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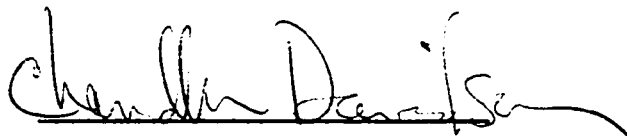
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RUDI VOLTI

A THESIS SUBMITTED IN PARTIAL FULFILMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

Thesis Director's Signature:

A handwritten signature in black ink, appearing to read "Chandler Davis", with a long horizontal flourish extending to the right.

Houston, Texas  
September 1974

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CHAPTER I

Bureaucracy and Modernization: Perspectives on  
Organizational Change in China

For centuries China has held a particular fascination for those in the West. First seen as a land of wealth and splendor, by the nineteenth century China presented to the outside world a grim picture of famine and social disintegration. Today interest in China centers on the nation's epic struggles to transform its economic and political order. The techniques used by the Chinese to achieve this end may seem idiosyncratic and even bizarre to the outside observer; the exotic civilization whose mysteries began to be plumbed by Westerners of centuries past still seems an enigma to foreigners. Yet China, like all other poor countries, faces basic imperatives of political and economic modernization. Today, the majority of Chinese men and women realize that dramatic changes in the economic sector coupled with new modes of political activity are prime requisites for the building of a strong nation. No sudden change, the acceptance of the need for deep-seated changes in the Chinese social order represents in part the fruition of ideas which first began to emerge more than a century ago. The purpose of this chapter is to outline the basic elements of modernization, both structural and cognitive, and to indicate how one aspect of change in China, the development of agro-technical organizations, reflects the basic issues of modernization.

In this study, I have fastened on the development of agrotechnical organizations because they have an important function in both the economic and political modernization of China. At times however, these two functions may come into conflict. The manner in which these conflicts are resolved is a key indicator of the general direction in which Chinese society has been evolving.

For a nation that is predominantly rural, the development of agri-

cultural production is a matter of the greatest importance. All other goals of a modernizing society - industrialization, the growth of educational and welfare services, even the elemental quest for social justice - are intimately tied to an increase in agricultural output and the provision of a better life for people in the countryside. To ensure this increase, new technologies must be developed and applied, and an appropriate organizational apparatus created for their support. Behind every far-reaching material technique stands an organizational technique, an assemblage of ideas, activities, and structures which allows the realization of the new opportunities provided by scientific inquiry and the general expansion of human knowledge.

In the West, these organizational techniques can often be subsumed under the concept of bureaucracy, the pre-planned ordering of people into distinctive roles for the efficient achievement of specific goals. Bureaucratic organization, however, has its own characteristic deficiencies. Efficiency in goal achievement is often counterbalanced by the relegation of individuals to narrow roles, with a consequent stifling of the human spirit. In China, the paradoxes of bureaucratization are sharply perceived. Before the establishment of the People's Republic of China, over two decades of revolutionary activity, much of it conducted through guerrilla operations, engendered in the Communist leadership a profound distrust for the principles of bureaucratic organization, whose attributes of hierarchy, regularity, stability, and insulation from political currents do not mesh easily with a revolutionary ideology predicated on struggle, the initiative of the masses, and the belief that revolutionary fervor can overcome all obstacles.

This study therefore must address itself to the conflicts inherent in the process of political and economic modernization in China. The organizations which are involved in the spread of advanced agricultural technology are subject to all of the pressures and tensions generated by China's history and by the modernization process itself. For the Chinese Communists, moreover, conflicts and tensions provide the motive power of progress and development. Far from shrinking from conflict, the Communists, particularly those of a Maoist persuasion, have used it to fashion their own developmental experience.

#### Political and Economic Modernization in the Non-Western World

The rapid emergence of the new states in the wake of post-World War II decolonization has brought into sharp focus the manifold problems of the non-Western world. For one thing, it has become abundantly clear that national integration does not necessarily follow the establishment of a new political entity. Of equal importance, per-capita income in many an "emergent nation" is often pathetically low. Such nations confront a range of problems which in the West took centuries to be resolved. In the non-Western world, according to Samuel Huntington's summation, "the problems of centralization of authority, national integration, social mobilization, economic development, political participation, and social welfare have arisen not sequentially but simultaneously."<sup>1</sup>

China differs from the majority of these Third World nations in that it was never directly colonized, yet the difficulties it confronts are not unlike those of the new nations recently freed from direct colonial control. In Chinese parlance, China was a "semi-colony", much

of its inland trade regulated from the outside, important sectors of its major cities parcelled into foreign enclaves, and a significant portion of its economic life attuned to the requirements of alien powers. The agrarian and handicraft economy was moribund. The traditional governmental system, a product of over two millenia of political life, had become irrelevant to the requirements of a modern society. For all its past glories, traditional Chinese civilization was incapable of meeting the challenge of modernization.

Although the drive for modernization has been in large measure a response to the impact of the Western world, modernization is not synonymous with Westernization. Indeed, the basic elements of modernity have by no means been firmly implanted in the West. The simplistic view which sets up a sharp dichotomy between the "modern" West and the "traditional" East results in the loss of all historical reference, and obscures the fact that modernization is a continuing process for the West as well as the East. There is much wisdom in the words of Lloyd and Susan Rudolph: "The myths and realities of Western experience set limits to the social scientific imagination, and modernity becomes what we imagine ourselves to be."<sup>2</sup> Yet as an analytical tool, the concept of modernization can be useful. When its elements are carefully chosen and defined they can provide a list of the tasks which have to be faced and the sort of difficulties which stand in the way of their solution. In the sections below, special attention will be given to three aspects of modernization: economic development, political development, and the development of rational thought patterns. The relations among these factors, as well as the conflicts which arise between them, provide the

basic subject matter for this study.

Economic Development: Industry and Agriculture

The contrasts between the Western and non-Western world are most immediately noticeable at the economic level. The contrasts between rich and poor nations are acutely felt in the non-Western world and provide one of the strongest incentives for modernization. Yet while economic development is a widely accepted goal, the tactics to be employed for this end, and their relationship to other aspects of the modernization process remain highly problematical. Difficulties immediately arise when a determination must be made regarding the proper role to be assigned to the agricultural sector. Because of a too-facile identification of economic development with industrialization, modernizing nations are all too likely to pursue industrial growth at the expense of the development of the agricultural sector. This ignores the fact that in the West an agricultural revolution accompanied the industrial revolution and that Western industrialization took place amidst a far more favorable population-land ratio than is found in most of today's non-Western nations.<sup>3</sup> Additionally, even a successful program of industrial development may belie the actual underdevelopment of the economy as a whole. To take the most obvious example, the industrial achievements of the "modern" USSR obscure the fact that nearly half of that country's population lives in a rural society characterized by poverty, stagnation, and diminished opportunity.<sup>4</sup>

Yet even with the best of intentions and a development policy firmly rooted in the desire to develop the agricultural sector, the modernization of the farm economy can prove a most intractable problem. The

creation of an appropriate strategy for agricultural development presents special difficulties. Modernity does not consist solely in the creation of specific organizational and social structures, but also in the flexible use of these structures to secure developmental goals.<sup>5</sup> Because of its unique requirements and activities, the agricultural sector presents some of the greatest obstacles to the infusion of specific organizational structures with the appropriate degree of flexibility. The attempts of the Chinese to develop organizational structures that combine central direction with the appropriate degree of flexibility will be one of the key themes of this study.

#### Political Modernization

For hungry nations, economic development, and agricultural development in particular, is a matter of the greatest urgency. Yet the strident demands for economic development should not overshadow an equal need for political modernization. In the most general sense, modernity is demonstrated in a people's conscious efforts to rationally approach problems and marshal the human and physical resources necessary for their solution. In this, the political system must play a vital role. The development of a poor nation's economy is dependent on the ability of the political system to evolve in such a way that new policies can be formulated and positive actions taken. The positive economic role played by the state is inescapable, for in most non-Western nations the other social forces working towards economic modernization are quite weak.<sup>6</sup>

Important as it is, however, a government's ability to promote economic development does not guarantee a modern nation. There exists the danger that the active role of the government in reshaping the economy



and society will be transformed into a mandate for authoritarianism. The political system should provide for broad-based participation in the setting of goals and policies. To be sure, a certain tension exists between the requirements of economic development and those of political participation. But a political system which allows for political participation is essential if the gap between the government and the governed is to be closed. Traditional societies are generally characterized by this sort of gap, and its presence made colonialism, no matter how superficially benevolent, unacceptable to colonized people. As Edward Shils notes, "a regime which seeks to work through a very high concentration of initiative can probably accomplish a great deal in many important respects; it will not, however, be able to create a political society."<sup>7</sup> Such a society requires that participation be an integral part of the political system and that initiative and interest be diffused widely throughout the society.

The tension between governmental control and political participation can be resolved, at least in part, when political development has reached the point where a distinct sense of national identity has begun to overpower narrower interests. When political participation is the activity of citizens of the nation, rather than representatives of sectional interests, a foundation for further political development will have been laid. Accordingly, nationalism can be of great service to the cause of national development by fostering a closer relationship between state and society. While the existence of a state pre-supposes little more than the capacity to control a given territory (or at least the recognition of this by other states), a nation exists by dint of its ability to

generate the loyalty of its populace.<sup>8</sup>

China may be the world's oldest state, but the concept of loyalty to the Chinese nation is a relatively recent development. To be sure, Chinese of all strata felt some degree of identification with Chinese civilization and manifested loyalty to some elements of Chinese culture. Yet this never overshadowed the narrow bonds of family, clan, village, or guild. It was only when these traditional groupings were disrupted by the simultaneous impact of urbanization, Western incursion, and population pressure that a larger sense of identity began to take root. But the traditional governmental system, which had channelled political participation into little more than a striving for bureaucratic office, was not the recipient of new loyalties. The traditional governmental system was incapable of rising to the challenge of modernization, and most Chinese could not fail to perceive this. Conversely, the ability of the Chinese Communist Party to identify itself with both socio-economic progress and national assertiveness greatly contributed to the Party's ability to foster loyalty to the regime and assure the "appropriate" degree of participation in the governmental process.<sup>9</sup>

The growth of nationalism does not, however, guarantee the absence of strain between the government and the populace. To the contrary, nationalism can result in new demands being placed on the government by the emerging citizenry. The reciprocal of universal service to the nation and the nation's government is egalitarianism, and the consequent expectation that the individual needs of the citizenry be met by the government.<sup>10</sup> Egalitarianism also fuses with political participation, and becomes manifest in demands for access to government offices. This,

however, may become a stabilizing influence, for it can allow the co-optation of a wide variety of interests into the political system and contribute to the legitimacy of the government and its activities.

#### Cognitive Changes and Modernization

While changes in the patterns of political and economic life are important aspects of modernization, any analysis of the process would be incomplete if it failed to take into account the alterations in the way of thinking which accompany modernization. In particular, modern societies address themselves to the solution of problems in a way that is fundamentally different from the manner in which traditional societies do. To solve a problem it is first necessary to identify it, then formulate possible solutions, and finally make a choice between them. Modern societies are typified by a distinctive mode of going about this process which is characterized as "rational". This certainly does not mean that rationality is absent in other societies, only that modern ones tend to be more rigorous and consistent in their application of rational thought patterns to the solution of specific problems. In a modern society, goals are more sharply delimited and circumscribed, and a wider range of techniques can be utilized to achieve these goals. Furthermore, not only are there more ways to solve a problem, there is also a greater tendency to consciously choose between alternative tactics of solution. And, as David Apter notes, "Self-conscious choice implies rationality."<sup>11</sup> Modern society is characterized, in Martin Buber's words, by the "dance of ends and means"; the rationality of the modern world is thus closely allied with the pursuit of efficiency - the selection and implementation of the best means for

the attainment of a given end.

The close kinship between rationality and the pursuit of efficiency can best be understood when an examination is made of the historical circumstances surrounding the cognitive modernization of the West. Specifically, rational thought patterns emerged in parallel with the development of market capitalism. This point was stressed in the pioneering studies of European economic history written by Max Weber, Werner Sombart, and Joseph Schumpeter. In a sense, their analyses echoed, in a more restrained way, the Communist Manifesto's statement that the bourgeoisie had "drowned the most heavenly ecstasies of religious fervor, of chivalrous enthusiasm, of philistine sentimentalism, in the icy water of egotistical calculation."<sup>12</sup> For Schumpeter, the existence of a money economy and the profit-and-loss calculus engendered by it, coupled with the social mobility of those able to make use of this mode of thinking, made capitalism "the propelling force in the rationalization of human behaviour."<sup>13</sup>

Although Schumpeter may have overstated his case, the existence of a specific historical and economic locus for the development of rationality needs to be underscored, for it is of no little importance for an understanding of the particular difficulties faced by a society undergoing modernization. Modern organizational forms presuppose the rationality of their members, particularly those in a position to make decisions. The ability to operate rationally is an important source of authority within the organization. Such authority, will, however, be challenged by other sources of authority, while demands for political participation may come into conflict with attempts to rationally

allocate roles, resources, and activities. While rational modes of thought are a prime characteristic of a modern society and rationality provides an important source of authority, this does not result in the sweeping aside of all "traditional" or non-rational elements. Rationality emerges as a dominant factor only after successfully competing with other modes of thought; a modernizing society will exhibit its own combination of different manners of thinking.

#### Elements of Bureaucratic Organization

Up to this point, only the most general aspects of economic, political, and cognitive modernization have been dealt with. Yet modernization is realized only when all of these changes combine to produce distinctive organizational forms. As Lucian Pye has it, the principal transformations of a modernizing society are "rooted in the need to create more effective, more adaptive, more complex, and more rationalized organizations[;] ... the ultimate test of development is the capacity of a people to establish and maintain large, complex, but flexible organizational forms."<sup>14</sup>

Before elaborating on the connection between organizational development and modernization, it is necessary to give a brief summary of the nature of modern bureaucratic organization. Bureaucracy has been defined above as the preplanned ordering of people into distinctive roles for the efficient achievement of specific goals. It is now necessary to elaborate on the manner in which this ordering takes place. As a start, we can offer the classic statement on bureaucratic structure as presented by Max Weber, who listed the following characteristics of bureaucratic organization in the modern world:<sup>15</sup>

- 1) Bureaucratic activity is defined and circumscribed by specific rules and regulations, which channel and constrain the activities of the individual members of the bureaucracy.
- 2) Bureaucratic offices are hierarchically structured; higher officers supervise lower officers without taking over their roles completely.
- 3) Bureaucratic office is not a personal possession; it is the occupation of a specific role operating within the constraints of the organization as a whole.
- 4) The occupation of bureaucratic office is predicated on the possession of expertise, which is the product of special training.
- 5) Bureaucratic rules are impersonally applied to all.

Important as these concepts are, they do not delineate the full essence of bureaucracy. The role of bureaucracy in the transformation of the social order is evident only when bureaucratic organization is related to distinctive forms of authority and the specific circumstances which give rise to that authority. Weber's formulation of the characteristics of bureaucratic organization was hardly novel, representing little more than a synthesis of principles found in Prussian textbooks on administration. The significance of the Weberian formulation of the principles of bureaucratic organization lies in the concept of rational-legal authority. According to Weber, bureaucratic authority is based primarily on the bureaucrat's possession of expertise. The technical knowledge of the modern bureaucrat sets him apart from his pre-modern counterparts, whose position within the organization and the society was a matter of tradition, with little concern being given to the bureaucrat's ability

to efficiently solve problems and achieve goals. By contrast, a modern bureaucratic organization, ideally at least, resembles a well-designed machine with a specific function to perform, in which every part of the machine contributes to the efficient performance of that function.<sup>16</sup>

While the internal workings of a bureaucracy are determined, at least in part, by the application of rational techniques of goal attainment, this does not guarantee that the goals themselves will be rationally selected. It is useful to recall Karl Mannheim's distinction between "functional rationality" (the organization of a series of activities in such a way that they lead to a stipulated goal) and "substantial rationality" ("the capacity to act intelligently in a given situation on the basis of one's own insight into the interrelation of events").<sup>17</sup> The basic distinction lies in the articulation of goals: functional rationality operates within the context of given goals, whereas substantial rationality is addressed to the selection of goals.

Functional rationality is thus best used for defining standards of evaluation and applying these standards in order to insure goal-attainment. The nature of the relationship between rationality and bureaucratic performance can be seen in Martin Albrow's assertion that "there is a major distinction to be drawn between defining bureaucracy as 'rational organization' and as 'organization whereby men apply criteria of rationality to their activities'."<sup>18</sup>

Of course not all bureaucratic activities are geared to the attainment of specific goals. A bureaucracy is a social system in its own right, and those working within it are necessarily concerned with the survival of this system. The internal structure of a bureaucracy is determined not only by the technical matters which relate to goal

attainment, but also by the need of the members to maintain the organization.<sup>19</sup> This characteristic of bureaucratic behavior will be accentuated when the bureaucracy is situated in a hostile social environment. This can be a particularly critical problem in a modernizing society, where a multiplicity of potentially antagonistic forces may linger. The resolution of conflicts, both real and potential, between the bureaucracy and other social groupings is vital for the continuance of modernization.

#### Bureaucracy and Modernization

Bureaucratic organization is emblematic of the modernity of the West. In non-Western countries, however, the relationship between bureaucracy and modernization contains many paradoxes. Although bureaucratically organized empires existed in Pharonic Egypt, imperial China, and Ottoman Turkey, rational-legal bureaucracies of the type described above came to the non-Western world in conjunction with European colonial expansion. The penetration of the colonial powers weakened and disrupted traditional political systems and necessitated the imposition of administrative structures that at least partially reflected Western modes.<sup>20</sup> Even though it was a tool of foreign interests, the colonial bureaucracy often took the lead in breaking through the constraints of the traditional social order. As S.C. Dube has pointed out, members of the colonial bureaucracy were "among the pioneers who sought to break away from the traditionally affective and emotion-laden communal society and to set in motion the forces that were to contribute towards the emergence of a different type of society - a society characterized by affective neutrality and based on rational ends-means calculations for individual



goals".<sup>21</sup> The imposition of a foreign administrative system thus resulted in a disjuncture between the bureaucratically organized agencies of the government and the indigenous political and social order. For all its modernizing effects, the bureaucracy was not the result of indigenous political development, but represented the imposition of a foreign technique of domination.<sup>22</sup> This seriously attenuated the ability of the government administration to play an active role in modernization. The aforementioned gap between state and society prevented the government bureaucracy from becoming the focus of an enlarged sense of loyalty; the commitments of the populace continued to rest with familial and sectional interests.<sup>23</sup> In a post-colonial situation, the perspectives of the "politicians" who had engaged in a nationalistic struggle often differed markedly from those of the "bureaucrats" who had administered the policies of the colonial power.<sup>24</sup> Thus, while a nationalist revolution may be necessary for the creation of a wider sense of loyalty and the acceptance of an expanded role for government, this need not result in the strengthening of the government bureaucracy. Government may be cast in the image of the revolutionary mass movement rather than in the image of the stable administrative bureaucracy.

#### Bureaucracy and Agricultural Development

One of the most pressing needs of a poor country is the expansion of its food production. Since bureaucratic organization is addressed to the efficient solution of specific tasks, it would seem to offer at least some help for a stagnating agricultural sector. Unfortunately, the prospects for applying bureaucratic organization to the farm sector are limited by the very nature of agricultural operations and the environment

in which these take place. The limitations of bureaucratic organization are also evident when it is to be used for the purpose of introducing new inputs and techniques into the farm sector.

Agricultural extension officers cannot be cast in the image of conventional bureaucrats. While their responsibilities are similar to those of regular bureaucratic operatives and they must effect policies handed down from the upper echelons of the organization, the manner in which they discharge their duties will be constrained by the distinctive requirements of agricultural production. First, farming activities are generally scattered over a relatively wide area, making it difficult to maintain the lines of communication characteristic of a functioning bureaucracy. This also results in infrequent contact between extension officers and their clients, the farmers, making close supervision of the farmers' use of new inputs and techniques a difficult procedure. In modernizing nations, this problem is exacerbated by the small number of trained extension officers and the consequent dilution of their overall impact. As Rainer Schickele sees it, a ratio of one extension officer to more than one thousand farmers will usually result in dissipated efforts and the loss of much of the potential benefit of extension work.<sup>25</sup>

Second, agricultural operations cannot be strictly regulated by artificial time schedules. The timing of farm operations is largely dictated by natural conditions, and extension agents cannot draw up strict timetables governing the use of new inputs and techniques. A great deal has to be left to the discretion of the farmer, with a consequent loss of control for the agrotechnical agency. Third, farming requires a variety of skills; the rationalized division of labor

characteristic of most bureaucratic operations is an impossibility within the farm sector. Agricultural extension officers need a wide range of skills too.<sup>26</sup> The diffusion of advanced agricultural technologies requires generalists rather than specialists.<sup>27</sup> Finally, farm operations require the integrated use of a multiplicity of resources and activities. The systematic nature of farming means that new inputs and techniques cannot appear in isolation from other aspects of farm operation.<sup>28</sup> Again, specific objectives cannot be transmitted down a bureaucratic network by functionaries with narrow responsibilities. Each extension officer must consider the total impact of his activities. Specific priorities covering all possible cases cannot be established.<sup>29</sup>

All of these factors militate against the establishment of centrally directed, limited-purpose bureaucratic organizations for the propagation of new agricultural technologies. What is needed is a decentralized system that allows the placement of agricultural extension officers at the grass-roots level, allowing them to understand the particular needs of the area in which they serve. Similarly, the establishment of line of communication between extension workers and local farmers is just as important as the maintenance of lines of communication within the agency itself. As Hapgood and Millikan stress, "Two way communication between the farmer and the bureaucracy is essential for bridging the gap between the producer and the agent of change. The urgent need is for return communication from farmer to bureaucrat."<sup>30</sup>

Government sponsorship of agotechnical development thus rests on the development of an appropriately decentralized organizational network. This can be difficult to achieve, given the preference of most government

Attempts to do so can be particularly harmful when the new technology is blindly propagated on the strength of its success in other areas. In particular, most foreign farm technologies cannot be imported without extensive revision and adaptation to local conditions.<sup>35</sup> The development of an appropriate agricultural technology depends, above all, on the willingness to break away from accustomed practices, either indigenous or foreign. What is needed for agro-technical development, to quote Millikan and Hapgood again, "is to build into the whole agricultural process - from the farmer to the university research institute, from the field extension agent to the minister of agriculture - an attitude of experiment, trial and error, continued innovation, and adaptation to new ideas".<sup>36</sup>

Because of the complexity of developing agricultural production, it is important that over-specialization of government agricultural agencies be avoided. The technological development of agriculture is an amalgam of research, educational, and extension activities; it is impossible to separate these functions into neat bureaucratic compartments. Extension work operates best in the context of an overall effort to improve the educational standards of the peasants, while research work should be responsive to the needs of the peasants and other agencies if it is to keep its focus on high priority topics.<sup>37</sup> Yet the coordination of experimental work with extension work is too often prevented by "the mentality of administrators and civil servants whose loyalty to a strict hierarchical line of command in the bureaucratic structure makes inter-departmental cooperation difficult".<sup>38</sup>

If bureaucratic organization has a potentially stultifying effect on innovation, what then can be said of the willingness of the "traditional"

peasantry to accept changes in their everyday routines? After all, the very term "peasant" conjures up notions of innate conservatism, fatalism, and superstitious behavior. Yet this image of the peasant is overdrawn. Peasant conservatism is the product of specific political and economic factors; as these change, peasant attitudes also change. The point is made by Schickele:<sup>39</sup>

What binds the peasants to the traditions of farming is lack of opportunities to acquire knowledge of modern techniques, is poverty preventing him from buying modern inputs and risking losses from untried methods, is the social power structure which puts him under pressure to remain docile and "keep him where he belongs".

Once the peasant finds himself in the mainstream of the economic and political life of the nation, his former adherence to traditional practices begins to fade. Political development, as we have seen, can aid in this by making the peasant a citizen of the nation rather than the member of an isolated village, clan, or family. In the economic realm, the expansion of the rural market can stimulate the replacement of an economy of subsistence farming by a cash-crop economy. This in itself can substantially expand the peasants' ability to assimilate innovations by providing the cash income necessary for the purchase of new technical inputs.<sup>40</sup> As Chapter III demonstrates, the development of the traditional Chinese farm economy was in large part a function of the growth of the market.

With the stimulation of agricultural production and the expansion of political participation, a modernizing nation can generate a new weltanschauung for the peasantry, particularly when the drive for modernization is located in a nationalistic, revolutionary context. This new value system can help to bridge the gap between government officials and

the peasantry. To be sure, extension officers will still have to exercise some control over the peasants' activities, but this control will take place in an atmosphere of greater mutual trust.<sup>41</sup> This is a situation far removed from the peasants' traditional belief that the government is exploitative and uncaring.

In sum, the best antidote for organizational insularity is an organizational structure that allows the solution of the peasants' basic production problems and at the same time catalyses the participation of all members of the rural social order. This requires something other than the establishment of conventional bureaucratic structures. It requires the development of a decentralized organizational system which encourages flexibility, innovation, and local initiative. Chinese efforts to create such a system are documented in Chapter IV.

#### Bureaucracy and Political Development

While bureaucratic organization can make only a limited impact on the agricultural sector, its role in fostering political participation may overshadow its strictly economic functions. The spread of service-oriented government agencies within the countryside is essential for national integration. The service obligations of a modern government distinguish it from traditional systems of governmental administration, where the role of the state is confined to the collection of taxes and the stifling of rural insurrections. In a modernizing political system, the activities of government functionaries working at the grass-roots level can help to create a closer sense of kinship between the government and the peasantry, for as Joseph LaPalombara has pointed out, "government is scarcely more than the specific public officials with whom [the peasants] come in direct contact".<sup>42</sup>

Additionally, by absorbing some members of the peasantry into its ranks, the government bureaucracy can do much to overcome traditionalism, regionalism, and insularity. Because a modern bureaucracy is not the exclusive possession of particular political or sectional interests, it is staffed on the basis of universalistic criteria of recruitment: bureaucratic positions will go to those best qualified to fill them. Since experienced farmers often have the kind of expertise which makes them eminently qualified to fill certain positions, they can often be directly or indirectly incorporated into the bureaucratic structure. When this happens, bureaucratic organizations at the local level can provide an alternative focus for the loyalties of the rural populace, and lead to a decline in the claims on loyalty put forth by local interests. As Hoselitz explains:<sup>43</sup>

The process of bureaucratic modernization in developing countries seems ... to be tied up closely with the struggle for national unity, and above all, the decrease, destruction, or fundamental modification of particularistic tendencies still prevailing in these countries.

While bureaucratic development can dovetail with economic and political modernization, at the same time bureaucratic development can generate conflicts between the specific requirements of the government bureaucracy and the general needs of political development. One of the most basic conflicts centers on the accommodation of expertise within the bureaucracy, and the claim that expertise makes on authority. Because a great deal of bureaucratic activity is based on the use of rationality for the attainment of specific ends, expertise is a prime requirement for the adequate performance of the bureaucracy. Pre-modern bureaucracies could operate with little emphasis on rationality because the low level of technology within their societies did not necessitate any

particular expertise on the part of government administrators. Instead, the traditional bureaucracies could be staffed by functionaries whose authority was derived from their ability to appeal to traditional orthodoxies as the justification for their activities.<sup>44</sup> While this was appropriate in a static society, a developing society requires that new goals and demands be met in a flexible, innovative manner.<sup>45</sup> A modern bureaucracy is thus characterized by an active search for ways of meeting new challenges; expertise is of fundamental importance for the perception of problems and for the choice and application of the correct solutions.

Yet while expertise is basic to the proper functioning of the bureaucracy, it may at the same time have a negative effect on the bureaucracy's role in political development. Specialists well-versed in a particular sphere of expertise may be blind to larger concerns, and may be unable or unwilling to use their offices for wider purposes. As LaPalombara sees it:<sup>46</sup>

The specialist is insular, narrow in his vision as well as his desires ... this insularity and concern with limited interests blurs the bureaucrat's vision of the broader national problems and reduces his capacity to fulfil his vital role as a policy advisor.

The self-imposed isolation of bureaucrat-experts is intensified when the possession of expertise, and the prolonged training necessary to obtain it, result in a "professional" orientation for the bureaucrat: solidarity with fellow experts, an internally generated code of ethics, and a self-definition largely based on a particular sphere of expertise. This orientation can have serious ramifications for the developmental goals of the organization, for as Press and Arian note, "A trained



person consciously or unconsciously sets goals because he desires to exercise his skills in ways he considers proper. Training of specialists has clear implications for ideology - the societal values to be achieved are subtly influenced by the act of training".<sup>47</sup> A professional orientation can thus lead to the emergence of tensions between the needs of the organization, the needs of the society as a whole, and the bureaucrat-experts' own sense of propriety. If these tensions are resolved in favor of the bureaucrats and their ideologies, the bureaucracies in which they work will be unable to meet many of the requirements of political development, particularly in the area of political participation. Bureaucratic offices are a natural target for such participation, and the staffing of the bureaucracy should reflect some of the demands placed on the political system. As Fred Riggs has emphasized, bureaucratic positions yielded up as "spoils" are a prerequisite for the development of a multi-faceted and broad-based political system.<sup>48</sup>

The experts' domination of the bureaucracy is however not an inevitability, but depends on a number of factors. Reinhard Bendix has enumerated six determinants of the degree to which experts will influence the structure and activities of a bureaucracy:<sup>49</sup>

- 1) the indispensability of the services provided by the experts
- 2) the extent to which a code of professional ethics has been developed
- 3) the ease with which the experts can find alternative employment
- 4) the unanimity of purpose of the experts when they seek to execute their own policies or sabotage existing ones

- 5) the remoteness of bureaucratic operations from the individuals and groups affected
- 6) the technical complexity of the matters which come under the discretion of the bureaucracy

From this perspective it is apparent that a rurally based bureaucracy which concerns itself with the technical development of agriculture will meet with a number of constraints should it attempt to use expertise as the sole basis of its authority. For one, the scattering of agro-technical experts throughout the countryside will put a limit on their interactions and thereby prevent the achievement of a "unanimity of purpose". Also, the nature of the relations with clients will set limits to the exercise of authority by the experts. Peasants will not be remote from the workings of the organization, but will often be de facto members. Additionally, the peasants are likely to remain somewhat sceptical of the indispensibility of the services offered by the experts. Finally, the services provided by the experts will often be directed at the improvement of existing agricultural practices; they will not be matters of great technical complexity.

The independent power of the experts will be further attenuated when the government and society within which they operate have been created, or have received a new sense of identity, through a nationalistic struggle. The qualities appropriate to the waging of a struggle for national assertion seldom correspond to the ideals of the expert, who prefers to build his environment amidst stability and insulation from political currents.<sup>50</sup> And, as a subsequent section will demonstrate, a further contradiction exists between authority based on expertise and the authority

of the charismatic leadership which is most likely to emerge in the course of the nationalistic struggle.

### Bureaucracy and Central Political Control

In China, the ideology of revolutionary nationalism is used to channel the activities of the experts so that their services can be put to use in the most extensive and economical way. Exhortations to "serve the people" and put aside professional parochialism reflect not only the Maoist emphasis on the importance of correct political consciousness, but also the practical requirements of building up an economy that will remain critically short of technical personnel for years to come. No poor country can afford the luxury of an aloof group of experts pursuing arcane subjects. As a means of channeling their activities, the central government may have to resort to the imposition of tight organizational controls over the experts. Yet the imposition of such controls is not without its perils. The power of individual organizations to control and supervise their operatives may so expand the powers of these organizations that they may become able to modify fundamentally the policies originating with the central government. Accordingly, a delicate balance between organizational autonomy and central control must be struck if individual organizations are to operate effectively and yet not turn into little kingdoms of their own.

The nature and extent of the political center's control over its bureaucracy will largely be determined by three factors: the power and internal unity of the political center, the degree of congruence between the goals and values of the political center and the bureaucracy, and the bureaucracy's access to resources lying outside of the political center's area of control.

Political systems differ in the extent of power possessed by the political center, but even in an authoritarian political system central power is never absolute. Individual bureaucracies generally have the option of bargaining with the political center for at least partial modification of central directives. Such bargaining is a recurrent process in centrally-directed economies, and indeed may be vital for the effective functioning of the system. At best, the conflicting requirements of political control and organizational autonomy may not result in a stalemate, but in a dynamic interplay between the two sectors which results in bureaucratic responsiveness and a high level of performance.<sup>51</sup>

The relative bargaining power of individual bureaucracies is largely determined by two factors: the degree to which the bureaucracy can exploit internal divisions within the political center and the ability of the bureaucracy to form alliances with clients or other organizations. Conversely, bureaucratic power can be checked by the political center's manipulation of rivalries which exist between different bureaucracies, and rivalries between a bureaucracy and other sectors. Such rivalries will be particularly acute when a number of bureaucracies perform a similar service for the same clientele, or when they compete with one another for important resources.

While a basic agreement concerning goals and values is a likely result of a successful nationalistic revolution, this does not preclude substantial disagreement regarding the specific policies chosen to implement the overall goals of the revolution. As was noted above, the role of the expert within a bureaucracy creates a distinctive perspective

on the "best" means of achieving objectives.

Further limiting the ability of the political center to use the bureaucracy for the attainment of the center's goals is the bureaucracy's tendency to make its own survival the dominant goal. Too often the maintenance of the structure of the organization will take precedence over the fulfilment of the objective for which the organization was established.

Finally, because of their often antagonistic relationship with the political center, bureaucracies are usually alert to the need to find outside sources of support. A bureaucracy, as S.N. Eisenstadt sees it, is "obliged to compete for resources, manpower, legitimization within the society, general support and clientele, and to some extent also, patrons and protectors".<sup>52</sup> Yet what is gained in autonomy from the political center is purchased at the cost of some subservience to these other groups.<sup>53</sup> This lends a subtle irony to relations between agro-technical officers and the peasants they are charged with serving. The central government's injunction to "serve the people" may be fulfilled as a result of the bureaucracy's desire to create a buffer between it and the political center.

The forging of some sort of alliance between the bureaucracy and the peasantry will thus help to alleviate the tendency of individual bureaucrats to place undue emphasis on the maintenance of their own power and position within the bureaucracy rather than on the fulfilment of the service obligations to their clients.<sup>54</sup> This is of particular importance where the clients are peasants, for bureaucracies and individual bureaucrats tend to derive a good deal of their status from

the type of clientele with whom they work, and working among the peasantry may be quite distasteful. While a successful bureaucrat-peasant alliance may not result in totally egalitarian relations between the two groups, it may come to resemble a peasant society's classic patron-client relationship, in which the peasantry secures a number of economic benefits in return for providing political support for their patron.<sup>55</sup>

The lower-level bureaucratic functionary may not, however, have the opportunity to forge such a linkage. A great deal depends on the degree to which the clientele is dependent on the services provided by the bureaucracy. When equivalent services can be obtained from other agencies, a given bureaucracy will of necessity be more responsive to the needs of its clientele.<sup>56</sup> Again, the paradox of basic-level bureaucratic administration is evident: bureaucratic responsiveness may be the result of a de facto alliance between the bureaucracy and its clientele, with a consequent dilution of control at the center. Accordingly, the political center's best defence against excessive autonomy at the basic level lies in the creation of parallel, competing bureaucracies. This tactic will of course vitiate one of the greatest virtues of bureaucratic organization, the establishment of specific roles for the attainment of particular goals.

The bureaucracy's search for allies may force it into taking on extra-role obligations, and thus deflect it from its stated objectives. As Eisenstadt notes, the bureaucracy's "continuous dependence on external groups, and the numerous pressures to which it is subjected facilitate or perhaps even necessitate modification of at least some of its goals".<sup>57</sup> It is thus evident that the power relationship between

the bureaucracy and the political center will be responsible for considerable alterations in the bureaucracy's functions and structure.

#### Charismatic Leadership and Bureaucratic Administration

While all bureaucratically-organized administrative systems face difficulties in coming to a satisfactory modus vivendi with central political authority, government bureaucracies in modernizing nations have the additional difficulty of accommodating themselves to the political authority generated by a charismatic national leader. In such countries, national assertion has been the work of a mass-based movement, fused and energised by charismatic leadership. It has thus become a commonplace of Western observers to invest the leaders of emerging nations with charismatic attributes. But the precise nature of charisma, and the manner in which it operates in a specific political setting, is a matter of some ambiguity, calling for a careful definition of charisma, and inquiry into the historical setting of charismatic leadership.

The basic attributes of charismatic leadership were first systematically analyzed by Max Weber. In Weber's analysis, the personal attributes of the charismatic leader and the distinctive nature of the social interaction between leader and followers intertwine to create the specific nature of charismatic leadership. The first aspect follows from Weber's definition of charisma as the secular equivalent of a "gift of grace"; charismatic attributes are of a distinctly personal nature.<sup>58</sup>

The term charisma will be applied to a certain quality of an individual personality by virtue of which he is set apart from ordinary men and treated as endowed with supernatural, super-human, or at least specifically exceptional powers or qualities. These as such are not specifically accessible to the ordinary

person, but are regarded as of divine origin or exemplary, and on the basis of them the individual concerned is treated as a leader.

Weber quickly added, however, that charismatic leadership has to be socially validated by a group of followers who are able to recognize this "gift of grace". As Willner shows, implicit in Weber's analysis is the idea that, "it is not so much what the leader is, but how he is regarded by those subject to his authority that is decisive for the validity of charisma".<sup>59</sup> For charismatic leadership to be maintained, this recognition must not only be freely granted, but internalized as a recognized duty by those under the spell of the charismatic leader. The followers cannot evaluate the merit of each command and calculate its likely effects; charismatic leadership requires a near-total belief in the correctness of the leader's policies. Yet the followers of a charismatic leader are rarely inclined to provide this unconditional recognition of the leader's charisma. Their continual need for a manifestation of the leader's charisma ("a Sign") seriously conflicts with the leader's demand for unconditional devotion. To him, requests of this nature can only be construed as an indication of lack of faith and dereliction of duty on the part of the followers.<sup>60</sup> Charismatic leadership is thus not static; rather, it is built on a dynamic social situation wherein the leader and the followers continuously place demands on one another. This results in the formation of policies which reflect the different interests and orientations of the two parties.

The distinctive social relations engendered by charismatic leadership are not confined to the leader-follower nexus. According to Weber, under the conditions of charismatic leadership, the followers are welded together into a distinctive social unit, "an emotional form of



communal relationship".<sup>61</sup> The consequences of this social formation for national political development are readily apparent: if the "communal relationship" can be generalized to encompass large segments of the populace, charismatic leadership can play a vital role in creating national unity. As Edward Shils notes, "charismatic personalities are invaluable in binding together such conglomerations of particularistic attachments as form the societies of the new states".<sup>62</sup> If the charismatic leader becomes the embodiment of the nation, his presence can stimulate the followers' identification with the nation. This will be facilitated when charismatic leadership is built on a mass base. A basic sense of equality will prevail between those who are simultaneously citizens of a nation and followers of a charismatic leader.

The reception of an egalitarian nationalist ideology, accompanies by the transfer of loyalty from traditional leaders to the charismatic leader can represent the first stage in the process of political modernization. The next stage, the development of an administrative system, particularly one built on rational-legal authority, presents new difficulties. Ironically, many of these difficulties hinge on the antithetical relationship between charismatic leadership and rational-legal authority. Rational-legal authority works best in an institutionalized social order whereas charismatic leadership arises in opposition to all existing forms of social organization. Charismatic leadership, according to Talcott Parsons, is based on "a kind of claim to authority which is specifically in conflict with the bases of legitimacy of an established, fully institutionalized order. The charismatic leader is always in some sense a revolutionary, setting himself in constant opposition to some

established aspects of the society in which he works".<sup>63</sup>

In an emerging nation, the charismatic leader's ability to set himself and his followers in opposition to the existing society is facilitated by the previous disruption of the traditional forms of social organization which accompanied Western penetration.<sup>64</sup> But while revolutionary mobilization can topple the existing order, it does have its limitations when a new social order is to be created. Workable modes of social organization stem from the transformation of a charismatically-led mass movement into an institutionalized order, a process which Weber described as the "routinization of charisma".

Although Weber never presented a systematic theory of the routinization of charisma, three basic elements contributing to the process can be discerned in his writings:

- 1) The everyday demands of social living, particularly those involving economic affairs, make charismatic leadership an unsuitable basis of organization. "The routinization of charisma, in quite essential respects, is identical with adjustment to the conditions of the economy. In this the economy leads and is not led".<sup>65</sup>
- 2) Those sharing in the authority of the charismatic leader begin to desire the regularization and stabilization of their power: "the routinization of charisma also takes the form of the appropriation of the powers of control and of economic advantages by the followers or disciples, and of regulation or of the recruitment of these groups".<sup>66</sup> This leads to the separation of authority from those unique gifts of personal leadership possessed by the charismatic leader.

- 3) Authority is shared with non-charismatic personages, whose participation in the governance of the society is indispensable. With specific reference to revolutions which were initiated and prosecuted through charismatic leadership, Weber notes, "every revolution which has been attempted under modern conditions has failed completely because of the indispensability of trained officials and the lack of its own organized staff".<sup>67</sup>

Routinization does not guarantee that rational-legal patterns of authority will ensue, nor that a bureaucracy organized on this basis will take over all administrative tasks. Indeed, there is always the possibility that the bureaucratic apparatus of a state which has emerged through a charismatically led mass movement will come to serve totalitarian political ends. When the moral fervor of the movement is coupled with the hierarchical organization of a "developed" bureaucracy, the result can be irresponsibility and an excessive concentration of power within the government.<sup>68</sup> Yet while this may be a fair characterization of the Soviet Union in the post-Lenin era, it is not an historical inevitability. As was noted above, the commitment to public service on the part of the emerging bureaucracy can outweigh the "totalitarian" tendencies. Nevertheless, the danger does exist, and the emergent nation must take appropriate steps if it is to prevent the emergence of a totalitarian bureaucracy.

Finally, it should be noted that the routinization of charisma need not result in the total destruction of all vestiges of charismatic leadership. In an institutionalized social order, charisma will no longer be the possession of one person in particular, but will be diffused into many different sectors of the society, even into bureau-

cratic organizations. Weber himself noted that charismatic elements could be found in bureaucratic offices (amtcharisma). This point has been elaborated by Shils, who claims that the conjunction of power with the pursuit of "meaningful activities" (activities which relate to central social values and concerns) infuses many organizations with their own distinctive charisma.<sup>69</sup> From this perspective, then, instead of being a disruptive force, charisma can contribute to organizational stability by adding to the legitimacy of the organization.

#### Charismatic Leadership and Guerrilla Warfare

Charismatic leadership and the "emotional form of communal relationship" which characterizes the charismatically-led group are often found in "outlaw" groups such as rural bandits or guerrilla armies.<sup>70</sup> The latter are particularly important for political change because they generally combine "modern" political goals, such as democratic participation, with a distinctive organizational form not usually found in modern organizations. As such, they present some dramatic contrasts with conventional armies. "Regular" military forces generally embody many aspects of routinized bureaucratic organization: hierarchically-arranged authority, clear division of roles, regular means of payment, and standardized training practices. This is not to say that some of the characteristics of the charismatically-led organization are totally lacking, only that the basic organizational framework is routinized and bureaucratically administered.<sup>71</sup> In contrast, the organizational structure of the guerrilla army will differ from that of the conventional army because of the unique tactical and political circumstances which attend guerrilla warfare, circumstances which contribute

to the receptivity of guerrilla armies to some form of charismatic leadership.

The most important determinant of the organizational structure of the guerrilla army is the manifestly political orientation of the army and its soldiers. Political change is the army's raison d'être, and this spirit energises all activities, military and otherwise. It creates a sense of common purpose which is the foundation of both organizational unity and effective action. As Mao Tse-tung stressed:<sup>72</sup>

Soldiers are the foundation of an army; unless they are imbued with a progressive political spirit, and unless such a spirit is fostered through progressive political work, it will be impossible to achieve a genuine unity between officers and men, impossible to arouse their enthusiasm for the War of Resistance to the full, and impossible to provide a sound basis for the most effective use of all our technical equipment and tactics.

Many things contribute to the development of this "progressive political spirit". Foremost among them is the infusion of an attitude which is essential for all revolutionary activity: the sense that power can be acquired and utilized to transform the conditions of life. Revolutionary activity requires a sense of hopefulness and a successful guerrilla movement will create a climate similar to that fostered by all revolutionary movements, what Crane Brinton has described as "a flaming sense of the immediacy of the ideal, a feeling that there is something in all men better than their present fate, and a conviction that what is, not only not, but need not be."<sup>73</sup>

Many guerrilla movements, including those initiated and prosecuted by guerrilla armies, have lived in hope, only to die in despair. Guerrilla warfare has to be appropriate to objective conditions and the military tactics and organizational techniques of the guerrilla army

must be congruent with the milieu in which the army operates. The politics of hope can be actualized only when the realities of the situation are grasped and appropriate organizational strategems applied to them. The natural environment for guerrilla operations is the countryside, but the countryside is not always a fertile ground for revolutionary activity and the rapid diffusion of new political orientations. Throughout history, rural areas have been the scene of rebellions, many of them suffused with extravagant proffers of hope, yet these hopes have not meshed with the realities of the rural situation. Millenarianism, chiliasm, wishes for a return to a mythical golden age - such notions are typical of traditional orientations to social change. The ideologies of traditional rural revolts were innocent of any realistic appraisal of the social setting and of what was needed to transform it. Because of this, such movements maintained the same patterns of leadership and organization found in traditional social organizations. In the modern world particularly, this mode of organization dooms traditional social movements to failure. The inability to form more modern organizations prevents an oppressed peasantry from effectively directing its wrath into workable political channels. As Eric Hobsbawm explains:<sup>74</sup>

Primitive reformist movements are easily lost in modern society, if only because the task of securing an equitable regulation of social relations within the existing framework, the creation of tolerable or comfortable conditions here and now, is technically specialized and complicated, and much better done by organizations and movements built to the specifications of modern societies ....

Organization "built to the specifications of modern societies" channels the naive political orientations of the agrarian rebel, while

guerrilla warfare becomes the crucible of developing political consciousness and organizational development. Although not specifically modern, a charismatically led guerrilla movement can provide for the transition to more modern organizational forms. Successful guerrilla operations fuse charismatic leadership with the development of political consciousness, thereby creating a workable framework for political and organizational activity.

Political and organizational development comprise the basis of successful guerrilla operations. At the same time, the activities and organizational modes of the guerrilla army reflect the military dictates of rural military operations. Because of the unique tactical requirements of small-scale rural warfare, military organization will reflect the dispersed, multi-front nature of guerrilla operations. While it is incorrect to view guerrilla activity as nothing more than the hit-and-run harassment of the enemy, it is nonetheless true that the guerrilla army avoids positional warfare and massive engagements. This follows from the transitional nature of guerrilla warfare; at best, guerrilla operations are temporary expedients which create the preconditions for military operations of a more conventional type.<sup>75</sup> Thus, the guerrilla army can never be content simply to pursue immediate military objectives; above all, it must be concerned with creating the preconditions for the eventual formation of a regular army. Again, success in this endeavor lies in the political mobilization of the populace - military success ultimately depends on political conversion. Accordingly, the guerrilla army's military operations are based on the need to organize space to yield time, which in turn is organized to yield will.<sup>76</sup>

Even the modest military objectives of the guerrilla army are not easily obtained. Because the army is comprised of dispersed bands, it lacks the permanent communications networks which are essential to most armies for the effective marshalling of forces and the resources which they require. Paradoxically, however, this weakness can become the guerrilla army's greatest source of strength. Since a hierarchically-directed military organization is an impossibility, discipline cannot be maintained through the issuance of orders and constant supervision. Once again, a coherent ideology, embodied in the charismatic leader, becomes vital for the cohesiveness of the army and for its ultimate expansion. With guerrillas, a discipline of compulsion is ineffective, if not impossible; the fundamental basis for discipline must be the individual conscience.<sup>77</sup> This conscience is not of course the free creation of the individual soldier. It is forged by a coherent ideology, as well as by the very nature of guerrilla warfare, which creates a breeding ground of solidarity, comradeship, and unity - in short, Weber's "emotional form of communal relationship".<sup>78</sup>

Still, these qualities cannot be relied on to provide a permanent basis for future activity. Charismatic leadership and the Gemeinschaft of a guerrilla army can provide the basis for future organizational development only when a coherent ideology reinforces the solidarity between the leaders and followers, and when it begins to be detached from the personal formulations of the charismatic leader. Again it must be noted that guerrilla operations are less concerned with the creation of permanent organizations than with the provision of the basic pre-conditions of organizational development. At the same time, the "mass



mobilization" aspects of guerrilla organization will linger on, and create numerous impediments to the development of routinized and specialized organizational forms.

#### China as a Case Study

A vast number of historical factors have combined to create the distinctive society of China and the unique patterns of organizational development within that society. The major factors, an ancient bureaucratic tradition, the nationalistic response to Western incursion, a Communist-led revolution, and a desperate struggle for economic development, present fascinating problems of interpretation and analysis. The rewards of studying modern China are great, yet the problems of study can be greater. Nowhere is this more apparent than in the investigation of bureaucratic organization. The most basic tools of organizational analysis, such as organization charts, compilations of regulations, data on recruitment and personnel, and precise statements of organizational goals, are not easily obtained. Moreover, the basic policies which shape organizational structure and direct the organization's activities are often unclear; still less do we know about the institutional and political factors which have contributed to the evolution of these policies. Organizational performance is no less indistinct. The crudest measure of organizational effectiveness in the economic sphere, the rate and composition of economic growth, is still a matter for considerable debate among economic analysts. Since the early 1960s the Chinese have imposed an effective embargo on economic and other statistics, making evaluations of the effectiveness of the Chinese economic system difficult. Still less can be said concerning the contributions made to economic development

made by specific organizations.

However, basic information on Chinese society can be culled from a number of sources. Some major publications continue to reach the outside world. These are of particular importance for an understanding of modern China, for the Chinese press is a basic medium for the transmission of policies. The reading and discussion of newspaper and magazine articles serves to translate central policies into local actions. Accordingly, a reading of Chinese press accounts can provide much information for the Western scholar. Unfortunately, however, since the early 1960s only the most widely-circulated Chinese publications, such as People's Daily and Red Flag have been made available to the West, although the Southern Daily is usually available because its area of circulation abuts Hong Kong. The general unavailability of local newspapers is a particular handicap for this study, which deals primarily with the local organization of agro-technical services, and the grass-roots response to them. Such local newspapers provide an important source for the part of this study which deals with the first decade of the People's Republic. For the remaining period studied, other sources of information help to overcome the loss of information caused by the embargo on local publications.

Although my knowledge of the Chinese language is still inadequate for reading the Chinese press, I have gone through the press translations made available by the United States Consulate General in Hong Kong, the Joint Publication Research Service of the United States Government, and the Union Research Service in Hong Kong. I have also obtained copies of some of the Chinese press accounts filed at the Union Research Institute and have had them translated.

Finally, I have been able to make use of the accounts written by recent visitors to China. While many of these narratives are little more than travelogues, some, such as Shavid Burki's People's Communes in China and Barry Richman's Industrial Society in Communist China, provide a good deal of information on the organizational structure and day-to-day workings of specific enterprises in China. I have also made considerable use of the studies of Chinese organizational structure and behavior written by Doak Barnett, Ezra Vogel, and Franz Schurmann.<sup>79</sup> Their books have been invaluable for a general filling-out of the patterns of contemporary Chinese politics and society.

#### The Scope of this Essay

Since this study attempts to present a general picture of the development of agrotechnical organizations, viewed in the light of the general imperatives of modernization, not all aspects of agrotechnical development have been covered. I have restricted my inquiry to those programs which are directly concerned with the diffusion of specific agricultural techniques and inputs among the basic element of Chinese agriculture, the Chinese peasantry. I have not concerned myself with some of the key determinants of the expansion of agricultural production, such as price policies, expansion of the rural marketing network, or the public health, education, and other welfare services which can play a vital role in augmenting the productive capacity of rural communities. However, there have been times when educational activities in particular have been so closely allied with agrotechnical measures that I have had to consider them together.

Finally, because my emphasis has been on those elements of agri-

cultural technology which can be directly used by the farmers, I have not dealt with massive agricultural development programs that are not the objects of extension work per se. The construction of massive water-control projects, the reclamation of unused land, and the construction of rural electrical networks are not the subject of this study.

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Throughout this study, a prime difficulty centers on the use of a social science perspective for the interpretation of one segment of Chinese society. This problem is not unique to this study, for, as Lucian Pye has pointed out, "Among scholars the division has been sharp between those working on Communist China and those working on political and economic development. Each group has gone its separate way, and there has been remarkably little intellectual exchange".<sup>80</sup> While I have tried to ground my inquiry in sociological theory, my analysis of organizational development in China does not constitute a rigorous testing of specific hypotheses. Present knowledge of contemporary China does not permit this, for there are many lacunae in the available data. For all of the cliches about the "great sociological experiment" being conducted in China, the country remains a difficult subject for systematic sociological research. Nevertheless, this study is an attempt to deepen our understanding of China through the application of sociological concepts to one critical aspect of the modernization process, the development of special-purpose organizations.

## CHAPTER II

Bureaucratic Control in the Chinese  
Countryside: the Historical Legacy.

Perhaps the most outstanding attribute of traditional China was the stability of its administrative system and the longevity of its basic structural elements. Despite the rise and fall of individual dynasties and the conquest of China by Mongols, Manchus, and other "barbarians", the administrative system continued to operate within channels cut during the Ch'in Dynasty, well over two thousand years ago. The general form of the Chinese administrative system proved remarkably stable from that time onward. Its disintegration came only with the total collapse of the imperial political system during the first decade of the twentieth century.

Underlying the formal structure of the administrative system, the philosophical precepts of Confucianism provided spiritual support for the activities of government officials. In thought and behavior, the bureaucrat was expected to adhere to the canons of the Confucian way of life. Equally, those under him were not allowed to forget that their behavior too had to reflect the Confucian code.

In this chapter, the structural and ideological features of the imperial administrative system will be briefly surveyed. Although most of the references used here deal specifically with the period encompassed by the Ch'ing Dynasty, its administrative system remained generally similar to those of other dynasties. The generalizations made in this chapter, while inadequate as a thorough characterization of the imperial administrative system, can serve to highlight the main features of the traditional government in China and demonstrate its strengths and weaknesses in satisfying the basic economic and political requirements of a far-flung agrarian empire.

Today, the imperial system of government is dead, and Confucius is an object of attack. Yet an understanding of the governmental system of traditional China is vitally important for anyone who wishes a deeper understanding of present-day Chinese society. Not only have many structural elements of the traditional governmental system been carried over, some aspects of the spiritual foundation of this system still endure, and strong measures have been taken to eradicate their influence. In taking such measures, the Communists are not simply exercising their will to supplant an ancient ideology with their own. To put the matter bluntly, a government based on Confucian principles is inimical to political and economic modernization. Any Chinese government, Communist or otherwise, would have to come to grips with the Chinese past and make every effort to undermine Confucianism and the political style which it engendered. While the Communists share with all Western radicals a sense that bureaucracy promotes conservatism and lassitude, their resolve to build a relatively bureaucracy-free society has been deepened by their recognition that the modernization of the Chinese nation cannot proceed unless the intellectual climate which surrounded the bureaucratic system of traditional China is dispelled forever.

Many structural elements of the imperial administrative system continue to provide the basic units of government administrative divisions within a totally different political and ideological context. Within this chapter we will examine the traditional administrative system primarily in terms of its ideological foundations, noting throughout how the total system, both structural and ideological, contributed to political and economic stagnation within the Chinese countryside.

### The Problem of Central Control

However unsatisfactory the imperial administrative system may have been, its defects become particularly glaring only when it is compared to the government of a modern nation, the emergence of which was forestalled by the very success of the traditional order. The tragedy of traditional China lies in the fact that the best-developed governmental apparatus of ancient times prevented the subsequent development of a social and political order more attuned to the needs of a modern nation. To put the failures of the traditional system in proper perspective, then, it is necessary to recount its long-standing success in bringing centralized governmental control to a fragmented country.

The establishment of the imperial governmental system within China dates to 221 B.C., when the power of independent feudal states was broken by the founders of the Ch'in Dynasty. Through succeeding dynasties emperors claimed the "Mandate of Heaven", and with it the exercise of total power; yet this power, while in theory absolute, could only be effective when transmitted through delegates, the functionaries of the state bureaucracy. Although feudalism had been laid to rest, in a country as vast as China only a centrally directed, ideologically united government bureaucracy could hope to prevail over the forces of regionalism and local particularism. The point is clearly made by Etienne Balazs:<sup>1</sup>

As many an episode in Chinese history has shown, if it had not been for the scholar officials, acting as benign shepherds and keeping the feudalists in order ... while maintaining an iron control on the unity of the empire, particularism would have won the day, and with the breakup of sovereignty, Chinese civilization would have collapsed altogether ... in a peasant China it was a rule without exception that the alternative to



a reign of bureaucracy was anarchy.

While the officials were thus indispensable to imperial control, there lurked the danger that the officials could gain an excessive amount of power, to the detriment of central control. As in all administrative systems, the imperial government was beset with the problem of achieving the proper balance between centralized control and local initiative. By and large, the system worked in favor of the former, resulting in economic and social stagnation, which, far from being deplored, was widely acclaimed by the Chinese elite as the ideal course of affairs.

In seeking to diminish the power of its local officials, the central government resorted to a number of practices that prevented the bureaucrats from putting down firm roots in the locality in which they operated. During the T'ang Dynasty, the "rule of avoidance" promulgated, and officials were forbidden to serve in their native locality. In the Ming and Ch'ing Dynasty, officials were rotated from locality to locality on a regular basis so that they could not build up a local power base. This of course attenuated the officials' ability to respond to local needs; tight central control was purchased at the cost of administrative inefficiency. The emperors' delegates found themselves unfamiliar with local customs, dialects, and economic conditions. This meant that a good deal of power passed by default into the hands of people who held no formal governmental office: the bureaucrat's entourage of runners, clerks, scribes, servants, and secretaries who had been recruited from the surrounding locality.

Administrative inefficiencies were compounded by the size of the governmental units. At the bottom of the administrative hierarchy was the hsien (county), and during the last two centuries of imperial rule, China

was administratively divided into 1200 to 1300 hsien. Although it was the basic level of the governmental system, the hsien was much too large a unit for effective governance. In 1749 there was, on average, one hsien magistrate for every 100,000 inhabitants; by 1819 the ratio had swollen to one magistrate for every 250,000 inhabitants.<sup>3</sup>

The difficulties of governing such vast areas are obvious. The government had only a limited chance of diffusing its commands through the countryside. Although the government had no compunctions about interfering with village life when it thought it expedient, the vast size of the administrative units put necessary limits on the extent and scope of this interference.<sup>4</sup> The result of this, again to quote Hsiao, was "a partial administrative vacuum in the countryside":<sup>5</sup>

In an immense political orb like the Chinese empire, the decrement of central power in its empire-wide application was bound to be considerable. Resounding imperial commands, to which officials generally rendered little more than lip service, tended to fade into faint echoes when they arrived at the chou or hsien level of the administrative structure. In fact, the imperial government was unable even to exercise effective supervision over the fifteen hundred chou and hsien magistrates who were supposed to keep the various apparatus of rural control in working order and to administer to the needs of the local inhabitants under their "parental care".

The situation was made even more difficult by the central government's refusal to allow for initiative or the merest suggestion of autonomy within the administrative branches. To ensure its control, the central government resorted to a policy of divide et impera. Posts were shared by officials of equivalent rank and power, while many high-ranking officials were forced to divide their attentions between different posts.<sup>6</sup> At best, this system equalized the powers of different officials and government agencies, but more often the result was administrative

paralysis.<sup>7</sup> In such a political climate, the bureaucrat's concern for safety took precedence over dynamic administrative work. The effect of this "trained incapacity" is summarized by Hsiao Kung-chuan: " experience taught officials to reduce the perils of assuming responsibilities by evading them as far as possible, with the result that many things which they should have undertaken for the benefit of local inhabitants were left undone".<sup>8</sup>

The issue of central control versus administrative autonomy was never resolved in a manner which would allow the government bureaucracy to act as an efficient and effective civil service working for the good of the Chinese nation as a whole. Bureaucratic inertia as well as the prevention of localism was the consequence of the central government's efforts to avoid any usurpation of its power. To quote Hsiao again:<sup>9</sup>

Whenever a choice had to be made ... the emperors invariably allowed imperial security to overrule administrative efficiency. As a result, public functionaries were rarely given an opportunity to show initiative, independent judgement, or satisfactory performance of tasks through the exercising of adequate authority ... A situation eventually prevailed in which the most prudent thing for the average official to do was to assume as little responsibility as possible - to pay greater attention to formal compliance with written rules than to undertakings that were useful to the sovereign or beneficial to the people.

The problem was not unique to China; all imperial systems in traditional societies face the difficulty of keeping local administrators in check.<sup>10</sup> That the central government was generally able to do so outweighed the problems created by the sapping of administrative initiative. Moreover, the Chinese administrative system did manage to survive for over two millennia, and was destroyed only when a stagnating economy and Western penetration clearly demonstrated the weaknesses of

the system and the need for a more dynamic form of government. Today however, attainment of a vigorous organizational system without concomitant dilution of central control is of necessity a prime concern for the Communist government.

### Confucianism and Government Control

The elaborate administrative structure of imperial China would have gone for naught were it not for the fact that the Confucian philosophy and the central government's active use of Confucianism provided an ideological prop for governmental control. The examination system, which made knowledge of the Confucian classics the basis for entry into the official service, affected not only the manner of thinking of the Chinese, particularly the intelligensia, but their motivational patterns as well. Ambitions were directed at the attainment of official positions, and alternate avenues of success, such as involvement in a mercantile career, were never allowed to open up. A merchant could amass great riches and all of the superficial trappings of worldly success, but he could never hope to attain the prestige accorded to a classically educated official. At the same time, the competition for office, manifested by individual attempts to place well in the examinations, served to channel ambition according to the dictates of the central government; with new people constantly striving to enter into official service, the danger of the emergence of a hereditary "office nobility" was considerably diminished.<sup>11</sup> For an ambitious Chinese, to be a success entailed playing the game according to the rules set by the central government.

Examinations aside, the intellectual tone of Confucianism often resulted in a pervasive conservatism within official ranks. Although

the absorption of the tenets of Confucianism by the administrative elite did not completely destroy their ability to adjust regulations and governmental activities for the fulfilment of new tasks, it did set limits to their ability and willingness to take on governmental tasks of a qualitatively different nature, such as the sponsorship of scientific research and its application to economic matters.<sup>12</sup>

Additionally, the elitism implicit in much of Confucianism encouraged the official to insulate himself from the general populace, thus preventing an empathetic understanding of their real needs. Having assimilated the classics and passed the imperial examinations, the official became a person apart. His understanding of the central values of Chinese civilization made him a figure of awe and respect, all the more so since these values were encapsulated by a literary system which was beyond the grasp of the illiterate majority.<sup>13</sup> The scholar-official, as Max Weber noted, could take on a "magical charisma" through his familiarity with the sacred texts of Confucianism and lift himself above the bulk of the populace.<sup>14</sup>

With knowledge thus codified and sacralized, the attainment of this knowledge became an end in itself; the notion that knowledge could be used for the solution of practical problems was scarcely considered. Accordingly, rational thought patterns and the desire to apply rational analysis to productive endeavors did not find a secure niche in the minds of the intelligentsia. Instead of seeking new solutions to problems, the tendency was to use old solutions. The most important thinker was not the one who is able to come up with new ideas, but the one best able to find the appropriate precedent within the tradition. As Fei Hsiao-tung explains:<sup>15</sup>

In a stable, traditionally organized society a man does not need to question, to rationalise, or to justify. What he needs to do is to find out what the custom is ... In a society in which historic traditions have the only real validity, influence does not seem to lie with the innovators, but with those who can guide along established paths. As apprentices learn their techniques from their masters, so common people depend upon the students of traditional values to teach them the way they must go. And these teachers are those who possess social authority and prestige.

In most administrative systems, the possession and application of some form of expertise is of fundamental importance for the conferring of legitimacy upon the administrator and his activities. But while the administrator in a modern political order gains expertise in order to solve practical problems, the Confucian official's expertise centers on the maintenance of sacred tradition. Although such knowledge could on occasion be effectively used for the achievement of specific governmental ends, its real importance lay beyond goal-attainment. Rather, sacred tradition was emblematic of the highest possible cultural attainment. Accordingly, in traditional China, a bureaucratic position represented more than the incumbency of a specific office. As Joseph Levenson puts it, "when office could be taken to symbolize high culture, knowledge for its own sake, the terminal values of civilization, then officeholding was clearly superior to any other social role".<sup>16</sup> The "magical charisma" which Weber attributed to the scholar and his texts was thus invested in a secular political order. The official, his office, and his learning together comprised the core of Chinese civilization.

As the Confucian viewpoint downgraded the instrumental use of knowledge, technical skills were discounted and traditional China's considerable achievements in science and technology were never fully applied to economic life. Content with their monopoly of the full understanding of the

traditional verities of the civilization, the scholar-officials tended to remain aloof from the realm of practical economic activity.

Although the separation of knowledge and practice and the irrelevance of the traditional examination system had been criticized by Chinese such as the Sung statesman Fan Chung-yen, the problem endured into the late nineteenth century.<sup>17</sup> Criticism from non-official Chinese writers such as Wang T'ao, as well as from those marginally attached to the officialdom such as Liang Chi-chao fell on deaf ears, and the divorce of the administrative elite from practical economic affairs remained deeply engrained.<sup>18</sup>

Artisans and technicians, even those entrusted with considerable power because of their direction of vast public-works projects, were only grudgingly given official rank or privileges, and then only through the influence of palace eunuchs, who were always on the lookout for potential allies in the course of their rivalries with regular officialdom.<sup>19</sup>

#### The Bureaucracy and Agricultural Production

Nowhere is the officials' distaste for getting involved in practical affairs better illustrated than in agriculture. Although the official ideology placed the farmer second only to the official in the Chinese social hierarchy, in actuality farming was seen as a distinctly inferior occupation. The officials' customary emphasis on the primacy of agriculture and the superiority of rural life represented little more than the manipulation of a "political myth" which served to make the peasants more content with their lot. However enobling farming might have been in theory, the scholar-officials themselves disdained all contact with the soil. Confucius himself was commonly represented as the sort of man

whose "four limbs are unaccustomed to toil" and who "cannot distinguish the five types of grain".<sup>20</sup> Mencius too placed the farmer in a distinctly subordinate position:<sup>21</sup>

Great men have their proper business and little men have their proper business ... hence there is the saying, "Some labor with their minds, and some labor with their strength. Those who labor with their minds govern others; those who labor with their strength are governed by others. Those who are governed by others support them; those who govern others are supported by them". This is a principle universally recognized.

While the officials eschewed vulgar labors, this does not mean, however, that their activities were irrelevant to agricultural production. The officials possessed practical skills in the area of regulating human relations, and were able to use these skills as a means of achieving the main administrative goal: bringing peace and harmony to a vast empire. At best, this ordering of human relations facilitated the maintenance, if not the expansion, of the rural economy. As Etienne Balazs notes, "this unproductive elite [the scholar-officials] drew its strength from the function it performed - the socially necessary, indeed indispensable, function of coordinating and supervising the productive labor of others so as to make the whole social organism work".<sup>22</sup>

Beyond this general function, however, the officials contributed little to the support of the rural economy. The main concerns of the officials lay in the area of tax collection, the maintenance of order, and the administration of justice.<sup>23</sup> Sinologists of an earlier era placed great emphasis on the activities of the officials in the construction and maintenance of hydraulic projects, using this as the foundation of their theory of "Oriental Despotism".<sup>24</sup> Subsequent scholarship has however downgraded the importance of water-control projects and has demonstrated the limited role that the officials played



in these enterprises.<sup>25</sup> While many dynasties (particularly at the beginning of the dynastic cycle) would initiate hydraulic projects, local projects of the sort most likely to benefit local agriculture were left to the care of lower-level officials, who were provided with no funds by the central government for these works. The local magistrate was thus forced to recruit local residents to do the labor or provide the necessary funds.<sup>26</sup> The central government would stimulate local hydraulic construction only by guaranteeing legal protection for the "water benefits" resulting from outside efforts.<sup>27</sup>

In sum, the officials failed to play a dominant role in the development of water-control projects necessary for agricultural production. As an eighteenth-century governor of Shensi complained:<sup>28</sup>

Water benefits could be realized everywhere if dykes and drains were built to conduct water of these rivers [within the province]. But on the one hand government functionaries do not take into their consideration the people's sufferings, and, on the other hand, the people [even] knowing what is beneficial to themselves, fail to accomplish anything in the absence of definite plans. Even in places where water ditches originally existed, these are allowed to fall into disuse.

Other activities of the scholar-officials, such as the compilation of calendars and the codification of astronomical lore - once thought by Western sinologists to have been an important contribution to agricultural production - in fact were of little importance. Scheduling of agricultural work required some sort of calendar, but the elaborate calendars developed by the officials could not easily be applied to the agricultural cycle, and in any event, the peasants themselves could schedule their labors by making a few simple observations of the heavens.<sup>29</sup>

Local officials were also enjoined by the central government to take an active role in the extermination of locusts, a recurrent plague through-

out China. In the event of locust attacks, magistrates were supposed to file reports with their superior officials and to supervise the peasants in exterminating the insects. The law also required them to destroy pupal locusts; failure to do so made the magistrates subject to dismissal.<sup>30</sup> To aid in this endeavor, provincial authorities would issue instructions to local magistrates.<sup>31</sup> While this was a laudable activity, it seems unlikely that the magistrates were able to accomplish much, given the size of their bailiwick and their unfamiliarity with local conditions.

Other aspects of agricultural development received little support from the officials. Involvement with the technical minutiae of crop production did not befit the position of the mandarin. Political and administrative functions were the stock in trade of the officials; agriculture was the work of agriculturalists, those people who were destined to be ruled by others superior to themselves.<sup>32</sup>

#### The Gentry and Local Government

Since government penetration into the local economic and social order was for the most part transitory, the organization of rural society tended to fall to the indigenous elite, the local gentry. The importance of their role is stressed by Hsiao: "It is not an exaggeration to say that the gentry constituted the keystone of rural organization ... villages without the gentry could hardly show any high degree or organized community life or any considerable amount of organized activity."<sup>33</sup> For the most part, the power of the local non-governmental elite complemented that of the officials and facilitated control over the rural populace.

Though the gentry were natives of the locality in which they operated, their activities and Weltanschauung were wedded to the formal

governmental system. Land-ownership, although important, was generally not a sufficient basis for the attainment of gentry status. Like the government bureaucrats, the gentry owed their position to their possession of an academic degree, conferred after passage of examinations administered by the state. Relative to the total population, they therefore remained a small elite within the countryside. At the beginning of the nineteenth century, approximately 1,100,000 Chinese had attained an academic degree, with the number rising to 1,500,000 by the end of the century.<sup>34</sup> As such, they with their immediate families comprised  $1\frac{1}{2}$  to 2 per cent of the total population. Since only 40,000 official positions were open to degree-holders, a sizeable surplus of the scholar-gentry was thus available to occupy positions of authority within the local social order.

The common culture shared by officials and gentry prevented the fragmentation of authority in the countryside. Both groups adhered to Confucian precepts, resulting in a community of belief for officials and gentry. Additionally, the gentry's preoccupation with preparation for their examinations channeled their efforts away from activities which could prove harmful to the state. As Franz Michael notes, "the constant preoccupation of the gentry with the never-ending preparation for ever-recurring examinations forced them into an examination life in which their thoughts were channeled into the stream of the official ideology."<sup>35</sup>

At times, however, the confluence of interests and orientations between officials and gentry broke down. When their differences became manifest and irreconcilable, the gentry could defy government authority and take an active role in the organization of a local rebellion.<sup>36</sup>

During the Ming and Ch'ing Dynasties, the government attempted to prevent the concentration of local power in gentry hands by resorting (without much success, it must be said) to such administrative devices as the li-chia and pao-chia systems, through which commoners were deputized as local agents of the state and given the responsibility for the collection of taxes and the maintenance of order.

Still, more often than not the symbiosis between gentry and officials was maintained and the informal power of the gentry complemented the formal power of the government. Indeed, the gentry had much to gain from the existing political system. They were exempt from labor services and some surtaxes, were immune from certain kinds of punishments, and received special treatment in legal affairs. They further benefited from sumptuary legislation which gave them the exclusive right to wear certain articles of clothing and to display special plaques in front of their residences. They also had the exclusive right to participate in certain ceremonies. Gentry status was invaluable for conferring protection from the deprivations of the government. Like all Chinese of imperial times, the gentry were concerned more with protecting themselves from the government than with using the government to further their interests. As one nineteenth-century Chinese put it:<sup>37</sup>

Once one became a sheng-yuan [the holder of a lower-level degree] one was exempted from official labor, free from the oppression of the underclerks, dressed in scholar's gowns, received by officials courteously, and not subject to the humiliation of being lashed. Thus the reason for persons wishing to be sheng-yuan was not necessarily for the honor of the title but for the protection of their persons and their families.

At the same time, the gentry did on occasion attempt to represent the community as a whole when dealing with the government. The gentry

was, in the words of Ch'ü T'ung-tsu, "the only group that could legitimately represent the local community in discussing local affairs with the officials and in participating in the governing process".<sup>38</sup> Although the local gentry's influence on the government generally was limited to the representation of the interests of their native hsien, they could accomplish much in this enterprise. Local gentry were particularly active in organizing the maintenance of local roads, bridge construction, river dredging, dyke construction, and the promotion of local irrigation projects.<sup>39</sup> The latter was particularly important for the rural economy, for, as was noted above, government officials were usually unable to finance such projects. Even if some money could be extracted from the government, the local gentry provided all of the administrative direction for public works projects.<sup>40</sup> These managerial skills were much in demand, and when a project was sufficiently large, the activities of the gentry could spill over hsien boundaries to encompass the organization of joint works within large areas of a province.<sup>41</sup> Finally, the gentry took a leading role in the organization of grain storage and famine relief, not infrequently using their position to appropriate grain supplies for their own use.<sup>42</sup>

Gentry membership did not automatically follow from landowning, although most gentry members did come from landowning families. In turn, gentry status could be used to obtain more land for the gentry family. Thus, gentry activities were more attuned to the preservation of the privileges of the landowners than to the improvement of the rural economy as a whole. To be sure, both the officials and the gentry had a vested interest in preserving a modicum of rural prosperity in order

to forestall the rural insurrections that were endemic in traditional China. For the vast bulk of the rural populace, however, the level of "prosperity" was very low indeed.

### Government and the Village

If the governmental system did little to nurture the agricultural economy, its benevolence could best be expressed through its non-interference with the lives of the rural populace. For the peasant, anything that involved the government was viewed with indifference, suspicion, or fear.<sup>43</sup>

For the peasant, the ideal political situation was one in which the government had little impact on the course of everyday life, and the peasants could go about their daily tasks believing that "the sky is high and the emperor far away". To be sure, this ideal situation came not through governmental design, but through the government's inability to make its influence felt. As Fei Hsiao-tung has pointed out, "It was within the inefficiencies of this governmental system that the ordinary man found his opportunity to carry on his private concerns".<sup>44</sup>

The threatening countenance of the government was in large part due to the fact that instead of taking an active role in the promotion of agricultural production, the government was content to skim off the surplus. Where agricultural production did expand, it was largely the reflection of an expanding marketing system which, unlike governmental organization, served to link individual villages to the outside world. As G. William Skinner has demonstrated, the social and economic integration created by an expanded marketing system surpassed that engendered by the administrative system, while at the same time reinforcing

and complementing it.<sup>45</sup>

Even under the Republic, the basic governmental orientation to agricultural growth and political development in the village remained unchanged. Instead of actively working for the development of the countryside, the Kuomintang contented itself with attempts to tighten up governmental control over the rural areas. Building on the foundation of a new administrative unit, the hsiang or "administrative village", the Republican government attempted to revive the pao-chia system and use it to control the hinterlands. The effort proved to be a failure; still, the hsiang has remained the focus of government efforts to penetrate the countryside, and remains the key unit of rural administration in China today.<sup>46</sup>

In failing to bring the rural villages under the sway of the government, the Kuomintang exhibited the same kind of administrative weakness that had characterized the imperial government. "State" and "society" in Imperial and Republican China were rarely coterminous; while the rural society organized itself on the basis of "natural" alignments such as kinship and location, the government had to content itself with the organization of society for only a few important tasks, such as the maintenance of order and the collection of taxes.<sup>47</sup> Yet by draining off the agricultural surplus through taxation while providing little in return, the government negated many of the potential benefits of agricultural growth, thereby aggravating the recurrent agricultural crises that marked the nineteenth and twentieth centuries.

Perhaps even worse, the psychological climate which surrounded government operations showed a clear tendency to instill a pervasive

sense of anxiety within the minds of the rural populace, while at the same time implanting attitudes of conservatism and subservience to higher authority in the minds of the officials closest to the rural scene. This resulted in the paralysis of traditional Chinese society, and although the system allowed Chinese civilization to prosper for centuries, it weakened the ability of the Chinese to meet the new challenges posed by an expanding population and foreign incursion.

Modernization and economic development are, in the last analysis, dependent on the creation and maintenance of complex organizations which allow the attainment of established goals and the adjustment of activities to meet new ones. Although the traditional Chinese administrative system served adequately to allow the solution of a narrow range of problems, it proved incapable of rising to the new challenges posed by the relentless growth of a population too large to be supported by a traditional agricultural technology. One key measure of the success of the Communist regime can be found in its ability to create an administrative system which has supported efforts of political and economic development, thereby giving an entirely new meaning to governmental control in the countryside.



### CHAPTER III

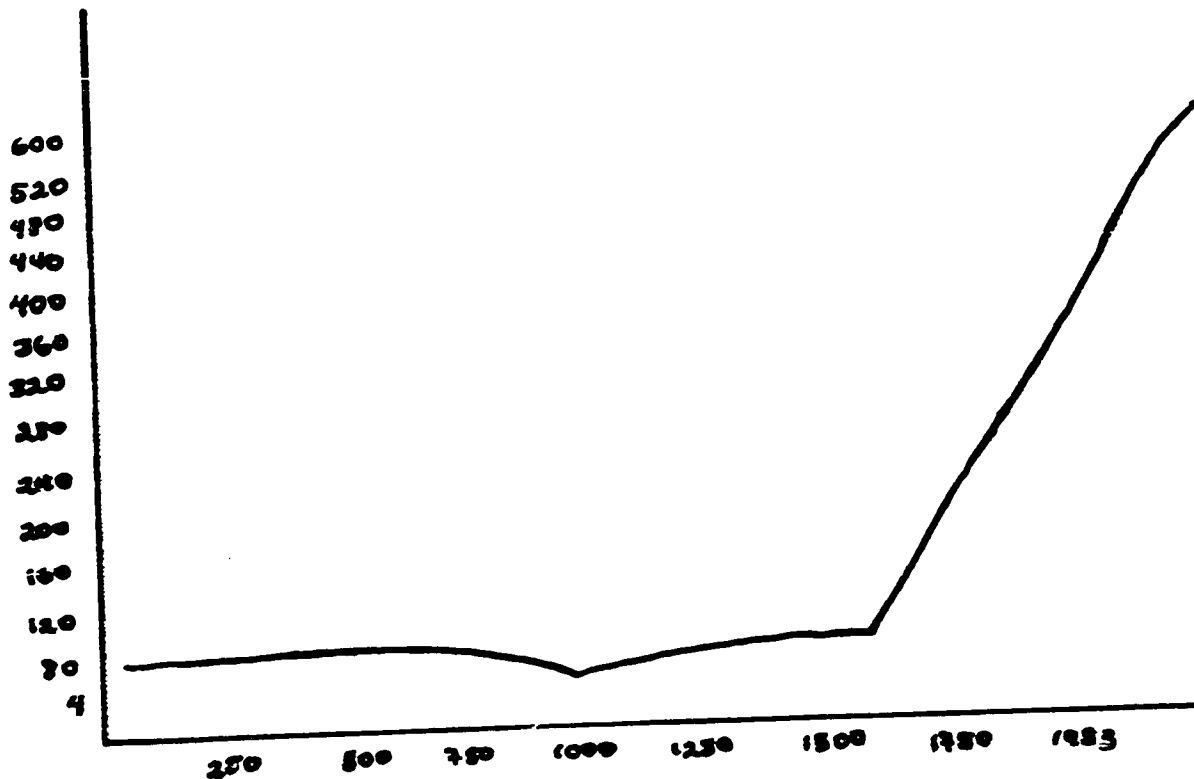
#### Agricultural Development in Traditional China

Agricultural production in traditional China demonstrated both the success and failure of a highly developed pre-industrial economic order. At a time when the peoples of Europe were only beginning to break out of a neolithic technology, the Chinese were laying the foundations of a massive empire through one of the first examples of large-scale sedentary agriculture. Arising in the loess highlands of North China some four millennia ago, a hydraulic agricultural technology allowed the expansion of a civilization of unrivalled splendor.<sup>1</sup> Yet by the nineteenth century, agricultural production had failed to keep up with the demands of an increasing population. Widespread famines and the rural rebellions which they engendered were the grim reflection of agricultural stagnation. Today, the success of the Communist government hinges on the country's ability to feed a population which increases by perhaps fifteen million each year. To put the development of contemporary Chinese agriculture into perspective, then, it is useful to look at the historical record of agricultural development in China, and in particular to examine the role played by the government in this crucial enterprise.

#### Agricultural Growth: The Historic Record

In the 1930s, after surveying the agricultural sector and taking note of some of the reforms which could be applied to it, R.H. Tawney came to a distressing conclusion. "The fundamental fact ... is of a terrible simplicity", he wrote. "It is that the population of China is too large to be supported by existing resources".<sup>2</sup> By the twentieth century, and for some time before, the pre-modern world's most effective agricultural system had failed to meet the needs of a

steadily growing population.<sup>3</sup> This failure was a tragic anticlimax to millennia of agrarian progress. In centuries past, not only had China's food production kept pace of population growth, the agricultural system itself owed much of its dynamism to the stimulus provided by the demands of a growing population. This was particularly evident during the Ming and early Ch'ing Dynasties, where the peace and stability which accompanied the establishment of these dynasties resulted in massive increases in population. Between the late Fourteenth and early Nineteenth Centuries, China's population increased five- or six-fold, and even during the turbulent years of the following century-and-a-half, it increased by another fifty per cent.<sup>4</sup> Although precise statistics on the rate of population increase cannot be ascertained, a general picture of population growth is presented in the following graph:<sup>5</sup>



Until about 1800 this growth in population did not result in severe pressure on the food supply; quite the opposite, the steady rise in population provided a strong stimulus for continuous agricultural growth<sup>6</sup> and, most importantly, allowed for the full exploitation of the potentials of the traditional agricultural system. This was due in large part to the ability of the rice-growing sector to absorb agricultural labor. As a highly labor-intensive mode of cultivation, rice production was able to make use of additional labor inputs far beyond the marginal rate of return for labor which obtains for other crops.<sup>7</sup> To take one example, by the sixteenth century, crop production in some parts of Fukien responded to the expansion of the rural labor force by doubling the yeild achieved during the Sung Dynasty.<sup>8</sup> Even in the first decades of the twentieth century, per-acre yields of rice exceeded those of all other nations with the exception of Japan.<sup>9</sup>

While the ability of the rice-growing sector to absorb surplus population played a key role in the development of Chinese agriculture, not all of the increase in food production can be attributed to it. According to Dwight Perkins, perhaps half of the increase in crop output during the last six centuries was the result of an expansion in cultivated acreage.<sup>10</sup> The ability to make use of this acreage was, in turn, facilitated by the introduction of new crops into the Chinese farm economy. In particular, the importation and utilization of New World crops, such as maize, sweet potatoes, and peanuts, allowed the productive use of land that otherwise would have been left untilled. As Ho Ping-ti has noted, "American food plants have allowed the Chinese, historically a plain and valley folk, to use dry hills and mountains and sandy loams too light for rice and other native cereal crops".<sup>11</sup> During the last

two centuries these crops were of increasing importance in feeding China's population as rice cultivation finally began to reach the point of diminishing returns.<sup>12</sup> Unfortunately, by the second half of the Nineteenth Century, new crops were no longer introduced.<sup>13</sup> The agricultural sector therefore had to make the best use of existing crops, although slight improvements continued to be made through shifting to crops which would respond to greater labor inputs.<sup>14</sup>

The introduction of improved strains of existing crops also played a key role in increasing agricultural production, both by increasing per-acre yields and, perhaps more importantly, by facilitating the development of new cropping patterns. Improved seed varieties allowed the spread of rice cultivation into new areas, while the use of early-ripening rice varieties led to the double-cropping of rice or the conjunction of rice cultivation with the cultivation of other crops.

The spread of these new crops and seed varieties demonstrates the willingness of Chinese farmers to take up new practices and to respond to the needs of a growing populace. Despite the constraints of a primitive communication network, the use of new crops and seeds spread fairly rapidly through China. As Perkins notes:<sup>15</sup>

... farmers, although conservative, were quick to seize new opportunities once it was clear they wouldn't risk a major crop failure by doing so. Most new seeds or new crops, for example, were known and used across all of China, within a century or two after they had gained a foot hold on the coast, or wherever else they first appeared.

Nevertheless, the introduction of new crops and seeds remained haphazard in traditional China. In particular, the diffusion of new seed varieties was a painfully slow process. As a following section indicates, serious limitations in the spread of new inputs were the result

of a weak organizational base for their support. Additionally, the lack of credit facilities made it impossible for many peasants to obtain improved seeds, even when the worth of these seeds was recognized by them.<sup>16</sup>

In contrast to the steady, if slow, development of seeds and cropping systems, the development of farm tools and other items of rural capital seems to have stagnated for centuries. The ironies of the situation were illustrated by Tawney when he remarked that Chinese peasants had "ploughed with iron when Europe used wood, and continued to plough with it when Europe used steel".<sup>17</sup> The massive labor surplus in rural China naturally obviated the need for many types of labor-saving devices, but the low level of rural capital investment also reflected a socio-economic system which encouraged investment in land, urban commerce and handicrafts, and money-lending activities rather than investment in farm capital.<sup>18</sup>

#### Land Tenure and Agricultural Development

Although many of the evils of traditional Chinese society have been attributed to maldistribution of land, the relationship between the underdevelopment of the agricultural sector and inequalities in the ownership of land is more complex than it first appears. Since the subject is a vast and complicated one, this section can only touch on the effects of the tenurial system on the technological development of Chinese agriculture. In the following brief summary, two aspects of land tenure will be discussed: first, the size of the landholdings, and second, the distribution of land and the effects of tenancy.

Because of the steady growth of Chinese population and the absence of primogeniture, landholdings in China were subject to continual frag-

mentation. This led many observers of the rural scene to believe that the small size of farm plots was a severe obstacle to increased farm production and the use of new technical inputs.<sup>19</sup> Yet recent investigation seems to indicate the need for modification of this longstanding belief. Ramon Myers for example has found that in North China during the late nineteenth century, fertilizer and livestock inputs per acre decreased as farm size increased.<sup>20</sup> And in late Tokugawa Japan, where the farm economy was analogous to China's, improvements in farm technology led to a reduction in the size of farming units. The reason for this is to be found in the nature of the technological changes which were applied to the traditional farm economy. These changes - better seeds and cropping systems, greater use of fertilizer, and the extension of small-scale irrigation projects - called for more labor per unit of land, not less. This new agricultural technology required the painstaking application of labor, making a landholding small enough to be worked by the members of a single family the optimal arrangement.<sup>21</sup>

If the small size of most farm plots did not necessarily lead to reduced crop output, there still remains the possibility that widespread tenancy had a debilitating effect on agricultural production. During the 1930s, many observers of the rural scene, both Westerners and Chinese, saw tenancy and exorbitant rents as the root cause of agrarian China's malaise. A typical statement of their belief can be found in the following passage:<sup>22</sup>

So long as the rent is as high as 50 to 60 per cent of the total harvest, which is the prevailing rate in China, the landlords will always prefer not to manage the farm, but to lease out their land for rent, while the peasants always have to pay an excessive tribute which denies them any possibility of improving the farm. The inevitable result

is the prevalence of small farms, a very low standard of technical knowledge, and general economic backwardness.

China produced few entrepreneurial landlords of the type which had played such a vital role in the agricultural development of England and Prussia, but the propensity of Chinese landlords to lease out their lands and be content to passively collect rent may not have acted as a brake on agricultural development. The question hinges on the extent to which the "excessive tribute" paid by the renters vitiated their abilities to make use of improved farm technologies. To be sure, population pressure did lead to a general bidding-up of rents; given the farm economy's ability to absorb additional workers, direct cultivation by landowners hiring wage-earning farmworkers could hardly be as profitable as renting out land to tenants.<sup>23</sup> Yet this does not necessarily mean that landlords were always determined to squeeze out the maximum possible rent from their tenants. Many landowners looked on their holdings not as an investment from which to reap the greatest possible return, but as the most secure repository for accumulated wealth.<sup>24</sup> In many cases, this set limits to the rapacity of the landlords, and the exploitative nature of landlord-tenant relations.<sup>25</sup>

Furthermore, a variety of tenancy conditions could be found in traditional China, each one having a different impact on the tenant and the course of agricultural development. Cash rents were rarely collected in traditional China.<sup>26</sup> Instead, rent payments were made by giving the landlord a share of the harvest. This usually took one of two basic forms: the payment of a fixed amount of the crop or the payment of a percentage of the crop. Each system had a different impact on the farm



economy. A sharecropping arrangement in which the tenants yielded up a fixed amount of their crop gave them a greater incentive to increase crop production than a system in which the tenants delivered a percentage of the crop.<sup>27</sup> The reason for this lay in the fact that under the fixed-share system any marginal increase in production was retained by the tenant, whereas in the percentage-rent system some of the marginal increase had to be given to the landlord. At the same time, the latter system did motivate the landlord to take an active role in increasing production. Since his rent was a percentage of the total harvest, it was to the landlord's advantage to assist in the raising of crop output. Accordingly, this system was often associated with land reclamation and the active participation of the landlord in the work of draining and dyking new land.<sup>28</sup> Finally, the percentage-rent system served to provide a cushion for the tenant in the event of crop failure; in a fixed-rent system an agricultural disaster could result in most of the crop going to the landlord, leaving the tenant to work out his own methods for averting starvation. A percentage-rent system could thus make some contribution to agricultural development by limiting some of the risks associated with innovation.

Historically, however, it is evident that the fixed-rent system provided a much greater stimulus for an increase in crop production, particularly in those cases where the period of tenure was long enough to encourage the tenant to make capital improvements to the farmstead.<sup>29</sup> Indeed, landlords often charged lower rents to tenants who gave indications of being able and willing to do things necessary to maintain the fertility of the soil. Paradoxically, especially fertile fields

could draw less rent than fields of lesser fertility.<sup>30</sup>

#### Agricultural Development and the Growth of Commerce

Even under the most advantageous tenancy conditions, agriculture is not likely to develop if the farmers are not motivated to raise production beyond the levels required for rent payments and their own consumption. The establishment of a marketing network is thus a prime requisite for the expansion of farm production. At the same time, the market can provide the new inputs necessary to sustain an increase in production. As Evelyn Rawski has noted of Hunan in Ch'ing times, "the response of rice cultivation to market stimuli is evident in steadily rising productivity through the period, supported by efforts in land reclamation, irrigation and increasing seed varieties".<sup>31</sup> This is echoed in Myers' observation that, "in Mainland China the marketed surplus was gradually increased by improvements in transport and expanding trade that enabled farms to adopt new cropping systems, engage in crop specialization, and apply more labor to the production of certain cash crops".<sup>32</sup> This general trend began to accelerate in the late nineteenth century, when the construction of railroads and the new marketing opportunities which came in their wake led to the cultivation of new crop varieties.<sup>33</sup>

There was some danger that the expansion of the market could lead to a reduction in food crop production by inducing peasant families to devote their time to handicraft production.<sup>34</sup> Yet given the vastness of the rural labor supply in China, this probably did not undermine agricultural production to any significant degree. More serious in terms of food production was the market-induced shift to cash crops such as

sugar, tobacco, and opium. At the same time, the returns to be had from these crops induced many peasants to buy greater supplies of inputs such as fertilizer.<sup>35</sup> On balance, then, the expansion of the market played a beneficial role in the growth of agricultural production.

### Agricultural Development and Government Activity

Chinese civilization rested directly on an economic base formed by peasant farming. But despite the crucial importance of agriculture for the continuance of this civilization, the traditional government did little to sponsor the expansion of agricultural production. Traditional governments were not hostile to agriculture; the occupation of farmer ranked high in the traditional Confucian ideology. But this was not reflected in any overwhelming desire on the part of the government to take an active role in fostering the development of the farm economy. Even by the nineteenth century, when the press of China's population against available food supplies had become a grievous problem, the idea of a growing agricultural sector had scarcely entered into the consciousness of government officials; an austere and stable rural social order remained the dominant ideal.<sup>36</sup>

The Confucian scholar-officials resolutely refused to bother themselves with the problems of the rural economy. As one Chinese commentator lamented at the beginning of the nineteenth century, "they despise anything to do with farming and do not research into it".<sup>37</sup> A similar judgement comes from Dwight Perkins, who calls attention to the lassitude of the officials in the critical matter of initiating the use of new seed varieties: "officials in particular were rather faithful in

recording for posterity their own good deeds, and the lack of written evidence of the dissemination of improved seeds by officials thus suggests that varieties discovered and spread by farmers themselves were the dominant source of new seeds".<sup>38</sup>

Government activity could indirectly lead to agricultural growth through the maintenance of peace and stability in the countryside. Economic expansion in all sectors was a general feature of the period of "dynastic heyday", during which banditry and military strife were controlled by the government.<sup>39</sup> Accordingly, economic development was less the result of specific activities by the government than it was the result of commercial growth, which could flourish amidst domestic tranquility. Commercial growth was perhaps the most important factor in the development of agricultural production; the government did little, however, to actively sponsor commerce.<sup>40</sup>

During earlier dynasties, when the consolidation of governmental authority followed the establishment of sedentary agriculture, Chinese governments played a more active role in sponsoring agricultural development. Agriculture was promoted by a government department as early as the Chou Dynasty (1122-249 BC),<sup>41</sup> while during the Han Dynasty (206 BC-220 AD) specialists were appointed to instruct the peasantry in the use of new agricultural methods, particularly in undeveloped frontier regions.<sup>42</sup> During the latter part of this period, rice cultivation drew the attention of the government, and the active promotion of this crop by the government resulted in the pre-eminent position of rice in the Chinese agricultural economy.<sup>43</sup>

Colonization and land reclamation were often conducted under the aegis of the military throughout dynastic times, resulting in the dis-

placement of aboriginal peoples by Han agriculturalists.<sup>44</sup> Military-agricultural colonies established along the Northern borders were a key instrument of Chinese "foreign policy" during the T'ang Dynasty, while the propagation of appropriate dryland crops during the succeeding Sung Dynasty facilitated a corresponding expansion of Chinese civilization to the south.<sup>45</sup>

Most importantly, the introduction of early-ripening varieties of rice allowed more extensive cultivation of the Empire's southern regions. In this the government played a prominent role. Early-ripening rice was introduced from the kingdom of Champa in Indochina by the Sung emperor Chen-tsung (998-1102), and was supported by the publication of government documents which explained the new techniques of cultivation.<sup>46</sup> In other times the government encouraged the cultivation of new crops; in one instance, imperial edicts and government circulars exhorted Northern peasants to grow sweet potatoes on a wide scale in order to stave off an impending famine.<sup>47</sup>

By the twentieth century, however, the government contented itself with a passive role in the development of agriculture, despite the fact that the growth of the Chinese population had made the expansion of food production a matter of crucial importance. Unlike their Japanese contemporaries, the ruling elite of China was totally uninterested in applying any of the elements of Western technology to their own agricultural economy, and agricultural production remained stagnant.<sup>48</sup>

Nor did the establishment of the Republic result in the emergence of a new interest in the modernization of agricultural production. During the first decade of its existence, the Republican government allocated between forty and fifty per cent of its revenue for military

expenditures, while most of the remainder was absorbed by police and administrative functions.<sup>49</sup> Government-sponsored agrotechnical services were never put on an adequate financial footing. A Ministry of Agriculture was created in 1912, but its unimportance was demonstrated when it was merged with the Ministry of Commerce three years later. The resulting ministry was subdivided into four bureaus: Agriculture and Forestry, Animal Husbandry and Fishery, Industry and Commerce, and Mining.<sup>50</sup> Clearly, the agricultural sector was not destined to receive the undivided attention of any agency of the central government.

The government's lack of interest in providing an institutional base for generating agricultural development can also be seen in its lack of support for agricultural education. The first government-sponsored agricultural schools, closely patterned on the Japanese model, were established in 1902.<sup>51</sup> But the growth of these schools was quite slow, even after the 1911 Revolution. By 1921, seventy-nine agricultural middle schools had been established, complemented by fourteen agricultural colleges, of which two had been established by the central government and eight others by the governments of various provinces.<sup>52</sup> Both levels suffered from teacher shortages and curricula which were largely irrelevant to the practical aspects of agricultural production and development.<sup>53</sup>

Agricultural research also remained undeveloped. The National Agricultural Research Bureau was not established until 1932, and its activities were weakly articulated with the immediate needs of Chinese agriculture.<sup>54</sup> As John Lossing Buck emphasized, the development of

China's agriculture required the coordinated efforts of a wide variety of specialists who could gear their activities to the solution of specific problems.<sup>55</sup> Unfortunately, this was not achieved. As R.H. Tawney observed, "the weakness of the system ... is the divorce which appears frequently to exist between the work of bodies engaged in research and the practical business of agriculture".<sup>56</sup> The development of an agricultural research effort appropriate to China's needs was further hindered by the marked reluctance of agricultural scientists and technicians to spend any amount of time in the countryside.<sup>57</sup>

Research, training, and extension work remained in separate compartments, and did little to bring new technologies to China's peasant farmers. For new technologies to make any impact on farming practices, extension centers had to be diffused to the basic cells of rural society, such as market towns, but chronic under-staffing and under-financing made this impossible.<sup>58</sup> In the technical realm, as in the political realm, the government made scarcely any impact on the fabric of rural life. The difficulties engendered by Japanese invasion and civil war made a poor situation hopeless. In 1947, China still had only 485 district extension offices in fourteen provinces; 21 provinces had none. In all, only about a hundred agricultural experiment stations, branches, and field stations had been established.<sup>59</sup> The experimental stations remained isolated from day-to-day farm activities, while the district extension offices could do little more than attempt to distribute small quantities of seeds and pesticides. In this they could not begin to fill the demand of an enormous agricultural sector.

The inability of the Chinese government to foster agricultural development contrasts markedly with Japanese efforts in colonial Taiwan.

There the creation of a network of agricultural associations and experimental stations greatly facilitated the spread of new farm technologies, particularly those centered on the use of new strains of seeds. The result was a considerable increase in crop production, despite the fact that little change had been effected within the existing social order.<sup>60</sup>

#### Agricultural Stagnation and the Prospects for Development

By the middle of the nineteenth century the agricultural economy of China had developed as much as possible, given the constraints of its technology.<sup>61</sup> Traditional Chinese agriculture provided a standard of effective land utilization which few pre-modern agricultural systems managed to equal.<sup>62</sup> But with per-acre yield as high as possible without the introduction of inputs from a modern industrial economy, Chinese agriculture was unable to meet the challenges posed by the relentless pressure of population increase.<sup>63</sup>

The further development of China's agriculture was not an impossibility, but it did depend on new agrotechnical inputs. In the 1930s, John Lossing Buch believed that a 25 per cent increase in farm production could be achieved through more intensive farming and the use of modern inputs. In this first study of Chinese agriculture he enumerated eight basic techniques for the development of agriculture, techniques which were to bear striking resemblance to Mao Tse-tung's "Eight-Point Agricultural Charter" of later decades.<sup>64</sup>

- 1) more thorough preparation and cultivation of the soil
- 2) the use of more fertilizer
- 3) more and better irrigation and drainage
- 4) the control of insects and diseases
- 5) the breeding and propagation of better crop varieties
- 6) the breeding of better animals



- 7) the growing of crops which will bring greater food production per unit of land or greater money return
- 8) the economic management of the farm business in such a way that the same or greater receipts may be obtained with less expenditure or more wise expenditure of capital and labor

Many of these elements required the introduction of new inputs from the industrial sector and the application of research findings derived through scientific inquiry. But of equal importance, the development of China's agricultural economy required a new organizational base to allow the dissemination of new inputs and techniques throughout the countryside. In the 1920s, Sidney Gamble noted these words of a peasant in the "model county" of Ting Hsien in regard to government-sponsored efforts to promote agricultural development: "though not much development is made, the spirit is not to be neglected".<sup>65</sup> But to allow the efflorescence of this spirit and to make it serve agricultural development, an appropriate organizational network had to be constructed in the Chinese countryside.

## CHAPTER IV

### Organization, Technology, and Development in the Chinese Countryside

Through two decades of Communist rule farm technology has evolved concurrently with the fundamental changes that have taken place within the rural sector. The development of China's agricultural technology has not taken place in a social and political vacuum, but has been carried by successive waves of social mobilization and political change. Similarly, the organization of agrotechnical services has reflected basic changes in the social organization of the Chinese countryside as a whole. In China, technology, politics, and organization are intimately connected, and changes in the pattern of agrotechnical development bear the imprint of basic policy shifts.

In order to put into perspective the role played by Chinese agrotechnical agencies, it is first necessary to present a general account of social and economic change in the countryside.<sup>1</sup> This is done in the first section of this chapter. The following sections then take up the specific technical policies implemented by these agencies, while the third section is concerned with a historical account of the evolution of the specific agrotechnical agencies which have been established to effect these policies.

The general social, technical, and organizational framework having been presented, the remainder of the chapter will be concerned with the involvement of the agrotechnical agencies in socio-political change. The general theme of these sections is political development, especially in relation to the attempts of the Maoist leadership to elicit mass political participation in the countryside while at the same time preserving overall central control. The use of mass participation for agrotechnical development is the subject of the concluding sections.

### Political and Economic Policy in the Countryside

By late 1949 the Chinese Communist Party had succeeded in destroying the last remnants of Kuomintang power on the Chinese mainland. Yet the revolution was still incomplete. Land and property were maldistributed, and significant segments of the rural society gave only reluctant assent to Communist rule. Magnifying these problems was a level of poverty which attested to a very low level of economic and technological development. To secure its rule, the new government used massive political campaigns to break the power of the landed elite. In the realm of the rural economy, however, Communist-led activities were far less decisive than had been the case in the political and social sphere. While few among the leadership doubted that the technical transformation of agriculture was an integral element in the creation of a new rural order, changes in farm technology were minor affairs in comparison to the political and social changes which swept over the countryside.

The social and political reconstruction of rural society through the equalization of landholdings had always been a key element of Communist policy.<sup>2</sup> However, the Communist leadership realized that the tempo of land redistribution had to be carefully modulated, lest the disruption of the rural order result in the diminution of agricultural production. The Communists fully realized that agrarian radicalism could get out of hand, and that the productive efforts of the rich and middle peasants could be overwhelmed by the "utopianism" of the poorest strata of the peasantry. The need for moderation in the service of agricultural production was underscored in a report at the Second Plenary Session of the East China Military and Administrative Commission on 14

July 1950 by Jao Shih-shih, a member of both the Party's Central Committee and the State Planning Commission:<sup>3</sup>

In carrying out agrarian reform, every step should be coordinated with the restoration of agricultural production. All measures should be geared with a view to benefiting production, while all work must be in keeping with the season of agricultural production and must not interfere with farming ... [T]he central task of any area that has completed its agricultural reform should be the organization of the masses for production.

In the interests of maintaining incentives and the internal organization of economic life, the Communists were willing to tolerate the existence of a stratified rural society. The agrarian laws promulgated during the period of land reform explicitly recognized the existence of complex divisions within the peasant social order and guaranteed that small landowners could retain their holdings. According to Party principle at the time, untrammelled rural egalitarianism threatened to seriously inhibit the willingness of the upper strata of the peasantry to expand their production. As one newspaper editorial warned, " 'eating together' [i.e., complete egalitarianism] not only will not encourage and develop production, but will on the contrary affect production and obstruct its development. Rural socialism is therefore a reactionary idea."<sup>4</sup>

While the productive efforts of rich peasants played an important role in the rural economy, the Communists had every expectation that a somewhat limited land reform would provide a strong stimulus for increased productive efforts by less-favored members of the peasantry. Article 1 of the Agrarian Reform Law of 1950 contained the expectation that the redistribution of land previously held by landlords would "set free the rural productive forces [and] develop agricultural production".<sup>5</sup>

This belief was echoed in a report on the Agrarian Reform Law delivered by Liu Shao-ch'i: "the basic aim of agrarian reform is not merely one of relieving the poor peasants. It is designed to free the rural productive forces from the shackles of the feudal land ownership system of the landlord class, in order to develop agricultural production".<sup>6</sup>

Still, the steady, if slow, recovery of agricultural production during the early years of the new regime was more a result of the restoration of peace and order than it was the result of land redistribution. In the past, inequalities in land ownership probably did not result in the stifling of farm production to any large degree, so a sudden acceleration of crop production subsequent to land reform was rather unlikely.<sup>7</sup> Rather, the redistribution of land probably impeded production to some degree because the subdivision of farm plots resulted in the formation of some farm units too small even for single families to work efficiently.<sup>8</sup> Furthermore, land redistribution without concurrent measures for the provision of capital equipment and new inputs for the poor peasants could hardly result in increased production. Draft animals and farm implements had been largely unaffected by redistribution efforts, resulting in some misallocations of capital and labor inputs.<sup>9</sup>

As a necessary complement to land redistribution, the Communists therefore turned to the organization of Mutual Aid Teams (MATs) in order to facilitate the pooling of farm labor and capital. In so doing, the Communists returned to an organizational mode that had served them well in the past. MATs had been organized throughout the Yen'an period, both as a means of expanding production and of consolidating Communist power. While the Communist leadership had taken pains to explain the

economic advantages of cooperative farming ventures for individual peasants and for the economy as a whole, the political value of re-organizing farm work was of equal importance to them.<sup>10</sup> The Party's task was facilitated by the fact that the organization of MATs did not represent the imposition of alien institutions on the social and economic order of the village. Some form of mutual aid had been practiced by Chinese peasants for centuries.<sup>11</sup> Communist organizational efforts gave greater scope to these traditional patterns while making them an integral element in the political mobilization of the countryside. This had readily been done under the wartime conditions confronting the Yen-an-based government. With the incorporation of the total population into the war effort, the Communists had acquired excellent opportunities for organization and political mobilization. MATs became part of this overall effort, for instead of being purely productive units they were amalgamated into military units. An MAT frequently was identical with a unit of the People's Militia.<sup>12</sup>

In the early 1950s, the martial environment fostered by the Korean War could engender similar feelings, but the main motivation underlying the formation of the MAT was economic. The sharing of labor and farm capital, it was hoped, would help overcome the losses of production caused by the parcellization of land. Accordingly, the Central Committee's directive on mutual aid in early 1953 stated that " .. whatever is done [in the formation of MATs] must be aimed at really raising productivity, so as to produce more grain or other types of crops and to increase income".<sup>13</sup>

Although the MATs helped to smooth out some of the factor mis-

allocations which followed land redistribution, they did little to change the level of farm technology. MATs were expected to build up a collectively owned stock of draft animals and agricultural implements through an annual levy on the peasants' income, but as long as most investment decisions continued to be made by impoverished individual households, the agricultural sector would be denied the comprehensive efforts necessary for an agrotechnical breakthrough.<sup>14</sup> Many among the Communist leadership believed that a new organizational structure was required if the enthusiasms created by the redistribution of land was to generate the productive forces necessary for agricultural development.

Through the first years of the 1950s a crisis began to build as the small peasant economy proved itself inadequate for the tasks of economic construction. In 1953 and 1954 grain production had grown by only 1.5 and 2.3 per cent respectively, while cotton production had actually fallen by nearly 10 per cent each year.<sup>15</sup> Additionally, in February 1955, Minister of Agriculture Liao Lu-yen admitted that the targets for silk, jute, tea, oilseed, and livestock had not been fulfilled.<sup>16</sup> While the economic situation gave little cause for cheer, political developments in the countryside were even more ominous. Land reform had broken the back of the landlord class, but control over rural society was passing into the hands of the wealthier elements of rural society, many of whom owed their elevated status to the redistribution of land. The "kulakization" of the countryside was underway, posing grave threats to the Party's power, as well as to the long-term egalitarian goals of the Communists.



As a means of engineering a frontal assault on the twin problems of economic stagnation and the erosion of Communist power, the Party began to take drastic steps to re-organize rural society. The basic result of this effort was the widespread formation of Agricultural Producers' Cooperatives (APCs) throughout the Chinese countryside. Within the APC, the majority of the land was jointly owned and operated, and the agricultural surplus distributed largely on the basis of the amount of communal labor performed by the individual peasant. At the beginning of the cooperativization drive, the existence of class divisions was tolerated, and some income was awarded in the form of rent payments remunerated in proportion to the amount of land contributed.

Cooperatives had been organized under Communist aegis during the Yen'an period and during the first years of the People's Republic, but until 1955 the pace of cooperativization had remained sluggish. By the spring of that year only 14 per cent of China's peasant households were in any type of cooperative, and most of these were confined to North, Northeast, and East China.<sup>17</sup> By the end of that year, however, the pace of cooperativization began to accelerate dramatically. The source of this upturn was Mao Tse-tung, who in a speech delivered on 31 July made it clear that the formation of APCs was the only acceptable solution for the economic and political ills besetting the countryside. Attempts to implement the Maoist program for an advanced rate of cooperativization had in the past met with considerable resistance from many Party functionaries. In his speech, Mao characterized those following a cautious policy of cooperativization as people "tottering along like a woman with bound feet and constantly complaining 'you're going too fast'."<sup>18</sup>

In order to nullify the power of these Party conservatives, Mao packed 388 regional Party secretaries into an "enlarged meeting" of the Central Committee, resulting in the swift passage of the cooperativization measures outlined in the July speech.<sup>19</sup>

During the second half of 1955 the tempo of cooperativization began to pick up dramatically; from July to the end of the year over 50 million peasants had entered cooperatives.<sup>20</sup> By the end of the following year the process was nearly complete, with 96.6 per cent of China's rural populace absorbed into APCs.<sup>21</sup> But this did not signify the end of the movement. Elementary or "semi-socialist" cooperatives were quickly converted to "advanced" cooperatives (sometime referred to as "collectives" in the West). Advanced cooperatives were larger in land area and population, more unified in management, and reckoned members' incomes purely in terms of labor performed. Rent payments were abolished. After their introduction in July 1956 these advanced cooperatives began to absorb the smaller semi-socialist cooperatives, until by the end of the year they encompassed 88 per cent of the peasant households.<sup>22</sup> By the end of 1957 the process was nearly complete; China's 120 million peasant households had been organized into 752,113 cooperatives, most of them of the "advanced" variety.<sup>23</sup>

Impressive as this achievement appeared to be however, the reorganization of rural society failed to bring many of the anticipated benefits to the countryside, particularly in the crucial matter of increasing crop production. In the winter of 1956-57 the government admitted that the establishment of APCs had not resulted in an increase in peasant income.<sup>24</sup> Although few Communists seemed to perceive it at

the time, administrative re-arrangements had proven an inadequate substitute for agrotechnical development. The problem of stagnating farm production was essentially technological, for, as Anthony Tang has pointed out, by 1957 Chinese agriculture "appeared to be fully caught up in the inexorable law of diminishing returns".<sup>25</sup> Agriculture was showing definite signs of having used up all of the traditional sources of growth.<sup>26</sup> The Chinese leadership was aware of difficulties in the agricultural sector, but, as in the past, it was reluctant to make a strong commitment to expand investment in the rural economy. Once again, an attempt was made to use social and political mobilization in the hope of coaxing out "productive forces" which had hitherto lain dormant. In order to effect a Great Leap Forward, the Communist leadership under the direction of Mao Tse-tung began to make massive efforts to tap China's seemingly abundant supply of rural labor for purposes of capital construction in the countryside. In particular, small-scale water-conservancy projects began to be built through the mobilization of available peasant labor.<sup>27</sup> During the slack farming season that stretched through the winter of 1957-58, 100 million people worked an average of 130 days each on hydraulic projects.<sup>28</sup> When regular agricultural operations were taken up, the scale of production organization was similarly expanded; "shock brigades" for ploughing and planting began to move across the countryside, supplanting traditional modes of organizing farm work.<sup>29</sup>

The massive mobilization of rural labor had to be accompanied by parallel changes in the organization of rural society. Advanced APCs were co-terminus with individual villages (t'sun), but the engineering of even small-scale water projects required larger territorial units;

existing APCs were too small and parochial to accomodate the new rural activities. Larger units were needed to allow a workable division of labor and the flexible use of the peasantry as a labor force.<sup>30</sup> The innovations in labor utilization were also predicated on the belief that some components of the rural population, particularly women, had been under-utilized in the past. New organizational arrangements were thus necessary to allow women to be freed from their traditional household tasks.

As a solution, the Communists turned to the formation of a new organizational unit in the countryside, the People's Commune. Much larger in size than previous productive units, the People's Commune was created through the amalgamation of existing APCs and the expansion of the scope of their activities. Although no planning document or Party resolution had made mention of the Communes at the beginning of the Leap, by the summer of 1958 they began to proliferate.<sup>31</sup> By the end of August, 30.4 per cent of all peasant households had been incorporated into Communes, with the number rising to 48.1 per cent by early September, then to 65.3 per cent by the middle of the same month. By the end of the year, no less than 99.1 per cent of the peasant households were reportedly incorporated into People's Communes.<sup>32</sup> To be sure, much of the rural reorganization was purely nominal, at least at first, but the establishment of the Communes did represent a major effort to create a new economic, political, and social order in the countryside. Under the slogan ch'uan-li hsia-fang (downward transfer of authority and power) initiative was to pass to local cadres, with the Communes providing a new organizational base for the mobilization of the masses.<sup>33</sup>

In addition to facilitating the mobilization of labor for water-control projects, Commune organization was designed to bring under unified management a vast variety of rural endeavors. Industry, agriculture, commerce, education, and defense (kung-nung-sheng-hsueh-ping) all became the concerns of Commune management, resulting in a vast expansion in the responsibilities of local cadres.<sup>34</sup> As a resolution on the People's Communes adopted by the Sixth Plenary Session of the Party's Eighth Central Committee put it, "labor power and the means of production can, on a larger scale than before, be managed and deployed in a unified way to insure that they are used still more rationally and effectively, and consequently to facilitate the development of production".<sup>35</sup> The rationality envisaged by the Communist leadership would emerge not in conjunction with the development of bureaucratic structures but through the waging of military-style campaigns. The martial images upon which leadership principles were based can be seen in Southern Daily's assertion that "all plans are battle plans. Just as in the past we fought wars with enemies, so we are fighting wars with the natural world".<sup>36</sup>

The use of martial imagery and the partial development of organizational principles modelled along military lines was fully consonant with the frenetic pace of the Leap, but the Chinese soon found that mass mobilization and military-style campaigns were poor vehicles for the solution of rural economic problems. Many elements of the Communist leadership quickly came to this realization, and the dramatic changes ushered in by the Leap began to be reversed. The first counter-movement came in December 1958, when the Central Committee's Sixth Plenum called for moderation in the efforts to communize the nation.<sup>37</sup> While the

Commune remained as the prime focus for political and economic activity, significant powers were delegated to the "production brigade" and "production team", resulting in a "three-level principle" of ownership and management. In the majority of cases, these two bodies replicated long-standing social arrangements in the countryside, the brigade being co-extensive with the natural village (t'sun) while the team was comprised of a single small village or one contiguous segment of a village. When the Central Committee's Eighth Plenum met at Lushan in August 1959, the powers of the brigade were further extended. Recognized as the "basic unit of ownership", the brigade became an independent accounting unit with its own administrative network.<sup>38</sup> Under this arrangement, the Commune management could set production targets and technical measures only after joint consultation with all of its constituent brigades.

Even this degree of decentralization did not resolve the basic difficulties of chaotic administration and diminished incentives which had dogged efforts to transform rural society through the creation of People's Communes. Accordingly, by October 1960 the production team took on the responsibility of being the basic unit of ownership in the countryside. A unit comprised of ten to twenty households, the team seemed to provide a sufficient degree of motivation for the peasants to fulfil their productive tasks. To insure that it would have every opportunity to fulfil these tasks and achieve its production targets, each team was guaranteed a fixed share of farm land, manpower, draft animals, and farm tools.<sup>39</sup> The Commune had become an administrative shell, having lost most of its power to manage the rural economy.

By 1961 it had become evident that the Great Leap Forward had not

resulted in any great leaps of production. On the contrary, China was caught in a severe economic crisis. The agricultural sector was in particularly bad shape, and while outright starvation was generally averted, food production became a matter of the greatest concern. Catastrophic weather conditions and the withdrawal of Soviet aid had been important factors in the economic decline, but mismanagement at the Commune level, along with the general organizational tenor of the Leap, also bore major responsibilities for making a bad situation worse. A reversal of the slide called for a serious reappraisal of the modes of leadership and organization which had prevailed for much of the Great Leap Forward. Ideological exhortation and political mobilization were denigrated, and the development of the rural economy was largely left to the efforts of a peasantry working within a decentralized political order.

At the same time, however, ideology and politics could not be totally submerged. The basic notions embodied in the Leap, although often distorted and perverted by local cadres, did bear the stamp of Mao's own thinking, and the repudiation of the Leap had serious consequences for the maintenance of China's ideological foundations. Thus, while economic liberalism served to put the economy on the road to recovery, after 1962 it was counterposed by a deepening emphasis on ideological education and "politics-in-command" tactics. Through the campaigns comprising the Socialist Education Movement, the concepts of struggle, mass mobilization, and political participation were once again brought to the forefront.

The first half of the 1960s had been marked by conflicts over the relative merits of political mobilization and economic liberality. China seemed to be without any unifying ideology.<sup>40</sup> By late 1965 politics and

ideology became prime concerns as the tensions which had lain beneath the surface erupted. With the initiation of the Great Proletarian Cultural Revolution, yet another mass movement began to sweep across China. Like the cooperativization movement and the Great Leap Forward, the Cultural Revolution consisted of a thoroughgoing assault on the existing format of Chinese society. The parallels between the Cultural Revolution and the earlier movements should not be overemphasized however. Whereas the cooperativization movement and the Great Leap Forward had immediate and direct repercussions on the rural economy and society, the Cultural Revolution largely remained confined to the cities, affecting no more than twenty per cent of the countryside.<sup>41</sup> Also in distinction to the two great periods of politically-induced change, the Cultural Revolution was not intended as a spur to the economy. On occasion the Chinese media did present the idea that energies unleashed by the political struggles of the Cultural Revolution would result in new economic breakthroughs, but on the whole the ideology of the Cultural Revolution proffered few hopes for a material utopia.<sup>42</sup>

Mao's chief concern as he tried to direct the Cultural Revolution was not the material transformation of China, but the inculcation of the proper political spirit within the Chinese people, a spirit that would itself simultaneously resolve the problems of political transformation and technological development. The application of this Maoist approach became a key issue during the Cultural Revolution. Although the differences between Mao and his opponents concerning economic policies cannot be easily factored out, the use of ideology and politics in the development of the economy was a vital issue.<sup>43</sup> An example of putting Maoist



principles into practice can be seen in the scheme for developing farm production which was put forth by the Chinese Academy of Agricultural Science in April 1966:<sup>44</sup>

... take the thought of Mao Tse-tung as the guide; take class struggle as the key; let politics command work; adhere to the general line for socialist construction; preserve the policy of self-reliance; make the intellectuals identify themselves with the workers and peasants, specialists with the masses, and scientific experiment with production practices; follow the mass line; continue to push the scientific and technical revolution forward, and serve Socialist construction and proletarian politics.

In similar spirit, charges were brought against Liu Shao-ch'i that he advocated excessive reliance on material incentives, a policy of "workpoints in command". Throughout the Cultural Revolution intensive debates were waged concerning the proper manner of remunerating the peasantry and awarding workpoints, the credits awarded to individual peasants for work performed. For a while the "Tachai System" was implemented, whereby political consciousness and activity were evaluated along with actual labor as a means of assessing workpoints.<sup>45</sup> But while the Cultural Revolution was still in effect, some Chinese sources began to hedge on the issue.<sup>46</sup> Labor points continued to be recorded on the basis of task performance as the Chinese economy continued to make use of "economism" as a means of stimulating good productive efforts.

With the cessation of the Cultural Revolution, domestic peace has returned to China and the rural sector continues to operate within a format that was established in the early 1960s. The Communist leadership seems to have come to the conclusion that in the rural sector at least, no amount of political mobilization and organizational rearrangement can substitute for technological development. The low level

of agricultural technology remains one of the severest impediments to the realization of the Communist vision of a revitalized social and economic order. The Chinese leadership seems to have realized that the farm sector could no longer be slighted.

#### Agrotechnical Development: Policies and Performance

As was noted in the opening section, technological policy and socio-political policy have always been intertwined in Communist China, and this section will chart how agrotechnical policies have evolved in conjunction with basic changes in the economic and political order. The exact nature of the political process involved in the setting of policy, as well as the role played by the persons involved, is as yet unknown in the West, but the general pattern of policy changes can be ascertained. Throughout, agrotechnical programs have been linked with fundamental transformations of rural society, and a general picture of the joint evolution of the two can be presented.

The importance of agrotechnical development entered the consciousness of the Chinese leadership only slowly. The developmental efforts initiated during the first years of the new regime were concentrated on the rapid development of the industrial sector, leaving little for agriculture. The relative indifference of the government to agriculture was demonstrated when Peking took direct control of the entire economy through the operation of its first Five-Year Plan, which was initiated in 1953. Focussed on industrial growth, the Plan allocated less than 8 per cent of the state budget for agricultural development.<sup>47</sup> Even this small figure overestimates the extent of state aid to agriculture, for it includes investments in forestry and water conservation, the latter

more attuned to the development of hydroelectric power than to the irrigation of croplands.<sup>48</sup> As a result of government parsimony the rural economy remained stagnant, especially in comparison with the fast pace of industrialization. While the tempo of economic growth picked up markedly during the first years of the Plan, agriculture contributed little to the growth rate - only 12 per cent.<sup>49</sup>

The Communist leadership was not of course totally oblivious to the needs of the rural economy, but it hoped that the re-organization of the rural social order would serve as a substitute for technological development and capital investment.<sup>50</sup> But such a policy contained inherent contradictions. Land redistribution had stimulated the demand for new technical inputs, but the provision of these inputs was severely restricted by the industry-first policies of the central government.<sup>51</sup> Similarly, the formation of MATs had facilitated the collection of taxes for agricultural development yet these funds could not be used to purchase modern inputs.<sup>52</sup>

Collectivization led to a greater degree of coordination in the management of the rural economy but the consolidation of organizational units had little impact on crop production so long as the peasants continued to be hindered by a traditional technology.<sup>53</sup> As Dwight Perkins noted of the cooperativization period, "the [technical measures] of central importance were the ones that had been used in China for centuries. Only the methods of organizing labor to carry them out had changed."<sup>54</sup> As one Ta Kung Pao article admitted, "the productive forces in our countryside have undergone no fundamental change".<sup>55</sup> In 1955, China's Minister of Agriculture conceded that no sweeping innovations in agricultural technology were in the offing, and that future developments

would center on making better use of what was at hand through the improvement of farm tools and the extension of small-scale irrigation projects.<sup>56</sup>

With farm technology largely unchanged, the Chinese leadership could only hope that the collectivization of agrarian society would result in sufficient production increases to obviate the need for state investment. Some Communists apparently believed that the creation of an APC would result in an immediate rise in output of 10 to 20 per cent within a year or two of the cooperative's formation.<sup>57</sup> With the expectation that the formation of APCs would be accompanied by an increase in farm production, Mao Tse-tung himself attempted to construct a rural development program that would fulfil the promise of cooperativization.<sup>58</sup> Mao's program, the "Draft Outline for Agricultural Development in the Nation, 1956-67", called for the consolidation and expansion of the cooperative economy in conjunction with the implementation of a number of practical measures designed to develop farm production. Specifically, the Program called for: 1) the construction of water conservancy projects and soil conservation measures, 2) the use of improved farm tools and the gradual introduction of agricultural mechanization, 3) efforts to discover every possible source of manure and improved methods of fertilizing, 4) the extension of the use of selected species of crops and animals, 5) improvement of the soil, 6) the extension of multiple cropping, 7) planting more high-yield crops, 8) the improvement of farming methods, 9) the elimination of insect pests and plant diseases, 10) the opening up of virgin and idle land and the extension of cultivated acreage.<sup>59</sup> Activities such as these were certainly not controversial. The chief defect of Mao's Program was that it was too

broad to be of much use for the formulation and implementation of specific agrotechnical programs. At the same time however, the Program also contained timetables for cooperativization which were unacceptable to Party and government officials who were of a more conservative cast of mind. This resulted in the tabling of the Program in April 1956, only a few months after it had been announced.<sup>60</sup> The Program was then revised in 1957 and again in 1960, in which form it was finally adopted amidst the radicalization of the Great Leap Forward.<sup>61</sup>

Ambitious as it was, Mao's Program was still not a signal for increased state investment for agrotechnical development. The overall thrust of the Program was that agricultural development was to be generated by organizational development, with the attainment of economies of scale providing the basis for future growth.<sup>62</sup> But the reorganization of rural society without attendant changes in farm technology contained many hazards. Although technological development was lacking, over the centuries the Chinese variety of labor-intensive agriculture had reached a high level of sophistication. Any alteration in traditional productive practices could throw farm operations seriously out of joint. Change in these patterns was desirable, and indeed feasible, only if rural labor was reorganized for the specific purpose of making use of new inputs and techniques. Accordingly, the unwillingness of the central government to infuse capital into the agricultural sector made the alteration of traditional work patterns a difficult and potentially dangerous course of action. However, as Franz Schurmann has pointed out, the Chinese leadership was "perhaps not aware ... that the technological revolution could not be postponed, for as the social revolution created new forms of production organization, it also created new capital needs

in agriculture".<sup>63</sup>

Apparently unmindful of this, the Chinese made another attempt to substitute rural reorganization for agrotechnical development. With the establishment of the People's Communes, many people, leaders and masses alike, believed that a mobilized peasantry, working within a new organizational matrix, could build a modern farm economy largely through their own efforts. Gradually, however, came the realization that even an aroused and enthusiastic rural populace would need some material aid if they were to transform agricultural technology and increase crop production. In 1958 the New China News Agency reported a joke making the rounds among the peasants: "Socialism is good, but it does not make much allowances for sleep, and with the advent of Communism we shall have to do without sleep altogether". The writer observed that "the joke reflects the urgent desire of the masses for technological revolution".<sup>64</sup> This conclusion was seconded by a People's Daily article which noted that the activism of the masses, while important, was not a sufficient basis for increasing agricultural productivity; it was also necessary to "carry out tools innovation and improvement extensively, create sources of motive power and energy, and carry out on a large scale the semi-mechanization of agriculture".<sup>65</sup>

In these endeavors, the peasants still received little help from the government. Their unaided labors continued to be the foundation of the rural economy.<sup>66</sup> The tasks laid before the rural work force, most of them of a traditional nature, were summarized into an "Eight-Point Charter for Agriculture", which was directly attributed to Mao Tse-tung himself. The Charter dealt with water conservation, fertilization, soil

conservation, and improvement, seed selection, close planting, plant protection, tool improvement and innovation, and better farm management (shui-fei-t'u-chung-mi-pao-kung-kuan).<sup>67</sup> All of these activities could of course be pursued with little or no state aid.

As the failure of Great Leap Forward policies became evident and some areas of China teetered on the brink of starvation, the Chinese finally modified their agricultural policies, beginning for the first time to pay close attention to the technical and capital needs of the rural sector. In 1959 Mao put forth his policy of "agriculture as the foundation" of the economy, which was confirmed as official Party policy in April of the following year.<sup>68</sup> In that year, state aid to agriculture reportedly increased by 50 per cent.<sup>69</sup> But this did not mean the end of Commune self-reliance:<sup>70</sup>

... funds allocated for state aid are limited; funds needed for the promotion of agricultural production and for the technical transformation of agriculture depend principally on the accumulation of the People's Communes through self-exertion, selfless labor, and running the commune industriously and thriftily.

Still, while Commune self-reliance was a forceful ideological theme, the Maoists had been stripped of their illusions that economic development and technical transformation could be effected solely through organizational re-arrangements. The assignment of too low a priority to agriculture and to rural capital investment had been one of the most fundamental errors of Great Leap Forward policy, and the "agriculture as the foundation" policy was reiterated during the Ninth Party Plenum in January 1961.<sup>71</sup> The Plenum took note of the low level of agrotechnical development and emphasized the importance of bringing about the "four transformations" in the countryside: mechanization,

electrification, irrigation, and the application of chemical fertilizers and insecticides.<sup>72</sup> The implementation of these changes was expected to take a long time; when the Party's Tenth Plenum presented its resolution in September 1962, a timetable was presented which allotted no less than four or five Five-Year Plans for the basic completion of the technical transformation of agriculture.<sup>73</sup> Even Mao lowered his sights, conceding that "because of the economic conditions of our nation, a longer period of time will be required for technical reform than for social reform".<sup>74</sup>

Attempts to accelerate the pace of "social reform" during the Cultural Revolution were not paralleled by efforts to make sudden breakthroughs in agricultural technology. Mao's Eight-Point Charter continued as the "basic, complete method for developing agriculture",<sup>75</sup> although with the proviso that each element of the Charter had to be adapted to fit local conditions, and that the scientific testing of all procedures was essential. As the Cultural Revolution polarized the political leadership, previous failures in implementing the Charter were attributed to the sabotage of Liu Shao-ch'i.<sup>76</sup> It is doubtful that Liu was really the perpetrator of the agrotechnical fiascos which marred the Leap, but such charges may have been brought out with the intention of restoring the influence of basic-level cadres. The disasters caused by their ill-informed attempts to alter farming practices could now be attributed to the pernicious influence of the "big swindler" Liu Shao-ch'i.

(Mechanization)

Unlike the Soviets, the Chinese Communists never considered the mechanization of agriculture to be the prime desideratum of either agrotechnical development or of agricultural collectivization. From the



beginning, the advance of cooperativization was not tied to mechanization.<sup>77</sup> This was not, however, a foregone conclusion, but apparently was resolved only after considerable debate on the part of the Chinese leadership. During the early years of the People's Republic an uneasy truce seems to have existed between Mao Tse-tung and Liu Shao-ch'i over the issue of agricultural mechanization. Mao agreed that the mechanization of farm activities should be a basic goal, but unlike Liu, he did not feel that mechanization was a necessary prerequisite for cooperativization. Liu appears to have been of the opinion that the distribution of farm implements would be necessary in order to "bribe" the peasants into joining cooperatives, while Mao, with his belief that the peasants were above bribery, felt that the socialization of the rural sector could operate independently of farm mechanization.<sup>78</sup>

The accelerated pace of cooperativization following Mao's 1955 speech did not resolve the issue, however. The 12-Year Draft Program made no substantial commitment to the mechanization of agriculture, only presenting the limp statement that, "agricultural mechanization should be carried out gradually, in line with the industrial development of the country".<sup>79</sup> But during the Great Leap Forward, Mao appeared to reverse himself, propounding an accelerated schedule for agricultural mechanization: "a small-scale solution in four years, a medium-scale solution in seven years, and a large-scale solution in ten years".<sup>80</sup> Whatever the precise definition of these terms, this was an extremely ambitious program, given the weak industrial base of the nation; it has yet to be realized.

In contrast to the relative lack of development in the area of

mechanized farming, the agricultural economy did reap substantial benefits from the manufacture and use of conventional farm implements. According to Chinese accounts, from 1949 to 1952, a total of 59 million traditional farm implements (such as ploughs and carts) and another 200 million small farm tools had been distributed to the peasantry.<sup>81</sup>

In 1955 the government modified its policy of refraining from the large-scale production of heavy farm implements and began to devote massive efforts to the production of a new type of plough, one having two wheels and one or two shares. Initially, their use was confined to the northern regions, but the accelerated pace of cooperativization seemed to present excellent opportunities for using these devices on newly consolidated plots of farmland. At first, the results following the introduction of the ploughs were encouraging. In late 1956 the New China News Agency reported that experiments conducted in Shantung had demonstrated that 22 per cent more grain could be produced through the use of the new ploughs.<sup>82</sup> But purchases of the implements failed to correspond to their promise. During the first half of 1956 the Chinese admitted that at most only 57 per cent of the ploughs had been distributed, and that of these, perhaps one in five had been cleared "through all forms of forced distribution".<sup>83</sup> The stricter controls maintained by APCs facilitated the unloading of these unwanted devices, but this did not insure that they would be used to good effect. In many parts of China the terrain was unsuited to the heavy, cumbersome implements, especially in the South, where the soft ground made the wheels skid and sink. Draft animals were unaccustomed to being yoked together for pulling the ploughs, and many rural roads and paths were too narrow to accomodate them. Chinese planners had miscalculated the

effective demand for the ploughs as well as the objective possibilities for the utilization of so vast a quantity of new implements. The attempt to generate an agrotechnical revolution through nothing more than the production of a new type of farm implement had proven a failure.

The double wheel plough having been left behind, the agrotechnical policies of the Great Leap Forward emphasized the improvement of traditional farm implements such as carts and water wheels, which could benefit from detail improvements and the fitting of ball bearings to moving parts. This tactic dovetailed nicely with the development of local industries, for in the autumn of 1958 virtually every county in China was reportedly engaged in the manufacture of ball bearings, thereby accounting for 70 per cent of the nation's production.<sup>84</sup> With the support of local industry, benefits to farm mechanization could be accrued well in advance of the day when agricultural production would be completely mechanized.<sup>85</sup>

During the Cultural Revolution, the issue of agricultural mechanization once again came to the fore. The divergent ideas concerning the best plan for agricultural mechanization came out into the open, and in the course of the political struggle the assertion was made that "the various problems existing in the work of agricultural mechanization are iron-clad proof of the crimes of the handful of top Party 'capitalist roaders' in pushing the counter-revolutionary revisionist line".<sup>86</sup> Seemingly a firm supporter of agrotechnical development, Mao could be quoted as having said that "the fundamental way out for agriculture lies in mechanization". Naturally, the use of machinery could not however be

made a substitute for mass mobilization and spiritual transformation.<sup>87</sup>

In any event, the mechanization of Chinese agriculture lay far in the future. By 1966 China had only 100,000 tractors, far below the requirements of a modern farm economy ; in 1970 high level officials admitted that the "basic completion of the nationwide transformation of agriculture" would take twenty to twenty-five years.<sup>88</sup> In the meantime, local industries would continue to steadily improve the quality of semi-mechanized implements.<sup>89</sup> Of these, perhaps the most significant were mechanical rice transplanters, which began to go into operation in the late 1960s.<sup>90</sup>

(Fertilizer)

Until recent years China's chemical fertilizer industry has lagged far behind the demand for artificial crop nutrients. For centuries Chinese farmers had raised their crops through the painstaking use of natural fertilizers such as animal manure, night soil, pond slime, oil-seed cakes, and vegetable compost. Because the generation of this fertilizer was closely tied to the crop cycle, Chinese agriculture was caught in a vicious circle: increased production of crops was dependent on increased supplies of fertilizer, which in turn was the result of increased crop production. Substantial agricultural growth was therefore dependent on the production of chemical fertilizers.<sup>91</sup> Unfortunately, during the first years of the People's Republic, the prospects for increased supplies of industrially produced fertilizers was hardly encouraging. In 1949 only two chemical fertilizer plants existed in all of China, with a combined capacity of 265,000 metric tons annually. As a means of increasing production, during the Great Leap Forward intensive efforts were made to produce chemical fertilizers in small commune in-

dustries. Although production figures were impressive, much of the fertilizer was of poor quality.<sup>92</sup> With the establishment of the "agriculture as the base" policy, chemical fertilizers began to be put into wider use as the chemical industry emerged as a prime focus of industrial development.<sup>93</sup> The Cultural Revolution's disruption of transportation and industry undoubtedly reversed some of these gains temporarily.<sup>94</sup> Nonetheless, the application of chemical fertilizer seems to have gone on throughout the period without any serious impediments.

In order to compensate for the shortage of chemical fertilizer, the government has taken an active role in the organization of drives to collect and distribute organic fertilizers.<sup>95</sup> With the formation of the APCs the possibilities for mobilizing labor for fertilizer collection were considerably increased.<sup>96</sup> Yet during the Great Leap Forward, the lack of development in the chemical fertilizer industry could be seen in increased emphasis being placed on hog raising for purposes of manure production, which was presented as "the central link in agricultural production increase".<sup>97</sup>

(Seeds)

While agrotechnical development continued to be stymied by the lack of support by the industrial sector, the Chinese turned to the cultivation and dissemination of improved seed varieties as a means of improving crop yields. At first, the Chinese placed much hope in the development potentials of improved seed strains, being of the opinion that production could be generally increased by 10 to 15 per cent through seed improvement.<sup>98</sup> Seed propagation centers were established within the People's Communes during the Great Leap Forward, even though the painstaking development and application of new seed varieties was not a particularly appealing

tactic, given the expectations of rapid growth which suffused the Leap.<sup>99</sup> During the following decade the development and propagation of new seed varieties became a prime focus for Chinese agrotechnical activities.<sup>100</sup> Still, the farm sector continued to be woefully short of scientifically cultivated seed varieties; by the mid-1960s only 3 per cent of China's total seed requirements were provided by official seed propagation farms.<sup>101</sup> The general thrust of seed policy can be seen in the slogan "four self services and one assistance"; the peasants could look forward to some state assistance, but the real work - production, selection, retention, and utilization - continued to be a matter of "self service".<sup>102</sup>

#### The Development of Agrotechnical Organizations

One of the basic characteristics of a modern society is a profusion of special-purpose organizations. These organizations facilitate the coordination of specialized activities, bringing greater efficiency to the performance of tasks that formerly had been handled by undifferentiated 'natural' groupings, such as the family. Chinese peasant culture contained much wisdom that could be applied to the tilling of the soil, but the future development of Chinese agriculture depended on the introduction and spread of new techniques by special-purpose organizations.

Subject to all of the strains inherent in a post-revolutionary society, Chinese agrotechnical organizations followed an uneven path of development, one which paralleled the shifting course of political and social change in the countryside. In this section, a brief history of the organizational support for agrotechnical services will be presented, and the development of these organizations will be linked to the evolution of political and social policies pertaining to the countryside.

Limited efforts at establishing agrotechnical organizations were a feature of the Yenan period.<sup>103</sup> During the early years of the People's Republic, the Chinese were unable to build much beyond this base, and no great strides were made in the organization of agrotechnical services. Small-scale experimental farms were set up as adjuncts to some mutual aid teams and APCs and a network of model state farms was established in some hsien.<sup>104</sup> But these were stopgap measures; agrotechnical development needed a firmer organizational foundation. This was provided by the foundation of Agrotechnical Popularization Stations (ATPSs). By the mid-1950s the Chinese had nearly 5,000 ATPSs and appeared well on their way to realizing their rather modest goal of establishing one ATPS in each ch'ü (an administrative unit intermediate between province and hsien, in 1955 there were 19,000 ch'ü in China).<sup>105</sup> The stations concerned themselves with a wide variety of tasks, relating to both technical aid and cooperative organization. This can be seen in one 1955 directive on the work of the stations:<sup>106</sup>

"The nature of the agrotechnical station is multi-functional. Their specific tasks are:

- a. To popularize new farm implements and to teach the use and repair of these implements.
- b. To popularize improved crop strains and guide the peasants to improve their cultivating techniques, select better seeds, accumulate and apply fertilizers, irrigate, cope with water-logging, conserve soil and water, and prevent pests.
- c. To teach the peasants how to improve the feeding and breeding of livestock, increase their number, and prevent animal diseases.
- d. To propagate the program of mutual aid and cooperativization in agricultural production, assist the APCs to improve their management, and help them with their accounting.
- e. To develop a nucleus of peasant technicians, aid the peasants to establish agrotechnical groups, and guide their activities.

- f. To carefully gather and analyze the important local experiences of the peasants which help them to increase production, and report them to the hsien agricultural bureau and the agricultural experiment stations for further research".

Aside from the ATPSs, State Farm Tool Stations were established for the demonstration and distribution of improved versions of traditional farm implements.<sup>107</sup>

Agrotechnical agencies had as their chief concern the dissemination of new farming practices, yet they could not avoid becoming caught up in the political activities aimed at the restructuring of rural society. At first, while the Communist government made efforts to penetrate the rural social order by locating officials at the hsiang level, agrotechnical agencies stood aloof from basic-level political activities, for they remained under the control of provincial and hsien governments.<sup>108</sup> But as basic-level political organizations began to develop in conjunction with the accelerated pace of cooperativization the political insulation of the ATPSs became more problematic. Agricultural Producer's Cooperatives were expected to "actively take measures to raise the level of agricultural production", thereby creating a new center for agrotechnical development.<sup>109</sup> This was a reasonable policy, for the burden of transforming agricultural technology could not be shouldered by specialized agencies such as the ATPSs, for by 1956 China could only claim one station for every 20 hsiang.<sup>110</sup> To make matters worse, the distribution of stations throughout the countryside was uneven; the old liberated areas of the North were better represented than those areas of the South, where a Communist administration was established only after 1949.<sup>111</sup>

ATPSs were cast into the mainstream of basic-level politics when, in



conjunction with the "socialist high tide" of agricultural cooperativization they were removed from hsien jurisdiction and put under the wing of the newly created APCs. This resulted in a diminution of ATPS autonomy, for the stations were expected to "rely on the APCs to carry out technical guidance according to the specific nature of work and local needs, and to sum up and popularize the local masses' experience in production increase".<sup>112</sup> Technicians in the employ of the hsien government found themselves becoming appendages of the APCs, strongly encouraged to "participate in agricultural production" within the cooperatives.<sup>113</sup>

The erosion of the autonomy of formal agrotechnical agencies became even more pronounced during the Great Leap Forward. Since the agrotechnical policies of the Great Leap Forward were predicated on campaign-style mobilization rather than precise bureaucratic organization, the notion of agencies such as ATPSs remaining separate from other sectors of rural life could not be tolerated by the organizers of the Leap. The tendency to merge agrotechnical services into the basic rural social and economic system was reinforced during the Great Leap Forward, with the Commune becoming the organizational center for the transmission of new inputs and techniques.<sup>114</sup> Reliance on the Communes for the generation of agrotechnical development was underscored by the use of "key points" - agricultural tracts within the Communes that had exemplary "high yield experiences"; these became centers for the demonstration of new agricultural techniques.<sup>115</sup> The National Congress on Agricultural Research decreed in 1959 that 232 such areas were to be set up in the countryside.<sup>116</sup> In a manner typical of the Leap, this target was soon raised and by the end of 1959, no less than 670 key points had been established at selected communes and districts "of a representative nature".<sup>117</sup>

Formal agrotechnical agencies regained much of their importance when the collapse of the Leap was followed by a general tightening-up of organizational structures. The broad details of the agrotechnical extension network as it existed in the 1960s are presented in the accompanying chart. Although the Cultural Revolution and its aftermath have undoubtedly changed some of the workings of the system, the basic pattern probably remains the same. It should be kept in mind, however, that the chart presents only the chief organizations involved with agricultural production and development, and that much is left unanswered concerning the connections between these organizations. The connecting lines and arrows are only the crudest representations of complex and subtle intra-organizational articulations. The precise manner in which agrotechnical policy is derived and promulgated is also something of a mystery, and the degree of latitude exhibited by intermediary governmental levels (such as provinces, ch'ü and hsien) in the enforcement of policy is still a matter for considerable speculation.<sup>118</sup>

For the outside observer, one of the most basic problems of organizational analysis results from the fact that a large number of agencies involve themselves in agrotechnical matters. In all but the simplest societies, activities are subject to the influence of a number of separate organizations, but in China, as in all Communist nations, this is intensified by the presence of dual, parallel hierarchies, one comprised of government officials, the other comprised of Party functionaries. The situation is further complicated by the division of the governmental sector into two distinct bodies headquartered in Peking: the Ministry of Agriculture and the Bureau of Commune Management. Although the nature of their relationship is still unclear, it appears

GOVERNMENT  
LEVEL  
CENTRAL

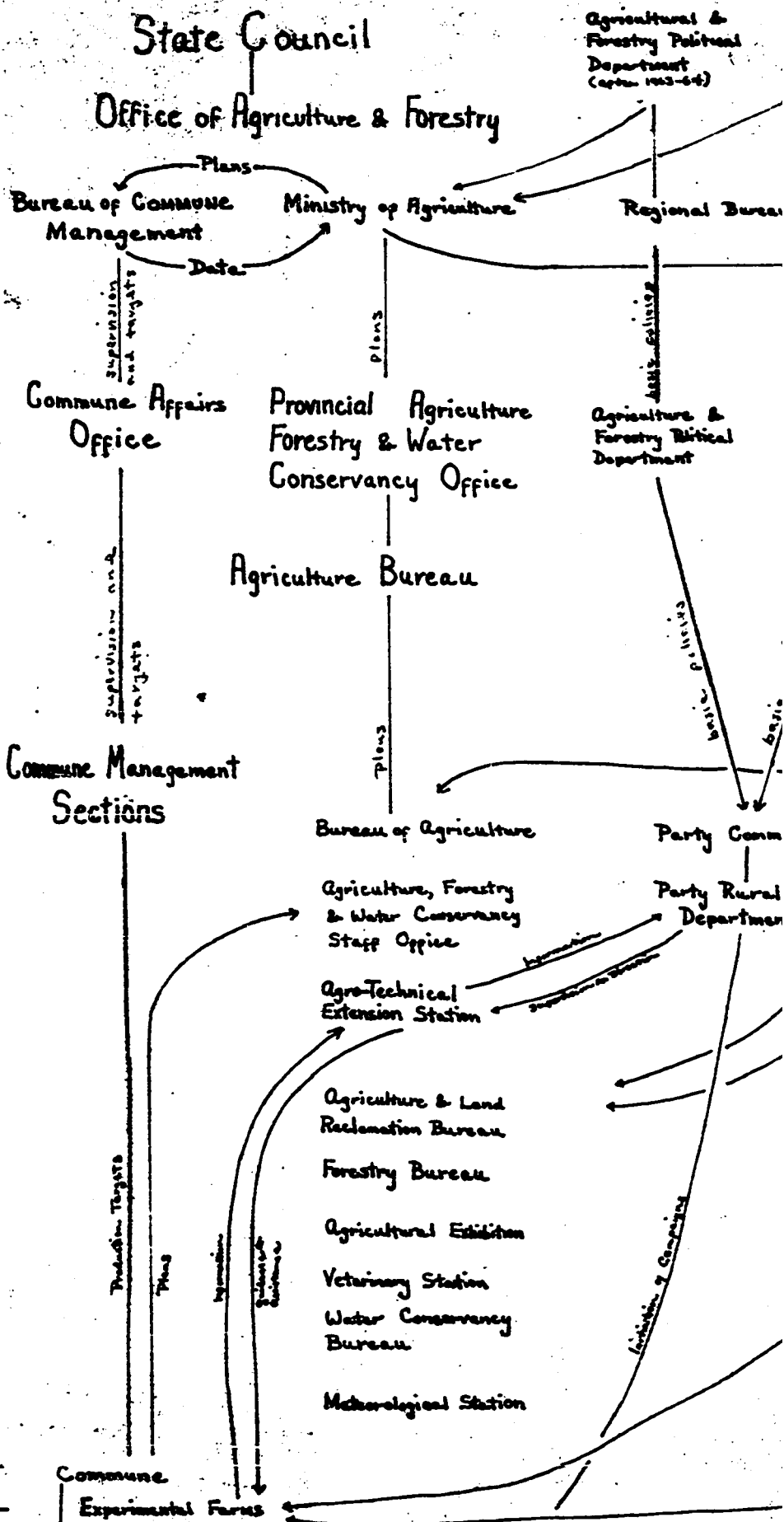
GOVERNMENT

PARTY

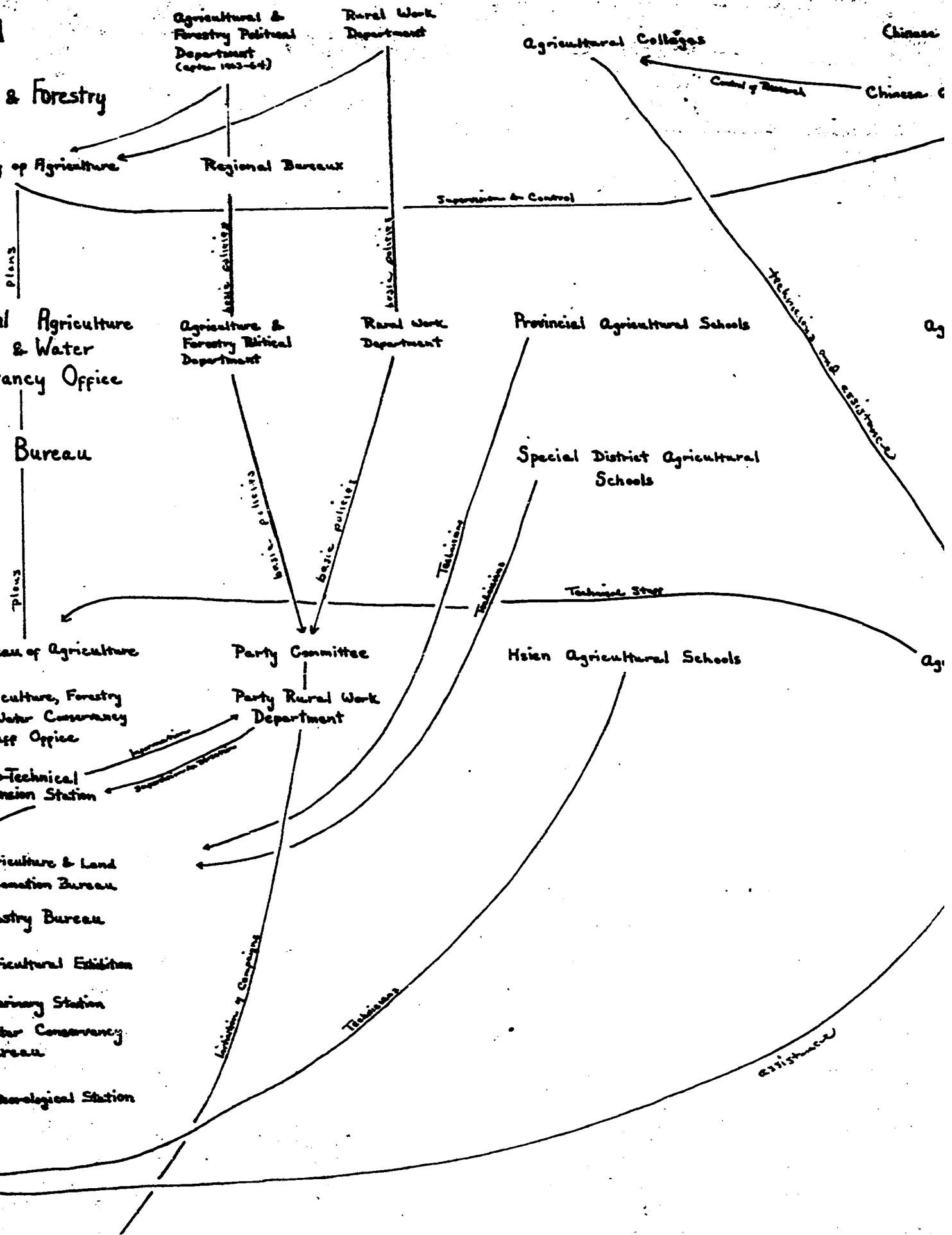
PROVINCE

HSIEN

COMMUNE

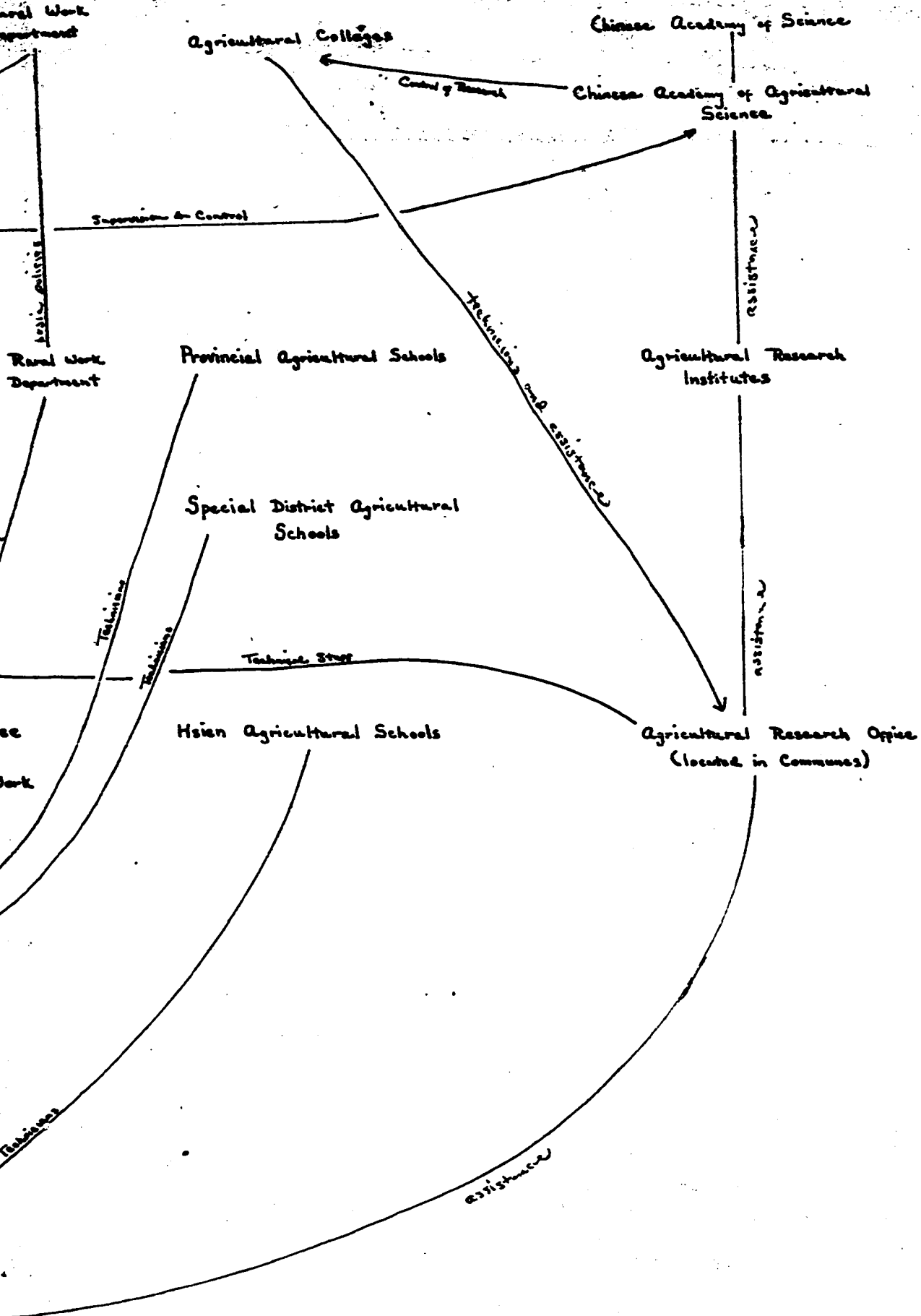


# SCIENTI



# EDUCATIONAL INSTITUTIONS

# SCIENTIFIC INSTITUTIONS



PROVINCE

Commune Affairs Office

Provincial Agriculture Forestry & Water Conservancy Office

Agriculture & Forestry Technical Department

Agriculture Bureau

HSIEN

Commune Management Sections

Bureau of Agriculture

Party Committee

Agriculture, Forestry & Water Conservancy Staff Office

Party Rural Department

Agro-Technical Extension Station

Agriculture & Land Reclamation Bureau

Forestry Bureau

Agricultural Exhibition

Veterinary Station

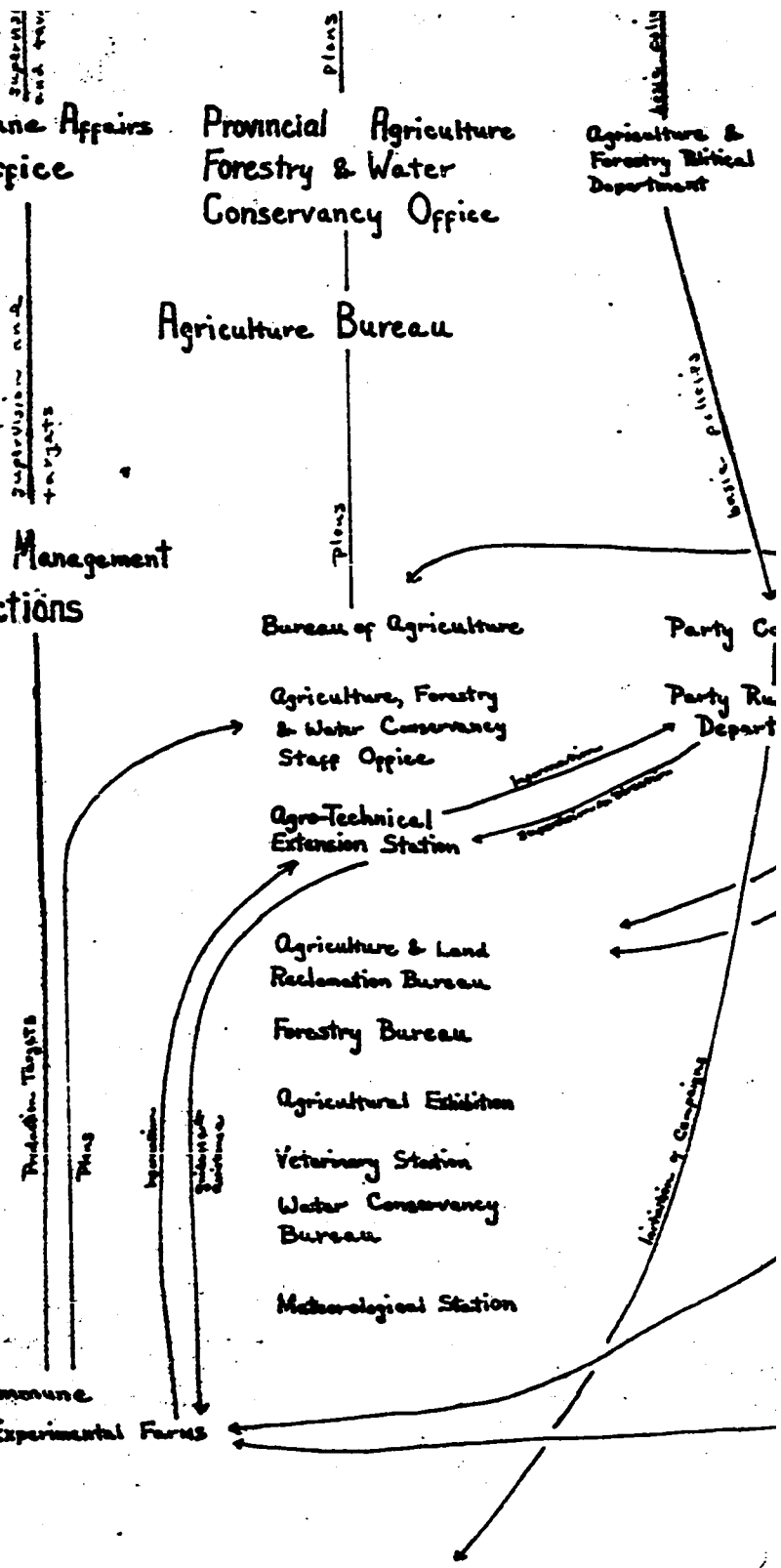
Water Conservancy Bureau

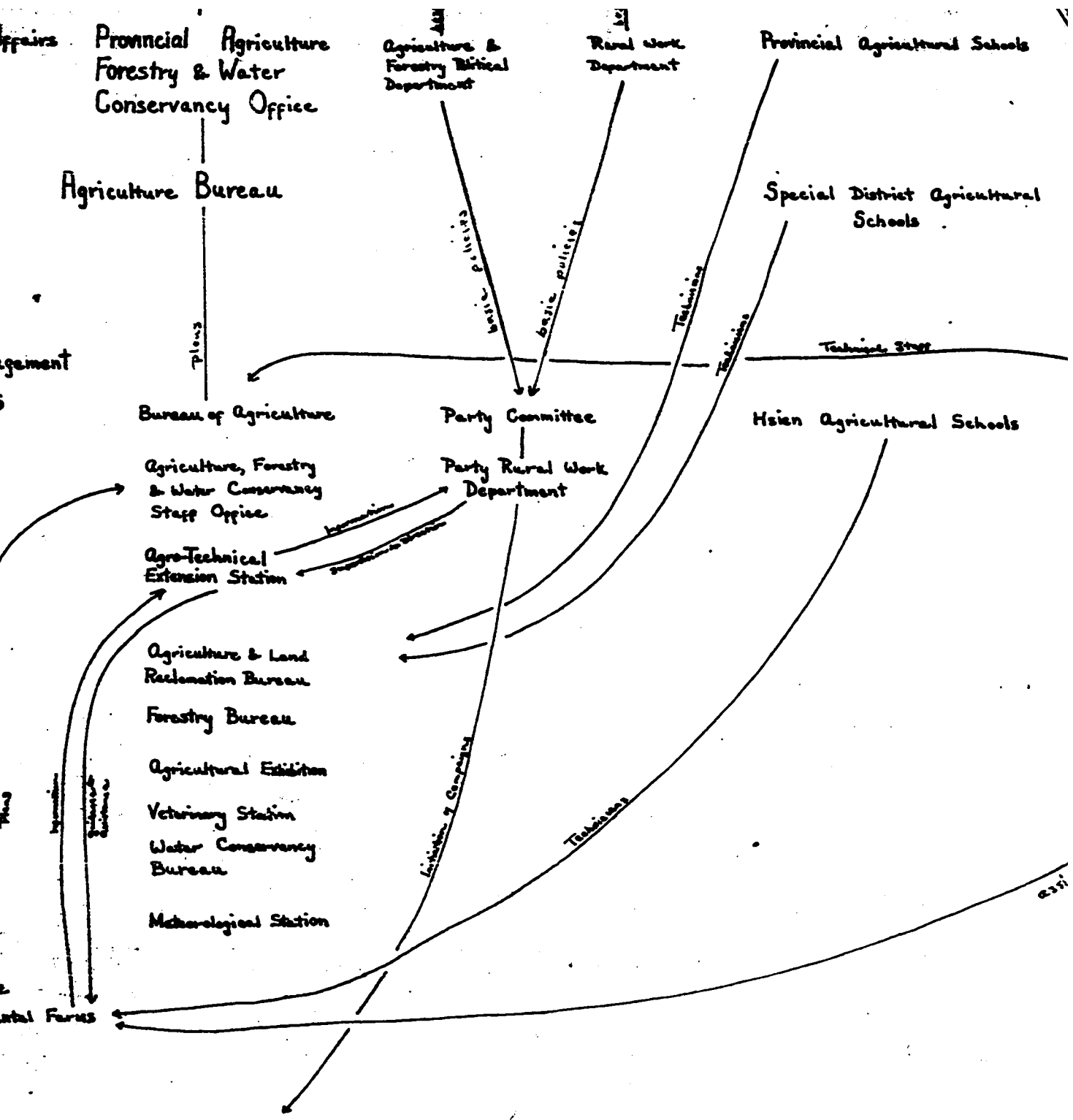
Meteorological Station

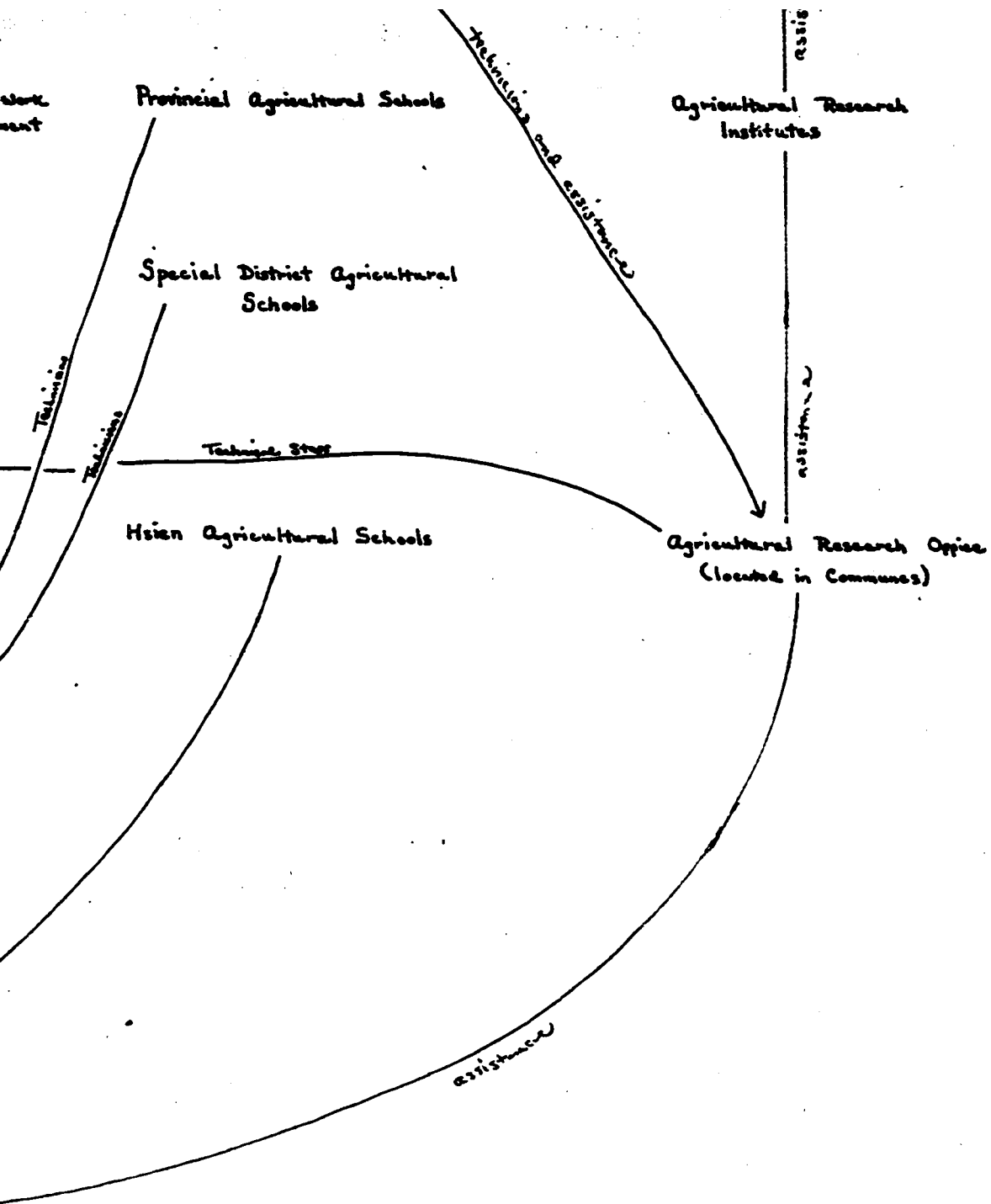
COMMUNE

Commune Experimental Farms

Targets for 1955









that the Ministry of Agriculture serves the "staff" function of processing information and drawing up overall plans, while the Bureau of Commune Management works in a "line" capacity by supervising the day-to-day work of the governmental agencies below it.<sup>119</sup>

Additionally, the People's Liberation Army has at times taken part in agricultural production. But since most of its work has been confined to land reclamation in the sensitive areas adjacent to the Soviet Union, its impact on most of the farm sector has been minimal.

These internal divisions within the central government are replicated at the provincial level and, with some alterations, at the hsien level. As in the imperial system of old, the hsien remains the lowest unit within the central governmental hierarchy. It is at this last level that local agrotechnical agencies, such as the ATPSs, are affiliated with the government. The formal connection between the ATPS and the hsien may be weakened, however, by the requirement that the Stations work in close conjunction with experimental farms that have been established on the Commune, brigade, or team level. There have been times when activities on these farms have overshadowed all other duties, with a consequent diminution of the role of the hsien government for the organization of agrotechnical services. The idea that agrotechnical activities should remain intimately linked with grass-roots economic activity did not die with the Leap, and the ATPSs may have to meet demands emanating from the basic units of rural society, which can use their experimental farms to break the monopoly that the county authorities hold with regard to agrotechnical services.

The Party's control over agricultural affairs is maintained through

the Rural Work Department. Its maintenance of a strong working relationship with the Ministry of Agriculture was, until 1962, facilitated by Teng Tzu-hui's concomitant occupancy of the directorships of both the Rural Work Department and the State Council's Office of Agriculture and Forestry.<sup>120</sup> In 1963-64, a new Party agency, the Agriculture and Forestry Political Department, was formed in order to strengthen Party control over the rural sector. Little information is available concerning the precise duties of this department, or of the nature of its relationship with the rural work department.

As in the government, the basic divisions of the Party's central organs of supervision and control are reproduced in the provincial Party apparatus. In both cases, the Party is less concerned with either the staff or line operations of its corresponding governmental body, but instead provides general leadership through the generation of basic policies and the legitimization of these policies through the articulation of them with the values and norms of the official Communist ideology.<sup>121</sup>

Within the Commune, the separation between Party and government is less distinct. Basic decisions are the responsibility of the Commune Management Committee, which is nominally elected by the Commune Congress. A great deal of power is vested in the Supervisory Committee, all of the members of which belong to the Communist Party. This Committee sees to it that the policies decreed by the Party are properly implemented by the Management Committee. The two committees are kept separate, and, although the Commune Congress ostensibly elects the membership of the Supervisory Committee, the latter is the real power within the Commune.<sup>122</sup>

The same basic structure can be found in the brigade (which seems to have lost importance since the first re-adjustments following the Leap). The production team, the "basic unit of accounting", does not have its own supervisory committee, owing to the shortage of Party cadres and the fact that it is not charged with many policy decisions. Important changes in agricultural production are the responsibility of the Agricultural Production Department of the Commune Management Committee, which not only controls the bulk of development funds, but can also order teams and brigades to alter their patterns of cultivation. The Commune has this power because land is legally owned by the Commune and only "leased" by the basic production units.<sup>123</sup> However, the "commandist" errors of the Leap have not been forgotten by most cadres, and few attempts have been made to decree changes in cultivation patterns by fiat. The Party can however exercise some control over the basic levels by charging the hsien Party Committee with the transmission of instructions on the use of new agricultural inputs and techniques.<sup>124</sup> This can be facilitated by putting the only Party member(s) in a production team in charge of technical innovations.<sup>125</sup>

Taken together, the Party and government hierarchies comprise the general system (hsi-t'ung) for controlling agricultural production and technical innovation. Other agencies, such as State Farms, industrial units and Supply and Marketing Cooperatives can also take an active role in fostering agrotechnical development in their locales.<sup>126</sup> Educational and scientific institutions, themselves under government and Party control, also play an important role in producing new agricultural techniques and the technicians necessary for their diffusion.<sup>127</sup> Many Communes,

and even some brigades and teams, have agricultural research offices staffed by members of the Chinese Academy of Agricultural Science and the various agricultural colleges.

Along with the employment of formal agrotechnical agencies, the Chinese have attempted to foster agrotechnical development by making use of a strategy that served them well in the days of guerrilla warfare: energies are first concentrated on individual "points", thereby allowing for the "concentration of superior forces" for the waging of a "war of annihilation" against rural backwardness. Points are not governmental units per se, but are venues for political and economic activity under the general leadership of government and Party cadres.<sup>128</sup> Cadres "squat at a point" where they can learn to "dissect a sparrow", that is, gain specific knowledge of the conditions prevailing within a given locale.<sup>129</sup> Extending the responsibilities of the experimental points of the Leap, the point is used as a base for gathering knowledge concerning the needs of the local agricultural system. It is not however a command center from which orders are issued.<sup>130</sup>

Work within the points cannot be isolated from more general concerns. To be of any use, the practical experiences gained by squatting at a point have to be generalized to the surrounding area (the "plane").<sup>131</sup> As People's Daily put it, "if we merely have points without guiding and pushing forward the areas, and if we grasp the minority while discarding the majority, then the points will lose their meaning".<sup>132</sup>

For all their importance, points are not autonomous organizations. Many of them are adjuncts to existing ATPs.<sup>133</sup> Additionally, points are a prime venue for cadre involvement; members of local Party committees

are expected to involve themselves in the work of the points and to take a hand in popularizing successful experiences gained within them.<sup>134</sup>

During the Cultural Revolution many of the formally constituted Party and government organizations came under fire, and governance became the business of "revolutionary committees" comprised of representatives of rebel groups, soldiers of the People's Liberation Army, and surviving cadres. By 1969 these committees had the mandate to take responsibility for the organization of agrotechnical services. Cadres from the Committees were expected to provide lectures, conduct experiments, and convene technical study conferences.<sup>135</sup> Although reports document the activities of teams sent out from the Committees and their involvement in such things as the introduction of new seed strains and the management of tractor stations, it is not at all certain that the activities of pre-existing agrotechnical agencies were totally submerged.<sup>136</sup> This issue will be taken up in a later section.

#### Organization and Agrotechnical Development: The Dilemma of Central Control

Although organizational growth is necessary for the economic modernization of China, conventional bureaucratic organization requires a kind of central control which is inimical to the ideals of the Maoists. In their view, not only does central control stifle political participation, it also creates some of the behavior patterns which made the mandarin bureaucracy so distasteful to those Chinese in search of modernity. If political development and agrotechnical development are to take hold in the countryside, the Chinese are faced with the necessity of building rural organizations which can combine local initiative with a modicum of central control.

Other difficulties also stand in the way of the implementation of Central Control. In interpreting Chinese organizational structure and performance one cannot lose sight of the simple fact that the People's Republic of China comprises the largest single political entity in the history of mankind. If for no other reason, the effective organization of the Chinese hinterlands is made a staggeringly difficult task by the sheer size of China's land area and population. Furthermore, the vast bulk of the population is scattered in thousands of villages throughout the countryside, greatly compounding the problems of organizing the local population and administering policies. Bringing China's peasant households under unified administrative control has been a difficult enough task; imposing such control without demoralizing the peasantry or destroying their enthusiasm for their daily tasks has added immensely to that difficulty. The basic dilemma is summarized by Eckstein, Galenson, and Liu:<sup>137</sup>

... most problems of agricultural organization in Communist China revolve around a continuing search by the planners and policy makers for the optimum degree of centralization - one that will assure the desired rate of extraction and technical innovation and at the same time provide appropriate material incentives to the farm cultivators.

The problem of blending central direction with local initiative had been a prime problem for the Communists long before the foundation of the People's Republic. The partially successful solution of the problem during the Yen-an period has provided the Communists with a basic perspective on organizational development, one which has not been lost even to the present day. Until 1942, the organizational structure of the Yen-an-based Border Region Government had contained two contradictory elements: a centralized bureaucracy located in the capital city, and

dispersed cadres working at the hsien level and below. Upper-level officials, many of them drawn from the urban intellectual strata, contrasted markedly with the basic-level cadres. The Yen-an bureaucracy generally contented itself with the issuance of orders within a routinized, bureaucratic format, whereas the local cadres were able to use their village loyalties to generate local mass mobilization drives in order to accomplish their objectives.<sup>138</sup>

Until the rectification movement of 1942, the tensions existing between the two levels had been largely resolved in favor of the Yen-an-based bureaucratic operatives. Centralized decision making and the absence of mass mobilization campaigns formed a natural complement to the united front policies of the 1937-41 period. But with the collapse of the alliance with the Kuomintang and the intensification of Japanese pressure, the Communists found themselves faced with the need to make more vigorous efforts at enlisting mass support and utilizing mass energy. Shifting power down to the local levels created great opportunities to do this.

This was a potentially dangerous course, however. The decentralization of authority could very well have resulted in the re-emergence of local autonomy and the loss of all political direction. The answer to this potential disintegration lay in the emphasis on the role of Mao Tse-tung as the embodiment of the Communist struggle. Coupled with this was the development of the "mass line" as the principal means of deriving and implementing policy. Both elements helped to solve the contradiction between central direction, and mass participation and initiative. Mao's charismatic leadership provided general political

direction while leaving the lower levels free to come up with their own means of implementation. The mass line, by stressing the reciprocal nature of policy formulation and implementation which encompassed both the leadership and the masses, was used, in James R. Townsend's words, "as a means of imparting Communist ideology to a peasant population, of propagandizing Party policies among isolated villages and illiterate peasants, of arousing national loyalties and political consciousness in a traditionally particularistic society, of enlisting mass support in the execution of policies that could not be enforced by Party organization alone, and of correcting bureaucratic tendencies in an organization stocked with intellectuals who abhorred physical labor and frequently adopted a patronizing air toward the masses".<sup>139</sup>

The basic principles of the mass line were summarized by Mao Tse-tung in the middle of 1943, when he explicated the general precepts of Communist leadership with these words:<sup>140</sup>

Take the ideas of the masses and concentrate them, then go to the masses, persevere in the ideas and carry them through, so as to form correct ideas of leadership - such is the basic method of leadership. In the process of concentrating ideas and persevering in them, it is necessary to use the method of combining the general call with particular guidance, and this is a component part of the particular guidance given in a number of cases, and put them to the test in many different units (not only doing so yourself, but by telling others to do the same); then concentrate the new experience (sum it up) and draw up new directives for the guidance of the masses generally.

This process can be formalized into a four-stage program for initiating and executing policy: perception, summarization, authorization, and implementation.<sup>141</sup> The random thoughts of the masses are systematically arranged, integrated with the basic policies of the Communist leadership, and then acted upon. Policies are thus based on



a constant interchange between the leadership and the masses; cadres cannot reflexively submit to the immediate desires of the masses ("tailism") nor can they set themselves above them ("commandism"). The need to maintain the enthusiasm of the masses and solicit their participation must be balanced against the need for organization and supervision.

The mass line, however useful as a theoretical construct of governance, would have been difficult to implement had it not been for the wartime environment and ability of the Communist leadership to put all activities on a war footing. As Mao had already noted in 1939, "it is impossible to have a good understanding of our political line, and, consequently, of our Party building in isolation from armed struggle, from guerrilla warfare".<sup>142</sup> As Townsend has noted, "the mass line was developed to a high degree in the Yen-an period precisely to overcome the problems inherent in maintaining some sort of general direction over a guerrilla war waged from scattered rural bases".<sup>143</sup>

The coming of peace and stability to China thus posed new problems for the Communist leadership. The government continued to make attempts at mobilizing the peasantry for political and economic campaigns, but without the martial climate of the war against Japan, these could lead to antagonisms between leaders and masses.<sup>144</sup> The over-extension of mass mobilization campaigns could be particularly harmful in the area of agricultural production. While these campaigns could do much to destroy the lethargy of certain aspects of traditional rural life, at the same time they could result in the destruction of the "natural" organizational fabric, with consequent damage to productive activities.<sup>145</sup> Excessive

mobilizational efforts, coupled with cadre ineptitude, could discourage the initiative and ingenuity of the peasantry.<sup>146</sup>

Mass mobilization campaigns could go awry because they were organized from too lofty a level, by middle-level officials who had little contact with the masses. Similarly, over-centralization of leadership could do a good deal of harm to agrotechnical programs. Agricultural techniques need to be carefully attuned to local conditions, but an excessive degree of centralization can result in the blind propagation of dubious agricultural inputs and techniques. The Communists appear to have been slow in coming to this realization. With the tightening of rural control which accompanies cooperativization, Party and government officials began to feel that they had overcome a major obstacle to the rapid dissemination of advanced agricultural practices; APC cadres could simply be ordered to propagate whatever agricultural techniques deemed appropriate by the central government.<sup>147</sup> This situation contained inherent dangers. "Peasant conservatism", although a real impediment to agrotechnical modernization, served to prevent the implementation of inappropriate measures. Cooperativization consequently encouraged risky adventures.<sup>148</sup>

One result of over-centralization and peasant acquiescence was the tragic over-use of "Pima No. 1" wheat, and other seed varieties inappropriate to local conditions.<sup>149</sup> When government policy stressed the use of improved seeds, some local cadres over-reacted to centralized commands and became so energetic in foisting new seeds on the peasants that they made necessary a warning from the State Council in early 1955: "the blind practice in some areas should be corrected

whereby new strains are transferred from remote areas and introduced to the masses direct, without testing and experimentation by the agricultural experimental farms, thus causing loss to the masses".<sup>150</sup>

Other examples could be found of cadres forcing peasants to dig wells and obliging them to change their sowing technique; in one case that was probably representative of others, cadres threatened to punish peasants who failed to change their sowing methods.<sup>151</sup> In another case, peasants were made to uproot cotton plants in order to allow the sowing of a new variety of seed.<sup>152</sup> Excesses such as these resulted in newspaper editorials restating the warning of the State Council: "modern scientific experience, and experience from outside areas must first be tested ... and proved practical before they are promoted. Experiences not yet successfully tested locally must not be hastily extended, much less forced on the masses."<sup>153</sup>

Over-reliance on the issuance of central directives became particularly acute during the double-wheel plough episode. The over-production of the ploughs was a direct consequence of the central government's failure to investigate the applicability of the implements to local conditions. The point was made in one article which appeared in Hsin Hunan Pao in late 1956:<sup>154</sup>

After the central government had raised the call for opposing rightist conservative thinking, we over estimated the favorable factors of cooperativization on the popularization of modern farm implements and mistakenly believed that to do things on a large scale was alone enough to oppose conservatism. As a result, when we saw the increased figures of popularized farm implements in other provinces, we began to enlarge our figures once and again, without considering actual conditions in our province.

By the time this was written the perils of over-centralization had become evident. In 1955, 81.5 per cent of the ploughs were sold,

with the number declining to 65.5 per cent the following year. In 1957 only 5.3 per cent of the ploughs were sold.<sup>155</sup> The peasants, whose finances had been badly strained by the purchase of these implements wryly referred to them as "hanging ploughs" (to be hung on the walls and never used). The dangers of over-centralization in the planning of agrotechnical development once again had been driven home.

This did not mean that centrally directed attempts to engineer agrotechnical change had come to an end. After the publication of the 12-Year Program, cadres came under greater pressure to effect an agrotechnical breakthrough in agriculture.<sup>156</sup> This often resulted in attempts by local cadres to push through technical reforms of dubious merit, or, more often, reforms which were inappropriate to local conditions. This led Chou En-lai to warn against "mechanically adopting advanced experiences or even forcibly popularizing these experiences".<sup>157</sup> Another high Party official, Teng Tzu-hui, specifically criticized the blind propagation of new cropping systems and crop varieties, also noting that "not a few localities have overreached themselves in the steps taken and this has consequently given rise to some faults in the extension of new measures; there has generally been the tendency toward generalization and the issuance of administrative orders".<sup>158</sup>

Still, problems remained. All too many local cadres, reported People's Daily, "resorted to methods separated from reality and the masses in undertaking capital construction of agriculture and effecting technical reform of agriculture".<sup>159</sup> In the supercharged political environment of the cooperativization epoch, the mere allegation of "rightist" thinking was sufficient to throw into disfavor cautious

planning, resulting in the blind propagation of dubious technical measures. As People's Daily ruefully admitted in late 1956, "the charge of 'conservative thinking' deterred goodness knows how many correct opinions".<sup>160</sup> Because of this, according to one 1957 report, attempts to improve agricultural technique were "faulty" in 15 per cent of the cases and "wrong" in 5 per cent of the cases; this was attributed to the inexperience of the leadership in managing large-scale cooperative production and their violation of the principle of taking local conditions into account.<sup>161</sup>

Revolutionary zealotry undoubtedly made for a number of difficulties, but the unresolved dilemmas of balancing central control with local initiative were probably more to blame for the extension of faulty or inappropriate agricultural techniques. The formation of APCs resulted in considerable expansion to the powers of basic-level cadres, but a good deal of power was still retained by the hsien government. Hsien functionaries were frequently responsible for commanding basic-level cadres to implement new agricultural practices. When hsien cadres resorted to disciplinary measures against basic-level cadres "who did not lead the masses" in changing farming practices, the latter in turn began to force the peasants to carry out technical reforms through threats of punishment for those who clung to old methods.<sup>162</sup>

During the period of agricultural cooperativization, over-centralization coupled with coercive tactics led to such agrotechnical fiascos as the introduction of new strains of rice into areas for which it was unsuited and the adoption of close-planting schemes whereby identical densities were prescribed irrespective of local conditions.<sup>163</sup>

The popularization of double-wheel ploughs was also botched. Central leadership organs contented themselves with ordering APCs to purchase the ploughs; little was done to provide guidance for their use. As the New China News Agency admitted in mid-1956, "in the extension of double-wheeled ploughs, the preparation in all aspects was achieved inadequately and the coordination of among relevant departments was lacking ... In most areas the coaching of technique and propaganda work lagged behind".<sup>164</sup> The central leadership simply sent out general directives and organized a few short-term training classes.<sup>165</sup> The result was a pathetically low level of ability in the use of the new implements.<sup>166</sup>

In order to remedy these difficulties the government in 1956 and 1957 attempted to devise an administrative system which would preserve central control while allowing for adjustments to suit local conditions. Cadres were enjoined to respect local conditions when promulgating new agricultural techniques, and to avoid commanding peasants to take up new "advanced experiences".<sup>167</sup> Upper-level government organs were expected to formulate overall policies in close coordination with basic-level units, taking into account local conditions at all times.<sup>168</sup>

This precarious balance was largely destroyed during the Great Leap Forward, when the formation of the People's Communes resulted in a substantially different organizational format within the countryside. Since the People's Communes took on a multitude of social and economic functions, they were quite naturally expected to become administrative centers as well. The establishment of an administrative network at the sub-hsien level had been an intractable problem for all Chinese governments in the past, the Communist one not excepted, but the establishment

of the Communes seemed to provide new possibilities for extending governmental authority. The perennial dilemma of creating a local governmental form that would be responsive to the needs of both the peasantry and the central government had apparently been solved. As the Communes began to take on more power, the central planning apparatus was dismantled, and officials in Peking and the provincial capitals contented themselves with the issuance of policies of a very general nature while leaving the formulation of more specific policies largely in the hands of the local cadres.

This was greatly facilitated by the merger of the Commune with the established administrative apparatus of the hsiang.<sup>169</sup> With the superimposition of the Commune economy onto the hsiang governmental apparatus, the basic unit of rural society could become a semi-independent social unit. No longer operating under the constraints of centrally allocated budgets, the hsiang/Commune began to enjoy a far greater degree of operational economy than had obtained in the days of the Five-Year Plan.<sup>170</sup>

As happened during the Yen-an period after the 1942 rectification campaign, the Great Leap Forward was marked by the re-emergence of the charismatic leadership of Mao Tse-tung. With the curtailment of the middle- and upper-level Party and government bureaucracy, an attempt was made to forge a closer relationship between the masses and the Maoist leadership.<sup>171</sup>

While the enlarged role of local cadres and masses may have had a salutary effect for their initiative, it did create vast control problems. Local activism often got out of hand, and many of the excesses of the Leap can be attributed to the local cadres' zeal in attempting to outstrip even the highly optimistic goals of the central government.<sup>172</sup> Opposite to this tendency, many cadres attempted to be "nice guys" in

the eyes of the local peasantry (hao-jen chu-i) and failed to implement any new policies.<sup>173</sup> Thus the basic problems of attaining an optimum degree of decentralization remained; some basic-level cadres were lackadaisical, while others resorted to excessive measures in the pursuit of Leap goals, or what they took to be Leap goals.

Difficulties were especially evident in the agrotechnical realm. Some cadres were negligent in taking an active role in the promotion of the agricultural techniques embodied in Mao's 8-Point Charter, while others attempted to implement all of the Charter's provisions in a willy-nilly fashion.<sup>174</sup> For this latter group, the Charter had become a "slogvanized" imperative for action rather than a general guide to be carefully meshed with local conditions.<sup>175</sup> As a means of correcting these difficulties, cadres were urged to "conduct more penetrating investigations on the happenings in the rural areas and on the state of agricultural production, to further master the laws governing the development of agricultural production".<sup>176</sup>

But the damage had been done. The collapse of the Leap resulted in the curtailment of the powers of local cadres, who were made to bear much of the blame for the misapplication of Leap principles.<sup>177</sup> Cadres were enjoined from taking too active a role in agrotechnical development, for as People's Daily editorialized in 1961, "only persons who have directly participated in local production for many years can make realistic decisions as to what measures to adopt for increasing production and what the standards should be for such measures".<sup>178</sup> Even so, local cadres still had a tendency to issue orders without investigating each situation or actively demonstrating the benefits of new technical measures.<sup>179</sup> Yet



one cannot help but sympathize with the cadres. On the one hand they could be taken to task for issuing orders imperiously; on the other hand, they could also be accused of being derelict in their duty of sponsoring agrotechnical change.<sup>180</sup> As Southern Daily explained the difficult situation, "taking a firm grip" on agrotechnical work often meant the issuance of compulsory orders, while the alternative was even worse - "becoming the tail of backward people".<sup>181</sup>

For all of its political militancy, the Cultural Revolution did not result in the establishment of new procedures for the dissemination of new inputs and techniques. Throughout the period, hsien-level government and Party organs continued to draft agrotechnical programs and organize emulation campaigns.<sup>182</sup> But mid-level government functionaries were reminded that agrotechnical programs could not be implemented by fiat.<sup>183</sup> The Chinese were finding that the means of revolving the dilemma of central control and local initiative were as elusive as ever.

#### Other Quandaries of Organization: "Bureaucratism" and "Commandism"

The over-centralization of policy-making and execution can create numerous difficulties for any organization. The Chinese, however, are particularly sensitive to the dangers of over-centralization not only because it leads to inefficiencies, but because it vitiates some of the primary political goals of the regime. Excessive centralization leads to a "bureaucratic" work style, a technique of goal-attainment in direct opposition to "mass line" principles. "Bureaucratism" is pernicious because it results in a "working style characterized by estrangements from actualities and from the masses".<sup>184</sup> The Chinese Communists, even the most radical Maoists, generally agree that some organizational

controls are necessary for the functioning of a complex social order. But they are alert to the corrosive effects that bureaucracy can have on the individual members and clients of the organization. Cadres committing the sin of bureaucratism were taking on the attributes of the aloof official of imperial times, content to observe the formalities of official procedures without becoming involved in the serious study of policies and taking an active role in their implementation.<sup>185</sup>

The best cure for bureaucratism, in the eyes of many Communists, is criticism from below; a bureaucrat's separation from the masses is to be challenged by the masses.<sup>186</sup> But the Chinese have not always been sure where to draw the line between necessary bureaucratic organization and "bureaucratism". During the first Five Year Plan period, many Chinese leaders seemed willing to tolerate a certain degree of bureaucratism if it was necessary for organizational cohesion and effective work. In mid-1953, People's Daily could report with approval that when drought threatened food production in one area of the country, the struggle against bureaucratism was suspended.<sup>187</sup> Furthermore, the "three antis" movement, which included assaults on bureaucratism, had a tendency to degenerate into "anarchism", and was accordingly stopped in the countryside.<sup>188</sup>

Bureaucratism was mainly a failing of the upper levels; basic-level cadres generally remained too close to the local scene, preventing them from indulging in bureaucratic insularity. But bureaucratism at the upper levels was reflected in "commandism" at the lower levels.<sup>189</sup> When the bureaucratism of upper-level cadres prevented them from making a full investigation of a situation, resulting in the formulation of inappropriate policies, basic-level cadres had to resort to commandist

tactics in order to implement the policies. The danger of commandism became acute when the accelerated pace of cooperativization resulted in an increase in the powers of local cadres, and a consequent tendency to resort to commandist tactics. Back in 1953 this danger had been foreseen in the Party's "Decisions on Mutual Aid and Cooperativization":<sup>190</sup>

It is wrong, of course, to adopt a formalistic and adventuristic working style, that is, to be too ambitious in proceeding with the formation of APCs simply by command from above, without taking into account the peasants' needs in production, the foundations of the mutual aid movement, the leading activists, the peasants' enthusiasm, their readiness, or other conditions.

This was echoed in the Party's 1955 "Resolution on Agricultural Cooperation", which took pains to state that "commandism must be avoided and necessary provisions made from time to time in the course of practical work".<sup>191</sup> But the problems of bureaucratism and commandism remained. On 27 April 1957 the Party Central Committee found it necessary to issue a directive prefaced with the complaint that "many cadres are liable to use purely administrative measures as a method of handling problems ... In the past few years there has been a new growth of bureaucracy, sectarianism and subjectivism which departs from the masses and reality".<sup>192</sup>

These lapses were almost inevitable, for basic-level cadres were faced with some exceedingly difficult tasks. They were, as Ezra Vogel notes, "simultaneously managing the co-op economy, introducing technical innovations, and supervising political studies. They were, incidentally, reminded not to resort to commandism and to set a good example by taking part in physical labor".<sup>193</sup> The problems of administration lay less with the malfeasances of individual cadres than with the poor articulation between central directives and basic-level

activities. As was noted above, throughout the history of the People's Republic, the ambiguity of central policies and their distortion by basic-level cadres has resulted in significant gaps between the intentions of the policy makers and the ultimate outcome of their policies. In many cases, over-reaction rather than laxity was the response, because performance was generally evaluated in terms of fulfilment of output targets advanced by the central government.<sup>194</sup> This situation worsened in 1956 when the government set unrealistically high targets for agricultural production.<sup>195</sup> This led to an assertion by Liu Shao-ch'i at the CCP's Eighth National Congress that over-centralization of authority was leading to bureaucratism and excessive restrictions on local cadres.

During the Great Leap Forward these tendencies were even more evident, for the central government did little more than set output targets that could hardly be taken as realistic goals for production. The organization of productive activities was left to the initiative of local cadres. Under the slogan ch'uan-li hsia-fang (downward transfer of authority and power) initiative was transferred from the often cumbersome bureaucracy of the central government to the masses, with the People's Communes serving as the institutional matrix for the transfer of power and the mobilization of the masses.<sup>196</sup> The authority of the central leadership, especially that of Mao Tse-tung, was to be preserved, but the vast middle range of Party and government officials was eliminated. Just as guerrilla warfare during the Yen-an period had been based on the cultivation of the proper political spirit rather than the construction of elaborate organizational networks, so the GLF was predicated on the primacy of spirit over formal organization. The essence of the Leap can

be found in the Maoists' belief that local initiative would generate a spirit of sacrifice, heroic labor, self-reliance, and the will to surmount all obstacles, thus rendering formal organizational structures unnecessary.

In this climate, cadres could not insulate themselves in bureaucratic office; they were urged to "conduct more penetrating investigations on the happenings in the rural areas and on the state of agricultural production, to further master the laws governing the development of agricultural production".<sup>197</sup> This general directive was put into practice through the use of the "two-five working style", whereby cadres were to devote two days a week to official activities and the remainder of the week to physical labor with a production team.<sup>198</sup>

With the termination of the Leap, however, the setting of policies once again became the responsibility of a wide spectrum of Party, governmental, and military agencies.<sup>199</sup> But the problems of translating these policies into day-to-day operational procedures remained as difficult as ever, perhaps even more so because economic liberalism had enhanced the position of economically successful peasants. By 1962 the difficulties of maintaining control over the production teams and individual peasants had become a recurrent topic in the Chinese press and in cadre meetings throughout China.<sup>200</sup> Even worse, concessions to individual peasant enterprise served to diminish the importance of ideological work and Maoist attempts to create a "new socialist man". Having apparently given up its efforts to transform the spirit of the Chinese people, the regime began to resort to control by Party and governmental officials in order to assure the attainment of its economic goals. As one Southern Daily

editorial put it in early 1962: "behind the measure of increased production there always lies the policy problem or the leadership problem. That is to say, the problems which appear superficially as concerning measures of increased production are essentially policy problems and leadership problems".<sup>201</sup>

The inability of the Chinese leadership to strike an acceptable form of policy formulation and implementation was an important factor in the outbreak of the Cultural Revolution. While one can agree with Peter Schran that "the Great Proletarian Cultural Revolution challenged not the pattern of organization ... but the spirit in which it was being implemented during the 1960's", it is also true that organizational patterns cannot fail to have a substantial impact on the spirit of the personnel and the manner in which they conduct the business of the organization.<sup>202</sup> The vast organizational changes in the agricultural sector which had accompanied cooperativization and the Great Leap Forward were not in evidence during the Cultural Revolution, but this was probably because all of the participants in the struggle recognized the critical importance of maintaining farm production and were unwilling to sacrifice it to the political struggle.<sup>203</sup> The rural sector today continues to be organized along lines established in the early 1960s; as such the rural social order contains tensions which may lay dormant or may result in more turmoil. In any event, efforts to re-organize rural life or to alter the mentality of the peasants will not come to a quick fruition.

Reds, Experts, and Agrotechnical Organizations

While the establishment of the proper degree of central authority presents many problems, the Chinese have had the further difficulty of insuring that organizational authority coincides with the requirements of a revolutionary society. Although Western organizational theorists from Max Weber onwards have tended toward the belief that organizational authority is founded on the possession of expertise by those at the upper levels of the organization, significant sections of the Chinese leadership have attempted to attenuate the authority of the "experts".

The Maoist element has consciously rejected the very idea that expertise can be used to set men apart from other men. The notion that expertise can be used to keep non-experts in a subordinate position is thoroughly unpalatable. This does not mean that the Chinese at all times have rejected expertise and expert authority. Depending on the general social and economic policies pursued, expertise has at times been highly valued and at other times scorned. Moreover, expertise has not been rejected because of the irrationality of the leadership, but because those of a Maoist persuasion in particular believe that the unquestioned dominance of experts prevents the attainment of important social and political goals. From their perspective, these goals are best achieved by persons who have political virtue ("redness"), that is, ideological purity coupled with a willingness to use political struggle as a means of attaining the goals of a Communist society. At times, the suppression of the experts and the undermining of their authority has slackened the pace of economic development; in the long run, however, it is the belief of many Chinese Communists that the erosion of

expert authority will result in the steady growth of the productive sector, a growth that will parallel the political development of the Chinese people.

When the People's Republic was founded, the dichotomy between "redness" and "expertness" was a minor worry for the Communist leadership. Relatively few Chinese possessed advanced industrial or agricultural expertise of the sort likely to set them apart from the general population. Indeed, the development of agricultural technology and agricultural technicians was a matter of such urgency that few Chinese had any qualms about the pernicious effects of expertise. By the time of the first Five Year Plan, technicians had become the new "culture heroes" of Chinese society, and with the Plan came slogans exhorting the cadres and masses to "regularize", "systematize", and "rationalize" their productive efforts.<sup>204</sup> With the forces of technological rationality seemingly ascendant, Western observers began to discern the emergence of pragmatism, order, and systematic economic development; China appeared on the path of "modernity".<sup>205</sup> If the majority of the experts were drawn from the upper strata of the old society this was seen as the inevitable outcome of a situation in which the Chinese masses were hindered by a cultural level too low to allow them to attain the position of the expert.<sup>206</sup>

Even with the participation of people of dubious class background, agrotechnical agencies were seriously deficient in expert personnel. One Chinese survey conducted in 1957 showed that only five per cent of the nation's agricultural extension workers were college graduates, while the remainder had only an elementary or ordinary middle school education.<sup>207</sup> Not surprisingly, basic level agrotechnicians "had no confidence in themselves", "did not know what to do", and "had no sense of security".<sup>208</sup>



Despite the recognized value of expertise, their authority could be easily usurped by political cadres, resulting in a situation in which, as Hsien Chien She put it, "amateurs lead the experts".<sup>209</sup>

By 1957, in principle as well as in reality, redness began to take precedence over expertise. In November of that year Liu Shao-ch'i warned intellectuals that they had to put aside their "so-called slogan of 'specialist first and red second'." As Liu explained, this attitude could only "serve as a call to escape politics ... Our intellectuals must understand that politics is inescapable. Once they have escaped revolutionary politics they can move toward reactionary politics. Without a correct political standpoint, they can fall into a reactionary political standpoint".<sup>210</sup>

The diminished position accorded to experts was in part a reflection of the failure of the Hundred Flowers campaign. The persistence of thinking that was antithetical to the Communist leadership was undoubtedly a surprise to them, and resulted in a new climate of suspicion surrounding intellectuals and technicians.<sup>211</sup> As a means of rehabilitating the political consciousness of agricultural scientists and technicians, campaigns were mounted to integrate the work of these experts with the day-to-day farming activities of the peasantry. As People's Daily admonished in 1960:<sup>212</sup>

Agricultural scientists must go into the rural areas, work on the front line of agricultural production and be in close contact with the broad masses and production. Only in this way will it be possible for them to discover and solve problems concerning production, to apply advanced experiences and scientific achievements to production and to improve them constantly.

With the collapse of the Leap, efforts to effect the merger of redness and expertise were suspended. Amidst conditions of near famine, the

technological development of Chinese agriculture through the application of specific expertise became a prime concern, and shouldered aside ideological and political concerns.<sup>213</sup> The very development of peasant political consciousness came to be seen as a residue of technical development. One Chinese journal made this case by quoting the words of Lenin: "only a material foundation, technique, large-scale use of tractors and machines in agriculture, and large-scale electrification can solve this problem of small peasants and make their metality sound".<sup>214</sup> Dispassionate scientific analysis began to replace the anything-is-possible exhuberence of the Leap. With the rise of technocratic sentiments, even Mao Tse-tung's name was invoked to demonstrate the virtues of "objectivity":<sup>215</sup>

... in our daily work some comrades often forget the teachings of Mao Tse-tung; forget that it is only when man's subjective activity is in accord with objective laws that it can be effectively brought into full play; and forget that the reason why man's subjectivity can actively transform objectivity is first of all due to the fact that it has reflected objectivity and transformed the world according to objective laws.

The necessity of recognizing the limitations presented by objective conditions was underscored by "model cadre" Wan Shao-ho, when he asserted that "we must not force ourselves into doing something which is beyond us. We must also have the courage of giving up something which has been taken up due to a lack of experience."<sup>216</sup>

With a diminished role for both the masses and the "red" cadres, technical experts once again began to concern themselves with the sober assessment of policy and its implementation.<sup>217</sup> With local cadres made to bear heavy responsibilities for the failure of the Leap, technically trained personnel took on significant powers despite the unsavory class backgrounds of many of them. Ezra Vogel vividly relates this new develop-

ment: "the poor enthusiastic country boy who was in the driver's seat in his work unit in the early part of the Great Leap often had to take the back seat to the older, more knowledgeable specialist who was more tainted with capitalism".<sup>218</sup>

The enhanced role of agricultural scientists and technicians was reflected in the attempts that were made to strengthen their supportive organizations. One People's Daily article recommended "concrete measures to improve and reinforce" agrotechnical extension agencies, while stressing that the work of these organizations "must be carried out, whenever and wherever possible, by persons who possess a certain agricultural and scientific knowledge as well as experience ... They should be accorded due respect and necessary conditions should be created for them to carry out their work."<sup>219</sup> Agricultural scientists and technicians received a further boost when Red Flag entreated Party and government cadres to cooperate with the experts "with comrade-like spirit for the development of agriculture".<sup>220</sup>

By late 1962, however, the politicization of rural activities which accompanied the Socialist Education Campaign shifted the balance back in the direction of redness. A People's Daily editorial which appeared during the National Conference on Agricultural Science and Technology in 1963 made it plain that "the Party's leadership plays a decisive role in developing productivity as well as scientific and technical undertakings in our country".<sup>221</sup> During the following year the tide shifted even more decisively in the direction of redness. The new direction was clearly indicated in one NCNA report:<sup>222</sup>

... the most fundamental experience in raising production was to put politics in command to conduct ideological and

political work well in rural basic-level units, and to develop fully the revolutionary activism and creativeness of the broad masses ... With revolutionary thought there will be revolutionary vigor; with revolutionary vigor there will be concrete measures [sic!]; with concrete measures the yield of grain and cotton will be high. It will not do to grasp merely the technical problems without solving the ideological problems.

By 1965, even the development of agricultural production began to recede in importance. One Cantonese newspaper proclaimed that "we may definitely say that 'good production' without politics taking command can never be truly good and in conformity with socialist principles".<sup>223</sup> In a similar vein, People's Daily explained that the attainment of high agricultural yields was no guarantee of an "advanced collective economy":<sup>224</sup>

Only collective units which are armed with ... revolutionary ideas are genuine advanced units. Speaking generally, without such advanced units there will be no lasting and surging enthusiasm of the broad masses for collective production and it will be difficult to create large areas of stable and high yields.

During the Cultural Revolution the issue of the relationship between production and political consciousness became of still greater importance. But farm production was not sacrificed to political mobilization and agricultural technicians were not uniformly disparaged. The preliminary conclusions of some Western analysts notwithstanding, the Cultural Revolution was not a struggle between "reds" and "experts" or over the relative merits of redness and expertise.<sup>225</sup> While many slogans stressed the importance of fusing redness with expertise during 1963-65, in the months preceding the Cultural Revolution these had been supplanted by the slogan "fear neither hardship nor death".<sup>226</sup> Indeed, the terms red and expert rarely appeared in the

torrent of literature produced during the period.<sup>227</sup>

As long as scientists and technicians demonstrated their willingness to develop their political consciousness, they could remain comparatively safe, for as Kuang-ming Jih-pao pointed out, "the simple technical viewpoint" had to be combated, but not technology itself.<sup>228</sup> Throughout the Cultural Revolution, articles by hsien-level personnel of agro-technical agencies continued to appear in the Chinese press, giving detailed accounts of advanced farming practices, while saying little about the political storms of the moment.

Whatever ground was lost by the experts during the course of the Cultural Revolution was largely regained in the years that followed. The Chinese press once again cited the need for specialized scientific and technical agencies, and the importance of conducting research into agricultural methods.<sup>229</sup> This could be tolerated, even encouraged, because to the Chinese Communists, the chief danger posed by an elite corps of expert scientists and technicians lay less in their monopolization of expertise than in their proclivities toward factionalism, with its constant threat to political control and ideological mobilization. Factionalism, in this context, means commitment to a profession and to "professional" standards of activity. As the social component of expertise, professionalism is inimical to the political goals of the Maoists because it stratifies the society and attenuates mass participation. Participation is one of the key aspects of political development in China, and, for the Maoists, the development of agrotechnical skills has to be a part of the larger process of political development.

Peasants, Experts, and Political Development

Because of the strong emphasis on political participation, Chinese agrotechnical organizations have been concerned with activities that have gone beyond the modernization of agricultural technology. The expanded role of these organizations has been shaped by the determination of the Maoist leadership that the peasantry be motivated to play a key role in both technological and social change in the countryside. The Communists, particularly those of a Maoist persuasion, have sought to bring the peasants out of their traditional lethargy, conservatism, fatalism, and subservience in the face of authority. Mao and his followers want the peasants to assume the role of citizens, active participants in the social, political, and economic transformation of the Chinese nation. At the same time however, the Communists have a justifiable fear that untrammelled participation will result in unacceptable "anarchistic" strains, leading to self-interestedness and the rejection of all authority. To channel participation and make it congruent with the general goals of the Communist leadership, government and Party officials have organized agrotechnical services so that they can absorb a wide spectrum of the rural populace and provide a constructive outlet for their energies.

The merger of political development with economic development was evident during the land reform campaigns initiated during the Yen-an period and during the first years of the People's Republic. Like most of the world's great land reform programs, China's was directed at political change rather than the short-run improvement of the local economy.<sup>230</sup> As Teng Tzu-hui, the head of the Central Committee's

village work department, put it in an address delivered toward the end of 1950, "we may realize ... that agrarian reform is not carried out merely for the development of production, but is rather a basic task of the Chinese people for the fulfillment of their revolutionary mission and the establishment of China as a member of the modern world".<sup>231</sup>

Land reform played a vital role in the development of political participation in the countryside, for peasants could rather easily be recruited into a movement which was directed at the satisfaction of their desire for land. From the beginning, the Communists incorporated large segments of the peasantry into the political struggles against representatives of the old order through the organization of peasant associations, which were chartered as the key agencies for the enacting of land reform measures. The associations conducted struggles against landlords, received confiscated property, and distributed it to the landless and the land-short.<sup>232</sup>

The destruction of the old rural social order having been accomplished, the Communists had to turn to new tasks in order to maintain revolutionary momentum and to provide a focus for the political activities of the peasants. The incorporation of the peasantry into the process of agro-technical development could provide just such a focus, for it fused economic development with political development. The low level of technical knowledge possessed by the peasantry was not a critical problem, according to the Maoists, for changes in the peasants' political consciousness was the chief source of economic and technological development. In Maoist eyes, the most important ingredient of agricultural development was the willingness of the masses to undertake the transformation of the

self in conjunction with the transformation of the environment. This was more important than the accumulation of great amounts of scientific and technical learning, for "only through continuing self-transformation can nature itself be more effectively transformed, can research produce even more results, and can even more red and expert technical and scientific personnel be developed and hardened".<sup>233</sup> Through politically induced spiritual transformation the weaknesses of the peasants can be "transformed into their opposites", for as Mao has said, "poverty gives rise to the desire for change, revolution, and action".

The peasantry, in this view, is not seen as a passive segment of the social order, ready for externally induced transformation. The Communists have consistently stressed the virtues of the peasantry, particularly in the productive realm. Technical experts still have much to learn from the peasantry. As People's Daily stressed in 1957:<sup>234</sup>

Especially must we make much of the innovations which our toiling masses have worked out in production, and we must promote the coordination of these with the experimental research activities of our scientists ... Agricultural scientists will succeed in developing agricultural science and production only when they rely on the toiling peasants and coordinate scientific techniques with the labor of the peasants.

Attempts to place a greater reliance on the participation of the peasantry in scientific and technical endeavors were redoubled as the Great Leap Forward got into stride. A great hope of the period, as expressed by one Peking Review article, was that "by breaking through the bonds of superstition and the veil of 'mystery' surrounding science and technology, the people's wisdom and skill will be unleashed in inexhaustible profusion".<sup>235</sup> The demystification of science and technology could be easily accomplished, according to the more radical



Communists, for scientific understanding was little more than accumulated practical knowledge obtained in the course of productive labor: "to liberate the people ideologically is to break down the concept that science is a mystery ... science is the product of the working people's practical production work and practical life. It is not a mystery; everybody can understand it, study it, and make use of it".<sup>236</sup> Furthermore, the untutored Chinese masses were not hindered by stereotyped conventions concerning the feasibility of a given course of action. Their involvement in productive activity made them "utter materialists, unfettered by any old established rules, and bold enough to do anything".<sup>237</sup>

Throughout the history of the People's Republic, experts and organizations staffed by experts have reportedly gained considerable benefits from maintaining close contacts with the "materialist" masses. Agrotechnical Popularization Stations were, at an early date, told to compile "useful farming experiences of the local peasants" while some agricultural experts reportedly lived with experienced peasants for long periods of time in order to "study their rich experiences in production".<sup>238</sup> Measures such as this, it was hoped, would serve to close the gap that separated educated technicians, who had new ideas for increasing production, and local peasants, who had an intimate knowledge of local conditions. Accordingly, technical agencies were told by the Ministry of Agriculture to consult with old peasants before putting new measures into practice, and to use "democratic discussion" when formulating plans for improving techniques and increasing production.<sup>239</sup> Technical development was thus merged with political development, for the peasants were given a voice in policy formulation and implementation,

becoming active participants in the construction of a new order in the countryside.

Although mass scientific and technical activities waned in the years immediately following the collapse of the Leap, the underlying philosophy was too deeply entrenched to be permanently ignored. By early 1965 People's Daily was again pointing out that "working people are the true heroes on the fronts of agricultural production and agricultural science".<sup>240</sup> Similarly, renewed emphasis was placed on the idea that scientific experimentation and technical application could not be divorced from day-to-day productive activities: "bookism ... and scholasticism which looks only for data but does not pay attention to actual effects are not genuine scientific attitudes".<sup>241</sup>

As the Cultural Revolution brought ideological indoctrination and mass participation once again to the forefront, the role of the peasants in effecting agrotechnical changes received a good deal of attention. A large number of press accounts emphasized the creativity of ordinary peasants in research activities, and the inability of recognized experts to solve practical problems.<sup>242</sup> Where agricultural experts had been successful in effecting agrotechnical breakthroughs, this was said to be due in large part to the fact that they had "constantly asked the poor and lower-middle peasants in the neighboring People's Communes for their opinions, and from them they learned many things which they could never learn from books".<sup>243</sup> Reflecting the dominant ideology, many scientific and technical experts began to integrate themselves more closely with practical activity and with the masses:<sup>244</sup>

Tempered in the three great revolutionary struggles struggle for production, class struggle, and struggle for scientific experiment, they have gone through a great change in their outlooks. Many of them formerly adhered to foreign conven-

tions, but now they rely on the red precious book; formerly they aimed at personal fame and gain and now they work for the people; formerly they drew blueprints behind closed doors, but now they go out of their offices to the worksites; formerly they did not touch the soil, but now calluses are formed on their hands ... [T]hey play an excellent role in the technical transformation of agriculture.

While bonafide technicians were drifting downwards, some representatives of the masses took on the duties formerly held by the experts. Old peasants, demobilized soldiers, educated youths, artisans, and cadres were organized into teams of "barefoot technicians".<sup>245</sup> According to a report originating in a county in Chekiang, 13,000 of these technicians had undertaken such diverse activities as the installation, operation, and repair of farm machinery, the elimination of plant diseases and pests, the breeding of good seeds, the popularization of advanced farming techniques, and the survey and design of small and medium-sized water conservancy projects.<sup>246</sup> By the middle of 1970, these indigenous technicians had also been instrumental in the establishment of nearly a thousand agricultural scientific experimental groups, with the result being that every production team within the county could claim its own "technician".

In a parallel development, during the course of the Cultural Revolution farm mechanization was taken from the care of experts and hsien-level functionaries. Machine Tractor Stations were disbanded and tractors and mechanized farm implements were released to the control of individual communes. For the Maoists, this was an important step, for it took mechanized farming out of the hands of professionalized managers and technicians, and laid the groundwork for distributing technical skills among a wider stratum of the rural society. From a

Maoist perspective, political development is best served when social egalitarianism is reinforced by technical egalitarianism, through which the largest possible number of the rural masses participate in agro-technical development.

### Emulation Campaigns and their Political Significance

Efforts to combine political development with agrotechnical development can be seen in the execution of the many emulation campaigns conducted throughout Chinese Communist history. Through the organization of emulation campaigns, the Communist leadership hoped to perform two critical functions, one economic and the other political. In the economic realm, emulation campaigns could be used to transmit new agricultural techniques. Politically, the campaigns could serve to infuse a sense of worth within the peasantry, while giving an important outlet for their participation in the transformation of rural society. Furthermore, a peasant model would generally be held up for emulation not only because of his technical ingenuity, but also because this ingenuity was a manifestation of his elevated political consciousness. Emulation campaigns had often been mounted in traditional China as a means of conveying moral principles to the people.<sup>247</sup> In modern China, emulation campaigns have been based on the fusion of virtue with technical expertise. Through peasant models, the Communist leadership could transmit political and technological policies to the peasant masses. The wide variety of actions embodied in peasant models can be seen in one account which appeared in People's Daily in 1953; according to the report, peasant models served to<sup>248</sup>

... set a good example to the broad peasantry in developing, consolidating, and stepping up the mutual aid and co-operation

movement in rural villages, in unfolding the patriotic emulation drive, in reforming the agricultural technique, in removing the conservative thought of production, and in creating new records of bumper crops. Such work has achieved salutary effects in leading the peasants and has served as a bridge between the government and the broad peasant masses.

During the early years of the People's Republic the activities of peasants such as Li Shun-ta, Chu Yao-li, and Lan kuo-han were held up as models of technical and political progressivism.<sup>249</sup> The emulation of their activities reportedly resulted in significant advances in the technical level of peasant agriculture. Model peasants were also incorporated into agricultural conferences and special classes were established as a means of deepening their technical knowledge.<sup>250</sup>

Despite the ebb and flow of political movements and the rise and fall of specific economic programs, emulation campaigns and efforts to cultivate peasant experts continued to be a prominent feature in the Chinese countryside. In 1964, however, a new type of campaign, one which downplayed the elitist aspects of previous campaigns, began to take shape. The new movement of "comparing, learning, helping and overtaking" minimized the competitive element which had been present in the past and instead stressed the responsibility that advanced areas had in aiding more backward areas through the sharing of their experiences.<sup>251</sup> Indeed, the aid given by the advanced to the backward did not go in only one direction, but was part of a reciprocal exchange: "the movement of comparison and emulation is not one in which the advanced help the backward and the backward learn from the advanced, but is also a mass contest in which people learn from each other and help each other".<sup>252</sup> As a key slogan of the movement put it, "learn from and catch up with the advanced and help others overtake you".<sup>253</sup>

At first, cadres from relatively advanced teams were sent to aid backward teams in raising their production, but by late 1965 emulation activities were largely confined within a single team. This naturally reflected the Maoist yearning for local self-reliance, but it also had a practical basis, for as People's Daily explained, "because agricultural production has a regional character, it is only by setting up local vanguards to organize the studying of local experiences that experiences will be more readily accepted by the peasants and the correct command will be given".<sup>254</sup> Most importantly, the establishment of a "local vanguard" was predicated on the simultaneous development of production and political consciousness: "in grasping production, one must proceed from ideology; in grasping ideology, one must proceed from production".<sup>255</sup>

The fusion of political development with agricultural development was a key theme in the "Learn from Tachai" movement. The story of the heroic struggles of this poverty-stricken brigade in North China was first brought to national attention in early 1964, and soon received wide coverage in the Chinese media. No less a personage than Chou En-lai used a session of the National People's Congress as a platform from which to exhort the people of China to "learn from Tachai's spirit".<sup>256</sup> While the brigade was hardly at the forefront of technical change, relative technological backwardness was more than compensated by the skill at ideological and political mobilization. This, as far as the Maoists were concerned, was more important than the application of advanced technology. Those who could not perceive the merits of using ideology and politics to transform the natural environment and transform production were suffering, according to Red Flag, from a "metaphysical

viewpoint", thus giving evidence of a "lack of strong ambition, being willing to lag behind and not daring to emulate Tachai's revolutionary spirit".<sup>257</sup>

#### Experimental Plots and the Cultivation of Peasant Experts

As was noted above, one of the most important precepts of Maoism is "the unity of theory and practice". According to Mao, "if you want knowledge, you must take part in the practice of changing reality".<sup>258</sup> While this may be a questionable epistemology, it does serve to underscore the importance of learning-by-doing, which in turn provides an acquisition of elementary scientific and technical knowledge for the vast majority of the Chinese masses who have been unable to avail themselves of a normal education. Additionally, this fundamental Maoist belief can aid in the instilling of feelings of confidence within the masses, a sense that their everyday productive activities, properly understood and summarized, can provide a basis for a deeper understanding of the natural world and give them the information necessary for its transformation. From the Maoist perspective, the technological development of agriculture cannot be imposed from without; it must be the work of the masses as they strive to transform productive activities and themselves.

Throughout Communist history, a key problem has been to establish an appropriate organizational format for mass technical activities. Western-style bureaucratic structures, with their clearly apportioned roles and predetermined activities too often serve to thwart initiative and to separate expertise from actual labor. In the agrotechnical realm, a distinct body of experts doling out new inputs and demonstrating

new methods while remaining aloof from the peasantry provides little opportunity for mass participation in the technical transformation of agriculture and the infusion of the spiritual changes that the Maoists see as the necessary complement to these technical changes.

The Communists have thus turned to a distinctive organizational mode for the development and extension of new agricultural techniques. Experimental and demonstration plots, cultivated by local peasants, have become a prime focus for the technological development of agriculture. Such plots lie alongside regular fields and provide for the development of techniques that are immediately applicable to farming practices in the surrounding area. And, since local peasants play an active role in the cultivation of the plots, their expertise and confidence becomes magnified in the process.

During the early years of the People's Republic, the formation of Mutual Aid Teams provided a natural organizational core for experimental farming activities. Not all MATs could boast experimental plots, but those that could soon became the objects of considerable attention. Peasants from other areas visited MATs with experimental plots and reportedly went away with an enhanced sense of confidence that higher yields could be achieved on their own land.<sup>259</sup> When the People's Communes were established during the Great Leap Forward, the opportunity for establishing experimental farms was further enhanced. In Honan province, for example, two million peasants reportedly took part in research activities in the experimental farms located in each production brigade.<sup>260</sup> One Commune in Kweichow claimed 95 technical demonstration centers in addition to 104 agricultural evening schools



and 1360 "agricultural science groups".<sup>261</sup> At the same time, in a manner typical of Leap excesses, some Communes went overboard in the formation of experimental farms; one Commune in Honan went so far as to convert forty per cent of its cultivated acreage into various types of experimental plots.<sup>262</sup>

The problems aside, the Commune experimental plots allowed a partial bridging of the gap separating red and expert. While local peasants received an on-the-spot technical education within the experimental farms, basic-level cadres also began to complement their political skills with technical expertise.<sup>263</sup> Political cadres in China have always been expected to possess a modicum of technical knowledge.<sup>264</sup> Through their cultivation of experimental plots this knowledge was expected to rise to new levels, resulting in the elimination of the vexing dichotomy of red and expert:<sup>265</sup>

The important significance of the principle of experimental farming by leading functionaries lies in the fact that it is the way leading to being both "red" and "expert" for many of our leading functionaries. Experimental farming will enable comrades who lead agricultural production to become experts in it, so that they are able to lead agricultural production successfully by leaps and bounds. This path is one not only for comrades who lead agricultural production but for all comrades in leading posts to become both "red" and "expert".

Most importantly, the expertise gained through the cultivation of experimental plots presumably would not remain separated from the everyday activities of the peasants, but would lead to a stronger sense of solidarity between cadres and masses. According to one account which originated in Hupeh province, the participation of political cadres in experimental farming resulted in "marked changes in ideology and style of work".<sup>266</sup> Commandist errors were avoided and the personal parti-

cipation of the cadres in the cultivation of experimental plots became "the most powerful way of persuading people by examples".<sup>267</sup> The cultivation of experimental plots was no less beneficial for technical cadres: "their action in technical research has been heightened. They have learned the experience of mass movements from the leadership cadres, and vivid experiences of production from the peasant masses. Not only their political and ideological level, but also their technical and professional level has been elevated".<sup>268</sup>

All the same, a number of problems arose in conjunction with the cultivation of the plots. In their haste to establish the plots, the "unity of theory and practice" was often forgotten by many cadres, and the plots became pro forma exercises. Some cadres "were in fact operating the experimental farms for no reason other than that they must have experimental farms to operate as the others had and they were putting up a show for others to see. They felt all they had to do was experiment successfully on small high-yielding farms and that it was the business of others to promote the successful experience gained".<sup>269</sup>

In other cases, a "displacement of goals" began to be manifested as the cultivation of experimental plots became an end in itself. Some cadres devoted so much labor and resources to the cultivation of experimental plots that work on regular crop acreage was seriously hindered.<sup>270</sup> The impressive production increases attained on the experimental plots could not be easily transferred to regular fields, which could never receive the same degree of attention that the experimental plots had benefited from. Thus by the middle of 1960, Kuang-ming Jih-pao found it necessary to stress that:

Scientific experimentation is a way of verifying established theories and establishing new theories. Under certain circumstances, experimentation can lead to production and make predictions. But it does not follow that experimentation can take the place of production. For all experiments must be conducted under conditions corresponding to certain practices of production which serves as the foundation. And, as the experiments are restricted by their conditions, the result is usually of a limited character. Therefore the foundation of science can only be the practice of production, not laboratory experimentation.

With the cessation of the Leap, the cultivation of experimental plots went on, albeit on a more limited scale. But by 1964, the increasingly radical political climate generated by the Socialist Education Movement was manifested in an expanded role for peasant technicians and their cultivation of experimental plots. By this time the emphasis had changed, and experimental work was more closely integrated with extension work. A type of "key point", "demonstration plots" became the core of a renewed effort to use mass-line techniques to discover, develop, and extend new agricultural methods. It was probably no coincidence that the first demonstration plots were established (in the Soochow Administrative Region) in the summer of 1965, right after Mao had proclaimed that the Chinese people were faced with three revolutionary tasks: class struggle, struggle for production, and scientific experiment.<sup>273</sup> Scientific and technical work was once again merged with wider political concerns.

In 1963 half of the personnel of Agrotechnical Popularization Stations were transferred to the demonstration plots.<sup>274</sup> Hsia-fang of technicians continued through the following year, and by early 1965, one-fourth of the scientists and technicians affiliated with the Chinese Academy of Agricultural Science had been resettled in the

countryside.<sup>275</sup> When agricultural technicians are included in the total of experts who had been transferred to the countryside, the number of technically qualified people working at the basic levels was further enlarged. By September of 1965, ten thousand agricultural and scientific workers - 40 to 60 per cent of their total number - had been sent to the rural areas.<sup>276</sup> Of these, 70 per cent were directly employed on the demonstration plots.<sup>277</sup>

In the months immediately preceding the outbreak of the Cultural Revolution, the sharpening political conflict within China's leadership was reflected in Maoist drives to expand the acreage of the plots, and to give wider scope to the technical and scientific activities of the masses.<sup>278</sup> The plots were to be a nucleus of an emerging unity of experiment and dissemination, and a unity of laboratory, extension station, and farm. A demonstration farm, according to People's Daily, "closely combines research work with mass experience and demonstrations".<sup>279</sup> Having experts working alongside peasants in the operation of the demonstration farms would, it was hoped, create a greater solidarity between the two groups, and would result in a greater sense of responsibility to the needs of the agricultural sector on the part of the experts. At the same time, work on the demonstration farms was expected to extend the scientific and technical creativity of the peasantry. As People's Daily put it, "the demonstration farms adopt the cream of the experience of the local people, the experience which they have accumulated in their struggle with nature and which has come from practice and has been tested by practice. To adopt such experience means relying on the initiative and creativeness of the people..."<sup>280</sup>

As ideological conflict became even sharper during the last months of 1965, mass activities within the demonstration plots took on a still deeper importance. Successful work on the plots was seen as one more indication of the validity of putting ideology and politics in command.<sup>281</sup>

... the work of the demonstration farms is not limited to spreading advanced techniques and expanding production. The work is also a process entailing the struggle between proletarian and bourgeois ideas, between the socialist and the capitalist road and also the struggle between the advanced and the backward, and between what is correct and what is incorrect ... The running of the demonstration farms means using Mao Tse-tung's thinking to discover and foster the advanced, sum up experience and elevate the level. The embryo of the advanced, formerly hidden among the masses of the people, after being nurtured by Mao Tse-tung's thinking will bloom and become a great force.

This approach to economic and technical development was a logical extension of the basic Maoist belief that politics and ideology should lead economic work. As People's Daily put it, "the big or small increase in production and the fast or slow rate of development are first determined by man's ideological and spiritual features and the work styles of the leadership. In one word, they are determined by the subjective activity of the people".<sup>282</sup>

At the same time, some important questions remained concerning the nature of the relationship between "ideological and spiritual features" and the authority of the formally constituted leadership. Demonstration plots were organized by work teams comprised of middle-level governmental, scientific, and Party cadres who worked in collaboration with existing agrotechnical stations.<sup>283</sup> Thus, despite the rhetoric of mass participation and control, the cultivation of demonstration plots may not have represented any significant dilution of control over agrotechnical matters by hsien-level authorities.<sup>284</sup> Even with the Cultural

Revolution's institution of the "Triple Combination" mode of government, agrotechnical services did not escape the hold of governmental apparatus. Members of triple-combination revolutionary committees were urged to "grasp experimental plots personally", as Commune cadres and hsien-level cadres worked together to help popularize new crop varieties developed in experimental fields.<sup>285</sup> Experimental and demonstration plots, while incorporating a considerable degree of mass participation, continued to reflect the combination of popular initiative and bureaucratic control which has been a basic feature of Communist society.

#### Young People in the Countryside: Agrotechnical Development and Political Participation

When the Cultural Revolution first broke over the Chinese political and social order, one of Mao's prime reasons for initiating the struggle, according to many Western analysts, could be found in his desire to prepare a new generation of "revolutionary successors". Because of the jump in the birthrate that followed the establishment of peace and order in the 1950s, China today has a population distribution heavily skewed in favor of young people. More than half of the Chinese now living were born after 1949, and their incorporation into a society forged through years of revolutionary struggle poses vexing problems for the Maoist leadership. The basic dilemma of maintaining a political culture which combines revolutionary dynamism with constructive activity is most strikingly contained in the necessity of allowing young people to become participants in the political and social order.

One means of resolving this dilemma is the absorption of youths into agrotechnical programs. Not only is the new generation given an

opportunity to participate in the economic reconstruction of the country, this participation is structured in such a way that economic activity is fused with political activity. Youths develop their technical skills in the course of engaging in productive activities; at the same time, the technical skills acquired are but part of their overall development. A young Chinese is never allowed to forget that the development of personal technical skills is part of the development of the Chinese nation as a whole. Expertise is not to be used for personal aggrandizement, but for the development of the Chinese nation. In turn, the development of the individual and of the nation is a reflection of political progress. In short, the development of a new generation of Chinese should reflect the fusion of redness and expertise.

During the early years of the People's Republic, the Chinese leadership attempted to provide a learning environment through which young people could become more technically proficient without succumbing to the hauteur that afflicted educated people in traditional China. As Teng Tzu-hui told a New Democratic Youth League Rural Work Conference, "don't put on airs and look down upon others and the aged, considering yourselves to be ahead of others in everything. For young men, the main task is to learn. You should learn from the aged. Nor is it a simple matter to perform agricultural labor."<sup>286</sup>

Political guidance was an important component in fostering the correct attitude. Significantly, the members of the New Democratic Youth League (NYDL), presumably made up of the most politically conscious of China's youths, were especially selected for advanced agrotechnical training. At the same time, the Youth League was itself expected to "mobilize young peasants and young intellectuals to learn farming

technique and to train large numbers of agrotechnical persons". While the NYDL had no patent on technical knowledge, it did offer a well-organized association which already had roots in the countryside. And no less important, it was the perfect vehicle for combining technical proficiency with political acumen. In this use of the NDYL can be seen one of the first attempts to provide an organizational basis for the fusion of redness with expertise.

Youth League members were also instrumental in the organization of emulation campaigns and the establishment of classes for the technical training of peasants.<sup>287</sup> At times, however, Youth League organizations went beyond these activities and began to use coercive tactics. In late 1957, the secretary of one provincial Party committee exhorted members of the Youth League "to struggle against the conservative ideas in rural activities and forcibly to execute measures for increasing production and to popularize mass experience".<sup>288</sup> This passage is noteworthy, for it contains one of the rare instances in which the Chinese press indicated that the reformation of agricultural technique was undertaken by means other than demonstration and education. It is possible that this plan of action was not widespread, but represented a deviation on the part of one Party secretary. Alternately, since the secretary's report also mentioned the need for the "popularization of certain modern farming implements", it may be that the report reflected the desperate situation created by the over-production of double-wheel ploughs.

Youth League members were not the only representatives of efforts to simultaneously raise the political and technical abilities of the new generation. Experimental plots were cultivated by youth groups through-



out the Great Leap Forward. Young people, according to People's Daily, were "bold in accepting new things and clear in seeing new conditions".<sup>289</sup> The problem was, however, that all too often they relied solely on their zeal and enthusiasm in effecting technological changes, "and therefore alienate themselves from reality". The cultivation of experimental plots was therefore seen as a useful technique for the linking of enthusiasm with practical reality. By 1959 the young people of China were reportedly engaged in the cultivation of over 30 million mou of "high yield plots" and more than 1,400,000 "scientific and technical experimental plots".<sup>290</sup>

During the Cultural Revolution similar efforts to channel and direct the energies of youth through the cultivation of experimental plots became more widespread, in part as a reflection of efforts to keep China's young people under some control. While youthful Red Guards were more than willing to "bombard the headquarters", their enthusiasm in attacking established positions of authority was not matched by any great desire to take up the onerous tasks of developing the backward hinterlands of China. At first, this reluctance was attributed to the opposition of the "capitalist roaders" who had stirred up trouble between the peasantry and the youths who had been transferred to the countryside.<sup>291</sup> But the problem went deeper than this. Educated young people, highly conscious of their intellectual superiority over the peasantry, could not easily see in the countryside any opportunities for the exercise of their talents. One way of countering this attitude was to give young people a sense of responsibility for the effecting of technical changes in agricultural production.<sup>292</sup> The policy of in-

corporating youths into a "triple combination" with cadres and peasants was extended, with group activities centering on the joint cultivation of experimental plots. Young people were lauded as "the most active force for scientific experiment" and were made to feel that the countryside was proper venue for their activities:<sup>293</sup>

In the midst of scientific experiment activities, some young intellectuals assigned to rural farming have further recognized the countryside as a really broad world where they can find full scope for their activity. They are more satisfied and content with the countryside as a place to strike roots in ...

Yet this promise was not always fulfilled. When the hsia-fang of youths began in earnest in late 1968 as a reaction to Red Guard excesses this was done for purposes of "labor remolding" and not because the youths could make important contributions to technological development within the countryside.<sup>294</sup> This may have been due to a misunderstanding of Maoist intentions, coupled with an inability to see any virtues in city-bred young people. The fact remains however that many youths met with a hostile reception in the villages. As one brigade spokesman admitted in early 1971, "when educated youths came to our brigade, we simply took them as additional labor power because we did not understand Chairman Mao's revolutionary line deeply, but laid one-sided emphasis on tempering through labor".<sup>295</sup>

Other reports convey a less negative impression and document the success of hsia-fanged youths in such things as the operation and repair of rice transplanters and the cultivation of saline soils.<sup>296</sup> But accounts such as these are spotty, and my interviews in Hong Kong with young people who emigrated to Hong Kong give no indication that they played any role in the transmission of advanced agricultural techniques. This could be a

fundamental problem, one every bit as important as the development of agricultural production itself. If China is unable to generate a technical and organizational format which provides for the participation of its emerging citizenry in the development of the nation, the promise of the Chinese revolution will never be completely fulfilled.

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Like all other economic organizations in China, the various agro-technical agencies will have to concern themselves with more than productive endeavors. It is necessary that they attune themselves to the diverse needs of a society that is developing not only economically, but politically as well. In so doing, agrotechnical organizations will be confronted with problems wider in scope and greater in magnitude than those faced by similar organizations outside China. The solution of these tasks is fundamental to the revolution. The mass-line approach favored by Mao Tse-tung prevents agricultural technology from becoming something to be changed through the "rational" application of new inputs and techniques, and stresses instead the growth of mass participation in the development of farm production. According to the Maoists, China will never be a developed nation if rationality is concentrated within the ranks of an elite body of experts, all of them occupying secure organizational niches while the rural masses remain unaffected by modern currents.

Important as is Mao's vision of the proper course for Chinese society, it has not been the sole inspiration for the structure and performance of Chinese organizations. For over a century, significant elements of the Chinese population have searched for a way to relate to the changed world around them and to respond to its challenges, seeking, in Joseph

Levenson's words, for "modernization with pride". The ultimate success of the Chinese Revolution will depend on the applicability of Maoist principles to the modernization process and whether these principles will allow the Chinese to solve the problems which stymied the imperial and republican governments. As an integral element in the modernization of Chinese society, the technological development of Chinese agriculture partakes in the revolutionary currents generated by Mao Tse-tung as well as those existing over a century ago. These will be briefly examined in the concluding chapter.

## CHAPTER V

### Conclusion

For Max Weber, a central propulsive force of historical development was the overwhelming of stable organizational structures by charismatically-led mass movements. A disruptive force, charismatic leadership was itself unstable; a new social order forged through charismatic leadership would eventually have to be stabilized through the development of new political organizations. These organizations, in Weber's estimation, would themselves solidify into stable structures, within which people went about their tasks in a routine manner.

Weber's analysis does provide a useful perspective for viewing historical developments in Communist China. The evolution of Chinese organizations and of Chinese society as a whole continues to reflect efforts to preserve the charismatic leadership of Mao Tse-tung while maintaining revolutionary dynamism against the encroachments of routinized administrative structures and bureaucratic work styles. But organizational development in China reflects more than the charisma-routinization dichotomy. The phenomenon of bureaucratic development is far too complex to be absorbed into a simple analytical scheme. In this concluding chapter, then, some of the key aspects of Chinese organizational development will be taken up, in the hope that a more complete picture will be presented of the forces generating the distinctive configuration of Chinese organizations.

#### Historical Precedents: the Yen'an Heritage

At the height of the Cultural Revolution, a number of Western commentators were struck by the parallels between Mao's vision of the proper developmental schema for Chinese society and his recollections of life in the wartime Liberated Zones. For Mao a militarily and

politically mobilized society, united in its struggle against a common enemy, provided the prime model to be emulated by succeeding generations of Chinese.<sup>1</sup> While this interpretation of Mao's overall view is probably correct, it is nonetheless necessary to guard against oversimplifying the Yen'an experience and treating it in a mechanical manner.<sup>2</sup> Organizational development in China has reflected the experiences gained during the Yen'an period, but these experiences themselves grew out of a complex reality. It is imperative that the Yen'an era not be looked on as a period when loosely organized guerrilla bands struggled heroically against a powerful foe, armed with nothing more than revolutionary zeal and united only by a common devotion to a charismatic leader. On the contrary, intensive efforts were made throughout the period to develop the specific competencies found in a modern social order. Technical and organizational expertise was not devalued; far less was it seen as a pernicious influence.<sup>3</sup>

During the Yen'an period, as during all phases of the Communist era, the emergence of new problems was met with concerted efforts to come up with workable solutions. While the revolutionary ideology stressed some modes of problem-solving and under-valued others, it rarely was responsible for closing the door to those solutions which required the application of specific expertise. Indeed, the very ideology of the revolution has presented a framework which requires an open approach to the solution of specific problems. The activity of revolutionary cadres as James Macdonald puts it, reflects "a conception of the revolution as an ongoing activity continually presenting new tasks to the revolutionaries, who have continually to strive for new awareness to cope with those tasks".<sup>4</sup> The increase of technical and administrative

competence is, to be sure, but one means of coping with the variegated problems of constructing a new order; it is an indispensable one nonetheless.

### Maoism and Organizational Strategy

While expertise in the abstract poses no irreconcilable difficulties for the Chinese (even those of a Maoist persuasion), the construction of appropriate organizational structures for the accommodation of expertise raises problems of a different nature. Although expertise per se need not present a fundamental threat to Maoist patterns of revolutionary activity, the emergence of stable, routinized organizational structures can signal the erosion of revolutionary dynamism. The issue, however, extends well beyond the simple analysis of revolution versus routinization. For the Maoists, the development of stable organizational forms is less at issue than the actual behavior of the personnel working within the organization. Unlike Weber, the Chinese do not seem to believe that the specific structural aspects of a modern bureaucracy result in specific behavioral imperatives. There is more than a trace of Confucian thinking, even in the Maoists, when they focus on the individual behavior of organizational functionaries, rather than on the structures which Weber thought to influence that behavior.

The strongest Maoist criticisms of bureaucracy center on the emergence of a "bureaucratic style" - a mode of work which belies the revolutionary virtues of egalitarianism, self-sacrifice, and willingness to take up new tasks. When bureaucracy in general is attacked, the complaints lodged seem to deal with complaints concerning the short-



comings of individual bureaucrats rather than with the bureaucracy as a whole. When Mao himself catalogued "Twenty Manifestations of Bureaucracy" - and it is noteworthy that bureaucracy is used here in a pejorative sense - his list included such disparate entries as "talentless bureaucracy", "lazy bureaucracy", "irresponsible bureaucracy", "disunited bureaucracy" and "degenerate bureaucracy".<sup>5</sup> Instead of an incisive critique of the bureaucratic phenomenon per se, Mao's list can be taken as a catalogue of a wide range of human frailties.

At times, however, Mao and his followers have turned their attention to the structural attributes of bureaucratic organization, and in so doing have attempted to explicate how individual malfeasances have been based in bureaucratic structure. A "bureaucratic style" can be the consequence of two interrelated factors: the specialization of skills and the parcellization of distinct spheres of authority. From a Maoist perspective, the greatest threat posed by bureaucratization lies in the bureaucrats' ability to insulate themselves from outside influences, not only those emanating from the political center, but also those which come from the masses, the putative clients of the bureaucracy. Specialized skills and clearly defined official duties enable bureaucrats to repudiate the "mass line". Instead of maintaining two-way communication with the masses, members of the bureaucracy can maintain a monopoly on information and cloak their activities in a veil of secrecy. The development of the Chinese nation, instead of a joint activity undertaken by all of the citizenry, then becomes a fragmented enterprise. Economic development may be achieved in this manner, but not political development.

For all members of Chinese organizations, the primary Maoist injunction is to avoid "parochialism", "sectarianism", and "isolationism" - in short, to avoid becoming insulated from the wider concerns of the society as a whole. As Martin Whyte has pointed out, the basic meaning of "politics takes command" is that "all organizational decisions and actions are seen as having political implications which extend beyond organizational boundaries".<sup>6</sup> According to the Maoists, only when tasks do not become the exclusive province of specific organizations will it be possible to bring about political and economic progress.

These Maoist organizational principles have a particular validity for the transmission of advanced agricultural technologies. Peasants cannot be convinced to change their traditional agricultural practices when extension officers act as aloof representatives of a distant bureaucracy. Additionally, agricultural development is more than a technical and economic problem. Changed agricultural practices require the transformation of peasant thinking and the fundamental re-orientation of the basic goals and attitudes found within a peasant culture. The Maoist schema for organizational behavior in the countryside thus extends beyond the application of rational principles for the solution of specific problems; the extension of new agricultural inputs and techniques is only part of a wider problem: the rebuilding of rural society through the obliteration of the traditional peasant vices of passivity, subservience, and ignorance.

From the Maoist perspective, there is no necessary contradiction between economic development and the attenuation of some of the powers

of bureaucratic officials. While a diminution of bureaucratic authority will undoubtedly result in some inefficiencies, it will at the same time allow for greater mass participation in the development and diffusion of new agricultural technologies. The accumulation of technical expertise will then cease to be the sole responsibility of specific agrotechnical organizations, but will be the task of all, peasants and office-holders alike. According to the Maoists, just as war is too important to be left to the generals, so the development of agricultural technology is too important to be left to an elite few of experts and bureaucrats.

#### Central Control: A Continuing Dilemma

Bureaucratic organizations can be instruments of central control; alternately, they can become "little kingdoms" in their own right. The Chinese have been engaged in a constant struggle to arrive at the optimum degree of central control, one that allows for initiative within each level of the bureaucracy without resulting in an excessive degree of autonomy.

One of the supreme accomplishments of the Communist Revolution was the bringing of unity and cohesion to a society that had been characterized as "a heap of loose sand". Yet the imposition of control from above has had its perils. In the agrotechnical realm, over-centralization has resulted in tragic failures, as demonstrated by such occurrences as the double-blade plough fiasco. The wide variations in local conditions continue to militate against the transmission of inputs and techniques by centralized administrative command. Local cadres need room to manoeuvre; failure to take this into account will perforce result in what Gilbert Etienne has characterized as "the unreasonable application of

generally reasonable principles".<sup>7</sup>

Many other historic examples underscore the basic difficulty of imposing central authority on the agricultural sector. In the Soviet Union, over-centralization, aggravated by the presence of conflicting lines of command emanating from a number of centers, has led to gross inefficiencies in the administration of the farm economy. Efforts of the Indian government to generate rural development through the establishment of Community Development and National Extension Blocks have been stymied by the central government's reluctance to delegate discretionary authority to the lower echelons of the system. The result has been the suffocation of imagination, innovation, and responsibility for the grass-roots Block Development Officers.<sup>8</sup>

The Chinese are still groping for an administrative system that will combine centralization with basic-level initiative and respect for local conditions. Peking has repeatedly shifted the balance between centralization and decentralization, making a good number of serious mistakes while so doing.<sup>9</sup> Local administrative units have been subject to continual redefinition regarding their powers and responsibilities.<sup>10</sup> While the hsien government has been the prime organizer of agrotechnical development programs, its authority in this sphere has been less than total.<sup>11</sup> For one thing, many of the employees of hsien agencies are not dependent upon the hsien administration for their salaries; instead, they continue to receive workpoints from their native production teams.<sup>12</sup> Additionally, the establishment of demonstration plots in conjunction with hsien agrotechnical agencies results in some dilution of the hsien's authority. Demonstration plots are

expected to reflect the successes of local peasants in raising crop production, and as such, they are to a significant degree subject to the influence of basic-level cadres and peasants. The demonstration plots were institutionalized as examples of the creativity of the masses. Their successes continue to provide proof that not all agrotechnical improvements are the work of officials working at the hsien level and above.

The limited authority of the hsien administration is further demonstrated by the distribution of funds for agrotechnical improvements. The commune remains the prime agency for the distribution of development funds, and teams and brigades cannot expect intervention on their behalf coming from hsien or provincial officials.<sup>13</sup> At the same time, however, the central government has retained overall control of agrotechnical development through its ability to channel development funds into "areas of stable and high yields".<sup>14</sup> Since the bulk of these areas are located in the South, this policy may very well have contributed to inter-regional tensions. Unfortunately, the documentary evidence does not allow intensive exploration of this topic.

The ability of government bureaucracies to insulate themselves from the control of the political center was first explicated by Max Weber. Although Weber's thesis that the growing complexity of society fosters bureaucratic autonomy has on occasion been criticized, the Chinese case does lend some support to it.<sup>15</sup> Basic-level agrotechnical agencies have often succeeded in following an independent course of action within their bailiwicks; indeed Maoist theory places a great deal of stress on the importance of "learning from the masses" and avoiding the sort of

"commandist" errors likely to be perpetrated by a centralized bureaucracy. Basic-level independence has been essential, given the peculiarities of the agricultural economy. The variability of local conditions remains a prime determinant of the validity of specific agrotechnical policies; farming practices cannot be changed through the mechanical transmission of orders sent down from above. While centralized bureaucratic systems can function effectively when policies are clearly articulated and universally applicable, agrotechnical development remains a poor subject for centralized operations.

#### Bureaucratic Organization and Mass Participation

The attainment of the optimal degree of centralization has importance which goes beyond the search for efficacy and efficiency in the development of agricultural technology. According to the conventional canons of bureaucratic practice, the basic task of bureaucracy is the marshalling of resources for the efficient solution of specific problems. But for the Chinese, the responsibilities of each bureaucratic organization are far wider. In essence, the task of any Chinese organization is the transformation of people along with the solution of particular problems. This basic point is elaborated by Martin Whyte:<sup>16</sup>

In the rational bureaucratic conception, the central concern is with achieving internal efficiency through the maximum use of technical knowledge. In the Maoist ideal the predominant emphasis is instead on finding ways to maximize the involvement and commitment of the organizational participants, particularly the "masses" at the bottom of organizations. While Weber focussed most of his attention on the administrators within bureaucracies, rather than on entire personnel, the Maoists focus most of their attention on how subordinates are tied into the organization.

This does not mean, of course, that considerations of efficacy and efficiency are deemed completely irrelevant to organizational per-

formance. The expansion of participation within the organization, the Maoists hope, will result in better morale for all personnel, by facilitating their more dedicated involvement with the work of the organization. The result will be more efficiency, not less. Agro-technical development in China is fostered by treating the peasants less as clients, and more as participants within the organization. The incorporation of a wide spectrum of the rural populace into the activities of the organization will also help to break down bureaucratic insularity and aloofness from the problems of rural society. Peasants can more easily voice their demands and threaten to withhold their activity if the policies formulated by the organization seem inappropriate. The incorporation of peasants and officers of agricultural agencies into a united front became evident during the Cultural Revolution, when the latter group interceded with the political center on the behalf of the peasants.<sup>17</sup>

For the Maoists, participation in the organized development of agricultural technology is part of a larger process of political development. With the blurring of the boundaries between "officials" and "clients", the latter have the opportunity more fully to exercise their rights as citizens, demonstrating their newly-gained status by working for the economic development of the Chinese nation. Mass participation in technical work is particularly vital in China, where private initiative is not the primary source of innovative behavior. The peasantry must be motivated to take up the challenges of modernizing agriculture through their incorporation into the affairs of the nation as a whole. The peasant then becomes the counterpart of the Western

entrepreneur, only his willingness to invest his energies in the development of new things is generated not by a desire for personal gain, but by a sense of responsibility to the nation as a whole.<sup>18</sup>

As a necessary complement to the enlargement of the orbit of political participation, the peasantry must learn new skills. Of equal importance, they must gain the self-confidence necessary for the acquisition and use of these skills. The creation of "peasant technicians" directly relates to both of these aspects. According to Maoist doctrine, when respect is accorded to the creative potentials of the peasantry, they begin to gain the confidence necessary for the initiation of new agricultural practices. This may be demoralizing to bonafide experts, but their losses are more than made up for by the spiritual gains of the peasantry. Thus when Mao says "the lowly are the most intelligent, the elite are the most ignorant", he is, according to Leo Orleans' analysis, "trying only to increase the self-confidence of the masses and is using the backs of the intellectuals as stepping stones to reach his objective".<sup>19</sup> For Max Weber, the alternative to the bureaucratic rule of experts was the rule of dilettantes. Weber however failed to consider that the expansion of participation and enthusiasm could outweigh the "dilettantish" aspects of organizational performance. When the work of the organization is focused on something as fundamental as agricultural transformation, the release of mass energies and the acquisition of basic skills by the masses seems more important than the preservation of authority based on expertise.

To be sure, the above analysis may present an idealized picture of organizational strategy in China. The incorporation of peasants into



agrotechnical organizations may merely be a device for co-optation in the pejorative sense of the word. An elite group of peasant technicians may be little more than Chinese Stakhanovs, their well-publicized successes unlikely to be replicated by the bulk of the peasantry.<sup>20</sup> Furthermore, popular participation does not include the actual setting of basic policy, only involvement in technical functions necessary for the fulfilment of a particular policy.<sup>21</sup> Nor can peasants voluntarily withdraw from this involvement; functions performed by the peasants are not granted as privileges, but become the basic duties for the citizenry. As James Townsend points out, "by investing acts that are not in themselves political with an aura of civic obligation, the CCP opens up a much broader sphere for the display of political activism".<sup>22</sup> Work and technical activities become a sort of ongoing plebiscite, wherein politics and economics are merged; a good economic performance is a good political performance.<sup>23</sup>

All of this is not unique to China. Even developed industrial nations owe a substantial measure of their economic success to the fact that individual economic motivations have been reinforced by the commitment of the citizenry to the development of the nation. The process of political development which fostered the creation of a broad-based citizenry was thus an important stimulant for the development of the nation's economy. This point was not lost on a significant strata of the Chinese intelligentsia during the late nineteenth and early twentieth century. For non-traditionalistic scholars such as Yen Fu, the secret of the West lay in its conjunction of national goals and individual goals within a wide spectrum of the population. The dynamism of the

West could not be explained by making reference to simple self-interest. Economically progressive elements were not atomized individuals running helter-skelter in a Darwinian struggle for survival. Rather, they were citizens working within the context of a mutually beneficial reciprocal relationship with their nation.

The inability of traditional China to develop such a social order was the despair of men such as Yen Fu, and the problem persisted into this century. Throughout, the critical problem had been the establishment of an appropriate spiritual base for societal and organizational development. The Kuomintang set up organizations galore, virtually all of them failures for their lack of a supportive spiritual framework. The lessons of Chinese history have not been forgotten by Mao Tse-tung, who has always stressed that the establishment of organizations had to be paralleled by efforts to raise the spiritual level of the people. The elevation of a people's spirit cannot be accomplished through ideological exhortation alone, the Maoists believe, but comes only with the development of a citizenry who truly feel that their concerns and those of the government are one.

The organization is not a passive beneficiary of these spiritual changes within the populace, but plays an active role in the transformation of the political order. Each organization becomes a tableau for political, spiritual and economic development. For Mao, an organization has no more important task than the political mobilization of those who in the past had been unconcerned with the political realm.<sup>24</sup> From this perspective, an organization does not sap individual vitality, as is often assumed in the West. As Yen Fu recognized during the last

years of the Empire, the energies of the individual are augmented and effectively channeled only when the individual is incorporated into an appropriate organizational framework.<sup>25</sup>

The development of the citizenry through organizational activity is a prime concern for China's agrotechnical agencies. In a nation that is overwhelmingly comprised of peasants, agricultural development cannot be engendered by the simple demonstration of new inputs and techniques; the entire rural way of life must be altered. Agrotechnical development is but one aspect of overall rural development and agrotechnical organizations must expend a good deal of their effort on the political development of the peasantry. In sum, the activities of agrotechnical organizations have to center on the transformation of peasant attitudes. The traditional peasant shortcomings of conservatism, insularity and parochialism are best countered by infusing in the peasantry a sense of their own importance as participating members of a wider political order.

Accordingly, Maoist doctrine clashes with Blau and Meyer's pessimistic statement that "although bureaucracies are not necessarily resistant to social change ... they are not suited to bring about changes involving greater democratic participation".<sup>26</sup> Instead of being a self-contained system, divided into a multitude of hierarchical ranks, a Maoist bureaucracy has to incorporate a broad range of the people into its ranks. This objective has yet to be completely fulfilled, of course, but the Chinese appear to be sincere in their dedication to expanding political participation through organizational development. This is a far cry from the short-sighted policies of the Soviet Union, where the use of the bureaucratic organization in the countryside resulted in the

conviction among the peasantry that many of the agrotechnicians attached to the Machine Tractor Stations were in fact agents for the secret police.<sup>27</sup> For the Soviets, the proper purpose of bureaucracy is political control, not political development. The Chinese have been aware of the shortcomings of the Soviet system, and have consciously attempted to create an alternate system that will combine socialist ownership with mass political participation.

#### Participation through Innovation

With the development of the rural sector, not only do peasants begin to take a more active political role, they also begin to take on a larger role in fostering technical and economic progress. The grass-roots development of science and technology is an integral element of overall rural development, for it incorporates political mobilization, economic modernization, and egalitarian social relations. According to one English visitor, at least, the involvement of China's peasantry in science and technology plays a vital role in the transition from a traditional society to a modern one.<sup>28</sup>

From the Maoist perspective, the transformation of the material world and the transformation of the self are part of the same process. The tasks selected for economic and technical transformation, important in themselves, have equal importance as educative devices.<sup>29</sup> While the Communist government has not always been consistent in its support of mass technological innovation, the populist strain in Mao's thinking has placed considerable emphasis on it.<sup>30</sup> As Benjamin Schwartz has noted, Mao's basic view of science "seems to involve an element of populism. If science is basically a matter of learning from practical experiences, it

should be a kind of common sense immediately accessible to all".<sup>31</sup>

Because the power of a nation derives from its ability to develop and channel the energies of its population, backwardness need not be a hindrance. Rather, a "transformation of opposites" can occur, an apparent backwardness can be a spur to progress. A dynamic, politically energised nation such as China can depend on the initiative and creativity of its populace to press the nation's development forward.

In many ways, the Maoist vision of China's course of economic progress is based on experiences acquired during the Yen-an period. Through a long and difficult process, the technical and material shortcomings of the Communist guerrilla army were overcome, resulting in the defeat of an enemy favored by a vastly stronger technological base. In Mao's China, to be "poor and blank" (that is, lacking even the rudiments of a "modern" society) can also mean to be virtuous - not just in the ideological sphere, but in the economic sphere as well. Unhindered by old rules and conventions, the Chinese people can reach new heights in the development of technology.<sup>32</sup> Some mistakes will be made along the way of course, but Mao is sanguine about the future: "failure is the mother of success ... [T]he lessons from failure are the basis of future triumphs".<sup>33</sup>

"Learning by doing" is a key ingredient in the Maoist model of development. The simultaneous transformation of the masses and their environment is fostered by the construction of an organizational system which does not minutely delegate all tasks to various specialists, but allows the emergence of creativity and initiative from a wide span of the populace. The basic wisdom of this tactic has been noted by Western

authorities such as Peter Kilby, who notes that formal technical training is not always necessary for effective performance; job experience and on-the-spot training can easily become the most important mechanisms for the implantation of new technical skills.<sup>34</sup>

Even before the control of mechanized farming was decentralized to the Commune level in the late 1960s, the development of local technicians within the Machine Tractor Stations was one of China's most successful and appropriate educational programs. With the decentralization of mechanized farming activities to the Commune level, the opportunities for on-the-job training have increased to an even greater degree. Similar educational opportunities have emerged with the incorporation of members of the peasantry into activities sponsored by other agrotechnical agencies. The cultivation of experimental and demonstration plots by peasants has been a particularly noteworthy means of providing opportunities for technical training.

#### Red and Expert: The Maoist Perspective on Technological and Political Development

The development of a corps of technically proficient and politically active people has been a perennial goal for the Chinese Communists. The relationship between technical proficiency and political activism has, however, been a matter of much debate. With changing policy emphases, the primacy of one or the other has been stressed, but neither has been paramount. The search for the optimal combination of both qualities began with the Communists' efforts to forge an effective strategy of revolutionary warfare in the 1930s. In the face of the overwhelming material and technological might of the Japanese army, the Communists

turned to the cultivation of the political spirit of their troops as a counter-measure. As Mao explained the situation in 1938, "weapons are an important factor in war, but not the decisive factor; it is people, not things, that are decisive".<sup>35</sup> Mao has always stressed the prime importance of getting the best out of people by transforming their political spirit, and using this spirit as the basis for solving technical problems. Even so, from the beginning of the anti-Japanese War, Mao did not slight the importance of making use of talents and abilities (t'sai) in addition to political virtues (te).<sup>36</sup>

The need to fuse virtues and talents for the effective waging of a revolutionary struggle has not been an exclusively Maoist concern, but is a continuation of a fundamental aspect of Marxism. For Marx himself, the revolutionary potentials of the proletariat rested in the combination of political activism and technological sophistication found within the class. The invincible strength of the proletarians was not attributable solely to their acute class consciousness and willingness to work for the revolution; proletarians, by the very nature of their work, had the most advanced and sophisticated knowledge of modern technology.<sup>37</sup> For Marx, revolutions were the "locomotives of history", but proletarians, literally and figuratively, were the engine drivers.

During the Great Leap Forward, when Maoist radicalism was ascendant, the ideal "Communist Man" was one whose advanced political consciousness motivated him to sacrifice comfort and sleep for the cause of economic construction. This did not mean, however, that the importance of technical expertise was slighted. Indeed, one of the prime reasons for self-sacrifice was to allow the pursuit of new inventions and scientific

experiments.<sup>38</sup> After the failure of the Leap, expertise temporarily moved into a position of pre-eminence, but this did not signify the eclipse of political concerns.<sup>39</sup> The Socialist Education Movement and then the Great Proletarian Cultural Revolution re-opened the debate on the proper relationship between redness and expertise, even though this was not the prime concern of either movement.

In the future, the Maoists will undoubtedly continue to create a closer alliance of redness and expertise. They know full well that the experts' ability to control information can lead to an expansion of their power. Additionally, when the control of information exists within a setting characterized by uncertainty, the power of the experts is augmented. The apprehension of the Maoists is understandable, for as Blau and Meyer pointed out, "since experts are by definition more knowledgeable and skilled than non-experts, one would expect them to have an advantage over others in uncertain situations".<sup>40</sup> If the peasants are to gain any stake in the political order they must develop the opportunity to develop their own expertise and withstand the power of the experts. Few economic endeavors are more subject to uncertainty than farming, particularly when new inputs and techniques are injected into the agricultural system. With the integration of peasants and technicians through such activities as the joint cultivation of demonstration plots, the Maoists hope to loosen the experts' monopoly on the control of uncertainty. At the same time, the peasants grow in the realization that they, no less than the experts, can begin to deal with the vagaries of developing agricultural technology. Once again, it should be evident that those organizations concerned with the advancement of agricultural technology cannot content themselves with the application and demonstration of new techniques, but must do their



part to provide a basis for peasant participation in the rural economy and society.

Many barriers continue to separate peasants from experts and prevent the realization of the ideal of mass technical participation in the countryside. Not only do technical cadres possess specialized skills still unattained by the majority of the peasantry; in many cases they have been recruited from different strata of Chinese society. In coming from the ranks of the old upper classes, scientific and technical workers also differentiate themselves from non-expert Party and government cadres.<sup>41</sup> At the basic levels of rural society, however, the separation between technical cadres and peasants is less pronounced. Technicians working at the Commune level and below are generally recruited from within the ranks of the peasantry, and have enjoyed a level of training only two years in advance of an ordinary middle school graduate.<sup>42</sup>

Beyond the political and organizational problems of utilizing experts, a further problem remains. As Chapter III has indicated, traditional China, despite impressive beginnings, never developed science and technology to the extent done in the West. By the nineteenth century, China's backwardness in this critical area had become painfully evident, and by the end of the century, a good number of the most progressive Chinese intelligentsia saw in the development of science and technology an escape from China's inferiority vis-a-vis the West.<sup>42</sup>

But for the Chinese Communists, and particularly Mao Tse-tung, Western technology was not to be ingested in a single gulp. The massive absorption of Western techniques would only underscore the inferiority of the Chinese people and further demonstrate their incapability of solving

their own problems. From this perspective, a "bourgeois expert", steeped in foreign technical learning begins to resemble a comprador of old, building up his wealth and influence while aping the thought and customs of foreigners.<sup>44</sup> Technological policy in Mao's China thus reflects a basic Leninist vision: exploitation is not solely a class function, but is also a product of the domination of one nation by another. As Rennsalaer Lee sums up, "the Maoist ideology closely links the concepts of national and class alienation, making national dependency upon foreign stereotypes the counterpart of workers' subservience to the tools and implements of manufacture".<sup>45</sup> In order to combat this dependency, the Chinese press has, with varying intensity, contrasted the success of home-grown experts (particularly peasants and factory workers) with the failures of those experts still under the sway of "foreign technology".<sup>46</sup> For the Chinese, it is not sufficient that the workers achieve the Marxist objective of regaining their tools; the tools themselves must reflect the development of a technology that is both proletarian and native.

This is not to say that an ideology tinged with some elements of xenophobia is the sole source of Chinese efforts to create an indigenous technology. As with most other elements of Maoist ideology, a strong element of practicality can be found in the requirement that the Chinese develop their own technology. The Chinese realize that the development of a modern agricultural technology requires many years of effort. While making strenuous efforts in this direction, they are at the same time attempting to make full use of native methods which can be used in the interim.<sup>47</sup> But even a highly developed agricultural technology has to

mesh with Chinese conditions. Foreign agricultural techniques do not always travel well, and their transportation to areas with different ecological and cultural settings can seriously limit the success of the transplanted techniques.<sup>48</sup>

In selectively absorbing Western technology while developing an indigenous one, the Chinese are walking in the footsteps of the only Asian nation that has successfully developed its economy. In contrast to present-day recipients of outside technological assistance who are still struggling to achieve agricultural growth, the Japanese in the nineteenth century began to develop their agricultural economy largely through their own efforts. A substantial part of their success came as a result of efforts of the Meiji government to collect the experiences of "veteran peasants" and to make maximum use of the native technologies developed by them.<sup>49</sup> The general applicability of the Japanese model of agricultural development to Chinese circumstances has often been noted. This model has been of particular importance for the successful agricultural development of Taiwan.<sup>50</sup> In developing a farm technology which contains some of the best elements of the Japanese experience, the Chinese are adhering to a development scheme most appropriate to the conditions of an Asian nation with a large labor supply and limited amounts of arable acreage.

#### Prospects for Further Development

China has a long way to go before she begins to duplicate the successes of Japanese and Taiwanese agrotechnical development. To take one important example, if China were to apply to one-half of her cultivated acreage as much chemical fertilizer as the Japanese use on a per-acre basis, between 32 and 35 million tons of chemical fertilizer

would be required.<sup>51</sup> While China's current production of about 15 million tons represents a tremendous increase over pre-1949 figures, it remains inadequate.<sup>52</sup> Still, it must be remembered that twenty-five years ago, the world's total chemical fertilizer production stood at only 10 million tons.<sup>53</sup>

Modern agricultural inputs such as chemical fertilizer still do not figure prominently in the economy of many Chinese villages. According to figures given to Shavid Burki by the Bureau of Commune Management in 1964, expenditures on chemical fertilizer averaged only 10.4 per cent of the production of China's Communes.<sup>54</sup> Now, ten years later, one can be fairly certain that a significantly higher percentage of Commune production budgets are taken up by modern inputs, but China is still a long way from having a modern agricultural economy.

But all in all, the achievements of China's agrotechnical development programs have been impressive, particularly when the state of the Chinese farm economy before 1949 is recalled. Well into the twentieth century, the agricultural inputs and techniques utilized in China were of ancient lineage, most of them having been used in at least some parts of China by the fourteenth century.<sup>55</sup> When the Communists found that the intensification of these traditional productive practices could not result in significantly higher yields, the shift to an agriculture-first policy in the early 1960s resulted in far more extensive efforts to develop and apply modern agricultural inputs and techniques.<sup>56</sup>

Yet even the subsequently successful development of China's agriculture cannot stand as the sole criterion for evaluating the nation's agrotechnical programs. Not content to use their agrotechnical

organizations for the sole purpose of developing agricultural production, the Chinese have used these organizations to foster the expansion of participation in the countryside. In so doing, the Communists hope to break down the peasants' traditional traits of dependency and submission to hierarchy, traits which have impeded modernization in the past.<sup>57</sup> Instead of allowing organizational development to discourage the political mobilization of the masses, Mao and his followers have attempted to create organizations which will allow the absorption of the widest possible range of the population into the political system.

To be sure, this participation is not totally spontaneous, but is directed and manipulated by the political center. Still, as long as the interests of the citizenry and the interests of the political center are generally similar, the relationship between the two will be, in the Maoist terminology, a "non-antagonist contradiction". Because the concerns of the government and of the people both center on the related goals of economic progress and national assertion, political participation can easily dovetail with governmental policies.<sup>58</sup> Within this context, political mobilization and mass line procedures can serve as a substitute for the routinized administrative methods used by most bureaucracies.<sup>59</sup>

Tensions will remain and contradictions will continue. Mass political participation at the village level may be absorbed into the local and particularistic loyalties which still remain in the countryside.<sup>60</sup> Still, the alternative of centralized direction from afar presents even worse dangers. The Chinese have recognized that economic

and political development is often best served by allowing for a fair degree of local autonomy. Few organizations have been able to balance centralized control with local initiative. The Chinese have applied substantial efforts toward the solution of this dilemma, motivated not only by Maoist ideology, but also by the recognition that economic development, particularly in the agricultural sector, is best achieved when the initiative of the masses is fully energised. As Hideo Yamamoto has pointed out, the economic and psychic liberation of the peasantry has "supplied the vital increment in energy that, perhaps more than centrally deployed machinery of technology, have been instrumental in restoring and transforming China's agriculture in the post-Liberation years".<sup>61</sup> Like all organizations, China's will continue to evolve; unlike the organizations of many other nations, however, a key source of this evolution will be the Chinese people themselves.

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59. Barnett, Cadres, Bureaucracy, and Political Power, op. cit., pp. 437-8; Townsend, op. cit., p. 215
60. Townsend, op. cit., p. 172
61. Yamamoto Hideo, "On the Evolution of the Chinese Model of Agrarian Technology" Developing Economies, 9, 4 (1971) p. 471

ABBREVIATIONS USED

CB	<u>Current Background</u>
ECMM	<u>Extracts of China Mainland Magazines</u>
JMJP	<u>Jen-min Jih-pao</u> (People's Daily)
JPRS	<u>Joint Publications Research Service</u>
KMJP	<u>Kuang-Ming Jih Pao</u> (Bright Daily)
NCNA	<u>New China News Agency</u>
NFJP	<u>Nan-fang Jih-Pao</u> (Southern Daily)
SCMM	<u>Selections from China Mainland Magazines</u>
SCMP	<u>Survey of the China Mainland Press</u>
URS	<u>Union Research Service</u>