FUNCTIONAL ALTERNATIVES, ECONOMIC DEVELOPMENT AND HISTORICAL EXPLANATION*

Robert E. Cole

University of Michigan

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A survey of the modernization literature cannot but lead the reader to recognize the drudity of the analytic formulations offered. Most often, the goal of empirical research seems to be nothing less (and nothing more) than the establishment of differences or similarities in attitudes and social structure relative to the attitudes and social structure anticipated by modernization theory. Commonly, the establishment of differences leads the researcher to emphasize cultural or historicist explanations (or lag phenomena); the establishment of similarities, on the other hand, leads researchers to emphasize commonalities that all societies share or those commonalities that societies share by virtue of having achieved a given level of economic development. A good example would be the debate and literature that has grown up around the study of occupational prestige rankings in different societies (e.g., Inkeles and Rossi 1956; Hodge, Treiman and Rossi 1966).

This paper deals with the concept of functional alternatives; I will argue that, properly used, this concept provides important leverage for sociologists engaged in comparative research, particularly those working in the area of economic development and social structure. In general fashion, this concept has been used to suggest that there are a range of structural or value arrangements that may serve to fulfill a common function. Despite what appears to be a growing disenchantment with the wares of structural-functional analysis by contemporary sociologists, even those spokesmen for a more empirically-oriented sociology continue to find the concept of functional alternatives useful (e.g., Stinchcombe, 1968: 80-125; Coleman,1969: 291-292). As will become apparent, there

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are good reasons for this. The final section of the paper will be devoted to examining the system of employment security dominant in large-scale Japanese firms to demonstrate the utility of this concept.

We may summarize the above mentioned alternative conceptualizations with a typology that compares two or more societies in their response to modern economic growth (see Figure 1).

Figure 1

Comparative Response of Two or More Societies to Modern Economic Growth

		STRUCTURE	
		Different	Same
FUNCTIONS	Different	Historicism	Structural Modelling with Environmental Effects
	Same	Functional Alternatives	Convergence Theory

Historicism, as presented in Figure 1, is an argument for uniqueness in both structure and structural consequences. It denies attempts to formulate generalizable propositions applicable to more than one society, culture, or period. The focus is rather on the ordering of temporal events which crystallize to form unique organizational and societal patterns. One understands the meanings of these historical experiences only by concentrating on relevant historical events. Robert Nisbet (1969) in his provacative book Social Change and History comes close to taking this position

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in his critique of macro-sociological theory.

Comparative sociologists reject the historicist view; they seek generalizable statements which apply to more than one society (Shils 1963: 1-26; Bendix 1963: 532-39). It is expected that the historical experience of one society will illuminate the meanings of historical experiences in other societies. Ideally, these general propositions are not rooted in any one society; they transcend specific societies. Yet, they prove their utility by helping to explain specific empirical processes.

To reject historicism is not to deny the conception of social structure as a system of historical dimensions. Indeed, as Reinhard Bendix (1963: 437) suggests, comparative analysis forces us to see social structure not "as a natural system with defined limits and invariant laws governing an equilibrating process, but rather as a system of historical dimensions". These historical dimensions influence point of origin, route and temporary destinations of social structures under the impact of and interacting with economic development. To say that social structure is a system of historical dimensions means that historical context influences the operation of seemingly invariant processes such as industrialization and thus makes possible a meaningful conception of process (c.f., Nisbet 1969; Gerschenkron 1962). The extent to which we can conceptualize historical processes in an intelligent fashion is based on our ability to separate random from nonrandom processes. As Boulding (1970: 16) notes, the human mind has a profound tendency towards superstition that is "the imposition of a spurious order on its obser-

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vation of random processes."

The issue at hand is to incorporate the role of history in our conception of social structure without compromising the generalizing goal of social science. Clearly, historicism does not allow such an outcome. I will argue below that the concept of functional alternatives does offer this flexibility.

We may now turn to a consideration of a second cell in Figure 1, that represented as convergence theory. Convergence theory is an argument for the increasing similarity of structural arrangements and their consequences in the industrial societies. Briefly put, convergence theory envisions that, with advanced industrialization, unique national identities fade and common solutions to problems of social organization come to prevail. Scholars more or less identified with this position are Clark Kerr and associates (1964), Alex Inkeles (1966) and Marion Levy (1966). The convergence position is ultimately a technocratic one which asserts that social and political relationships must be restructured to mesh with the complex technological organization characteristic of higher levels of economic development (cf., Weinberg 1968: 10). The constraints of modern technology and economic organization are seen as the center of a series of concentric circles which gradually impose convergence on the outer circles of social structure and value orientation.

Convergence theory has not been lacking in its critics. Arnold Feldman and Wilbert Moore (1969) have accepted the imagery of concentric circles but argued that convergence is limited to the "core" elements of

the industrial system, with all industrial societies possessing the minimum characteristics of: a factory system of production, a stratification system based on a complex and extensive division of labor and hierarchy of skills, an extensive commercialization of goods and services and their transfer through the market, and an educational system capable of filling the various niches in the occupational and stratification system. Beyond these minimum core characteristics, Feldman and Moore emphasize the elements of divergence in industrial systems. Similarly, Goldthorpe (1966: 648-59) duns convergence theorists for adopting an exaggerated degree of determinism which focuses exclusively on the impact of material exigencies upon social structure. Critics, in short, have attacked the assumption of strict functional inter-dependence among component parts and stressed the partial nature of solutions to problems of social organization in the course of economic development.

In stressing the partial nature of solutions to problems of economic organization, Bendix (1964) accepts that the industrial revolution brings to bear common imperatives on industrializing nations. Yet, he emphasizes the way these imperatives are combined with the unique historical experiences of each country to produce an amalgam. This amalgam denies the simple applicability of one nation's experience to another. The significance of this position is that each successive level of industrialization may be seen as opening up common options and closing others, but the actual choices made by people are in terms of subtle interactions between these common options and the specific social, political, economic and

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cultural history of the contry in question. The problem with convergence theory lies in its proponents' willingness to exaggerate the organizational requirements of modern industrial society without recognizing the needs of purposive historical actors (cff Goldthorpe 1966: 648-59).

Thus far, our discussion has focused on the two cells, historicism and convergence theory. Both represent "all or nothing" propositions and, as such, appear simplistic. Edward Shils (1963) argued some time ago that what we need are sociological concepts which both allow for societal uniqueness and explain it in a wider analytical framework. What historicism does is to allow for uniqueness -- historical uniqueness is the very basis of this formulation -- but it cannot explain it in a wider analytical framework. Convergence theory has an analytical framework, to be sure, but it does not allow for societal uniqueness as represented by the intrusion of history. It is with these limitations in mind that we now turn to consider the remaining two cells.

The first of these cells has not yet been discussed; it is labeled structural modeling with environmental effects. The possibility of developing similar structural arrangements but with different outcomes has not been formulated by sociologists as a major societal response to economic development. Nevertheless, social scientists have often pointed out how "modern" appearing structural arrangements in non-western societies, often borrowed from the West, have unanticipated consequences (especially from a western viewpoint) that are quite different from their consequences

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in western societies (e.g., Riggs 1966: 368-371). The basis for these different conseqqaneas lies in the new structural arrangements having to cope with and draw resources from quite different social and even physical environments. The new institutional arrangements are often designed to meet quite different goals; this usually leads to the diffusion of only selected western characteristics (with critical omissions) to meet the needs of native leaders. For example, the Japanese university system, though modeled first after the French, American and finally Prussian systems in the pre World War II period and the American system in the post-war period, has had a number of distinctive conseqqences which have not been shared by its counterparts in Western Europe and America. The basis for these different conseqqences lies in the quite different social context in which this institution appeared. Michio Nagai (1971) provides an excellent documentation of the impact of western models of education in conjunction with the needs of the Japanese in prewar Japan. In summary, conceptualizing the relationship between economic development and social change in terms of structural modeling with environmental effects appears to be a fruitful research strategy.

This brings us to a consideration of the fourth cell, which is the focus of attention in this paper. We shall use the concept functional alternatives to refer to the empirical possibility that social units evolve different structural arrangements to solve common problems. In the past, sociologists have used such concepts as functional equivalents,

functional alternatives, functional substitutes, and functionalaanalogues in rather loose and interchangeable fashion. Our discussion is intended to apply to all these concepts. The terms themselves invoke the languages of structural-functional analysis. One can make a strong argument for dispensing with the above terminologies and thereby dismissing the baggage of functional theory by substituting a term such as structural equivalents. But there are costs to developing new terminologies, one of which is the loss of continuity with past literature on the subject.

The functional terminology in this case has been based on the premise that we can identify specific functional prerequisites of "universal needs" which must be performed to permit societies to persist (Aberle et. al., 1950; Levy 1966: 174-187). An even more demanding version (more demanding in the sense of requiring more detailed specification) is that we can identify at varying levels of development certain functional prerequisites which must be satisfied if a society is successfully to proceed with modernization. When these functional requirements are not met, further economic development or modernization will not occur. This has been an implicit assumption in much of the modernization literature based on the search for universal preconditions or universal obstacles to development.. Gerschenkron (1962: 31-51) and Hirschman (1965: 385-93) provide biting critiques of these assumptions. Gerschenkron shows that many alleged preconditions are concomitants of economic growth while Hirschman demonstrates that many alleged obstacles have on occasion been beneficial for economic growth.

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For some of the early functionalists such as Malinowski (1926: 136) the assumption of functional indispensability was ambiguous. It was not clear whether it was the funttion that was indispensable or the structural item fulfilling this function. This vagueness has by no means disappeared as Gerschenkron and Hirschman show. Nevertheless, leading spokesmen for structural-functional theory have recognized the problem. The distinction that is now commonly made is that we may speak of functional needs but that these needs may be met by a range of structural alternatives (Merton, 1957: 32-37).

Notwithstanding these modifications, critics continue to point to the deficiencies of functional analysis. There is no need to rehash these criticisms here. (See Hempel, 1959: 271-307 for a more intensive treatment))

Those criticisms relevant to our discussion are that key terms of functional analysis such as need and functional prerequisite have been used in a nonempirical manner without providing clear operational definitions. Without a specification of how these terms can be applied to the empirical world they lead to no specific predictions and cannot be put to empirical use. Particularly important in terms of its weak explanatory force is that functional analysis does not provide an explanation of why a particular item rather than some functional alternative of it occurs in a given system. This is a consideration we will deal with later under the section, historical explanation and functional alternatives.

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These weaknesses have become increasingly clear to contemporary sociologists. What is needed is a way to capitalize on the strengths of the concept of functional alternatives cited earlier and separate it from the limitations just noted. To this end, I proposed that we focus on common problems facing societies at given levels of industrialization. This approach allows for universal problems such as establishment of factory discipline and recruitment of a labor force as well as problems faced by a selected number of societies. An example of the latter would be those problems which confront latecomers seeking to industrialize in a world already dominated by highly industrialized nations. Even universal problems such as recruitment of a labor force are strongly influenced by the historical timing of the industrialization (e.g., the quality of the labor force changes).

This perspective does not deny the emphasis put on imperatives of industrialization by convergence theorists, However, unlike convergence theory which posits common responses to these imperatives, the functional alternative position is less demanding; it posits common problems which may be solved by a limited range of alternative social arrangements. It permits us to accept societal differences without having to fall back on explanations based on historical uniqueness. Instead, we may incorporate these societal differences in a common analytic framework.

Historical Explanation and Functional Alternatives

As noted earlier, a major weakness of functional analysis is its lack of explanation of why a particular item rather than some functional alternative occurs in a given system. In considering the persistence of a given structural pattern, it cannot be assumed that once key decisions leading to its institutionalization at an earlier time have been made, a society is locked into maintaining that pattern. The essential distinction that must be made concerns the way patterns specific to a given society arise, and how they may or may not come to be preserved. To establish causal linkages necessitates asking three questions: what are the particular set of factors responsible for the emergence of the pattern; what are the set of factors by which social arrangements reproduce themselves; and to what extent do those resources responsible for reproduction remain continually available to adjust to changing internal tensions and changing environmental conditions (cf., Stinchcombe, 1968: 101-2)?

In cases where a given social arrangement is preserved, the goal is to distinguish between what caused the particular pattern at an early time period, how it came to be established through a process of positive feedback or deviation amplifying feedback, and the nature of the self replicating causal loop that preserves the pattern at a still later time period. The issue raised here is one of historical selection; an understanding why one functional alternative and not another gets selected out.

Specifically, one must identify the emergence of specific social

practices and evaluate their consequences for meeting the needs of relevant actors. We trace the path by which social arrangements that are preserved gradually eliminate alternative modes of organization by their very success in meeting socially defined needs relative to the failure of the alternatives. Implicit in this model is the learning process by which social actors adopt appropriate behaviors in response to patterned rewards and punishments. Moreover, when taking a given action precludes the result of alternative action foregone in performing the first, this becomes a cost which the individual may weigh against the value of the rewards to be derived from taking the first action (Homans 1961: 51-82). In summary, once participants in a social situation find they get satisfactory results from specific behavior patterns, ceteris paribus, the selective principle encouraging a search for alternative practices is weakened (Stinchcombe 1968: 105). Sociologists can benefit from the economists' perspective on opportunity costs. The question to be considered is what are the costs incurred by adopting a particular social arrangement as compared to some other functional alternative (Olson:1970: 123).

In any discussion of the historidal evolution of functional alternatives we must specifically examine the degree of awareness of the relevant actors of the problems to be solved, the extent to which they are aware of alternative solutions and constraints on borrowing. Lack of awareness of the problem to be solved and/or alternative solutions may, in itself, be a powerful factor selecting for one functional alternative

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rather than another. It is often noted that cumulative historical experience with modern economic growth has given the contemporary third world states a wealth of alternatives from which to choose in solving problems relating to industrialization. Yet, the historical experience of a country also imposes constraints on choice. A major example is 19th century China, which by virtue of the self-image of its elite saw China as the center of the world, with outsiders having barbarian status. Consequently, it was extremely difficult for the Chinese to borrow technology and especially form of social organization from the West. The use of Soviet industrial experience by contemporary Chinese leaders as a negative model is similar in these respects. Generally speaking, the ambiguity of contemporary third world nations toward borrowing from their ex-colonial rulers suggest similar constraints. In addition, much of the accumulated material stock of transnational resources may not be relevant for backward economies. Simon Kuznets makes a distinction between total stock of transnational resources and the relevant stock of transnational resources (Kuznets 1968). This is especially relevant in the area of technology. In summary, the extent of awareness of problems and awareness of alternatives, along with the objective possibilities that various alternatives have in being accepted are important questions to be examined by researchers.

Structural functional analysis arose in part as a challenge to evolutionary theory. As a conseuqnce a notable willingness to dispense with historical explanations had been characteristic of many structural-functionalists and led to the charge that the theory was ahistorical. It

is true that historical causes are contained in the state of current interactions by virtue of having shaped them. It is also true that the options open to any individual in a given social situation are determined by the state of current interactions and their rules.[1] Based on this understanding, many sociologists have concentrated on explaining the existence of a given structural item in terms of its present consequences for other items in the social structure.

Yet, the options open to contemporary actors are also historical outcomes and the way we come to understand them is by understanding their historical development. The ultimate rationale for this interpretation is based on the view that every historical event that takes place, in principle, shapes the course of subsequent events. What is important here is not only that an individual's behavioral options are historical outcomes. An individual's "past history of success in his activities under given circumstances determines whether he will try them again, or others like them, in similar circumstances" (Homans 1967: 90).

In practice, however, many questions about current interactions can be answered that do not require historical explanations. If we want to know the present impact of religion on party preference, we do not need to invoke historical explanation. In this case, historical explanation serves as an "indirect cause," which is contained in the current social interactions. If, however, we ask why religion is more highly

related to party preference than sex, then a historical explanation must be invoked as a direct cause. We are able to answer this question only by turning to the historical process that selected for a particular functional alternative. In short, there is no one correct approach; the research strategy is dictated by the questions which are chosen.

An Empirical Example: Permanent Employment in Japan

In an effort to illustrate the approaches suggested in this paper, I turn now to a consideration of the practice of permanent employment in Japan. Few social practices in Japan have so caught the attention of American social scientists as has the practice of permanent employment. It is primarily through the work of James Abegglen (1958) in his widely discussed book, The Japanese Factory, that American social scientists have become aware of this practice (see also Odaka, 1963; Yoshino, 1967; Ballon 1969; Cole 1971; Marsh 1971).

Permanent employment, or the lifetime employment system as it is sometimes called, refers to the practice by which male employees, especially those in large firms are hired upon graduation from school -- whether it be middle school, high school or college -- receive in-company training and remain employees in the same company until the retirement age of fifty-five.

The permanent employment practice in Japan in no way restricts the formal rights of employees to change employment. It has been established as a management policy to minimize the discharge of regular employees in large firms; it is reinforced by the explicit distribution of rewards

according to age and length of service (nenko). The nenko wage system is, in effect, a mechanism of deferred wage payment with younger workers being underpaid relative to their productivity and older workers being overpaid. The economic rationality of this reward structure is based on the expectation that employees will spend their work careers in one firm. A man's actual performance in staying with a firm during his entire work career should not be confused with his subjective hopes and aspirations. Cole (1971: 131-35) presents case study data showing that this actual performance often conflicts with individual aspirations for job changing. Marsh (1971) reports case study data showing the acceptability of the norms and values of job changing among employees. These data suggest that examination of the structural factors affecting availability of employment opportunities rather than a mystical "tradition" is a more useful approach to decomposing the meaning of permanent employment.

The simplest measure of the different systems of employment security and different opportunity structure for inter-firm mobility in the United States and Japan is the ratio of employed persons changing jobs.[2] This ratio is reported for the one-year period from 1965-1966. Table 3 presents the findings. The job change ratio for American females of 6.8 percent is only slightly higher than the ratio of 6.5 percent for Japanese females. Among males, however, the ratio of 9.9 percent for American males is more than twice as high as the Japanese ratio of 4.7 pereent. Looking at age-specific job change ratios, it may be seen that

the greatest gap among males opens up in the 20-24 age category where the ratio in the United States is almost four times higher than in Japan; the smallest gap for males occurs from age 35-54 where the American ratio is reduced to less than twice as high as the Japanese ratio. These differences for males in overall change ratio and age-specific change ratios should not lead us to ignore basic similarities in pattern between the two societies. In both societies, the change ratio is highest for males 18-19 with the ratio undergoing gradual decline thereafter. It should be noted that these data do not distinguish between the two divergent types of job changes: voluntary and involuntary.

In the United States, high voluntary quit rates are combined with high involuntary quit rates based on managerial perogatives to adjust the labor force to changing business conditions; an institutionalized layoff system typifies this approach. The American practices are buttressed by a wage system which explicitly rewards productive performance. In a situation where employees might change employment at any time, it is not surprising that system of deferred wage payment is unacceptable.

The existence of permanent employment in Japan confounds the expectations of economists and sociologists alike that high rates of job mobility are associated with advanced levels of industrialization (Kerr, et.al., 1964: 17-18). Some sociologists have even come to describe the emergent "post-industrial society" precisely in terms of the temporary nature of individual participation in work organizations. (Bennis and

Slater, 1968). These expectations of high job mobility seem based on the view that individuals as resources to be efficiently and rationally used by productive organizations must be separable from these organizations under appropriate economic conditions. Such economic conditions are said to be present in advanced industrial societies characterized as they are by factors such as rapid technological innovation and the need continually to adjust and transfer factors of production.

The stickinessoof Japanese interefirm mobility rates has led most observers to concentrate on the unique character of intra-generational mobility patterns in Japan. The practice seems to symbolize all the uniqueness that we have come to expect from Japan: enduring loyalty to the corporate group, a system of shared obligations, and strong employee dependence upon powerful superiors. Scholars most associated with this perspective are James Abegglen (1958) and Nakane Chie (1970). They represent essentially the historicist analysis of this phenomenon. As such, these analyses are both incompatible with the goals of a generalizing social science and ignore some fundamental similarities with practices in other advanced industrial nations (to be discussed below).

In addition, Abegglen's discussion of the permanent employment practice provides no dynamics either historically or in contemporary practice. Permanent employment is presented as arising out of Japanese tradition and as having adapted itself to modern needs. Much doubt has already been cast on Abegglen's historical treatment (Taira, 1962; Odaka, 1963; Sumiya, 1966; Yoshino, 1967; Cole, 1971a). There was apparently considerably more variation in mobility rates historically than can be accounted for by simple reference to the enduring strength of Japanese

tradition. It is possible, in fact, to trace the sets of constraints and available resources which led Japanese industrial leaders to select permanent employment as a solution to these needs and Japanese workers to accept these innovations (Cole, 1971a). In short, it is possible to depict the process of institutionalization whereby permanent employment gradually became established in selected firms and for selected employees to the exclusion of alternative arrangements.

An alternative position taken by some scholars (e.g., Bennett, 1967) is that of convergence. They see rapid transformations occurring in Japanese patterns of labor mobility; in particular, the shift from a labor surplus to a labor shortage economy is viewed as a critical factor driving up inter-firm mobility rates to a level characteristic of other advanced industrial societies. Existing rates of inter-firm mobility may also be seen as deriving from the nature of industrial composition. We know that turnover rates, size distribution of firms and internal promotion ladders vary widely by industry. As Japan shifts its industrial structure to patterns characteristic of other advanced industrial societies, it may be argued that the patterns of inter-firm mobility will move in the same direction. The enthusiasm of convergence advocates, however, is matched only by the lack of convincing data. I have discussed this problem in depth elsewhere (Cole, forthcoming). Here, it will suffice to note that despite massive shifts in industrial composition and marked changes in labor market relationships over the last 20 years, we can detect only modest changes in inter-firm mobility rates. This suggests that permenent employment as crystallized in Japan has some significant and persistent strengths.

The remaining discussion will not deal with the historical evolution of this pattern nor with contemporary pressures for change. Rather, the focus will be on present Japanese structural arrangements with their characteristic low rates of inter-firm mobility relative to the United States. The question posed is how may we best conceptualize the Japanese arrangements <u>vis a vis</u> the American arrangements.

As advanced industrial societies, both Japan and the United States manifest stratification systems involving a complex division of labor with individuals ranged according to a hierarchy of occupational skills. Both societies consequently must continually motivate individuals to train for, occupy and perform these occupational roles. The rapidity of technological innovation in both societies with the rapid obsolescence of occupational skills means that these problems are not solved upon initial entry to the labor force. Insofar as both societies display an ability to operate complex technologies free from labor constraints, we may see the different structural arrangements regulating employment security and allowing differing opportunity for inter-firm mobility as functional alternatives. That is, using different arrangements for employment security andaallowing differing opportunity for inter-firm mobility, both societies succeed in motivating individuals to train for,ooccupy and perform the necessary (and increasingly common) occupational roles which keep their advanced technologies operative.

The basic core of the permanent employment system is present in any ongoing industrial society. The reason lies in the fundamental nature of labor market arrangements. To be successful and persist, all productive units try to reduce replacement and termination costs arising from

employee turnover. The greater the investment of the firm in embodying specific training in individuals, the more important it becomes to reduce movement out of the firm; otherwise, recruitment, screening, training and termination costs would prove unmanageable (Becker, 1964). On the other side, workers develop psychological and economic stakes in their employment; labor market arrangements must guarantee some degree of employment tenure if they are to successfully motivate workers. Employees tend to prefer some system of internal replacement and upgrading since the opportunity costs of enterprise mobility generally exceed zero.

The kinds of elaborations that are built on this core structure depend on the political, social and cultural heritage of a given country and its specific industrial structure and labor market situation. The recent work of Piore and Doeringer (1971) provides help in conceptualizing these differences.[3] They deal with the existence of internal labor markets by administrative units such as manufacturing plants. Within these units, administrative rules and procedures govern the pricing and allocation of labor. This internal labor market is connected to the external labor market by certain job classifications which constitute ports of entry and exit to and from the internal labor market. The remainder of the jobs are shielded from the direct influence of competitive forces in the external market and are filled by the promotion or transfer of workers who have already gained entry.

Viewed from this framework, it seems that in Japan the ports of entry and exit and the traffic volume of these ports are more limited than in the United States. At issue is the rigidity of the rules which define the boundaries of internal markets and which govern allocation of the work force. The greater rigidity of the rules in Japan enables us to speak of

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more closed internal markets in the large industrial firms of Japan and more open internal markets in the United States. Piore and Doeringer (1971: 6) note that the rigidity of the internal market is associated with investment in enterprise specific human capital, on-the-job training, and the role of labor as a fixed or quasi-fixed factor of production. These characteristics loom especially large in Japan (see Somers and Tsuda, 1966: 195-236, esp. 207). The greater role that seniority plays in the pricing and allocation of labor in Japan also becomes understandable in this context. (4) Rather than emphasizing the uniqueness of nenko and its basis in Japanese tradition, we may speak of the importance of seniority in a situation in which workers have less recourse to the market in highly structured internal markets. (5)

The strength of the Japanese approach in crystallizing a practice of permanent employment for selected employees is that it places a high premium on the resource of employee commitment and the benefits that flow to the organization from mobilizing this commitment. (6) By combining a system of deferred rewards (nenko wage) with long-term service, loyalty to the firm and motivation to achieve formal organizational goals are maximized.

This approach operates as a tradeoff for the strengths associated with American practices. The advantages of the American practice of maintaining high rates of inter-firm mobility is that it provides for quick readjustment of labor pools and skills in adjusting labor costs to changing business conditions. The layoff system, modified to meet some worker interests, institutionalizes management perogatives in this area. American practices of high inter-firm mobility further enable the organization to

capture those benefits that flow to the organization from being able to mobilize external sources of trained labor at short notice.

The greater constriction of the labor market in Japan, with its particular--though not exclusive--emphasis on recruitment at time of school graduation and retention of employees, reduces the flexibility of Japanese employers.[7] But it also permits Japanese employers to avoid the endemic instabilities apparent in America, as manifested in high turnover rates, poor returns on training costs, high cost of recruitment and termination and seemingly high levels of alienation.[8]

The Japanese real economic growth rate was about three times as high as the American rate during the period from 1955 to 1972. This has meant an enormous capacity of Japanese society to absorb massive technological innovation. In a recent four year period (1966-1969), private equipment investment expanded at the remarkable average rate of 26 percent a year (Economic Planning Agency, 1970: 15-16). Permanent employment practices have certainly been a major factor in realizing this capacity through minimizing dislocations and excessive costs to individuals and business firms alike which would likely result from high rates of job changing. This success is dependent in turn upon highly developed in-plant training and retraining programs that have characterized Japanese business firms. In a recent article, Peter Drucker (1971: 110-22) has suggested that American managers have much to learn from Japanese company practices of providing "continuous training" for employees. The permanent employment system avoids much of the "waste" associated with employee and union resistance to technological innovation deriving from threats to employment security, such as has characterized the United States. When employees are

relatively confident that they will retain their employment and be given the opportunity for job retraining, they can be expected to reduce their opposition to technological innovation. This is especially true where there exists a wage system such as Japan's which is not directly occupationally based.[9] Similarly, employers can undertake extensive training of their employees, with less fear of losing their investment through inter-firm mobility.

Figure 2 presents a schematic representation of the thesis presented in this section. The generalized model suggests that the ability of a firm to remove labor constraints on the utilization of technology depends on two major inputs: first, the mobilization of high labor force commitment (e.g., minimizing quits, and alienation and maximizing loyalty to the firm), with a "capture" of the firm's investment in specific training; and secondly, the ability to adjust labor costs to changing business conditions with a further capture of the benefits to be derived from mobilizing external sources of trained labor.[10]

In practice, it is difficult to mobilize high labor force commitment and adjust labor costs to changing business conditions simultaneously. One principle reason is that internal labor force commitment depends very much on assurance of employment security and adherence to the often strongly held value of employees that vacancies be filled from within the organization. But it is difficult, if not impossible, to maximize these conditions when management policies involve significant use of fires, layoffs and hiring of trained external labor. Given these difficulties in reconciling the two inputs, the maximization of one generally results in minimizing the other.

The thesis proposed in this section is that, in Japan, historical experience has seledted for maximizing internal labor force commitment and the benefits that accrue to the organization from reducing alienation and quits and fires among employees while maximizing the benefits that flow from investing in specific training. This operates as a trade-off for the benefits that the organization would have experienced from having more flexibility in adjusting labor costs to changing business conditions and having access to external sources of trained labor. In the United States, the historical process of selection has been such that the opposite trade-off is made. In the sense that the choiees made in both nations successfully remove labor constraints on the utilization of technology they operate as functional alternatives to one another.

One may ask, of course, the question of which trade-off more efficiently removes labor constraints on the utilization of technology, or the more general question of whether there are optimal trade-offs which perhaps neither country has achieved. It seems likely, for example, that as Japanese economic growth slows down, current trade-offs between the two inputs may become more of a liability for employers with their having greater need for increased flexibility in adjusting labor costs. These are both questions deserving further investigation.

Conclusion

Intthis paper, I have tried to suggest the importance of functional alternatives as an analytical construct. Its importance lies in its ability to serve as an alternative to sociological explanations which emphasizesthe polar positions of cultural and structural uniqueness or cultural and structural universals. The task is to establish how different structural arrangements or value systems may have the same consequences for the larger systems in which they are implicated. While perfect equivalence is not to be expected, the heuristic value of hypothesized functional alternatives is great.

To understand why one rather than another functional alternative becomes established requires historical analysis. At present, many sociologists are still trying to establish the degree ofccommonality in structural outcomes at given levels of industrialization. It will be necessary to go beyond this to examine these structural arrangements, whether similar or different, and ascertain their basis for coming into existence, and the basis for their maintenance.

FOOTNOTES

1. Definininghhistory in a narrow sense one may argue that a non-experimental observational basis for a science is always historical insofar as causal explanation involves ascertaining the temporal priority of causal factors (Karl Popper, 1957: 38-39).

2. We should be cautious about seeing the United States as the model of the industrial nation which must be emulated if modernity istbo be achieved. If we compare labor turnover tates (a more indirect measure of job mobility) in manufacturing of Japan with England and West Germny, it appears the Japanese rate is only slightly lower (OECD, 1965: 50). Perhpps students of Japanese conditions ought to be comparing their findings to the unique labor market tradition of the United States.

3. See also Dunlop (1966).

4. The more important role played by seniority in Japanese industry as compared to the U.S. has been pointed out by numerous observers. See Whitehill and Takezawa (1968: 127-156).

5. George Taylor (1966) 132) makes the same argument in explaining why seniority principles develop in some American industries and not others.

6. Commitment, while undoubtedly never complete, involves both the performance of appropriate actions in a given social context and the acceptance of the normative system that sets out the rules and their rationale (cf. Moore, 1965: 40).

7. It also means that employers are likely to adjust prices downward rather than output when confronted with short-run problems. This theme should not be overdone, however, since there are also a variety of informal means for management to adjust labor costs to changing business conditions (Cole, 1971).

8. For anaanalysis on the American scene, see Stanley Lebergott (1968: 122-27).

9. This thesis is easily exaggerated, however. Public opinion polls for example, show a less than favorable attitude by the Japanese public toward the impact of technology (Ishida, 1971: 98). Cole (1971: 92-100) reports case study data documenting employee restriction of production. Viewed from the American side, it has been noted in American industry as well that employment guarantees are associated with considerable managerial freedom to modify jobs and to redeploy the internal labor force (Piore and Doeringer, 1971: 57).

10. The level of the labor force commitment important to the firm can be expected to vary with the nature of the technology in question.

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FUNCTIONAL ALTERNATIVES, ECONOMIC DEVELOPMENT AND HISTORICAL EXPLANATION*

Robert E. Cole

University of Michigan

*This paper benefited from the caustic comments of Arnold Feldman and Paul Siegel. Lois Verbrugge's comments were less biting but of great value. I take full responsibility for the use and misuse of these comments and criticisms.

This paper is concerned with the concept of functional alternatives. In general fashion, this concept has been used to suggest that there is a range of structural or value arrangements that may serve to fulfill a common function. Despite what appears to be a growing disenchantment with the wares of structural-functional analysis by contemporary sociologists, even those spokesmen for a more empirically oriented sociology continue to find the concept of functional alternatives useful (e.g., Stinchcombe, 1968:80-125; Coleman, 1969:291-292). Discussion in this paper focuses on conveying the importance of the concept of functional alternatives, making it trim for empirically minded sociologists, and suggesting guidelines designed to avoid common pitfalls and increase the probability of developing empirically testable propositions. The final section of the paper will be devoted to an empirical case examining the system of employment security dominant in large-scale Japanese industrial firms.

Those engaged in empirical comparative research on the relationship between technological complexity and economic organization on the one hand and social structure on the other face the continual need to choose between two ways of casting their interpretation of data and presenting their findings. This is the choice between "culturalist" or "historicist" explanations on the one hand and the need to recognize the commonalities that all human societies share and the commonalities that societies share by virtue of having achieved a given level of technological complexity

and economic organization. The issue is specifically joined in the discussion generated by "convergence theory" where it is hypothesized that growing similarities in social structure come to characterize advanced industrial societies as unique historical differences come to play a more restricted role. Critics of convergence theory have attacked the assumption of strict functional interdependence among component parts and have advanced a thesis stressing the partial nature of solutions to problems of social organization in the course of economic development.[1]

Reinhard Bendix speaks of the way comparative analysis forces us to see social structure not "as a natural system with defined limits and invariant laws governing an equilibrating process, but rather as a system of historical dimensions" (1963:537). These historical dimensions influence point of origin, route and temporary destinations of social structures under the impact of and interacting with economic development. To say that social structure is a system of historical dimensions means that historical context influences the operation of seemingly invariant processes such as industrialization and thus makes possible a meaningful conception of process (c.f. Nisbet, 1969; Gerschenkron, 1964). The extent to which we can conceptualize historical processes in an intelligent fashion is based on our ability to separate random from nonrandom processes. As Boulding (1970:16) notes, the human mind has a profound tendency towards superstition, that is, "the imposition of

a spurious order on its observation of random processes."

To say that social structure is a system of historical dimensions does not mean, however, that we accept the extreme version of historicism. Historicism is a point of view that asserts historical uniqueness and denies attempts to formulate generalizable propositions applicable to more than one society, culture, or period. The focus is rather on the ordering of temporal events which crystallize to form unique organizational and societal patterns. One understands the meanings of these historical experiences only by concentrating on relevant historical events. Robert Nisbet (1969) in his recent provocative book _Social Change and History_ comes close to taking this position.

Comparative sociologists reject the historicist view; they seek generalizable statements which apply to more than one society (Shils, 1963:1-26; Bendix, 1963:532-539). It is expected that the historical experience of one society will illuminate the meanings of historical experiences in other societies. Ideally, these general propositions are not rooted in any one society; they transcend specific societies. Yet, they prove their utility by helping to explain specific empirical processes. One such analytic concept is that of occupational prestige. It refers to a hierarchy of evaluations. In itself, it says nothing about a specific society but in the course of asking how societies evaluate their occupations, we come to recognize certain commonalities and differences. The problem then becomes one of searching for

conditions that are likely to produce one rather than another of these outcomes. The task of the social scientist becomes one of cataloging and suggesting causal relations between the limited range of possible outcomes and other associated variables. (See Hodge, Treiman and Rossi, 1966)

To summarize, the bridge between historical observations and general theory lies in developing theories comprised of a set of statements that are general, parsimonious and contain a causal set of statements. At the same time, this set of statements proves its utility by explaining specific empirical processes. It is in this context that Przeworski and Teune (1970:17-30) argue that the role of comparative research in the process of theory building and testing is the replacing of the proper names of social systems (e.g., China, France, Sweden) by specific variables. They treat names of nations and social systems as residua of variables that influence the phenomenon being explained but have not yet been considered.

I

Functional Alternatives

It is with an eye to bridging this gap between theory and concrete sociological observations that the concept of functional alternatives becomes useful. As Shils (1963) has noted what is needed are sociological concepts which both allow for societal uniqueness and explain it in a wider analytical framework. While it is not hard to agree with Przeworski and Teune that the goal of comparative

research is to replace the proper names of social systems by specific variables, it does seem advisable not to decide *a priori* that specific historical sequences of events be treated as residua. The concept of functional alternatives is useful precisely because it does not prejudice the outcome of empirical research at the outset. It is the absence of such analytical formulations that often leads sociologists to adopt either the extreme position of cultural uniqueness or to endorse notions of universal concommitants of industrialization.

One example is the way research on comparative occupational prestige rankings has proceeded. The earlier focus of Inkeles and Rossi (1956) purported to show the weakness of the "culturalist" position and the strength of the "structuralist" position emphasizing the relatively invariable hierarchy of prestige associated with the industrial system. Later research (Hodge, Treiman and Rossi, 1966:309-321) points to similarity in occupational prestige rankings even in non-industrial societies. This is accounted for by an assertion of "the essential structural similarity shared by all nations of any degree of complexity" (Hodge, Treiman and Rossi, 1966:321). What research in this area has not done is to examine the significance of occupational prestige rankings for individuals in these respective societies. Does the occupational prestige hierarchy have motivational consequences for individuals? There is sufficient evidence to suggest that occupational achievement is

not a major focus for large sectors of the American labor force.[2] Concern with job security, with community and family status, may be more evident. One may then ask how are individuals motivated to train and fill occupational roles in different societies. Functional alternatives in this case refer to the empirical possibility that different structural arrangements (e.g., systems of employment security, reward systems, educational systems) and/or value systems may emerge in different societies to insure recruitment to these occupational roles and their performance. An example of such an equivalent will be discussed in the final section of this paper.

We may summarize the different approaches discussed thus far as a typology using a two by two table which compares two sets of structural arrangements and their consequences.

Table 1.--Comparison of two or more structures and their consequences

		STRUCTURE	
		Different	Same
FUNCTIONS	Different	Historicism (cultural-relativism)	Structural Modelling with Environmental Effects
	Same	Functional Alternatives	Convergence Theory

Three of the four cells have been discussed. Historicism is an argument for uniqueness in both structure and structural

consequences; convergence theory focuses on the growing similarity of structural arrangements which have common consequences. The third cell of functional alternatives which hypothesizes different structural arrangements with similar consequences is the central concern of this paper. I suggest that it is simplistic to focus exclusively on the "all or nothing" propositions which flow from the historicist and convergence cells.

The fourth cell, which I have labelled structural modelling with environmental effects, has yet to be discussed. The possibility of their developing similar structural arrangements but with different outcomes has not been formulated by sociologists as a major societal response to economic development. Nevertheless, social scientists have often pointed out how "modern" appearing structural arrangements in non-western societies, often borrowed from the west, have unanticipated consequences that are quite different from those in western societies. The basis for these unanticipated consequences lies in these structural arrangements having to cope with and draw resources from a quite different social and even physical environment. For example, the Japanese university system, though modelled after the German system in the pre-World War II period and the American system in the post-war period, has had a number of distinctive consequences which have not been shared by its counterparts in Germany and later America. The basis for these different consequences lies

in the quite different social context in which this institution appeared (see Passin, 1965).

In the past, sociologists have used such concepts as functional equivalents, functional alternatives, functional substitutes, and functional analogues in rather loose and interchangeable fashion. Our discussion is intended to apply to all these concepts. The terms themselves invoke the language of structural-functional analysis; they have been based on the premise that we can identify specific functional prerequisites or "universal needs" which must be performed to permit societies to persist (Aberle et al., 1950; Levy, 1966:175-187). An even more demanding version (more demanding in the sense of requiring more detailed specification) is that we can identify at varying levels of development certain functional prerequisities which must be satisfied if a society is to successfully proceed with modernization. When these functional requirements are not met, further economic development or modernization will not occur. This has been an implicit assumption in much of the modernization literature based on the search for universal preconditions or universal obstacles to development. Gerschenkron (1965:31-51) and Hirschman (1965:385-393) provide biting critiques of these assumptions. Gerschenkron shows that many alleged preconditions are concomitants of economic growth while Hirschman demonstrates that many alleged obstacles have on occasion been beneficial for economic growth.

For some of the early functionalists such as Malinowski (1926:136) the assumption of functional indispensability was ambiguous. It was not clear whether it was the function that was indispensable or the structural item fulfilling this function. This vagueness has by no means disappeared as Gerschenkron and Hirschman show. Nevertheless, leading spokesmen for structural-functional theory have recognized the problem. The distinction that is now commonly made is that we may speak of functional needs but that these needs may be met by a range of structural alternatives (Merton, 1957:32-37).

Notwithstanding these modifications, critics continue to point to the deficiencies of functional analysis. There is no need to rehash these criticisms here. (See Hempel, 1959:271-307 for a more intensive treatment.)

Those criticisms relevant to our discussion are that key terms of functional analysis such as need and functional prerequisite have been used in a nonempirical manner without providing clear operational definitions. Without a specification of how these terms can be applied to the empirical world they lead to no specific predictions and cannot be put to empirical use. Particularly important in terms of its weak explanatory force is that functional analysis does not provide an explanation of why a particular item rather than some functional alternative of it occurs in a given system. This is a consideration we will deal with later under the section, historical explanation and functional alternatives.

These weaknesses have become increasingly clear to contemporary empirically minded sociologists. What is needed is a way to capitalize on the strengths of the concept of functional alternatives citied earlier and separate it from the limitations just noted. Rather than speak of functional prerequisities, I suggest we focus on common problems that have to be solved at certain levels of industrialization. This approach allows for universal problems such as establishment of factory discipline and recruitment of a labor force as well as problems faced by a selected number of societies. An example of the latter would be those problems which confront latecomers seeking to industrialize in a world already dominated by highly industrialized nations. Even universal problems such as recruitment of a labor force are strongly influenced by the historical timing of the industrialization (e.g., quality of labor force changes).

Functional alternatives refer to the empirical possibility that social units evolve different structural arrangements to solve common problems. It permits us to accept societal differences without having to fall back on explanations based on historical uniqueness. Instead we may incorporate these societal differences in a common analytic framework.

An attempt to grope toward a more quantitative expression of functional alternatives appears in recent sociological literature. Janowitz and Segal (1967:601-618) examine

determinants of party affiliation in Germany, Great Britian, and the United States. Their specific intention is to "analyze variables that had comparable meaning and significance in each country" (Janowitz and Segal, 1967:604). Using a series of paired comparisons, the authors find that party affiliations were most polarized on the basis of socioeconomic positions in Great Britain, less in Germany, and the least in the United States. High polarization occurs when the working class supports the main party of the left while the middle and upper income groups support the major non-left party. Low polarization occurs when there is little association between socioeconomic status and political affiliation.

The primary focus of the authors is to show that in each country there are secondary bases of political cleavage. I shall limit my discussion of their procedures and findings to the United States and Germany for illustrative purposes. In the U.S. they find that the key secondary variable influencing political affiliation is race, while in Germany they find that the key secondary variable influencing political affiliation is religion. The logic of the authors' statement cited above is that religion in Germany and race in the United States are equivalents though in fact the authors studiously avoid making a direct statement to this effect. If all we intend by calling religion in Germany and race in the United States functional alternatives is to call attention to the fact that they both serve as secondary bases of social

cleavage influencing the distribution of party affiliation, then there can be no objection to the use of this term. But formulating it in this fashion is, after all, not a very powerful statement. We want to know whether these secondary bases of social cleavage actually operated to produce the same outcome. In asking this question of the Janowitz and Segal data, the functional alternative interpretation becomes no longer tenable.

TABLE 2.--Socioeconomic status, social cleavage, and party affiliation: United States and Germany*

Total Sample		Partial Relations within Social Groups	
United States	V=.162	White	V=.149
		Non-white	V=.011
Germany	V=.284	Catholic	V=.297
		Non-catholic	V=.251

*Adapted from Morris Janowitz and David Segal (1967:610).

Table 2 presents the degree of association of party affiliation with socioeconomic position for each nation holding constant race for the United States and religion constant for Germany. The measure of association is Cramer's V. For the total sample, we see first that socioeconomic status produces a stronger polarization in Germany (V=.284) than in the United States (V=.162). Perfect association between socioeconomic status and party affiliation would be represented by V=1. Secondly, when we look at social

cleavage, we find that race in the United States and religion in Germany are not operating in a uniform direction in terms of their influence on party affiliation.

As the authors note, "the consequences of these cleavages for political change depend on whether they work to reduce or to heighten the strains generated by socioeconomic stratification." Unfortunately, they do not systematically follow up this observation. One gets a sense of the different direction in which these variables are operating by expressing the extremes of the range: for blacks in the United States, the degree of association of party affiliation with socioeconomic position (V=.011) is <u>weakened</u> as compared to the whole sample (V=.149). That is, the predominantly Democratic Party affiliation of blacks means that their party affiliation is relatively unrelated to socioeconomic position. For Catholics in Germany, however, the degree of association of party affiliation with socioeconomic position (V=.297) is <u>strengthened</u> as compared to the whole sample (V=.284). In summary, given these differences in direction of relationship, it is not appropriate to speak of race in the United States and religion in Germany as being functional alternatives with respect to impact on party affiliation. If the authors had pushed the comparison of race in the United States and religion in Germany far enough in their attempt to uncover variables that had "comparable meaning and significance in each country," they would have discovered substantial differences. But they did make a case for establishing the

secondary bases of social cleavage influencing party polarization after the primary impact of socioeconomic status.[3] With this empirical example in mind, I turn now to identifying some common pitfalls in research utilizing the concept of functional alternatives and to proposing some strategies to avoid these pitfalls.

II

Some Suggested Guidelines for Establishing Functional Alternatives

1. The first task for the researcher is to identify clearly the model being considered and the hypothesized consequences of specific variables for other referents in the social structure. It is the identification of the consequences of a specific structural pattern for a specific referent in a circumscribed system that ought to shape the identification of functional alternatives. Much research based on the concept of functional alternatives has suffered from the failure to specify clearly the referents in the original model (c.f. Hempel, 1959:292). This failure does not allow a meaningful empirical test of the proposed proposition. A prime example is recent research in the non-Western world devoted to establishing a functional analogue to the Protestant Ethic. Some scholars have focused on the motivation religion is supposed to have provided an emergent entrepreneurial class, others on the role of the Protestant Ethic as a force for the structural transformation of western

societies. Obviously the selection of one or the other referent will critically determine the nature of the search for an equivalent and the likelihood of finding one.[4] The referent that Weber had in mind in discussing the impact of the Protestant Ethic was an emergent Capitalism. What does it mean to change the referent to industrialism or socialism? Few scholars trying to apply the Weberian formulation have faced the implications of this change in referent (see Eisenstadt, 1968). In short, the use of functional alternatives as an effective analytical tool is predicated on the careful specification of the original model (original only in the sense that the researcher has so designated it) which includes a delineation of the consequences of the given structural pattern for a given referent.

2. At the same time, the search for functional alternatives must be tempered by a recognition that no structural pattern in one society will have consequences that are completely equivalent to another pattern in a different society. This is because a structural pattern presupposes a variety of underpinnings and interrelations with other structures and has a variety of consequences that are not likely to be duplicated with a point by point correspondence in isomorphic fashion. Indeed, the Janowitz and Segal research as well as the final example presented in this paper suggest that as one moves from comparisons at a general level to a careful detailing of the variety of

consequences manifested by a structural pattern, the less likely is it that an equivalent will be found. This should not be interpreted as failure. In the first place, although a structural pattern has a variety of consequences for different referents, it is quite proper--indeed it is necessary--that a carefully formulated hypothesis specifically delimit those consequences of the pattern and the referents with which the research is concerned. Thus, while no structural pattern is likely to duplicate another in all respects with regard to consequences for one or more referents, analytically, it may be appropriate to discuss the limited equivalence of specific consequences of structural patterns. In short, exact correspondence in all consequences should not be confused with the utility of an analytical framework concerned with a limited set of consequences. A good example of the form that circumscribed statements about equivalence may take, appears in the following assertion by Coleman (1969:292):

> Many activities may be alternatively carried out by the community or the family, with either substituting for the other: disciplining children, controlling crime and enforcing social norms, sheltering or aiding handicapped or otherwise dependent members, and the variety of other functions that communities and families perform. The family and community differ in size and in strength and permanence of attachment, but their potential functions are similar, except for the child-socializing function in which the community seldom substitutes for the family.

A second reason that lack of complete equivalence should not be interpreted as failure is that the concept

of functional alternatives not only provides an explanatory category but also operates as a heuristic construct. To the extent that we formulate research designs predicated on establishing functional alternatives and come to understand that the two or more patterns under investigation operate quite differently, this may contribute to our knowledge of the phenomena under investigation. It leads us to examine where the correspondence breaks down and what factors are responsible.

3. A third set of guidelines may be derived from our discussion of the Janowitz and Segal contribution. When evidence for identification of a functional alternative takes a statistical form, the research should make certain that the direction of association be similar so as to justify using the concept of functional alternatives. Even more important than this, however, is that equivalence in coefficients cannot be equated with equivalence in content. Just as correlation is not a substitute for causal analysis, per cent of variance explained is no substitute for carefully working out the logical interrelatedness of the phenomena under investigation.

4. The dictum that propositions should be stated in as general and yet parsimonious fashion as possible has not always been adhered to in research using the concept of functional alternatives. This can lead to rather misguided research designs. Again, the research devoted to establishing

functional equivalents to the Protestant Ethic in the non-Western world serves as a good example of what ought not to be done. The search for an analogue to the Protestant Ethic has been needlessly restricted to religious structures and values. Neil Smelser (1963) makes exactly this point in an overall critique on the disproportionate amount of attention that has been devoted to the initiating role that formal religious values play in economic development (see also McClelland, 1961). He suggests that the role of secular nationalism may perform the same functions for many of the non-Western nations that the Protestant Ethic is alleged to have performed in the West. Smelser suggests that the great strength of existing traditional commitments and modes of integration in pre-industrial societies requires a very generalized and powerful commitment to pry individuals from these attachments (Smelser, 1963:38-39). The values of this worldly ascetic religious belief may be one source for this commitment but so may be the secular ideologies of nationalism and socialism. The thrust of this discussion is that framing the issue in terms of a search for analogues to the Protestant Ethic needlessly restricts the choices. Instead a more parsimonious and yet inclusive statement is to ask how industrializing nations develop a commitment from its members to action consistent with the exigencies of modern economic growth. What functional alternatives exist? How does the availability of functional alternatives get conditioned by the historical timing of the industrialization process?

5. A fifth consideration is suggested by the Smelser critique. To argue that a functional alternative exists requires statements of relative causal importance. Too often sociologists have been guilty of stating that a particular structural arrangement or value system has important consequences for a given system without establishing its degree of importance relative to other existing causal factors. Robert Bellah's work on Tokugawa Japan (1957) illustrates the problem. He provides a convincing statement that religious factors were a necessary if not sufficient explanation for Japan's successful attempt to industrialize. Yet, while there is a general discussion of the importance of the polity, we do not get an evaluation of the relative importance of nationalism as a motivating factor relative to religious values. What were their relative weights in contribution to the economic motivation of the Japanese? To what extent did they fuse and interpenetrate one another? If we are to speak of functional alternatives in a meaningful sense, it is not enough to establish that given structural arrangements or value systems are important in two different societies in producing a specified consequence. Rather we must seek to demonstrate that the two factors had similar weights in contributing to the referent under consideration. Were religious values more important in England in providing economic motivation with nationalism taking second place, while in Japan was nationalism of primary importance with

religious values having secondary importance? There is some evidence to suggest that this might be the case. (For suggestive rather than conclusive evidence, see Pyle, 1969; Thompson, 1963.)

To meet these kinds of requirements for establishment of functional alternatives is clearly no small task. In the past, the weaknesses of sociologists in this respect, especially in the area of historical sociology, has been attributable, in part, to the lack of reliable and quantifiable data. But clearly if sociology is to go beyond merely suggestive and plausible explanations, such assignment of causal importance of alternative factors is a critical goal. It is the gradual exclusion of alternative hypotheses and establishment of causal importance among a variety of "competing causes" that lies at the heart of empirical social science.

6. A sixth guideline for carrying out analysis using the concept of functional alternatives lies in clearly establishing the historical evolution of the social arrangements in question to understand why and how societal experience selects for one rather than another alternative. This will be the basis for discussion in the next section.

III

Historical Explanation and Functional Alternatives

As noted earlier, a major weakness of functional analysis is its lack of explanation of why a particular item rather

than some functional alternative occurs in a given system. In considering the persistence of a given structural pattern, it cannot be assumed that once key decisions leading to its institutionalization at an earlier time have been made, a society is locked into maintaining that pattern. The essential distinction that must be made concerns the way patterns specific to a given society arise, and how they may or may not come to be preserved. To establish causal linkages necessitates asking three questions: first, what are the particular set of factors responsible for the emergence of the pattern; what are the set of factors by which social arrangements reproduce themselves; and thirdly, to what extent do those resources responsible for reproduction remain continually available to adjust to changing internal tensions and changing environmental conditions (c.f., Stinchcombe, 1968:101-102).

In cases where a given social arrangement is preserved, the goal is to distinguish between what caused the particular pattern at an early time period, how it came to be established through a process of positive feedback or deviation amplifying feedback, and the nature of the self replicating causal loop that preserves the pattern at a still later time period. The issue raised here is one of historical selection; an understanding of the process of historical selection is critical to understanding why one functional alternative and not another gets selected out.

Specifically, one must identify the emergence of specific

social practices and evaluating their consequences for meeting the needs of relevant actors. We trace the path by which social arrangements that are preserved gradually eliminate alternative modes of organization by their very success in meeting socially defined needs. Implicit in this model is the learning process by which social actors adopt appropriate behaviors in response to patterned rewards and punishments. Moreover, when taking a given action precludes the result of alternative action forgone in performing the first, this becomes a cost which the individual may weigh against the value of the rewards to be derived from taking the first action (Homans, 1961: 51-82). However, as I suggest below, individual awareness of alternative courses of action must be taken as problematic and cannot be assumed. In summary, once participants in a social situation find they get satisfactory results from specific behavior patterns, *ceteris paribus*, the selective principle encouraging a search for alternative practices is weakened (c.f. Stinchcombe, 1968:105).[5]

In any discussion of the historical evolution of functional alternatives we must specifically examine the degree of awareness of the relevant actors of the problems to be solved, the extent to which they are aware of alternative solutions and constraints on borrowing. Lack of awareness of the problem to be solved and/or alternative solutions may, in itself, be a powerful factor selecting for one functional alternative rather than another. It is often

noted that cumulative historical experience with modern economic growth has given the contemporary third world states a wealth of alternatives from which to choose in solving problems relating to industrialization. Yet, the historical experience of a country also imposes constraints on choice. A major example is 19th century China, which by virtue of the self-image of its elite saw China as the center of the world, with outsiders having barbarian status. Consequently, it was extremely difficult for the Chinese to borrow technology and especially forms of social organization from the West. The ambiguity of contemporary third world nations toward borrowing from their ex-colonial rulers suggests similar constraints. In addition, much of the accumulated material stock of transnational resources may not be relevant for backward economies. Simon Kuznets makes a distinction between total stock of transnational resources and the relevant stock of transnational resources (Kuznets, 1968). This is especially relevant in the area of technology. In summary, the extent of awareness of problems and awareness of alternatives, along with the objective possibilities that various alternatives have in being accepted are important questions to be examined by researchers.

Structural functional analysis arose in part as a challenge to evolutionary theory. As a consequence a notable willingness to dispense with historical explanations has been characteristic of many structural-functionalists and led to the charge that the theory was ahistorical. It is true that

historical causes are contained in the state of current interactions by virtue of having shaped them. It is also true that the options open to any individual in a given social situation are determined by the state of current interactions and their rules.[6] Based on this understanding, many sociologists have concentrated on explaining the existence of a given structural item in terms of its present consequences for other items in the social structure.

Yet, the options open to contemporary actors are also historical outcomes and the way we come to understand them is by understanding their historical development. The ultimate rationale for this interpretation is based on the view that every historical event that takes place, in principle, shapes the course of all subsequent events. It is not only that an individual's behavioral options are historical outcomes that is important here. An individual's "past history of success in his activities under given circumstances determines whether he will try them again, or others like them, in similar circumstances" (Homans, 1967: 90).

In practice, however, many questions about current interactions can be answered that do not require historical explanations. If we want to know the present impact of the religion on party preference, we do not need to invoke historical explanation. In this case, historical explanation serves as an "indirect cause," which is contained in the current social interactions. If, however, we ask why religion

is more highly related to party preference than sex, then a historical explanation must be invoked as a direct cause. We are able to answer this question only by turning to the historical process that selected for a particular functional alternative. In short, there is no one correct approach; the research strategy is dictated by the questions which are chosen.

An Empirical Example: Permanent Employment in Japan

In an effort to illustrate the approaches suggested in this paper, I turn now to a consideration of the practice of permanent employment in Japan. Few social practices in Japan have so caught the attention of American social scientists as has the practice of permanent employment. It is primarily through the work of James Abegglen (1958) in his widely discussed book, The Japanese Factory, that American social scientists have become aware of this practice (see also Odaka, 1963; Ballon, 1969; Cole, 1971; Marsh, 1971).

Permanent employment or the lifetime employment system as it is sometimes called refers to the practice by which male employees, especially those in large firms are hired upon graduation from school--whether it be middle school, high school or college--receive in-company training and remain employees in the same company until the retirement age of fifty-five. This practice is, in turn, buttressed

by a wage system, nenko, which explicitly rewards regular male employess in large firms according to age and length of service. This is, in effect, a mechanism of deferred wage payment with younger workers being underpaid relative to their productivity and with older workers being overpaid. The economic rationality of this reward structure is based on the expectation that employees will spend their work careers in one firm.

The simplest measure of the different systems of employment security and different opportunity structure for inter-firm mobility in the United States and Japan is the ratio of employed persons changing jobs. This ratio is reported for the one-year period from 1965-1966. Table 3 presents the findings. The job change ratio for American females of 6.9 per cent is only slightly higher than the ratio of 6.5 per cent for Japanese females. Among males, however, the ratio of 9.9 per cent for American males is more than twice as high as the Japanese ratio of 4.7 per cent.[7] Looking at age-specific job change ratios it may be seen that the greatest gap among males opens up in the 20-24 age category where the ratio in the United States is almost four times higher than in Japan; the smallest gap for males occurs from age 35-54 where the American ratio is reduced to less than twice as high as the Japanese ratio. These differences for males in overall change ratio and age-specific change ratios should not lead us to ignore basic similarities in pattern between the two societies. In both

TABLE 3.--Rates of Change of Employment (comparison between Japan and the U.S.). Ratios of Employed Persons Changing Jobs in a Year (in per cent)

Age Groups	Japan		U.S.	
	Male	Female	Male	Female
18 - 19	10.2	8.1	31.7	29.0
20 - 24	7.5	8.2	28.5	14.9
25 - 34	4.4	6.0	13.8	8.5
35 - 39*	3.3	4.7	7.4	5.3
40 - 54*	2.8	4.2	5.2	4.7
55 - 64	0.5	3.2	3.8	2.4
More than 65	0.3	0.3	2.7	1.8
Total	4.7	6.5	9.9	6.9

1. Source: Economic Planning Agency, 1968: 152.

2. Rates of change of employment are calculated as follows; As for the Japanese, the number of persons who changed jobs (persons whose job as of July 1965 was different from that of a year ago) divided by the total numbers of those who have not changed jobs and those who have changed jobs. As for the Americans, the ratio of persons changing jobs out of those who were employed both in January 1965 and January 1966.

3. Age groups marked * are 35-44 and 45-54, respectively, for the Americans.

societies, the change ratio is highest for males 18-19 with the ratio undergoing gradual decline thereafter. It should be noted that these data do not distinguish between the two divergent types of job changes: voluntary and involuntary.

In the United States, high voluntary quit rates are combined with high involuntary quit rates based on managerial perogatives to adjust the labor force to changing business conditions; an institutionalized layoff system typifies this approach. The American practices are buttressed by a wage system which explicitly rewards productive performance. In a situation where employees might change employment at any time, it is not surprising that a system of deferred wage payment is unacceptable.

The presentation of the permanent employment practice to western audiences by Abegglen (1958) has emphasized its distinctive characteristics (see also Nakane, 1970). The practice seems to symbolize all the uniqueness that we have come to expect from Japan: enduring loyalty to the corporate group, a system of shared obligations, and strong employee dependency upon powerful superiors. It confounds the expectations of economists and sociologists alike that high rates of job mobility are associated with advanced levels of industrialization (Kerr, et al., 1964:17-18). Some sociologists have even come to describe the emergent "post-ndustrial society" precisely in terms of the temporary nature of individual participation in work organizations (Bennis and Slater, 1968).

This emphasis on the uniqueness of Japanese practices is clearly inconsistent with the approach suggested in this paper. A search for commonalities with western practices and functional alternatives would seem better calculated to advance our understanding. First, some clarification is in order. The permanent employment practice in Japan in no way restricts the formal rights of employees to change employment. It has been established as a management policy to avoid as much as possible the discharge of regular employees in large firms and as an employee behavioral pattern that is reinforced by the distribution of rewards according to age and length of service. It is strengthened by social and judicial pressures. A man's objective performance in staying with a firm, during his entire work career, moreover, should not be confused with his subjective hopes and aspirations. Cole (1971:131-135) presents case study data showing that this objective performance often conflicts with individual aspirations for job changing. Marsh (1971) reports case study data showing the acceptability of the norms and values of job changing among employees. These data suggest that examination of the structural factors affecting availability of employment opportunities rather than a mystical "tradition" is a more useful approach to decomposing the meaning of permanent employment. In James Abegglen's discussion of the permanent employment practice, we are given little in the way of dynamics either historically or in contemporary

practice. Permanent employment is presented as arising out of Japanese tradition and as having adapted itself to modern needs. Much doubt has already been cast on Abegglen's historical treatment (Taira, 1962; Odaka, 1963; Sumiya, 1966, Cole, forthcoming). There was apparently considerably more variation of mobility rates historically than can be accounted for by simple reference to the enduring strength of Japanese tradition. I will not discuss here either the historical evolution of the permanent employment practice or contemporary pressures for change. Rather I want simply to concentrate on present structural arrangements with their characteristic low rates of inter-firm mobility relative to the United States and ask how we may conceptualize the Japanese arrangements so as to best understand them.

As advanced industrial societies, both Japan and the United States manifest stratification systems involving a complex division of labor with individuals ranged according to a hierarchy of occupational skills. A continual need of both societies consequently is to motivate individuals to train for, occupy and perform these occupational roles. The rapidity of technological innovation in both societies with the rapid obsolescence of occupational skills means that these problems are not solved upon initial entry to the labor force but must be continually dealt with. Insofar as both societies display an ability to operate complex technologies and improve on them, we may see the different structural arrangements regulating employment security and opportunity for

inter-firm mobility as functional alternatives. That is, using different arrangements for employment security and allowing differing opportunity for inter-firm mobility, both societies succeed in motivating individuals to train for, occupy and perform the necessary occupational roles which keep their advanced technologies operative.

To note that at this general level, the two different institutional approaches to employment security and opportunity for employee inter-firm mobility are functional alternatives does not entirely capture the degree of similarity and dissimiliarity of Japanese practices with western practices. More detailed comparison is necessary.

The basic core of the permanent employment system is present in any ongoing industrial society. The reason does not lie in common tradition or culture but in the fundamental nature of labor market arrangements. To be successful and persist, all productive units try to keep to a minimum the replacement and termination costs arising from employee turnover. It is especially important to commit to the firm key persons upon whom the enterprise is dependent such as skilled workers and able management executives. Devices must exist which penalize movement out of the firm; otherwise recruitment, screening, training and termination costs would prove unmanageable. The greater the skill requirements and the scarcer the skills, the more important this becomes to the employer. On the other side, workers develop psychological and economic stakes in

their employment; labor market arrangements must guarantee some degree of employment tenure if they are to successfully motivate workers. Employees tend to prefer some system of internal replacement and upgrading since the opportunity costs of inter-enterprise mobility generally exceed zero.

The kinds of elaborations that are bult on this core structure depend on the political, social and cultural heritage of a given country and its specific industrial structure and labor market situation. The strength of the Japanese approach in crystallizing a practice of permanent employment for selected employees is that it places a high premium on the resource of employee loyalty and the benefits that flow to the organization from mobilizing this loyalty (see Whitehill and Takezawa, 1966). This may be seen as a tradeoff for the strengths associated with American practices. The strength of the American practice of maintaining high rates of inter-firm mobility is that it provides for quick readjustment of labor pools and skills to meet employer needs and the benefits that flow to the organization from mobilizing external sources of trained labor. Workers may also find it easier to move to alternative employers should they be dissatisfied with their present employer, thus making possible a better fit between employer and employee.

The greater constriction of the labor market in Japan, with its particular--though not exclusive--emphasis on recruitment at time of school graduation and retention of

employees, reduces the flexibility of Japanese employers. But it also permits Japanese employers to avoid the endemic instabilities apparent in America, as manifested in high turnover rates, poor returns on training costs, high cost of recruitment and termination and seemingly high levels of alienation.[8]

A better way to conceptualize these differences between the two societies is suggested by the recent work of Piore and Doeringer (1971).[9] They are concerned with the existence of internal labor markets by administrative units such as manufacturing plants. Within these units, administrative rules and procedures govern the pricing and allocation of labor. This internal labor market is connected to the external labor market by certain job classifications which constitute ports of entry and exit to and from the internal labor market. The remainder of the jobs are shielded from the direct influence of competitive forces in the external market and are filled by the promotion or transfer of workers who have already gained entry. Viewed from this framework it seems that in Japan the ports of entry and exit and the traffic volume of these ports is more limited than in the United States. At issue is the rigidity of the rules which define the boundaries of internal markets and which govern allocation of the work force. The greater rigidity of the rules in Japan enables us to speak of more closed internal markets in the large industrial firms of Japan and more open internal markets in the United States.

Piore and Doeringer (1971:6) note that the rigidity of the internal market is associated with investment in enterprise specific human capital, on-the-job training, and the role of labor as a fixed or quasi-fixed factor of production. These characteristics loom especially large in Japan (see Somers and Tsuda, 1966:195-236, esp. 207). The greater role that seniority plays in the pricing and allocation of labor in Japan also becomes understandable in this context.[10] Rather than emphasizing the uniqueness of nenko and its basis in Japanese tradition, we may speak of the importance of seniority in a situation in which workers have less recourse to the market in highly structured internal markets. The important point here is not that internal markets are unique to Japan but that they seem to be more closed than those which exist in comparable industrial units in the United States.

The Japanese real economic growth rate was about three times as high as the American rate during the period from 1955 to 1970. This has meant an enormous capacity of Japanese society to absorb massive technological innovation. In a recent four year period (1966-1969), private equipment investment expanded at the remarkable average rate of 26 per cent a year (Economic Planning Agency, 1970:15-16). Permanent employment practices have certainly been a major factor in realizing this capacity through minimizing dis- locations and excessive costs to individuals and business firms alike which would likely result from high rates of job

changing. This success is dependent in turn upon the high developed in-plant training and retraining programs that have characterized Japanese business firms. In a recent article, Peter Drucker (1971:110-122) has suggested that American managers have much to learn from Japanese company practices of providing "continuous training" for employees. The permanent employment system avoids much of the waste associated with employee and union resistance to technological innovation deriving from threats to employment security, such as has characterized the United States. When employees are relatively confident that they will retain their employment and be given the opportunity for job retraining, they can be expected to reduce their opposition to technological innovation. This is especially true where there exists a wage system such as Japan's which is not directly occupationally based.[11] Similarly, employers can undertake extensive training of their employees, with less fear of losing their investment through inter-firm mobility.

I first suggested that we may speak of functional alternatives between Japan and the United States with respect to the role played by the differing structural arrangements regulating employment security and opportunity for inter-firm mobility. In both societies, these differing structural arrangements succeed in motivating individuals to train for, occupy and perform the necessary occupational roles which are necessary to the respective advanced economies. More detailed comparison, however, showed

some important differences. The permanent employment practice in Japan is supported by extensive company training programs and it has distinctive consequences for mobilizing employee loyalty to the firm's production goals. These underpinnings and consequences are not present in the American system to the same degree. Thus, a focus on a wider set of consequences flowing from these differing structural arrangements leads us to recognize some key differences in their preconditions and consequences. In summary, by working both from the initial conceptualization of functional alternatives as well as examining the possibility of equivalence over a wider set of consequences, I suggest we are better able to understand the different processes operative in the two societies.

Conclusion

In this paper I have tried to suggest the importance of functional alternatives as an analytical construct. Its importance lies in its ability to serve as an alternative to sociological explanations which emphasize the polar positions of cultural and structural uniqueness or cultural and structural universals. The task is to establish how different structural arrangements or value systems may have the same consequences for the larger systems in which they are implicated. While perfect equivalence is not to be expected, the heuristic value of hypothesized functional alternatives is great.

To understand why one rather than another functional alternative becomes established requires historical analysis. At present, many sociologists are still trying to establish the degree of commonality in structural outcomes at given levels of industrialization. It will be necessary to go beyond this to examine these structural arrangements, whether similar or different, and ascertain their basis for coming into existence, and the basis for their maintenance.

Footnotes

1. Clark Kerr and his associates (1964) are commonly identified with the convergence position while Reinhard Bendix (1964) is one of the outstanding critics. For some summary statements of the controversy see Weinberg (1968), Goldthorpe (1966), Feldman and Moore (1969), and Meyer (1970).

2. See Faunce (1970:418) for a discussion of these issues.

3. The problem with this assertion is that the researchers have not examined a variety of other variables such as educational level that might explain some significant portion of the variance. Given the difficulty of knowing whether all relevant variables have been considered, it is not clear how useful it is to speak of having identified the "different secondary social bases of political cleavage."

4. Robert Bellah's retraction (Bellah, 1963) of his original claim to have found a counterpart to the Protestant Ethic in the religion of Tokugawa Japan (Bellah, 1957) stems directly from his lack of clarity in specifying the content of the Western model in his original statement.

5. For a discussion of an empirical case utilizing this strategy see Cole (forthcoming).

6. Defining history in a narrow sense one may argue that a non-experimental observational basis for a science is always historical insofar as causal explanation involves ascertaining the temporal priority of causal factors (Karl Popper, 1957:38-39).

7. We should be cautious about seeing the United States as the model of the industrial nation which must be emulated if modernity is to be achieved. If we compare labor turnover rates (a more indirect measure of job mobility) in manufacturing of Japan with England and West Germany, it appears the Japanese rate is only slightly lower (OECD, 1965:50). Perhaps students of Japanese conditions ought to be comparing their findings to the unique labor market tradition of the United States.

8. For an analysis on the American scene, see Stanley Lebergott (1968:122-127).

9. See also Dunlop (1966).

10. The more important role played by seniority in Japanese industry as compared to the U.S. has been pointed out by numerous observers. See Whitehill and Takezawa (1968:127-156).

11. This thesis should not be exaggerated, however, public opinion polls, for example, show a less than favorable attitude by the Japanese public toward the impact of technology (Ishida, 1971:98). Cole (1971: 92-100) reports case study data documenting employee restriction of production. Viewed from the American side, it has been noted in American industry as well that employment guarantees are associated with considerable managerial freedom to modify jobs and to redeploy the internal labor force (Piore and Doeringer, 1971:57).

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