and inequality of power. An unequal distribution of power over members is the essence of organization. Without it we get something like "a flock of birds, in which the only rule of behavior for each bird is to change the direction of its flight so that, relatively, it always sees its fellows in the same position and thus never leaves the group" (Cotta, 1976: 178). Inequality of power in organizations is essential for temporarily overcoming the Law of Entropy, which states that disorder will increase (p. 176). Even organizations designed to be egalitarian, such as political parties, de-

CULTURE'S CONSEQUENCES

President Carter took issue yesterday with former President Richard Nixon's claim that the chief executive has an inherent power to order burglaries and other illegal actions against dissidents. President Carter does not feel any president has a right to break the law, said White House Deputy Press Secretary Rex Granum. He feels very strongly that it is a tragic mistake to follow that philosophy, as past events have shown so dramatically. He does feel there are adequate judicial means to prevent danger to the country. Mr. Nixon, defending some of the illegal acts that took place in his administration, made the assertion during the third of his televised interviews with David Frost, broadcast last night [International Herald Tribune, May 21-22, 1977: 3].

Carter in this case defends equality before the law against Nixon, who wants to let the law yield to power.

In the manifestation of the dilemma of status consistency versus equality we should distinguish sharply between the ideological and the pragmatic level, the level of the desirable versus the desired as described in Chapter 1 (Figure 1.3). Plato, Rousseau, and Carter all operate on the ideological level; Nixon is trying to justify his acts and is therefore operating exceptionally on the pragmatic level; it is extremely unlikely that he would have made the same statement in other circumstances. The reactions of the public to the Watergate affair, to which the Carter-Nixon quote refers, can be seen as an attempt in American society to close the gap between the desired and the desirable. Other societies at other moments in history have shown even larger gaps in this respect. The "liberté, égalité, fraternité"³ of the French Revolution of 1789 was an ideological statement which did not cover the behavior of the revolutionaries at all.⁴ Lammers (1978) distinguishes ideological "democrats" and "oligocrats," but shows that different ideological positions may lead to the same types of pragmatic action so that, for example, "constitutional oligocrats" can act as "functional democrats" (1978: 11).

In practice no society has ever obtained equality in the form of complete inconsistency between different areas of rank. What has been obtained in some societies is what Galtung (1966) calls "criss-cross" in social structure: the existence of individuals who belong to disparate groups in the structure and can thus serve as bridges in case of conflict. These individuals form a middle layer in society in between the "top dogs" and the "underdogs." The stabilizing role in society of middle strata is an age-old truth:

Thus it is manifest . . . that those states are likely to be well-administered, in which the middle class is large . . . for the addition of the middle class turns the scale, and prevents either of the extremes from being dominant [Aristotle "The Politics," approximately 330 B.C., reprinted in Bendix and Lipset, 1966: 1].

Societies with criss-cross structures can be called "pluralist"; societies without criss-cross but with status consistency, "elitist" (Blais, 1974). Pluralist societies are less unequal than elitist societies but still maintain large inequalities. In all modern societies, probably without exception, there are disadvantaged groups which are behind in physical and mental abilities, having been undernourished and undereducated, who earn less and enjoy life less and who die younger.

Related to the pluralist-elitist distinction is the aspect of social mobility. Other factors being equal, in pluralist societies new members will be more easily admitted into elites than in elitist societies, because the middle groups in the pluralist society are stepping stones to the top dog ranks.

velop their power elites; this is Michels' Iron Law of Oligarchy (Michels, 1915 [1962]: 342ff).

In most utilitarian organizations, the distribution of power is formalized in a hierarchy. The basic element from which hierarchical pyramids are built is the relationship between a boss B and a subordinate S. If we know that S "reports to B," we know certain formal aspects of their relationship; it is likely that B can set priorities for S's work and possible that B has some influence on S's rewards and career. Luhmann (1975: 104) feels that power in organizations is mainly exercised through influence on people's careers, but this may be more true in societies and groups in which careers are more important (as in Germany; see Chapter 6). Beyond the few formal aspects, we know little about the actual power relationship between B and S. A boss and a subordinate can fill in their formal hierarchical relationship in very different ways. Objective factors play a role, such as the expertise of both parties, the history of their relationship, the task at hand, and the relative criticalness of the situation. Then there are the subjective factors of the way in which B and S choose to play their hierarchical roles, which depends on their mental programming and their psychological impact on each other. Their mental programming contains their personalities and their values, affected by the societal norms which they respect.

The boss-subordinate relationship is a basic human relationship which bears resemblance to even more fundamental relationships earlier in life: that of parent and child (Levinson et al., 1962: 69; Kakar, 1971) and of teacher and pupil. Both as bosses and as subordinates, people can be expected to carry over values and norms from their early life experiences as children and school pupils. As family and school environments differ strongly among cultures, we can expect to find the traces of these differences in the exercise of power in hierarchies.

Differences in the exercise of power in a hierarchy relate to the value systems of both bosses and subordinates and not to the values of the bosses only, even though they are the more powerful partners. The popular management literature on "leadership" often forgets that leadership can only exist as a complement to "subordination." In the same way that patterns of inequality between groups in society are supported by both dominant and subordinate value systems, patterns of power inequality within organizations reflect the values of both parties. Subordinates as a group are accessory to the exercise of power in a hierarchical system: The way the system functions reflects their collective complicity and the role relationship to which both parties contribute. Authority only exists where it is matched by obedience. In France, Etienne de La Boétie wrote in 1548 (1976) in his *Discours de la Servitude Volontaire* that a tyrant has no other power than that which is given to him, and that the problem is less the tyrant than the "voluntary servitude" of his subjects. On the psychological level, the need for independence in people is matched by a need for dependence, and the need for power by a need for security; dependence and security needs stem from early childhood and are common to all mankind; independence and power are only developed later in our lives, if they are developed at all.

The Concept of Power Distance

In order to describe meaningfully the relationship between boss B and subordinate S in a hierarchy, including its values component, I shall use the concept of Power Distance. Power Distance is a measure of the interpersonal power or influence be-

tween B and S as perceived by the least powerful of the two, S. The term "power distance" is taken from the work of Mulder (et al., 1976, 1977); Mulder's theory is based on a long series of laboratory and field experiments with simple social structures. Mulder defines "power" as "the potential to determine or direct (to a certain extent) the behaviour of another person/other persons more so than the other way round," and "power distance" as "the degree of inequality in power between a less powerful Individual (I) and a more powerful Other (O), in which I and O belong to the same (loosely or tightly knit) social system" (Mulder, 1977: 90). He has proved about 20 hypotheses, of which the most relevant to this study are the following (p. 92):

1. The mere exercise of power will give satisfaction.
 2. The more powerful individual will strive to maintain or to increase the power distance to the less powerful person.
 3. The greater this distance from the less powerful person, the stronger the striving to increase it.
 4. Individuals will strive to reduce the power distance between themselves and more powerful persons.
 5. The smaller this distance from the more powerful person, the stronger the tendency to reduce it.
- 3/5. The "downward" tendencies of the powerful to maintain the power distance, and the "upward" power distance reduction of the less powerful reinforce each other.

The implication of hypothesis 5 is that the strongest power distance reduction tendency "will not be found in the powerless, but in people whose power striving is partly satisfied. *The power striving is not fed by dissatisfaction* but by satisfaction. Having power feeds the need, making it comparable to the need for hard drugs. An individual can become addicted to "power distance reduction" (1977: 46).

Mulder makes it plausible that the hypotheses proved in his laboratory setting are valid for (Dutch) societal settings such as labor-management relationships. In the United States, Kipnis (1972) independently carried out laboratory experiments similar to Mulder's and arrived at similar conclusions. Kipnis shows that more powerful persons tend to devalue the worth of the performance of less powerful ones and to attribute the cause of the less powerful's efforts to themselves. Kipnis et al. (1976) show that this even applies between partners in marriage and for U.S. housewives employing maids. The conclusions from Mulder's and Kipnis' psychological experiments converge with those from sociological studies on the forming of power elites, such as Michels' Iron Law of Oligarchy, to which I referred earlier in this chapter; Michels' "law" is based on an analysis of the German Social Democratic Party before World War I and of other European socialist parties. There is therefore evidence from a number of western countries which supports the validity of Mulder's hypotheses. This evidence shows how inequality confirms and perpetuates itself. Boulding (1978: 282, 283) refers to the "Matthew principle" (from the Christian New Testament, Matthew 13: 12: "for he who has, to him shall more be given"); Boulding finds the Matthew principle present both in the concentration of power and in the concentration of wealth.

In the poorer countries, historical events point strongly to the confirmation and perpetuation of inequality in power, so that it is very likely that here, too, Mulder's Power Distance Theory applies. However, where cultural differentiation comes in is