

ECONOMIC DEVELOPMENT AND SOCIAL CHANGE IN RURAL JAPAN  
-- A CASE STUDY OF SHIWA COMMUNITY, IWATE PREFECTURE --

by

MITSURU SHIMPO  
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Department of Anthropology & Sociology

The University of British Columbia  
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## ABSTRACT

This study examines post-war social change in a Japanese farming community. Social change is defined as changes in the three sets of rules for social behaviour in a social system. Three sets of factors affected social change in rural Japan: (1) changes in the policies and programmes of the central government, (2) changes in the national economy, and (3) the adoption by farmers of new farm techniques.

The central government has aimed at the industrialization of Japanese agriculture. Through its policies and programmes the government removed or modified obstacles to economic growth and provided conditions favourable to the growth of the farm economy. The Japanese economy has grown at a rapid rate. National economic growth together with governmental policies and the farmers' incentive to increase farm output has resulted in significant changes in rural Japan. For example, these factors have increased farmers' access to economic resources, absorbed rural young people into industrial centres, motivated farmers to mechanize farm practices thereby raising production costs, and made necessary an increase in household income. Farmers have adopted new farm techniques. Despite the exodus of youth from the rural areas, as farmers mechanize their practices they developed a surplus of labour. Farmers have diversified production activities by investing the surplus labour into non-farm operations, or into

farm operations when competent change-agents existed. Their adoption of new farm techniques modified the old sets of rules for social behaviour, and social change took place in rural Japan.

If the present trends continue, Japanese farming communities will look very different in the future. First, present suburban communities will disappear as "farming" communities. Second, the majority of present farming households will leave farming, and only a small number of larger farmers will remain in those communities in which the residents make no deliberate efforts to differentiate their farm operations. Third, a large number of farming households will remain farming in those communities in which the residents will differentiate farm operations; these communities will be small in number, but the community I studied will be one of them.



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## PREFACE

Dr. Thomas Smith, an American expert on the history of Japanese farming communities, once told Dr. Seiichi Tōhata, an expert on Japanese agriculture, that in his opinion the changes in Japanese farming communities which began in 1955 were almost comparable to the Enclosure Movement of eighteenth century England or to the Kolkhoz (collective farm) Movement begun in the U.S.S.R. after 1917. On hearing this, Dr. Tōhata was at first surprised, but on second thought he<sup>1</sup> agreed with the above observation. In the process of change that took place in Japan from 1955 to 1968, Dr. Tōhata noticed two occurrences: technological change and economic growth in farming communities, and the decline of farm production activities during the rapid economic growth of the nation as a whole. Numerous books and papers treating various aspects of the above process have appeared in Japan, but I have found few satisfactory sociological writings. In addition, few sociological papers written in Western languages have analyzed the above process using first hand data. I have provided detailed information on this subject, in the hope that it will be a contribution to Western readers.

In this study, I tried to omit any irrelevant information on Japan, however interesting it may be. I also avoided Japanese terms where possible so that anyone who has an interest in this subject, but

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1. S. Tōhata, ed., 1968, p. iii. Complete information on footnoted sources appears in "The References" attached at the end.

does not necessarily have a deep knowledge of Japan, can follow the argument. I have not, however, neglected the accomplishments of Japanese scholars. In many places, I condensed enormous amounts of information in a few paragraphs while attempting not to mislead the reader. I hope I have not done the injustice of distorting the accomplishments of Japanese scholars. I quoted only those books and papers which are directly relevant to my discussion; numerous others which were important but not immediately relevant have had to go unmentioned.

The fellowship provided by the Canada Council made this study possible. Without the co-operation of the Shiwa Agricultural Co-operative, I could not have completed the necessary study for this degree. Information provided by Mr. Matsuzō Matsuoka, Mr. Kyū Kumagai, Mr. Eietsu Fujio, and Mr. Sakuo Takahashi was invaluable. The staff members of the Extension Department were particularly helpful. I firmly believe that this co-operative is a first class change-agent in Japan. Among Shiwa farmers, Mr. Takeshi Hatakeyama and his family, Mr. Shingorō Niisato and his family, and Mr. Ryūji Hōjō gave me valuable insights into the life of the farmers. Mr. Yoshitaka Niida, when we first met, frankly told me that if I did not reach an understanding of the farmers' mentality he would regard me as a "phony" whatever I might publish: I hope he will not ruthlessly condemn me upon reading this. I should like to thank others too numerous to name.

Staff members of Shiwa Town Office, Yahaba Town Office, and Tonan Village Office were kind enough to provide the information that I requested. Mr. Kyūzō Abe and Mr. Shōji Takagi of Shiwa Town Office



are to be thanked for their co-operation. The Federation of Agricultural Co-Operative in Iwate Prefecture passed on to me invaluable information, in addition to making arrangements for me to interview certain people. Iwate National University had several faculty members who played the role of consultants; among them I have to express my special thanks to Professors Tadashi Satō, Takeo Ishikawa, and Yoshimi Fujisawa. The Tōhoku National Agricultural Experimental Laboratory collected enormous amounts of invaluable information; but without the friendship extended by the staff members of this institution, I would not have obtained so much comparative data. Mr. Masayoshi Kimizuka, Mr. Keiji Hashimoto, Miss Chise Satō and Mr. Kazuo Kamiya were particularly helpful. Among the personnel of the Government of Iwate Prefecture, I must thank Mr. Shin Ogawa and Mr. Hideo Chiba. As to Mr. Ryō Ōmura, I have respected him for many years, and I was extremely fortunate to be able to work in his prefecture. The names of Rev. Aritoshi Yamada and his family, Dr. Kō Kurihara, and Rev. Kazuya Nakajō and his family must be mentioned here: whenever I tired of research, the encouragement and consolation of these people was invaluable.

Professor Kiyomi Morioka of Tokyo University of Education, my teacher in Japan, has continually encouraged, stimulated and advised me during various aspects of the field research as well as during the process of writing. Professor Kazuhiko Nakayama of International Christian University programmed and operated the computer to process the data collected through the co-operative. Without his contribution and friendship, the completion of this study would have been significantly

delayed. Rev. Sadao Ozawa provided space for me in his church located in the centre of Tokyo, helping to economize my limited budget; he also arranged meetings with interesting people in Iwate. Indeed, he recharged my withered energy whenever I visited him from Shiwa. Mr. Shōtō Sugawara, the father of Kayoko (my wife) accommodated my family so that I could freely conduct the research as I liked.

Six professors of the University of British Columbia kindly read all three drafts of my study, each time giving me penetrating criticisms and invaluable suggestions. They are: Dr. William Willmott (the first chairman of my dissertation committee), Dr. Cyril Belshaw (the second chairman), Dr. Harry Hawthorn, Dr. John Howes, Professor Robert Pokrant, and Professor Richard Copley. I learned a great deal from Professor Raymond Firth and despite our limited contact he has greatly influenced this study. Miss Patricia Horrobin and Mrs. Ann Harley accepted the task of editing my draft -- if this writing has any readability, I owe it to them. Mrs. Gale LePitre kindly typed the manuscript, which was by no means easy to read.

## CHAPTER ONE

## INTRODUCTION

Making correlations between economy and society is an integral part of common sense for sociologists and anthropologists.<sup>1</sup> With this assumption in mind it follows that a major change in the economy ought to result in some significant changes in the society. Change in the economy (of a nation) is mainly expressed in two terms, "economic growth" and "economic development",<sup>2</sup> and is closely related to governmental action. Particularly after the Second World War, economic development "became a matter of political policy."<sup>3</sup> If a government's programmes are successful, the economy ought to grow, and the society ought to change in some way. This study is concerned with social change in what is frequently considered to be a peasant society. Peasant societies with high rates of economic growth ought to provide challenging data for study. Japan, a nation with such a peasant society, succeeded remarkably in developing its economy: the average growth rate of GNP between 1957 and 1966 was 14.5%,<sup>4</sup> and the national economy expanded from an annual production of 31 billion U.S. dollars to 102 billion dollars in the same period. As the economy of Japan grew, the

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1. For example: B. Hoselitz, 1957; M. Nash, 1959; W. Moore, 1963(B). See also Section I-B-1.
  2. I will treat these terms in Section I-B-2.
  3. W. Moore, 1967, p. 33.
  4. The average growth rate in the same period in West Germany was 10.4%; Italy, 10.0%; E.E.C., 9.5%; France, 8.6%; U.K., 6.1%; U.S.A., 6.0%; and Canada, 5.0%. Ienohikari Kyōkai, 1969, p. 52.

economy of the rural communities also grew, and social change emerged in all aspects of the society, including the rural communities. Before the Second World War, Japanese peasants were economically poorer, politically more conservative, religiously more pious, and were less interested in school education than the inhabitants of cities.<sup>5</sup> If the rate of economic growth is rapid, studies in rural communities should reveal conspicuous social change in a relatively short period. This study will deal mainly with post-war economic development and social change in a rural community in Japan.

To deal with this subject, it is necessary to have a clear notion of: (1) how "economy" and "society" are related; (2) what is meant by "social change"; and (3) what is essential for social change. There must also be a leading theory within this study to "explain" the process of social change. From the theory derived, the areas of interest are defended and substantiated by empirical data. This chapter attempts to clarify and to relate relevant concepts; it proposes a theory and makes statements on the areas covered by the study. Following this, there is a brief description of the research techniques employed and of the community studied.

## I. An Approach to the Theory of Social Change

A study of Japanese rural communities involves two technical problems. First, after the Second World War Japan became rich enough

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5. T. Fukutake, 1968.

to maintain a very large number of professional scholars. Therefore a substantial amount of work had to be surveyed before one could begin to discuss research and results and legitimately claim any originality. Second, as Ronald Dore pointed out, many Japanese have "a conviction that the foreigner can never 'really understand' Japan." They do not take seriously non-Japanese scholars' writings on Japan.<sup>6</sup> Satisfying both Western and Japanese scholars is a major problem.

This study undertakes two tasks in order to satisfy oriental and occidental researchers. First, it briefly reviews the accomplishments and the theories of the Japanese rural sociologists as well as of the American anthropologists. Second, it develops a theory to explain the data accumulated by other Japanese scholars and to explain the data covered by this study.

#### A. Japanese Rural Sociology

In the latter half of the 19th century, Western scholars and their Japanese students taught sociology at two elite universities, Tōkyō University and Kyōto University. Until the 1920's, sociology in Japan was speculative rather than empirical. The first empirical study on the Japanese family appeared in 1926, followed by the first book on research methodology in 1933;<sup>7</sup> both were written by Teizō Toda, a professor at Tōkyō University. The high social prestige of the University and Toda's fresh approach contributed to the popularization of the idea

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6. R. Dore, 1963, p. 244.

7. T. Toda, 1926, and 1933.

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of empirical research. Until the end of the Second World War, however, the number of sociologists and empirical studies were limited.

The pre-war researchers concentrated on studies of family,  
household, <sup>9</sup> dōzoku, <sup>10</sup> or rural communities. During the period from 1928 to 1932, a rural sociologist, Eitarō Suzuki, studied farming communities in Japan, borrowing some of the techniques and concepts used  
<sup>11</sup> in American rural sociology. In the early 1930's, Kizaemon Ariga and a group of young sociologists began to analyze institutions in rural communities from a different viewpoint; they thought that the "social reality" of Japanese rural communities, which could not be adequately covered by Western concepts, had to be the "real" starting point of any discussion. Parallel to this phenomena, studies in folklore and ethnology led by Kunio Yanagida provided detailed descrip-  
<sup>12</sup> tions of Japanese cultural traits. One notices two characteristics of the three schools of rural studies in this period. First, researchers did not have "theories" to apply to their studies: they derived generalizations by inductive inference and interpreted data instead of  
<sup>13</sup> testing hypotheses. Second, they did not emphasize the impact of change in outside conditions upon the rural community under study.

Japanese rural sociology rapidly developed after the Second World War. The number of sociologists increased, and the re-introduction

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8. K. Naitō, 1958, p. 56.

9. Definition appears on page 66.

10. On these institutions, see Chapter Two, Section I-B.

11. E. Suzuki, 1939.

12. C. Nakane, 1967, p. 181.

13. O. Hasumi, 1958, p. 109.

of American sociology remarkably improved the techniques of social research. Karl Marx and Friedrich Engels' writings, banned by the Japanese government until 1945, came to influence the social sciences. Sociologists began to use in their studies sharper theoretical foci gained from Marxian and other Western approaches. Changes immediately after the last war in the fields of polity, law, economy, education, and religion, aroused the interest of sociologists. The simultaneous development of other social sciences such as economics, economic history, law, folklore, ethnology, and social anthropology, also stimulated sociologists. Compared to pre-war research, significant changes occurred in post-war rural sociology: sociologists' areas of interest diversified; they used new theoretical tools in their studies, among which the Marxian approach and structural-functional analysis were pre-eminent; new techniques of data collection and data processing were adopted; they jointly studied a community with researchers of other disciplines -- researchers of rural communities jointly organized an academic association in the 1950's which included scholars of various disciplines; <sup>14</sup> the number of publications increased.

Post-war publications contain a couple of basic features which are objectionable: in some cases sociologists' writings are not objective, in other cases they are taxonomic, that is, inclined toward categorization rather than explanation. This chapter examines four recent books relevant to the areas dealt with in this study. The books were

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14. See the following sources: Hasumi, op. cit., Japanese Ethnological Association, ed., 1954, Vol. 2, pp. 579-587 and pp. 596-597, K. Odaka, 1950, and Nakane, op. cit., pp. 176-183.

all written by relatively young but well known researchers in contemporary Japan. The discussion deals mainly with the introductory chapters and the last chapters since these parts reveal the theoretical views of the works. The first book treats relations between agricultural co-operatives and farming communities.<sup>15</sup> The second book is concerned with the impact of the central government's policies on rural communities.<sup>16</sup> The style of these first two sets of authors is representative of the writings of some contemporary sociologists who have come under the influence of the Marxian approach. The third book represents the peak of post-war studies in dōzoku by sociologists.<sup>17</sup> The fourth book represents the social anthropologists' approach to community studies in Japan.<sup>18</sup>

Tadashi Fukutake is a representative rural sociologist in contemporary Japan, who has been influenced to a limited extent by the Marxian approach. A group of researchers who were trained under him wrote the first two books; so they are treated jointly. The books are studded with phrases and statements similar to the following examples quoted from the introductory chapter of the second book:

"Self-sufficient agricultural production was typical of pre-capitalistic agricultural production and the economic basis of so called 'traditionalism'."<sup>19</sup>

"We have to focus on the problem-situation under the system [or 'establishment'?] of so called 'state [or 'national'?] monopolistic capitalism'."<sup>20</sup>

15. J. Watanuki, J. Matsubara, and O. Hasumi, eds., 1964.

16. J. Matsubara and O. Hasumi, 1968.

17. T. Nakano, 1964. On this institution, see Chapter Two, Section I-B-2.

18. C. Nakane, 1967.

19. Matsubara et al., 1968, p. 6.

20. Op. cit., p. 7. Parentheses supplied.



"Under the system of state monopolistic capitalism, one can observe that unbalanced growth occurs between agriculture and manufacturing industries, as well as government of agriculture and farmers by capital."<sup>21</sup>

"Development of strata-differentiation as the expression of government by capital...."<sup>22</sup>

In the final chapter of the first book, the editors discussed the relations between monopolistic capitalism, the government (or "state"), and social change in Japanese farming communities, the topic covered by this study. To summarize the editors' argument, monopolistic capitalism incorporated the government as its agent and thereby governed farming communities. More specifically, post-war state monopolistic capitalism had two "demands": (1) to develop commercial farming, diminishing the self-sufficiency of rural communities in order to expand the domestic markets for its products and (2) to absorb cheap labour from rural areas in order to compete with other countries in international markets.<sup>23</sup> According to the editors, these two demands, commercialization of farming and the exodus of rural labour, were<sup>24</sup> "changes" (dependent variables) although the readers cannot know if these "changes" are what the editors mean by "social change". Monopolistic capitalism "wished" certain patterns to develop (independent variables), so the above changes occurred. If one discussed the above changes in terms of farmers' aspiration to fill the gap between the

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21. Op. cit., p. 8.

22. Op. cit., p. 9.

23. Watanuki, et al., eds., op. cit., pp. 249-250.

24. Op. cit., p. 250.

living standard of farming communities and industrial workers' households, he would be "fundamentally wrong...because, he was dazzled by 'phenomena' and could not see the 'substance' (or 'essence')." <sup>25</sup> In brief, the editors' proposition is: the "logic of the monopolistic capitalism" caused the "changes" in farming communities. In order to conform with the editors' line of argument, one has to identify the "demands" and the "logic" of the monopolistic capitalism. The editors claimed that "the above point", which is summarized in the form of a proposition, "will immediately become clear when we examine the establishing process of the Agriculture Basic Law, the intensive expression <sup>26</sup> of capital's demands on farming."

"It -- the Agriculture Basic Law -- emerged on the basis of the 'logic' of capital rather than the 'logic' of developing farm economy, and the Programmes for Structural Improvement of Farms<sup>27</sup> which is the empirical expression of the capital's logic, emerged bearing the 'anti-farmers' tendency."<sup>28</sup>

Three characteristics emerge in the writings of these sociologists. First, in the above discussion, the editors' concepts are not clear. To give a few examples, the meaning of "logic", "logic of monopolistic capitalism", or "logic of capital" is unclear. Second, the editors personify certain concepts such as "capital" or "capitalism". Third, they do not always establish a point empirically. In spite of their claim, one cannot know how to identify the "demands" or "logic" of the monopolistic capitalism. The three concepts -- "demands of capitalism", "logic of capitalism", and "logic of capital" -- are not clear,

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25. Ibid.

26. Ibid.

27. On these programmes, see Chapter Two, Section II-B.

28. Op. cit., p. 251.

as the editors try to define concepts in terms of other undefined concepts. With unclear concepts, one cannot clearly establish a point. In addition, if one is not in conformity with the editors' argument, he is branded "fundamentally wrong."<sup>29</sup> In order to be approved by these editors, one has to accept their assertions: they try to make their points by assertions rather than in an empirically testable manner.

Apparently, these researchers have a keen awareness of the impact of central government policies and programmes as well as of the impact of economic conditions in the society at large on farming communities. Their statements, however, contain considerable "Marxian" jargon developed in Japan and ad hoc terms created by combining several characters, most of which do not help to explain human behaviour in empirical situations.

The third writer, Takashi Nakano, represents monographers in contemporary Japan in that the ultimate goal of his research is to construct rigid categories and to find relationships between the categories.<sup>30</sup> He claims the "theory" of dōzoku as "one of the great achievements Japanese sociologists have accomplished."<sup>31</sup> This theory is "delivered from and brought up by empirical field research."<sup>32</sup> In Nakano's discussion, "theorization" means to identify the basic unit of analysis, to find rules which relate the units in certain ways, and to re-construct

29. Op. cit., p. 250 and 278.

30. M. Shimpo, 1970, p. 60.

31. Nakano, 1964, p. 5.

32. Op. cit., p. 6.

a social phenomenon. When a new concept or a category in a theory replaces an old one, Nakano calls the product the "refined" theory.<sup>33</sup>

When researchers propose "more adequate terms which help to define the essence (of a social phenomenon)", he asserts: "We have to regard it as the development of a theory."<sup>34</sup>

His approach is basically taxonomic rather than explanatory although his concepts are clear in Japanese. In addition, his interest in cross cultural data is limited in spite of the fact that he mentions such work. Nakano asserts that "truly universal theory can be created only through empirical studies of historical facts and through confrontation with theories developed in other societies." Then, he rejects individual Japanese theories "which lack the viewpoint of cross cultural comparison." He also demonstrates his reluctance to accept any ready made Western theories as "ultimate truth."<sup>35</sup> In his major work of eight hundred pages, however, only seven Western scholars are referred to: two scholars of law in the nineteenth century, two German sociologists of the early twentieth century, one Canadian historian, one American social psychologist, and one American anthropologist. The only anthropologist Nakano quoted is George Murdock, and the most highly evaluated sociologist is Max Weber. No other comparative study by cultural and social anthropologists appears in Nakano's major work. In sum, his works are not only taxonomic but the taxonomy is comprised of particularly Japanese cate-

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33. Op. cit., p. 31 and p. 34.

34. Op. cit., p. 35.

35. Nakano, 1968. In this reprint of his major 1964 work, Nakano added a postscript to answer some of his critics.

gories. In order to be a contribution to the world body of knowledge in social sciences, Nakano's works will have to be "translated" into more general terms.

Chie Nakane represents the social anthropological approach in contemporary Japan. She is concerned with examining "in the light of modern methods of social anthropology" "a wealth of material" collected by Japanese scholars, which was "not yet fully analyzed by Western scholars."<sup>36</sup> The major subject of her book is "systematic theoretical generalization on the basis of a structural analysis of the data concerned with Japanese kinship."<sup>37</sup> As a well trained social anthropologist, she has extensive knowledge of comparative data; unlike Nakano, she has a positive interest in locating Japanese social organization in the more general taxonomy of human societies.<sup>38</sup> She challenges, for example, the definition of dōzoku developed by sociologists and "translates" it into social anthropological terms.<sup>39</sup> She lists criteria of a "descent group", or more specifically, of a "lineage". She then examines dōzoku in this light and concludes that it is not a lineage. Thus, she "translates" the contributions of some Japanese scholars, including Nakano, into more accessible form. As mentioned above, Nakane<sup>40</sup> has a positive orientation toward generalization. For all her emphasis<sup>41</sup> on theoretical rigour, however, her propositions seem to have limited explanatory power. Following Raymond Firth, she talks about social

36. C. Nakane, 1967, p. v.

37. Op. cit., p. vi.

38. Shimpo, op. cit., p. 61.

39. Nakane, op. cit., p. 85.

40. Op. cit., p. vi.

41. Op. cit., p. 85.

organization and "the principle of social structure." After examining institutions in rural communities she inductively infers that there are three "distinctive characteristics of the structural principle underlying Japanese social organization." First, "personal relationships are confined to the 'tangible' and 'local' sphere, which limits the scope of the sociological body of individuals." Second, "social organization tends to produce a one-sided structure, in which personal relationships and the system of organization usually function along a vertical line," or egalitarian relationships receive little emphasis. Third, "groups become independent of each other with no elaborate or constant network cutting across the different groups in the way that Hindu caste networks cut across various villages."<sup>42</sup> Nakane further concludes that these are the results (dependent variables) of the absence of a unilineal descent system (independent variable).<sup>43</sup> If this is the case, when a society lacks a unilineal descent system, the structural principle must have the above characteristics, roughly determining the features of social relations in it. However, in Canada and the United States where the unilineal descent system is not typical, the social relations assumed by Nakane to exist in the absence of that system are not necessarily found. It is apparent that Nakane has not explicitly stated many of the postulates made in her discussion. As the rules and criteria of her inductive inference are not explicit, it is doubtful that anyone adopting her approach in dealing with the same material would reach either her conclusion or similar ones.

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42. Op. cit., p. 172.

43. Op. cit., p. 170.

In order that Japanese scholars may make some contribution to the body of knowledge commonly shared by social scientists in the world, whether contributing theory or empirical information, their presentations ought to satisfy a few conditions. First, the researchers must use clear concepts. Second, they must have a theory, preferably one which is explanatory, however simple it may be. Third, they must articulate indices so that others can use them. It is hoped that the above conditions are satisfied in this study.

#### B. Community Studies in Japan by American Anthropologists

During the period between 1935 and 1936, John Embree conducted the first and sole pre-war ethnographic study of rural Japan.<sup>44</sup> The Second World War separated American anthropologists for a few years from this island country. Numerous Americans came to live in Japan after the last world war, when opportunities to study rural Japan were open. The studies that resulted are usually referred to as "community studies". As early as 1950, A.F. Raper and others published their observations in a work entitled The Japanese Village in Transition<sup>45</sup> for SCAP. Among Japanese scholars, this was considered a notorious study since the research method was rather rough. According to a legend among researchers in Japan, a group of Americans in uniform drove jeeps into rural communities and "interviewed" farmers who had been called to the place by military authorities. Detailed mono-

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44. Embree, 1939.

45. SCAP = Supreme Commander of the Allied Powers.

graphs began to appear after this period of unsophisticated studies.

Associates of the Centre for Japanese Studies of the University of Michigan, such as John Cornell, Edward Norbeck, and Robert Smith, and other scholars from different institutions conducted community studies in the early 1950's: they published their reports in the mid 1950's.

All these studies, together with studies by scholars of different disciplines such as Paul Dull,<sup>46</sup> Andrew Grad,<sup>47</sup> Thomas Smith,<sup>48</sup> or Thomas Grubbs<sup>49</sup> prepared the way for the epoch making study later achieved by

the Centre for Japanese Studies. From April 1950 to July 1954 a group of scholars conducted a thorough piece of research in a hamlet called Niiike<sup>50</sup> located in the southwestern mainland. Among the participants in this project such names as Cornell, Norbeck, Smith, or George De Vos were found besides the authors of Village Japan. In 1956, the Asia Foundation, an American non-profit organization, initiated an experiment in the same hamlet -- a project of mechanizing farm practices. A team of Japanese social scientists began to study the effect of changes as they would appear in the hamlet. No single Japanese hamlet has ever been observed by so many scholars with different cultural backgrounds and academic disciplines for so long. Indeed, this was the peak of community studies in Japan by American anthropologists. After this study, the interest of American scholars seemed to have left this subject. In the 1960's, Japanese scholars did not find many stimulating

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46. Dull, P., 1953.

47. Grad, A., 1952.

48. Smith, T., 1952.

49. Grubbs, T., 1953.

50. Beardsley et al., 1959.



monographs of community studies by Americans. This subsection discusses Embree's work (which still enjoys a high reputation among contemporary Japanese scholars) and the monographs produced by a group of Americans related to the Centre for Japanese Studies.

Reading lists of rural sociology in contemporary Japan still include Embree's Suye Mura not because of his concepts and categorization of social institutions but because of his vivid description of pre-war rural life. When Embree conducted his research, Japanese rural sociology was in the making: Eitarō Suzuki who gave advice to Embree<sup>51</sup> published his own book in the same year that Embree published his monograph from the University of Chicago Press. Japanese scholars' pre-war writings frequently dealt with one or two aspects of the social system or discussed a couple of institutions in the rural society. Instead of farmers' behaviour in everyday life, their interest tended to focus on functions of certain institutions in historical perspective. On the other hand, being trained under Radcliffe-Brown, Embree described the "network of direct and indirect social relations<sup>52</sup> linking together individual human beings" through his firsthand observation of farmers' behaviour. Contemporary Japanese students have been brought up in the decades of rapid post-war social change and are thus a kind of "foreigner" knowing little about pre-war rural Japan. Hence, they can perceive the pre-war situation more vividly from Embree's description than from some Japanese sources.

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51. Suzuki, E., 1939.

52. Embree, op. cit., p. xv.

Embree had a limited command of oral Japanese but could not read Japanese literature: all he did was to collect data by interviews, often through an interpreter, and to record what he personally observed. The language barrier placed a certain limitation on his study. If he had access to Japanese papers available at that time, his concepts would have been sharper, as would have been his description of relations between such categories as "family", "household", or "extended family". The reader cannot clearly see if Ie<sup>53</sup> is a family or a household in Embree's terms nor can he see the relations between Ie and the extended family. Embree applied Lloyd Warner's six social class categories (the upper upper, the lower upper, the upper middle, the lower middle, the upper lower, and the lower lower) to group Japanese farmers in terms of the degree of their access to social and economic resources. By doing this he underestimated the significance of landlord-tenant relationships in pre-war Japan. If one is interested in social change, one has to take Embree's description as the starting line or  $T_1$  rather than an intermediate point or  $T_2$ . This is because Embree did not clearly discuss what had changed, or in what manner: his emphasis was the present, and his interest in social change seemed limited. In brief, Embree applied the concepts available at the University of Chicago instead of adopting or modifying any of the concepts or categories about rural Japan developed by Japanese scholars.

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53. See Chapter Two, Section I-B-1. I used the term "household" as an English equivalent of Ie and not to denote merely a group of residents under the same roof who share social and economic life as a unit.

54. For example, Ariga, 1933 and 1934 were available as good references.

Consequently, he missed a number of significant points from the viewpoint of contemporary researchers.

As a part of the big project of the Centre for Japanese Studies, John Cornell and Robert Smith independently but almost simultaneously conducted ethnographic studies of one hamlet in Shikoku (1950-1951)<sup>55</sup> and another hamlet in the mainland (1951-1952).<sup>56</sup> The common goal of their studies was to demonstrate that with some modification,<sup>57</sup> Redfield's concept of "folk society" was useful in the study of Japanese rural society. Like Embree, they had some oral Japanese but could not read Japanese literature; hence they had to depend upon interviews and firsthand observation, including participant observation. Unlike Embree, however, they were aware of the significance of landlord-tenant relationships, because they were in the field after the Land Reform. Both of them distinguished a family from a household; the "household" was a group of residents under the same roof who shared social and economic life as a unit, while the "family" was a kin group regardless of the location of the members' residences at a given time.

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55. Cornell, 1956.

56. Smith, 1956.

57. Redfield wrote about "folk society" in Chan Kom: A Maya Village (1934, Alfonso Villa was the co-author) as follows:

"These villages are small communities of illiterate agriculturalists, carrying on a homogeneous culture transmitting by oral tradition. They differ from the communities of the preliterate tribesman in that they are politically and economically dependent upon the towns and cities of modern literate civilization and that the villagers are well aware of the townsman and city dweller and in part define their position in the world in terms of these. The peasant is a rustic, and he knows it."

Quoted from Embree, 1939, p. xx, footnote.

Neither of them adopted the concept of Ie nor analyzed inter-household relations in terms of dōzoku. Despite Cornell's description of technological change in farm practices, he did not deal with its impact upon farmers' behaviour, social relations and institutions, nor did he explain why the local farmers adopted the innovations. When Smith discussed social change, he made an inventory of various spheres in which changes were observed: from his description one cannot explicitly perceive his concept of "social change". Both Cornell and Smith believed that the hamlet was the most persistent institution in rural Japan and failed to see the directions changes in it under certain conditions. Their great emphasis on the persistent aspect of the hamlet tended to lessen relatively their judgement of the impact of the central government or of the national economy upon the hamlet despite the initial goal of the studies.

The study of Niiike by Richard Beardsley (anthropologist), John Hall (historian), and Robert Ward (political scientist) was unique  
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 in several respects. First, scholars of different disciplines coordinated their efforts in studying a single Japanese hamlet. Second, the team of scholars could obtain comparative data from the works of their graduate students. Third, the team of scholars, one of whom was a historian, had access to Japanese literature so that the historical aspect of their study was strengthened compared with other previous community studies by American anthropologists. Finally, they

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58. Beardsley et al., 1959.

used more sophisticated research techniques than other preceding ones: besides traditional techniques of interviews and firsthand observations, they used questionnaires. Because of the above features, their study was thorough, and some concepts which had remained nebulous since Embree's study became much clearer. Beardsley and his colleagues used the term "household" as the English equivalent of Ie and analyzed the inter-household's relations in terms of dōzoku -- they adopted the term "lineage". They could compare their findings with those of Japanese scholars such as Kizaemon Ariga. Much of their discussion made sense to Japanese scholars although some, such as Chie Nakane, were unhappy about Beardsley's usage of "lineage". Beardsley regarded the hamlet as a microcosm and used an equilibrium model: after the study, he and his colleagues concluded that the hamlet had the "capacity to maintain equilibrium...absorbing fundamental changes."<sup>59</sup> The authors' beliefs were challenged when Niiike farmers began to introduce farm machines in 1956. When Beardsley re-visited his old field in 1957, he thought that "One thing is certain. Niiike...will never be quite the same again."<sup>60</sup> Then, a set of questions arise in the mind of the reader: "How will a social system change?"; "What will cause the change?"; and "What will change in what manner?" If a scholar wishes to pursue such questions, he has to develop his own theory to explain social change in rural Japan.

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59. Op. cit., p. 480.

60. Op. cit., p. 481.

### C. An Approach to the Theory of Social Change

When proposing to construct a theory of social change, one faces the immediate question as to whether various social phenomena in the process of social change can be explained by a single theory; as Wilbert Moore said, it might be a "dubious enterprise."<sup>61</sup> However, "the attempt to arrive at 'descriptive' generalizations seems in any case to be of dubious value,"<sup>62</sup> too. Attempts to produce an inventory of empirical generalizations in many aspects of society<sup>63</sup> seem to need further refinement.<sup>64</sup> Ideally, the study seeks to "arrive at generalizations about 'causal' connections of the type: 'X' is likely to lead to 'Y', other things being equal."<sup>65</sup> This section is an approach<sup>66</sup> to the construction of a theory of social change.

#### 1. Economy and Society

In the history of theories of social change, there have existed at least two groups of ideas, cyclical theories and theories of evolutionary stages. Pitirim Sorokin's theory of the alternation of "ideational", "idealistic", and "sensate" culture<sup>67</sup> is an example of a cyclical theory. Unlike economists' theories of the "business cycle",

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61. W. Moore, 1963 (A), p. 33.

62. R. Dore, 1963, p. 242.

63. For example, see W. Moore, 1963 (B), C. Kerr, J. Dunlop, F. Harbison, and C. Myers, 1960.

64. "Preface" of C. Belshaw, 1967.

65. Dore, op. cit., p. 242.

66. I have been influenced by the work of Ken'ichi Tominaga, 1965.

67. P. Sorokin, 1957.

Sorokin's theory had no empirically testable indices for measuring the magnitude of changes from one phase to another, e.g. from "ideational" culture, to an "idealistic" one. In addition, the time span of the changes from "ideational" culture to "idealistic" culture was so large that the documentation tended to be crude. Richard La Piere claimed that "the cyclical theory can...be discredited by the very kind of evidence upon which it is erected."<sup>68</sup> Since such theorization is not empirically testable, theories in this category are excluded from consideration. Theories of evolutionary stages assume certain trends in social change -- to borrow the economists' expressions, trends of the "developmental" as well as the "regressive" type.<sup>69</sup> As stated earlier, the examination of social change arising from economic growth constitutes the central focus of this study; economic growth is, by definition, "a sustained increase...in the volume of products."<sup>70</sup> Therefore, the proposed theory assumes certain evolutionary and developmental trends.

The relationships assumed between economy and society up to this point need clarification.<sup>71</sup> There have been two streams of thought in this regard: (1) the view that economy can be marked off from other aspects of society; and (2) the view that economy and society are different abstract models of the same phenomenon. Most economists and some sociologists like Vilfredo Pareto<sup>72</sup> have held the first view.

68. R. La Piere, 1965, p. 22.

69. For example, H. Leibenstein, 1957, p. 8.

70. S. Kuznets, 1959, p. 1.

71. In the following discussion, I owe much to Ken'ichi Tominaga, 1965.

72. V. Pareto, 1935, Vol. 1, Ch. 2.

Economists like Marx,<sup>73</sup> sociologists like Talcott Parsons,<sup>74</sup> and most anthropologists have held the second view. Raymond Firth, for example, argued that "economic relationships are part of an overall system of social relationships (however weak this system is structured and integrated). The economic system (or sub-system) is therefore to be fully understood only in a context of social, political, ritual, moral,<sup>75</sup> and even aesthetic activities and values, and in turn, affects these." As Belshaw rephrased Firth's statements, all actions have an economic<sup>76</sup> aspect and a social and cultural aspect. This argument has to assume a social system.

This study perceives "economy" as man's choice of allocating scarce means to competing ends. Making a choice out of alternatives is a kind of decision-making, and non-economic aspects will come into the process as factors which affect the decision. If one has a model of decision-making, he can explain people's behaviour, including the economic aspect.

In summary, as economy is an aspect of a social system, change in the economic aspect will affect other aspects of the system in terms of the people's action. And a model of decision-making will explain their behaviour. But before examining the model, factors that would cause "developmental trends" in social change must be identified.

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73. K. Marx, 1859.

74. T. Parsons and N. Smelser, 1956.

75. R. Firth, 1964 (B), p. 16.

76. C. Belshaw, 1965, p. 5.



## 2. A Developmental Trend in Social Change

The theory that is relevant has to explain developmental trends in societies. A number of factors may cause the developmental trend, but this discussion is initiated from an observable phenomenon, which is economy.

In the 1950's, despite attempts among some scholars to make a distinction between "growth" and "development" in economic change, these terms were practically synonymous.<sup>77</sup> In the 1960's, clearer distinction of these concepts emerged. According to Moore, "growth" is a quantitative increase in output while "development" is an increase in the complexity of the institutional framework of the social system.<sup>78</sup> Regarding this concept of "development" Charles Erasmus asserts that when an innovation is introduced, the people concerned estimate how likely they are of being rewarded through its use, and react accordingly. If they test the innovation and find it profitable, they adopt it, changing their behaviour patterns. When these new patterns of behaviour are institutionalized, or when they are internalized in the social system, an "additive" type of change takes place.<sup>79</sup> This process of adding institutional complexity is "development" as Erasmus perceived it. Thus, "development" contains "growth", but it is more than simply "growth", and a "developmental trend" in this study means a process of sustained quantitative increase in output, accompanying increasing institutional complexity in the social system.

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77. For example, see B. Higgins, 1959, A. Hirschman, 1957, and B. Hoselitz, 1957.

78. W. Moore, 1965, pp. 5-6.

79. C. Erasmus, 1961, pp. 52-56.

If the economic aspect and other aspects of a social system change as discussed above, a close look at changes in the economy is necessary. Simon Kuznets observed that a distinct feature of modern economic growth is high growth rates of population simultaneously combined with a high per-capita product.<sup>80</sup> When available resources are limited, an increase in population ought to cause a decrease in per-capita product. Marked increases in the product per labour unit in a situation of population growth, Kuznets maintained, usually is possible only through continuing innovation of advanced productive technology.<sup>81</sup> Apparently, he assumed certain values. Despite an increase in demand for a certain output and the adoption of advanced productive technology, the output may not increase if the labourers do not work for the same length of time as they did before the innovations were adopted. If the hours of work remain unchanged, however, increasing per capita product would imply "advanced productive technology" and "industrialization."<sup>82</sup>

In order to define "industrialization", one has to define "industry", which is a form of aggregated human actions related to the production of goods and services. But not all such human actions are "industry" unless these actions satisfy certain conditions. Manning Nash's definition is suitable for the purpose of this study:

"A form of production...considered to be men aggregated at power-driven machines, working for monetary return with the products of the manufacturing process entering into a market based on a network of exchange relations."<sup>83</sup>

80. S. Kuznets, 1959.

81. Kuznets, loc. cit., pp. 14-15.

82. Ibid.

83. M. Nash, 1954, p. 271.

In other words, Nash suggested three conditions: (1) use of power-driven machines in the production process; (2) social actions motivated by rewards in monetary terms; and (3) the existence of a market economy. Manufacturing industries satisfy these conditions most strictly at present, but any other production activities, including farming, can become an "industry" if the activities simultaneously satisfy all the above conditions. From the above, it is seen that "industrialization" is the process by which social activities related to production gradually come to satisfy these three conditions.

Another concept to be examined is "advanced productive technology", and its relation to economic development. Tominaga summarized characteristics of "technology" in the following terms: (1) man must first have the motive to modify given conditions into "more satisfactory" ones; (2) the body of knowledge concerning laws of nature are re-organized; and (3) technology takes on a cumulative aspect because of the cumulative characteristic of knowledge concerning the laws of nature.<sup>84</sup> Thus conceived, technology is broad and abstract, but what is empirically observable is concrete and requires more specific terms to describe it. Any complex of standardized means for attaining a predetermined result is "technique"<sup>85</sup> -- whether it includes human or non-human components. With a new idea, techniques convert spontaneous and unreflective human behaviour into deliberate behaviour. Non-human components may be machines, chemical products or

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84. K. Tominaga, 1965, pp. 205-208.

85. J. Ellul, 1954, p. vi.

others. When a set of ideas, human behaviour, or non-human components are qualitatively "new" to the social system under question, they are "innovations". Thus, advanced productive technology is made up of advanced productive techniques. As technique is a complex of standardized means, change in one part of the complex will result in change or modification of the technique.

According to Tominaga, there are three spheres of causal relations between advanced productive technology and economy: (1) diversification of the kind of economic output; (2) re-organization in factors of production; and (3) reduction of the per unit production cost.<sup>86</sup> The third relation has to be conditional, for adoption of a new technique may cause an increase in labour productivity as well as capital productivity; but these two do not necessarily coincide. If the newly adopted technique is inefficiently employed, as in the case of farm machines used only on a small number of days per year, the production cost per unit of labour will increase. Anyway, to diversify economic output will diversify the production activities of the people concerned; similarly, to re-organize the factors of production will imply re-organizing the allocation of human resources in the social system. Thus, adoption of new productive techniques will affect the economic aspect of human behaviour.

In summary, Kuznets identified industrialization and advanced productive technology as crucial factors for "modern economic growth."

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86. Tominaga, op. cit., pp. 211-214.

Industrialization is a process in which social actions of the people gradually satisfy the three conditions discussed earlier. Among the requisites, the one that has a cumulative nature is technology. Therefore, technology will be one of the critical variables in the theory of social change used here.

### 3. Social Change

Firth pointed out that social change must concern "what  
<sup>87</sup>happened to social structure." Basically, the concept of "social structure" is one that must be inferred. If the idea of the structure of society is to be in conformity with the general concept of structure, Firth further suggested, the idea must fulfill the following three conditions. First, it must be concerned with the ordered relations of parts to a whole. Second, these relations must be regarded as built one upon another. Third, these relations must be of more than purely  
<sup>88</sup>monetary significance. The "ordered relations" of the first condi-  
<sup>89</sup>tions imply certain "rules" or "fixed lines of social behaviour."

The social system must have a certain order. In order to maintain the order, the members of the social system must acknowledge  
<sup>90</sup>and obey at least the following three sets of minimum rules; otherwise, one cannot infer the social structure by observing the members' behaviour. The first set of rules will allocate the members to certain

87. Firth, 1951, p. 83.

88. Op. cit., p. 30.

89. Firth, 1964 (A), p. 61.

90. Tominaga, op. cit., pp. 239-264.

positions such as a househead, a heir, or a young-wife in the case of  
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a household. The amount of resources such as power, information, economic goods and services, and security allocated to each position -- from the observers' viewpoint -- or the extent of access to resources -- from the participants' viewpoint -- will vary as the positions vary.

In brief, from the observer's viewpoint a set of rules allocates both human and non-human resources in a social system. The second set of rules will legitimize authority in the social system. If an order issued by a person is accepted by other members and controls their

activities, then the order is said to carry "authority".  
 92  
 The authority ought to be acknowledged and obeyed: it ought to have "legitimacy". From the first set of rules, the distribution of resources among the members varies with their positions. From the third condition of the concept of structure, the rules ought to persist, thus institutionalizing unequal distribution of resources in the system.

Those with greater access to resources can more frequently influence others who have less access, and so the former have greater authority. If the unequal distribution of resources persists, the social relations will be ordered and built up one upon another in terms of the amount of authority and resources. The third set of rules will apply sanction on those who do not conform to the rules. When a certain number of people form a group and commonly share the above three sets of legitimate rules in their social behaviour, the group is said to have "structure". Change in these legitimate rules, therefore, is "social change".

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91. On households, see Chapter Two, Section I-B-1.

92. G. Homans, 1950, pp. 417-423, Homans, 1961, Ch. 11.

The abstract set of patterned behaviour known as "institutions" is critical in studying the grosser units of social structure.<sup>93</sup>  
 At a given time, people in an institution adapt themselves to the given conditions and strive to increase their subjective satisfaction;<sup>94</sup>  
 their actions oriented to a goal under the influence of cultural values<sup>95</sup>  
 gives meaning to their behaviour. The rules of social behaviour in  
 an institution will vary with its goals, and some institutions may  
 have more explicit goals than others. Depending on the nature of the  
 goals, we can talk about economic, religious or other institutions.  
 If an institution has critical significance in the life of the people  
 in a larger social system such as a community, change in these rules  
 means change in the structure of the community. As a strategy of study-  
 ing social change, therefore, one may examine institutions in the  
 social system.

The crucial question is: "How do social systems change?"  
 Talcott Parsons suggests an equilibrium model in which "there are no  
 social processes, corresponding to...the stabilizing mechanism...which  
 systematically make for deviance and social change."<sup>96</sup> Challenging  
 Parsons' scheme, Moore asserted the systematic creation of deviants<sup>97</sup>  
 due to "some uncertainty in socialization." David Lockwood empha-<sup>98</sup>  
 sized conflict based on actors' competition for limited resources.

93. Firth, 1951, p. 33.

94. Nash, 1967, pp. 524-538.

95. Firth, op. cit., p. 9.

96. D. Lockwood, 1956.

97. Moore, 1967, p. 187.

98. Lockwood, op. cit.

Ralf Dahrendorf's argument of social conflict rested on the fact that limited resources are allocated unequally among the members.<sup>99</sup> Firth wrote that "essence of the dynamic process lies in the continuous operation of the individual psyche, with its potential of unsatisfied desires -- for more security, more knowledge, more status, more power, more approval -- within the universe of its social system."<sup>100</sup> In brief, these sociologists agree that people in a social system may raise questions on the legitimacy of the rules of social behaviour. Here is a fundamental dilemma of a social system.<sup>101</sup> On the one hand, without the rules of social behaviour the social system cannot maintain order. On the other hand, unequal resource distribution will create "tension" (Moore), "conflict" (Lockwood and Dahrendorf), and "unsatisfied desires" (Firth) among the members. Potential for social change then exists in most social systems.<sup>102</sup>

If productive technology rapidly changes the economy and ultimately society, how people initially adopt it will become a critical question -- a form of decision-making. For the purpose of this study the model of decision-making to explain the people's behaviour will be satisfactory if it does not contradict psychological statements. In the preceding discussion on the dilemma of the social system, two sets of tendencies were mentioned: the propensity to conform to the group norms and the propensity to increase conflicts. In the earlier

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99. R. Dahrendorf, 1958.

100. Firth, 1951, p. 86.

101. Tominaga, op. cit., pp. 252-253.

102. In egalitarian societies, this may not be the case.



discussion on "institutions", it was assumed that actors strove to increase their personal satisfaction; if actors find probable satisfaction or "reward" greater than probable sacrifice or "cost", they interact with others. Hence, the set of propensities which increase conflict imply the above postulate. Persons in a social system are assumed to have "unsatisfied desires", for they can not behave as they personally desire. The factors influencing the persons to act in a way conforming to group norms are referred to as "modifiers". This study assumes the following three factors as minimum modifiers: (1) the three sets of minimum rules of social behaviour, (2) cultural values, and (3) limited access to resources. In brief, it is assumed that persons will choose one alternative rather than others when they think their personal satisfaction will be greater than the cost imposed by modifiers.

#### 4. The Proposed Theory

In an earlier discussion of industrialization, it was suggested that when markets and social behaviour motivated by monetary rewards are evident, advanced productive technology will cause rapid changes in the economy. For example, adopting new techniques will increase labour productivity, re-allocate human labour, and differentiate production activities. The third of these consequences will diversify the resources required for a given set of production activities, and some resources such as specialized knowledge and skills will be "new" in the social system. In discussing the rules of social

behaviour, it was mentioned that persistent unequal distribution of resources tends to maintain authority. If the distribution pattern of resources changes, it will modify the rules which legitimize authority. Thus, change in the economic aspect brought about by advanced productive technology will affect rules of social behaviour, causing social change.

From the above, it follows that when people in a social system have cultural values which encourage them to increase monetary rewards and to be industrious in their production activities, and when well tested new productive techniques and other necessary resources, such as trained labour, investment capital, and markets for output are available, the adoption of new productive techniques will promote social change. This is the theory of social change used for this study.

## II. The Scope of This Study

The scope of this study must be defined, using the leading idea stated above. The first section is devoted to a brief survey of the concept of "peasant society" which is then applied to the case of Japan. Following this, is an outline of the major areas of interest covered in the study.

### A. The Japanese Rural Community as a "Peasant Society"

In 1939, John Embree defined Suye-Mura, a Japanese community,  
 103  
 as "a peasant village". On the subject of peasant communities, some  
 103. J. Embree, 1939, p. xix.

American rural sociologists hold rather static and confused views. E.A. Wilkening, for example, defined peasant communities in the following terms: self-sufficiency, a family-centred social structure, and limited participation in the world outside the village or locality.<sup>104</sup> In this model, limited interactions exist between a peasant community and the society at large; therefore change in the latter does not seriously affect the former. Embree held a different view. He stated that:

"A peasant community possesses many of the characteristics of a preliterate society, e.g., an intimate local group, strong kinship ties, and periodic gatherings in honour of some deified aspect of the environment. On the other hand, it presents many important differences from the simpler action which controls its economic life, enforces a code of law from above, and more recently, requires education in national schools. The economic basis of life is not conditioned entirely by the local requirements but by the nation through agricultural advisers...."<sup>105</sup>

Eric Wolf supported Embree's view, distinguishing "peasants" from "primitives" as well as from "farmers"; "peasants form part of a larger, compound society, whereas a primitive band or tribe does not", but "at the same time, they are not 'farmers', or agricultural entrepreneurs as we know them in the United States".<sup>106</sup> The concept of "peasant society", however, is not yet clear. In the above definition various kinds of people such as landlords, independent cultivators, and tenants, are included in one category of "peasant": the validity of this concept is not questioned. It is not important to develop a uni-

104. E.A. Wilkening, 1964.

105. Embree, op. cit., p. xx.

106. E. Wolf, 1966, p. 2.

versally valid concept of "peasant" or "peasant society". What is emphasized is that changes in conditions in the larger nation -- such as governmental policies or the national economy -- will effect rural communities, together with changes in conditions inside the social system.

In the above, an implicit criterion which distinguishes "primitive", "peasant", and "farmers" is the degree of economic complexity in their social system. Nash summarized the general characteristics of peasant economy as follows. First, peasant societies are technologically simple, and undifferentiated tasks are performed by small working-teams with a low level of division of labour in terms of age and sex. Second, peasant economies lack institutions organized solely for production activities -- implying that there are no organized labour markets, capital markets, and entrepreneurs in the social system. Third, under the above two conditions, estimates of costs and rewards in economic terms are difficult. Finally, resource allocation rules are en-  
107  
tangled with other social institutions.

Contemporary Japanese farming is moving toward an "industry" as defined in Section I-C-2. In order to stress the rapidity of change, the term "farmers" is used to denote Japanese peasants; but the real situation rests just between "peasants" and "farmers in Wolf's sense. To make statements on changes, a base-line, or  $T_1$ , and an operational "present", or  $T_2$  is needed. Three phases of time become significant in  
107. Nash, 1966, pp. 19-41.

the above distinction: (1) the  $T_1$  period, which was ended by a specific turning point (1945); (2)  $T_1$ - $T_2$  period; and (3) the period of  $T_2$  as such. Immediately after the Second World War, both the Allied Powers and the Government of Japan initiated significant changes in all aspects of the nation, including the spheres of polity, law, economy, education, and religion. Therefore, the first phase will be the "pre-war period" up to 1945: in this term, the "war" exclusively signifies the Second World War. The field research for this study was done in 1968, so that the period from 1968 to 1970 is the third phase. The second phase or the period between 1945 and 1968 is the "post-war period". From now on, comparative statements will always refer to situations in the pre-war period, in the post-war period, or at the operational "present".

Japanese farmers in pre-war days held a philosophy of austerity which Dore rendered into English as "Agriculture-Is-The-Base-<sup>108</sup> Ism." It tinged with beauty the spiritual values of rural life and the "Japanese family system."<sup>109</sup> It valued highly the virtues of "frugality", "piety", "hard-work", "resignation", and "devotion to duty."<sup>110</sup> When conditions in the larger nation remained relatively stable, these virtues mutually strengthened one another. As conditions changed some discrepancies emerged as will be substantiated in the body of this study. A few virtues such as "hard-work" have survived until the present; farmers had a persistent incentive to increase farm output and worked hard

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108. Dore, 1959, p. 56.

109. Fukutake, 1959, pp. 558-561.

110. Takeo Sakurai, 1935.

111  
after the last world war. Hence, they worked hard with new productive techniques or any other innovation.

Japan saw the development of regular market places in the  
112  
twelfth century. During the Tokugawa Period (1600-1867) farmers turned to such commodities as silk to produce for the markets. After 1868, the year which marked the beginning of Westernization, they sold rice in the markets. In brief, in pre-war days, farmers were included in the market economy of the larger nation.

In the Tokugawa Period farmers in the mountain communities or in the snow-belt areas who had limited resources and a long winter slack season emigrated seasonally for subsidiary income. Half-a-year servants, roof repairers, winter peddlers, and brewers of sake (the Jap-  
113  
anese liquor), are examples of seasonal emigrants. But their wages were low, despite their skills. Farmers in the twentieth century still needed a subsidiary income. They were even willing to accept a low wage if it would increase their household income. In brief, Japanese farmers had an incentive to increase their monetary rewards.

At the end of the 19th century, the Government of Japan made an effort to develop farm techniques and tried to introduce them into the rural communities. At the same time, the system of universal primary education, begun early in the Meiji Period (1868-1912) had spread  
114  
economic opportunity and upgraded productive efficiency. In 1933,

111. Dore, op. cit., pp. 213-219.

112. T. Toyoda, 1944.

113. Japanese Ethnological Association, ed., 1957, pp. 955-959.

114. W. Lockwood, 1954, p. 497.

99.65% of the boys and 99.63% of the girls in rural communities received compulsory education, and 13% of sixth grade graduates went on to middle school.<sup>115</sup> From the above, we can say that farmers had access to certain well tested techniques, although farm machines were not yet well developed. They had at least one necessary condition for adopting advanced productive technology, a formal education. Farmers in pre-war days, however, had limited access to financial resources and sources of the latest information. Farmers did not even have mediators involved in community services who could link their communities with the larger nation.

#### B. The Scope and Organization of This Study

In an earlier discussion three sets of factors for social change in post-war rural Japan were suggested: (1) changes in the general economic conditions of the society at large; (2) changes in the government's policies and programmes; and (3) the adoption of new farm techniques, including mechanization of farm practices.<sup>116</sup> The first two sets of factors exist outside of the rural communities and affect the latter, while the third set is internal to a community. This study deals with social change in a farming community; the third set of factors is of primary importance while the first two sets form a background.

115. S. Tōhata and K. Kamiya, eds., 1964, p. 250.

116. In this study, I will refer to a set of production activities such as "rice-cultivation", "cattle-raising", or "apple-growing" as a "farm operation", and refer to the organization of units of production activity in each farm operation as "farm practices". A more elaborate definition of "farm practices" appears in Chapter Two, Section I-A-2.

To make comparative statements on changes, a base-line, the situations in the pre-war period, is used, and will be referred to constantly. In this sense, the pre-war situations form the background as well. Chapter Two will provide the three sets of background information for the following case study.

As this study has its focus on one farming community, idiosyncratic conditions which governed the behaviour of the local farmers have to be considered. Not only are there three sets of general background information but there is also a discussion of relevant local conditions. Conditions which were significant in the pre-war period and changed in the degree of their significance in the post-war period need special examination. These topics are the starting point for the study of the farming community through which changes of general and idiosyncratic nature can be traced. Chapter Three will survey the relevant local conditions.

As the economy of the larger nation grows, production activities diversify, and economic resources as well as income resources  
117  
increase. From the standpoint of residents in rural communities, the number of alternatives to choose from increase. In farming communities, people have "unsatisfied desires" due to a limited number of al-  
118  
ternatives. Hence, when farmers perceive an increase in the ac-  
119  
cessible alternatives and have the resources to adopt them, they do so.

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117. See Section I-C-2.

118. See Section I-C-3.

119. I assumed that man has a propensity to increase his subjective satisfaction, modified by three sets of factors of which access to resources is one. If people find the alternatives more satisfactory than staying in their natal communities, and the rules of social behaviour allow them to do so, they will take the "new" alternatives. See Section I-C-3 and 4.



"Modern economic growth" accompanies industrialization and continuous adoption of advanced productive technology; manufacturing industries appear, which most strictly satisfy the three conditions given earlier for being an industry.<sup>120</sup> The location of manufacturing industries are referred to as "industrial centres", it is here that income resources most conspicuously increase. Thus, residents of rural communities emigrate to industrial centres. Relatively fewer alternatives exist in rural communities -- so, inferring from our basic postulate on human behaviour, residents emigrate -- and the rural population decreases with national economic growth. In the peasant economy, working-teams<sup>121</sup> are small in size and tend to be made up only of household members. People in their productive age are the emigrants, and so the total labour force in rural communities decreases with two consequences: (1) working-teams become even smaller in size; and (2) wages for labourers increase. Under these circumstances, if farmers do not have the incentive to increase farm output, they emigrate to industrial centres and both the farming population and farming households decrease. If farmers have an incentive to increase farm output, they have to increase their labour productivity by mechanization of farm practices and/or by adoption of other new farm techniques. In this case, the farming population decreases rapidly but farming households do not decrease rapidly. This study assumes that the incentive is operating and a community in which farmers try to increase their output was selected. Under the rapid

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120. See Section I-C-2.

121. See Section II-A.

economic growth of the larger nation, then, in the community studied there was an increase in farmers' access to resources, in emigration of residents from their farming community, and in wages for labour. The adoption of advanced productive technology means that farmers satisfied certain conditions:<sup>122</sup> "new" resources such as high formal education, access to sources of latest information on new techniques, and capital investment, became important among farmers. Whatever the old sources for legitimatizing working-team authority were, distribution of "new" resources became significant in the communities, modifying the old set of rules of social behaviour. Changes in rules of social behaviour<sup>123</sup> cause other changes in the social structure; and the larger nation's rapid economic growth resulted in social change in the communities. Chapter Four will deal with this process.

In order to see the relations between the development of the farm economy and social change it is assumed that farmers strive to increase farm output. In order for an economy to "develop economically", institutional complexity must increase along with sustained increase in per-capita product. Even if farmers adopt new farm techniques and in-

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122. To take an example of a garden tractor, the machines have to be well adjusted before they are used; farm roads have to be wide enough so that an operator can take it to his own fields; the field has to be dry enough so that the machine can operate most efficiently when paddy fields are rectangular; after the operation and for the next use, it has to be cleaned, oiled, and adjusted. Unless every farmer has his own machine, farmers have to arrange for the joint use. The above are only a few of the conditions a relatively simple farming machine requires. If a number of machines are introduced, the complexity of conditions will be greatly increased, requiring substantial modification of traditional practices.

123. See Section I-C-3.

crease per-capita product, they do not "develop" their farm economy unless new institutions organized for production activities become established and form an integral part of the social system. Mechanizing farm practices will give farmers some "saved" or "surplus" labour even when the farming population is shrinking. How to invest it is a critical question, for farmers can invest the saved labour in non-farm operations as well as farm operations. The average acreage in Japanese farming communities is about one-fifteenth of that in France,<sup>124</sup> therefore mechanization tends to involve over-capitalization. To help financially, farmers may take non-farming employment for extra income. In this case, the farm economy does not "develop". In order to develop their farm economy, farmers have to re-invest the saved labour on their farms, diversifying farm operations and institutionalizing the new production activities. Despite the assumed incentive among farmers, to choose the second alternative, differentiation of farm operations will be a hard task, for farmers have to acquire a new body of knowledge and skills to take on production and marketing transactions. It is not an automatic process: it is a deliberate process, requiring some kind of "change-agent". A competent individual or a group of volunteers can be the change-agent. Local institutions which have existed for almost a century, such as the village-office or town-office, can also be the change-agent. Relatively new institutions like the agricultural co-operative organized in every farming community after the Second World War can be a third alternative. Government personnel trained as change-

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124. T. Ōuchi, N. Kanazawa, and T. Fukutake, eds., 1964, p. 19.

agents is another alternative. In any case, if a competent change-agent helps, the farmers may differentiate farm production activities and develop the farm economy in their community. To state it alternatively: if farmers develop their economy, they will diversify their production activities, requiring modification of the social system's rules of social behaviour. The interactions between a change-agent and the recipients, the process of farm economy development, and social change in the community will be examined in Chapter Five.

Human actions have various aspects. Farm economy development means change in the economic aspect of farmers' actions, which ought to accompany changes in other aspects. Human actions contain two sets of elements, as was assumed earlier: the propensity to increase personal satisfaction and the three sets of modifiers. One can regard the first propensity as a constant and the modifiers as variables. Among the modifiers, "access to resources" was treated thoroughly in preceding chapters; cultural values are discussed in various parts of this study. As to change and persistence in the rules of social behaviour in social institutions, this needs detailed examination. Chapter Six is devoted to this task.

Finally, the summary concerns the relations between the three sets of factors -- changes in the government's policies and programmes, changes in the national economy, and the farmers' adoption of new farm techniques -- and Japanese farming communities. Using the findings, some hypotheses about the future of institutions in contemporary farming communities are discussed. These will appear in Chapter Seven.

### III. The Approach of This Study

As stated at the outset, the subject of this study is post-war economic development and social change in rural Japan. In order that one researcher could collect and handle the data, the focus is on one farming community. Choosing a community involves two technical problems: (1) establishment of the unit of study; and (2) selection of the sample.

Previous community studies focused on one buraku (a hamlet),<sup>125</sup> because a hamlet was the unit of polity, economy, social life and Shintō religion in rural Japan for several centuries until 1890. The boundary of hamlets were clearly defined, therefore Japanese scholars considered<sup>126</sup> them the most significant territorial group for study. Western scholars interested in community studies followed the Japanese tradition. Thus, John Embree (1939), Edward Norbeck (1954), John Bennet and Iwao Ishino (1955), John Cornell (1956), Robert Smith (1956), Richard Beardsley, John Hall, and Robert Ward (1959), and Erwin Johnson (1961) studied one hamlet in each of their studies. Japanese and Western scholars whose interest was on a higher level of abstraction did not stick to one ham-<sup>127</sup>let. The rapid economic growth in the nation as a whole, the further commercialization of goods and services, and the expansion of the wage earning population, accelerated the adoption rate of advanced productive technology. This produced a serious impact on the farming commun-

125. I will discuss this institution in Chapter Two, Section I-B-4.

126. A detailed bibliography of studies by Japanese scholars appears in Nakane, 1967.

127. For example, see R. Bellah, 1957 and Dore, 1959.

ities. If this is the case, the traditional economic unit may in the future expand from a hamlet to a larger territorial group. Since few sociologists have looked at social change in larger units, this study is devoted to one community as opposed to the smaller hamlet unit.

In choosing a community to study it was necessary to find an old rural community which would continue to be a farming community in the future. According to Keiji Kamiya, future Japan will be divided into three major land-use zones. In the period from about 1960 to approximately 2010, the population will increase but the total acreage under cultivation will decrease in the first zone. During this period, both the population and the total acreage will decrease in the second zone. The population will decrease but the acreage will increase in the third zone. According to Kamiya, farming will remain in the third zone which is made up of Hokkaidō, Tōhoku District, and Kyūshū Island.<sup>128</sup>

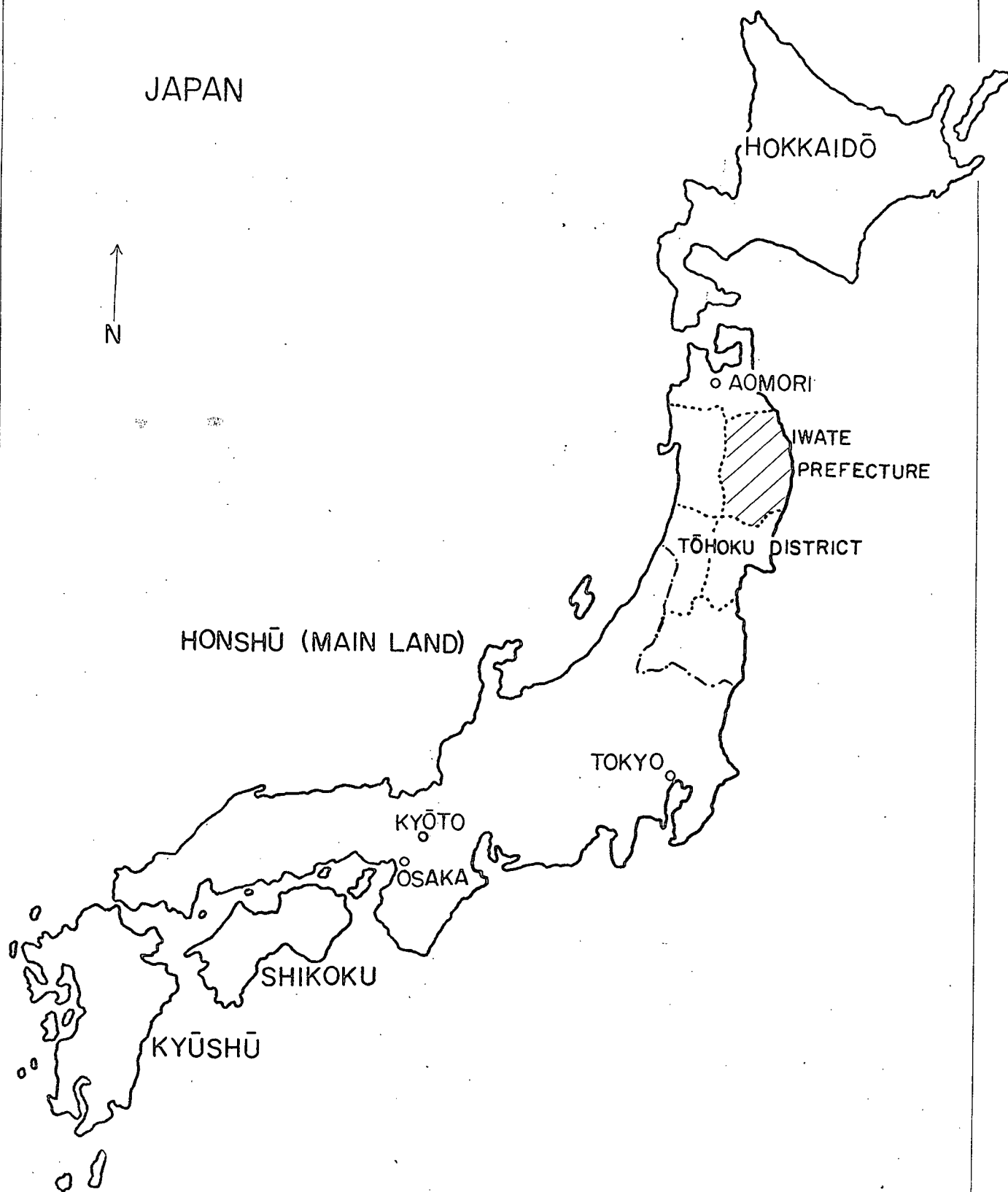
(See Map 1) As a subject of study, the renovation of an old farm operation under rapid economic growth is more appropriate than the case of an entirely "new" operation. As discussed in the following chapter, rice-cultivation has been the major production activity in Japan since the beginning of her written history. If the majority of farmers in an area have cultivated rice and are increasing their paddy-field acreage, it can be assumed that they have a definite motive to continue

129  
farming. According to statistics concerning the total acreage of paddy-fields and the increase of acreage in the period from 1960 to

128. See K. Kamiya, 1967, for further information on the other two zones.

129. This is not to deny that other farmers, such as mandarine orange growers, also have a definite motive to farm.

MAP 1



1965; Hokkaidō enjoyed the fastest rate of increase, but rice-cultivation existed barely one hundred years, <sup>130</sup> it was not appropriate for this study. Tōhoku District has the largest acreage, the second fastest rate of increase in paddy-fields, <sup>131</sup> and has a long written history in which rice cultivation was evident from the beginning. Hence, it was the logical choice for this study. Among the six prefectures in the district, the total acreage of paddy fields in 1965 did not vary dramatically. Between 1960 and 1965 Iwate Prefecture added about 8,500 hectare (ha.) of paddy-fields, surpassing the rest in this district; <sup>131</sup> the second largest increase was only 3,600 ha. This outstanding increase in Iwate is due to the central government's construction of several multi-purpose dams. Ideally, the sample should satisfy the following three conditions: (1) a rice growing community in Iwate Prefecture; (2) the acreage number of paddy-fields in the community increased conspicuously after the Land Reform (1946-1948); and (3) mechanization of farm practices developed remarkably. The professional personnel of the prefectural government, staff members of the Federation of Agricultural Co-Operative in Iwate Prefecture, and some faculty members of Iwate National University (which will henceforth be referred to as the "local university") almost unanimously suggested Shiwa Community in Shiwa Town, Shiwa County, Iwate Prefecture. Since the names of the county, the town, and the community, share the same sound, the first two have fictitious names: "Rikuchū" County, the ancient name of Iwate Pre-

130. The Council for Research of Agricultural Policies, ed., 1967, p. 9.

131. Op. cit., p. 10.



fecture, and "Nambu" Town, the name of the feudal lord who governed this region until 1868.

I conducted the field research by myself during the period from February to November, 1968. I was in Shiwa Community for seven months of this period and was away from the community for short periods amounting to three months. While in Shiwa, I stayed at a local inn in Hamlet No. 1 for four months and at a farmer's home for the rest of the time. Naturally, it was necessary to travel extensively in Iwate Prefecture to know how the local features of Shiwa compared with other communities. I frequently visited Morioka City for discussion with researchers at the local university and at the Tōhoku National Agricultural Experimental Laboratory, with researchers and administrators at the prefectural government and at the Federation of Agricultural Co-Operatives in Iwate Prefecture, and with a couple of widely known experts on rural communities in Iwate. Once each month, I visited Tōkyō to see my family and to visit and to speak with my friends and professors at universities in Tōkyō. All through this period, I read the relevant literature published in Japanese.

In Shiwa, I used the local co-operative as the base of my field study. The Shiwa Agricultural Co-Operative supported this study in every respect. The co-operative provided me with a desk in the Extension Department and allowed me free access to any source of information under its control. It introduced me to any farming household I wished in the community, to other co-operatives in Iwate Prefecture, to the Nambu Town Office and other town offices in Rikuchū County, and to

informants in other communities. Because of the high social prestige  
 132  
 of this co-operative in the town as well as in the prefecture, I  
 was saved considerable time and energy in persuading informants to co-  
 operate with the study. Among "outside" informants, the Nambu Town  
 Office was particularly co-operative: it provided almost all the in-  
 formation I requested.

The co-operative had good access to information about its  
 133  
 members. By counter-checking ten samples, I found most of its in-  
 formation very accurate and dependable. Its information covered the  
 following areas: concerning each household, the co-operative had the  
 latest information on names, sex, date of birth of all the household  
 members, relations between the househead and other household members,  
 latest data on acreage, land use, kinds of farm machines possessed,  
 other farm implements, the number and kinds of animals, the associations  
 to which the households belonged, and, in case the household was a joint-  
 ownership partner in certain farm machines, the names of the other part-  
 ners, major consumers' goods, and many other minor items of information.  
 If I wished so, I had access to other economic data of each household  
 such as the amount of savings and the size of the debt at the co-opera-  
 tive, the amount of sales of farm products through the co-operative, and  
 the amount and kinds of purchases such as farm machines, fertilizers,  
 pesticides, feed-stuff, and other consumers' goods through the co-oper-  
 ative. Since the co-operative had inventories of farm machines and of

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132. See Chapter Five, Section I-A-1.

133. Op. cit.

consumers' goods in each household, it could fairly accurately arrive at the number of users of its services in the community. In addition, the co-operative frequently conducted total surveys on various items, and most of the data were processed in the form of tables crossed by a few variables such as acreage and the territorial groups to which each household belonged. The privilege of having access to the above information considerably economized my time and energy: otherwise, I would have had to collect the information by visiting each of 824 households.

In Shiwa, I spent most of the daytime visiting farmers, learning from them the details of farm practices and taking photos. I observed the ways they co-operated within the household on farm practices and on other occasions, as well as certain social relations which occurred between the households. I asked farmers how farm practices, division of labour in farm practices, and decision-making in households and in territorial groups had changed compared with the pre-war period. I also inquired after the farmers' reactions to existing institutions, changes in economic conditions of the society at large, and the government's policies. The responses were recorded in field notes, in relevant books for the purpose of comparison, and in various documents obtained from the co-operative and other institutions in order to make a comparison with the objective facts.

In June, 1968, I learned that the co-operative would conduct another total survey in August. I actively participated in the preparation stage and in the data processing stage: I asked a friend in Tōkyō to process the results by computer. Some information was purely

for the co-operative's use but I was able to put in several questions to ascertain the Shiwa farmers' reactions to their co-operative.

Through the field research, I was able to find out about social changes in rural Japan in the post-war period. As for the general trends in the larger nation these could be seen in the available literature. The general trends in the prefecture were evident from literature, documents and personal observation. And the general trends in Nambu Town were derived from documents provided by the town office and again by personal observation. Several studies about Shiwa Community existed when I entered the field, providing pre-war and post-war information. The information I collected, together with the dependable data provided by the local co-operative, helped me to understand changes (and the process of change) in Shiwa. After leaving the community, I have kept up a correspondence with the local co-operative to follow changes in Shiwa in 1969 and in the first half of 1970.

#### IV. Shiwa Community

Shiwa Community is located in Iwate Prefecture in the north-eastern part of the mainland. Although Iwate is the second largest prefecture in Japan it is very mountainous and only 14% of the land is

134

flat. It has twelve cities, Morioka is the capital, and twelve counties of which Rikuchū is one. The wealthiest county, Rikuchū is located in the middle of two mountain ranges, and includes two towns and one village. (See Map 2) Nambu Town was established in 1955 in

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134. Bureau of Statistics, ed., 1969, p. 2.

MAP 2

## IWATE PREFECTURE



○ MORIOKA CITY

SHIWA COUNTY ('RIKUCHŪ COUNTY' IN THE  
TEXT)

SHIWA TOWN ('Nambu TOWN' IN THE TEXT)

KITAKAMI RIVER

PACIFIC  
OCEAN

0 20 K.M.

the southern part of the county, amalgamating one town and eight villages, and by 1965 it had a total population of 27,449.<sup>135</sup> A community called Hizumé is the largest service centre in the town as well as in the county.<sup>136</sup> Shiwa Community was a village until the amalgamation. (See Map 3)

The earliest source regarding this area is a tenth century document, describing the development of rice-cultivation in this area. Socio-economic development started at the foot of the mountains where a road was built that led from that area toward the plain. The Shiwa Clan governed this area from 1335 until 1588, when the Nambu Clan temporarily emerged victorious. As a result certain place names are of Shiwa origin while others have a Nambu origin. In 1655, the present Shiwa Community alone was transferred as a fief to the branch household of the Nambu Clan. Because the Nambu Clan did not get along well with its branch household potential enemies surrounded Shiwa Community for more than two centuries, until the new central government re-organized the administrative units in 1890. Local people assert both in speech and in documents that their political and economic isolation encouraged the Shiwa people to develop co-operative characteristics.<sup>137</sup>

Shiwa is a farming community which includes twenty hamlets. The hamlets are numbered 1 through 20. There were as many as 824 households which included "farmers",<sup>138</sup> but, in the 1965 census, only 696

135. Census data of 1965.

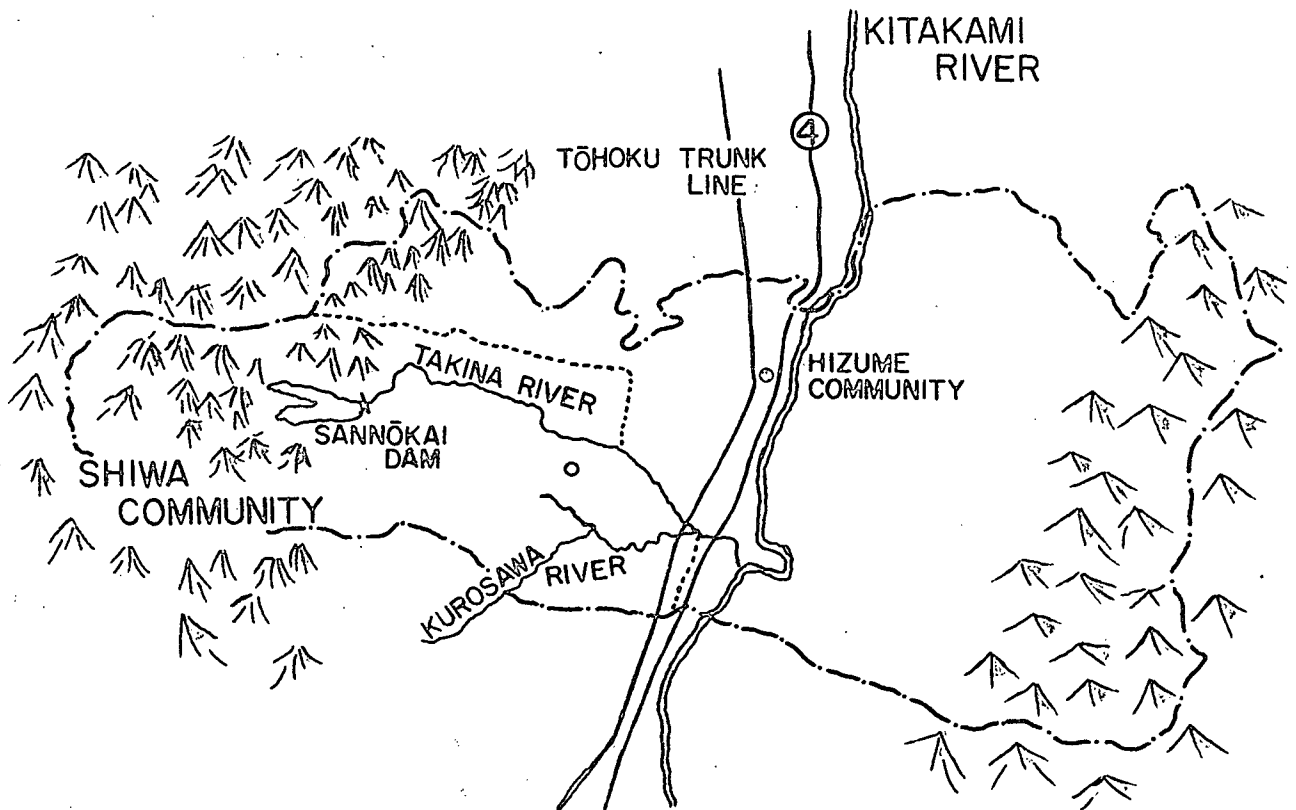
136. On the definition of "village", see Chapter Two, Section I-B-5.

137. For example, see Shiwa Agricultural Co-Operative, ed., 1968(B), p. 1.

138. The Ministry of Agriculture and Forestry defined a "farmer" as a person who engaged in farm practices for more than 150 days per year.

MAP 3

# SHIWA TOWN ('Nambu Town' in Text) AND SHIWA COMMUNITY



④ HIGHWAY NO. 4.

○ SHIWA AGRICULTURAL  
CO-OPERATIVE

0 4 K.M.

identified their household occupation as farming. Manufacturing and construction industries involved 74 households, and other industries, mostly commerce, involved 185.<sup>139</sup> Roughly speaking, non-farming households concentrated in hamlets numbered 1 and 2 which are the local service centre, and farming households are distributed mostly in the other eighteen hamlets. This study deals with farming households only.

In the pre-war period, Shiwa people engaged in four major production activities. Rice-cultivation was the most important. Three-fourths or 3,150 ha. of the community territory was mountains and forests, the remaining quarter was arable land. In the arable area, the total farm land increased from 1,168 ha. in 1939 to 1,346 in 1965. The proportion of rice-paddies in the total farm acreage increased from 67% to 83% in the same period. The second production activity was horse-raising. Until 1945, farmers raised horses mainly for the army and for use on the farm. In 1945 the horses were replaced by cattle.<sup>140</sup> Third, Shiwa farmers had their traditional local winter works. Because of cool temperatures -- an average high of 14.6<sup>o</sup>c. and average low of 4.8<sup>o</sup>c.<sup>141</sup> -- farmers could grow rice only once a year, during the period from April to October. In the early centuries, in the slack season farmers either made charcoal in the mountains or made straw-bags, straw-shoes, straw-boots, and other straw products. Since the seventeenth century Shiwa farmers have emigrated as brewers of sake.<sup>142</sup> The irregular water supply under the old institution of irrigation and the subsequent regular crop-failures made the need for subsidiary income acute.<sup>143</sup>

139. Census data of 1965.  
 140. See Chapter Five, Section II-A-1.  
 141. Information provided by the Morioka Meteorological Station.  
 142. See Chapter Three, Section II-E.  
 143. Ibid.



Shiwa Community is not isolated from cities. The Hizume railroad station which is 4 k.m. east of Shiwa is on the main rail route from Tokyo to Aomori and Hokkaidō service to Hizume started in 1900. In 1906, stage-coach services connected Morioka and Hizume; they were replaced by buses in the 1920's. In 1929, the bus service was opened between Hamlet No. 1 in the community and Morioka City. Since the 1950's, three bus routes have connected the community with both the railroad station and Hizume, while four other routes connect Shiwa with other neighbouring towns and cities. In 1933, Highway No. 4 which connects Tōkyō and Aomori, the northern ferry port for Hokkaidō (see Map 1), was paved. In addition, the central government has announced the construction by 1975 of a freeway probably passing through Shiwa Community.

The number of corporated institutions is rather limited. Until 1955, the Village Office was the most significant one, but the Nambu Town Office absorbed all its functions. Until 1948, the community had only two elementary schools. Since then, Shiwa and a neighbouring community have built a middle school in Shiwa Community. Most teachers commute from outside the community, having limited interaction with farmers and little influence on local affairs. In addition, Shiwa has one post office, one clinic, the Sannokai Land-Improvement Office, Shiwa Forestry Co-Operative, and Shiwa Agricultural Co-Operative.

144. Yahaba Village Office, ed., 1957, p. 15.

145. See Chapter Six, Section II-C.

146. On the agricultural co-operative, see Chapter Five, Section I.

## CHAPTER TWO

## GENERAL BACKGROUND FOR THE CASE STUDY

This study assumes three major factors affecting social change in the farming communities in the post-war period. The factor in the social system is the adoption of new farm techniques, particularly mechanization of farm practices by the farmers. Factors in the nation at large include changes in the general economic conditions and changes in the central government's policies and programmes. At least three sets of background information will be necessary in order to deal with social change in Shiwa Community: (1) an overview of the social organization of the farming community in the pre-war period as the starting point for the development of post-war social change; (2) changes in economic conditions in the society at large and their relevance to agriculture -- specifically, farmers' major production activities -- and farming communities; and (3) changes in the central government's policies and programmes relevant to the farming communities. In order for this study to make generalizations valid beyond Shiwa, that is for them to have validity for other "rice-growing" communities or even for Japanese farming communities in general, the overview of pre-war social organization has to treat institutions which existed universally. Local<sup>1</sup> conditions which have particular significance are treated separately. The discussion of general changes in the following chapters refers back

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1. I discuss the local conditions in pre-war Shiwa in Chapter Three.

to the basic situations which appear in this chapter. Treatment of factors in the larger nation will be limited to changes in the post-war period. Thus, this chapter will provide three sets of background information: (1) social organization of pre-war farming communities; (2) post-war changes in general economic conditions relevant to farming communities; and (3) post-war changes in the central government's policies and programmes relevant to the farming communities.

#### I. Social Organization of Farming Communities in the Pre-War Period

Since social change consists of the change in the social structure which includes three minimum sets of rules of social behaviour in the social system, and since this study deals with the rules, the observation of farmers' behaviour is of prime importance. For the reasons stated in Chapter One, Section III, this study focuses on a rice-growing community in which rice-cultivation is the farmers' major production activity. In such a community, changes in rice-cultivation have a serious impact on farmers' behaviour; the impact on behaviour is the main concern of this study.<sup>2</sup> To understand the nature of changes in rice-cultivation, some brief background information on the subject is necessary. Hence, this section will provide two sets of information: basic information concerning rice-cultivation, and a description of institutions in pre-war farming communities.

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2. See Chapter Four.

## A. Rice-Cultivation and Technical Units of Production Activities

The practice of rice-cultivation has to be examined from two distinct viewpoints. First, since rice-cultivation can change through adoption of new farm techniques, the technical aspect of the practices must be outlined. Second, how the practices influence the behaviour of the farmers is discussed.

### 1. Rice-Cultivation

Because of the monsoons peculiar to eastern Asia, the summer in Japan is humid, hot, and sultry, making rice one of the crops best suited for summer growing. It has traditionally been the mainstay of farming in Japan. Rice-cultivation is considered to have been introduced to Kyūshū Island from China via Korea in the first century B.C.; during the period between the eighth and thirteenth century it spread into the Tōhoku (Northeast) District<sup>3</sup> in which Shiwa Community is located. In 1965 rice-planted acreage comprised 44% of the total cultivated area in Japan, and farmers earned 44% of their farm income from its yield.<sup>4</sup> Thus, on the basis of both planting acreage and farm income, rice-cropping is still of primary importance in Japanese agriculture.

There are two main systems of rice-cultivation: the "dry-system" and the "wet-system". In 1965, the wet-system was practiced on 95% of the total area planted in rice; therefore it will be discussed

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3. T. Matsuo, 1961, p. 1.

4. Bureau of Statistics, ed., 1968, pp. 42-43.

here. Successful paddy cultivation depends upon adequately flooding the fields during the greater part of the growth period of this plant and upon adequate soil nutrients. Although "irrigation" implies adequate and controlled water supply as well as efficient drainage of excess water whenever desirable, the former is more significant. Given adequate irrigation, rice will grow in a wide range of soils and in many climates -- thus water is even more important than the type of<sup>5</sup> soil.

## 2. Technical Units of Production Activities

One can distinguish three levels of units of production activities in rice-cultivation: (1) "activities"; (2) "operations"; and (3) "steps". The most basic unit of production activities is called an "activity". The larger unit of "activities" is "operation". The operation of "uprooting seedlings", for example, includes four activities: "uprooting", "selecting strong seedlings", "washing out mud attached to the roots" and "bundling them into a bunch". A cluster of operations which corresponds to the life history of the plant is a "step". There are seven steps in rice-cultivation: "germination", "nursery-bed making", "preparation of paddy fields", "transplanting", "intermediate step", "harvesting", and "the post-harvest step". Discussions in following chapters will often refer to "operations" and "steps".

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5. D. Grist, 1965, p. 32. See Chapter 3.

In farm practices, there is a cyclical pattern of labour intensiveness. The steps of transplanting and harvesting are the two "busy seasons" in rice-growing, while except for weeding operations, the intermediate step is the least busy step. Farmers call it the "summer slack season". The "winter slack season" starts immediately after the post-harvest step, lasting until germination in the next spring.

Rice-cultivation is basically oriented toward encouraging the growth of a rice-plant, including eliminating obstacles to its growth.<sup>6</sup> To achieve this basic goal, unit activities are arranged, patterned, and built up one upon another, forming operations and steps. "Farming practices" are the organization of these three levels of units of production activities.

#### B. Institutions in Pre-War Farming Communities

In pre-war farming communities, institutions were related to each other, forming a pattern of social relations and farmer-shared cultural values characterized as "Agriculture-Is-The-Base-Ism". This subsection outlines the institutions and the mutual relations between them, and discusses the basic socio-economic conditions, in which change undermined the institution in question. Some institutions had a wide variety of functions related to all aspects of the farmers' life, while others had relatively specific goals. The most basic institution was

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6. This point will become critical in Chapter Four, Section II-A.

the household, the basic unit of all other institutions appearing in this chapter. Four local corporate groups -- dōzoku, kumi, hamlet, and son -- also had significance, because every pre-war farming community had all of them despite the varying significance of dōzoku from one district to another.<sup>7</sup> In communities where farmers mainly grew rice, the labour force, farm land, irrigation water, and grass land for producing manures were the four resources of prime importance. Farmers developed institutions for maintaining and exploiting these limited resources. Finally, farmers joined various groups organized for satisfying specific needs in their community life. This category of institutions is briefly mentioned later in the chapter.

#### 1. Ie -- The Most Basic Social Unit

The social unit most basic to farming communities is the ie<sup>8</sup> or 'Household', an institution which has existed since prehistoric times.<sup>9</sup> A household is normally formed by, or around, the nucleus of an elementary family, and may include relatives and non-relatives other than immediate family members.<sup>10</sup> The economic basis of this institution is household property, including the residence, the furniture, the graveyard where the ancestors lie buried, farm lands and grass lands, animals,<sup>11</sup> and farm implements. Occupations within this unit of production or the working-team, whether agricultural, commercial, or having to do

7. Fukutake, 1959.

8. I will borrow Nakane's translation. See Nakane, 1967, p. 1.

9. Y. Nakamura, 1957.

10. Nakane, op. cit., p. 1.

11. Fukutake, 1968, p. 486.

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with domestic crafts, are handed down from father to son. The household is an entity continuing through time with changing personnel but an unchanging identity: this phenomena will be referred to as "suc-  
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 cession of the household" or "household succession".

Before the Second World War, positions which had individually different amounts of authority and responsibility formed a hierarchical order in the household. How others view one's position in the hierarchy is referred to as "social status". The househead held the highest social status and exercised the most authority over other household members. His authority had three sources to legitimize it: (1) senzo or 'ancestors'; (2) competence in pragmatic problem solving, including his knowledge, skills and experiences in production activities and farm management; and (3) the Civil Code promulgated in 1890 and enforced in 1898.

First, farmers believed that the ancestors had entrusted the present generation with the responsibility to transmit their inherited land to the next generation. To fulfill the common responsibility, household members accepted the househead's authority; he functioned as the mediator between ancestors and living men. If a househead behaved "deviantly" instead of fulfilling the common responsibility, other household members could criticize him in the name of the ancestors.

Second, a household was a working-team and the househead was its leader. The househead had to be competent in pragmatic problem

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12. Dore, 1958, p. 99.

13. Household succession is the fixed line of farmers' social behaviour or a "rule". On contemporary farmers' behaviour in this respect, see Chapter Six, Section I-B.



solving, that is, he had to be competent in knowledge and skills related to farm practices; he had to control group members and maintain high group morale; and he had to take into consideration the total situation. The househead also had the responsibility of training and preparing his successor or the "heir". Hoping that the heir would acquire the leadership qualities outlined above, the househead and other household members treated him differently; this was particularly true among larger farmers.<sup>14</sup> Community people punished incompetent househeads<sup>15</sup> by gossiping about them.

Third, the legal system of pre-war Japan legitimized primogeniture as well as the authority and duties of the househeads. The legal structure of the household was called the "family system". Amendment of the Civil Code in 1947 abolished the family system, and therefore the legal status and authority of househeads. In spite of the abolition of the legal "family system", the institution of household has persisted until now.

Three rules of social behaviour had significance in allocating resources in the household: (1) sex; (2) seniority; and (3) distance from the ancestral line. The above rules patterned relationships among positions in the household. Generally speaking, men enjoyed more freedom and other advantages than did women. Younger household members paid respect to their seniors. Even among siblings, seniors had authority over juniors, although the eldest boy received preferential treat-

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14. On pre-war socialization, see Fukutake, 1968, p. 487.

15. In this respect, see S. Tōhata and K. Kamiya, eds., 1964, Chs. 6 and 7. Also, see Chapter Four, Section III-A.

ment and had the obligation of inheriting the household property -- he had more responsibilities and more security than the others. On "auspicious" occasions, in instances where bilateral members were not needed, they were to leave their natal household and try to become independent.<sup>16</sup> Parent-child relations surpassed husband-wife relations. When a 'young-wife' -- the spouse of a young male resident in the household -- could not get along with her parents-in-law, she had to leave her husband. Although an "adopted-son" (the spouse of a househead's daughter) could not occupy a high status, it was the young-wife who had to accept the lowest status in the household. To obtain a higher status, an adopted-son or a young-wife had to "pay installments" by hard-work at farming. After many hard years, finally they would obtain a position of higher status. Farmers in Iwate prefecture expressed it as, "One cannot obtain big property free."<sup>17</sup>

Among positions in a household, there were conflicting relations between the housewife (the spouse of the househead) and the young-wife. The housewife tried to maintain her position while the young-wife paid her installments to eventually obtain it. As time went on, the young-wife's children grew up to be her allies. The housewife would feel threatened, further building up the tension between the two. In this structure, the lot of the young-wife was sometimes tragic. Here<sup>18</sup> in part is the reason contemporary girls do not wish to marry farm boys.

16. On the alternatives the second or younger sons could have, see Chapter Four, Section I-B-1.

17. From my field notes.

18. See Chapter Six, Section I-B.

From the idea that ancestors entrusted the present generation with transmitting land to the next generation, there emerged a set of rules to sanction acreage and hard-work. If the acreage a househead inherited increased by the time he transmitted the property to his heir, he was favourably evaluated in the community. If the acreage remained the same, the community people accepted him as reasonably good. If the acreage decreased, however, they punished the "lazy" househead (and household) by informal gossiping. In order to increase the acreage, farmers needed cash. In order to increase cash one had to produce some surplus output. When farmers could not increase their farm output by increasing labour productivity, they tried to raise land productivity and increasingly exploited their own labour. To work hard at farming appears to be the value most highly held by pre-war Japanese farmers. This was one of the major criteria for evaluating farmers. Those who did not satisfy this criterion could not receive favourable evaluation in either the household or in the community; while hard workers could cover their shortcomings to a considerable degree. This criterion was particularly strictly applied to those who joined a household in their adulthood, for example the adopted-sons and young-wives.

The patterned behaviour known as institutions is a form of adaptation under given norms and conditions as discussed in Chapter One, Section I-C. The institution of household had at least three basic socio-economic conditions, in which a change would seriously modify the institution. First, farming must be the household occupation; otherwise, succession of the household would have less significance because

there would be nothing to hand on to the next generation. Second, land must be regarded as something more than a mere commercial commodity. If farmers felt free to choose any alternative, they would easily emigrate, undermining the first basic condition. Third, the household had to have an heir for succession. Otherwise, the farming household would disappear.

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## 2. Dōzoku -- A Local Corporate Group

Dōzoku is a set of households which recognize their relationship in terms of honke or a "main-household" and bunke or "branch-households", and which on the basis of this relation have developed a corporate function as a group. The househead who inherited the household property took some responsibility for younger siblings who would not remain in the household. If economic conditions were ideal, a younger brother might establish a branch-household. At the fissioning off, both households had to acknowledge the relations of main and branch households; otherwise they would not form a dōzoku.

A main-household was senior and collateral while branch-households were junior and bilateral. Member households in a dōzoku were under the control of the main-household, and senior branch-households occupied a higher social status than junior ones, forming a hierarchy. Two major factors legitimized the authority of the main-households:

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19. There is no English equivalent so I have used the Japanese term.

20. Nakane, op. cit., pp. 90-91.

21. S. Kitano, 1956, pp. 42-43.

(1) the common ancestors of the dōzoku who presided over the ceremonies held by the main-household; and (2) the economic predominance of the main-household over the branch-households.<sup>22</sup> In order to establish a branch-household the main-household had to give some of its land and other means of production to the new household; but this was usually not sufficient to support it as an independent economic unit in the community. Hence, the new household had to depend upon the main-household<sup>23</sup> and functioned as a part of the main-household's farm.

Unequal distribution of economic resources and seniority of a household in the incorporate group, together with the distance from the ancestral line, allocated inferior social status to a branch-household. The branch-household, which was often a tenant of its main-household, had to demonstrate its inferior social status by asking the latter for ratification of decisions or by receiving supervision and orders from the main-household in almost every aspect of the household and community life.

The institution of dōzoku had two basic socio-economic conditions for its maintenance: (1) the main-household's supremacy in economic resources over the branch-households; and (2) the symbolic authority of the main-household to preside over religious ceremonies for the common ancestors. Egalitarian re-distribution of the factors of production decreased the necessity for the branch-households to be dependent upon the main-household, thus weakening the institution. The

22. Nakamura, ed., 1956, Ch. 2.

23. Nakamura, 1957, p. 134.

farmers' decreasing dependence on the supernatural also weakened the symbolic authority of the main household.

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### 3. Kumi -- A Local Corporate Group

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Kumi is a local group in the strict sense: all households located in a small locality are regarded as members of the kumi, and a hamlet involves several such kumi. In pre-war Japan, kumi performed two major functions. First, the members of this institution exchanged reciprocal services on such occasions as funerals or fire-fighting. As mentioned later, the members of a kumi often developed an institution of labour exchange at busy seasons such as transplanting and harvesting. Second, this institution had significance as a political unit for the self-government of farmers. Often, kumi levied an informal tax upon members in order to perform the reciprocal services.

Kumi might or might not include kin-related households. Therefore every household in the same corporate group had an equal share in every aspect of the community life. Exchanges of reciprocal services needed to be balanced. Hence, conditions which prevented the disturbance of the balancing mechanism are the basic ones for the persistence of kumi. There are at least two such conditions. First, kumi has to have homogeneous membership in terms of production activities. Second, differentiation of income resources ought not to develop in the locale; otherwise, conflicting interests will create conflict, jeopardizing the balancing mechanism.

24. We do not have an English equivalent for this concept.

25. When a farming community is located in the suburbs of an industrial centre, the members of kumi tend to be limited to farmers.

#### 4. Buraku -- The Farmers' World

Buraku or the "hamlet" is a distinctive residential area surrounded by fields and is comprised of households. The Tokugawa Government (1600-1867) established this local group as the administrative unit in the early seventeenth century, and farmers called it mura or the "village community", regarding it as their world<sup>26</sup> until 1868 when the Meiji Government re-organized the administrative system. Under the new administrative unit, which the government called son,<sup>27</sup> several such village communities or hamlets were involved together. Members of a hamlet<sup>28</sup> shared common interests in irrigation water and commonly owned plains, forests and mountains to collect fodder material for green manure and firewood.<sup>29</sup> Other institutionalized practices such as collective observance of religious ceremonies, communal works such as road-mending<sup>30</sup> and clearing canals, or the excommunication of "offenders" of the social norms reconfirmed the boundary of the hamlet.

As a political unit, the hamlet was the only social grouping beyond the household which laid serious claim to the individual farmers' loyalty.<sup>31</sup> It levied an informal tax upon members for services listed, and in some cases it had written laws and ways to impose sanctions upon

26. Nakamura, 1957, p. 105.

27. In the following sub-section, I treat this concept in detail.

28. Nakamura, ed., 1956, pp. 267-406.

29. Nakamura, op. cit., pp. 407-612.

30. I substantiate these practices both in Chapter Three and Chapter Six.

31. Fukutake, 1962.

the deviants. As mentioned in the preceding chapter, both Japanese and Western sociologists and anthropologists intensively studied the single hamlet, because it had such conspicuous political and social autonomy.

The hamlet had at least two basic socio-economic conditions for its persistence. First, as in the kumi, the members of this local group have to share common interests in their production activities. If non-farming households increased in a hamlet the conflict of interests among residents would weaken the propensity to conform to social norms. Second, the hamlet has to involve a sufficient number of households to maintain production activities and services for the residents. If the number of households decreased to a certain point, the remaining households would have to leave the locale, unable to continue farming.

##### 5. Son -- The Administrative Unit

The Meiji Government began re-organizing the administrative system of Japan in 1871. After several failures, the final institutionalization of territorial groups took place in 1888 when shi or "city", chō or "town", and son or "village as an administrative unit" or the "administrative village" were established. In 1890, the central government re-organized the higher levels of administrative units, the ken or "prefecture" and the gun or "county". Thus, a hierarchical administrative system composed of the prefecture, county, administrative village, and hamlet was finally established. The administrative vil-

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32. The critical point will be determined by the amount of work and by the amount of necessary labour. Hence, the point will move in accordance with the advancement of farm technology. See Chapter Six, Section II-C.



lage involved several hamlets and the village council, elected by househeads, made policies which were administered by the village office. The central government administered the administrative village through the prefectural government and, until 1923, through the county government.

The administrative village had to spend a major portion of its budget to implement the duties entrusted by the higher levels of administrative institutions and to maintain schools. With the small remainder, the administrative village provided services for the resi-

<sup>33</sup> dents. Each hamlet had to send its representative to the village council, otherwise it might fail to obtain any benefits. The members

of a hamlet co-operated in electing a representative to protect their own interests.

<sup>34</sup> Thus, village councillors were larger farmers, who spoke for their hamlets; these farmers monopolized the council. The budget of the administrative village did not cover all the services required in hamlets so the hamlets continued to levy informal taxes on their residents.

In 1953, the central government implemented the second major re-organization of the administrative units, joining several administrative villages and towns together into a new unit. In this study, the term "community" will denote the local group identical to the boundary of the administrative village existing between 1888 and 1953; the terms "village" and "town" will denote the present administrative units.

33. Fukutake, 1968, pp. 545-553.

34. See Chapter Six, Section II-C.

## 6. Yui -- The Institution of Labour Exchanges

Yui is an institution of labour exchange with fixed membership; its basic unit is a household. Certain farm practices as well as certain housework tasks are operations which must be finished in a short period and thus require intensive labour. No single household can command sufficient labour to manage all the operations, and so households in a community exchange their labour to finish the task in time.<sup>35</sup> Not all yui have the same membership: farmers may organize different yui for different operations. Particularly in the pre-war period, close social relations among households rather than close physical distance determined the partners in the institution.

In the pre-war period, two types of yui existed simultaneously: (1) yui in dōzoku; and (2) yui among neighbouring households. In the first type of yui, the members did not exchange an equal amount of labour. Branch households provided more labour for the main household than they received, but were rewarded by the main household in other forms of assistance. In the second type of yui, the members exchanged equal amounts of labour. After the Land Reform (1946-1948), the dōzoku was weakened and the first type of yui disappeared, but the second type of yui still persists in Shiwa Community and other farming communities in the Tōhoku District.<sup>36</sup>

There are at least three basic socio-economic conditions for the maintenance of this institution. First, all the residents in a

35. T. Nakano and S. Matsushima, 1958, pp. 71-79.

36. Recent changes in this institution appear in Chapter Four.

community are engaged in the same kind of production activities as their needs are identical. Second, labour productivity is relatively low. Third, economic alternatives in the locale are limited. Unlike the household or the dōzoku, this institution has a specific objective and will easily be affected by change in these conditions.

## 7. The Institution of Tenancy

The farmers' relationships to the farm land was of the utmost importance in their community life. Japanese agriculture prior to the Land Reform had two characteristics. First, the average acreage was extremely small. Only 1% of the farmers cultivated 5 ha. or over, while 90% of the farmers cultivated less than 2 ha. The average acreage was about 1 ha. Second, prior to 1945, 70% of farmers were tenants and 28% of farmers had no land of their own. These tenants had to pay their rent in rice, not in cash.

This practice of paying rent in kind pushed tenants into a vicious cycle of poverty. Considering the small acreage and low level of technology, rent was very high. In the pre-war period the rate was <sup>37</sup> over 50% of the farm output. Under these circumstances, tenants could not produce a surplus from farming to improve their means of production. Rather, most tenants were constantly in debt. What remained of their output was frequently not enough to see them to the next harvest, and tenants were obliged to borrow resources from their landlords, who hap-

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37. T. Ōuchi, 1952, pp. 16-20.

pened in many cases to be the tenants' main-household. Their immediate debt was paid from the following year's crop but the tenants could not pay all of the rent for the new fiscal year. Thus they were perpetually in debt. Also, a rise in the price of rice did not boost their income. Although they frequently benefitted from the technical know-how of their landlords, the system remained in balance very oppressive.

There were two types of tenancy. In one type the tenant chose his landlords and a tenant cultivated several landlords' fields and was not bound to one.<sup>38</sup> After his retirement, his son might choose to cultivate the fields of a different landlord. Tenancy as an institution in Shiwa Community was of this type. In the other type, the tenant could not choose his landlord. In Iwate Prefecture, there were large landlords with authority over all the people in the community, including their branch-households. The landlord-tenant relationship was perpetuated generation after generation.<sup>39</sup> Even as recently as the 1930's, from 50% to 80% of farmers in three countries in Iwate Prefecture farmed under the second type of tenancy.<sup>40</sup> Three conditions

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38. Nakamura, 1957.

39. K. Ariga, 1939.

40. Japanese Ethnological Association, ed., Vol. 3, p. 1063. This type of tenancy existed in other parts of Japan as well, but it persisted in Iwate Prefecture until recently because of the poor economic conditions. The classical study on this subject, conducted by Professor Ariga in a northern community of Iwate Prefecture, was summarized in social anthropological terms by Nakane. See, Nakane, op. cit., Ch. 3.

supported the persistence of this involuntary tenancy: (1) these counties were mountainous and farm resources were extremely limited; (2) the large landlords almost monopolized the mountains, and hence limited economic resources; and (3) in the pre-war period, income resources other than farming practically did not exist in the locale.

Tenants' economic dependence on landlords conditioned other aspects of the community life. Landlords had authority over tenants, but the degree of their influence upon the tenants' behaviour varied according to how much the tenants were dependent upon them.<sup>41</sup> As an illustration, under voluntary tenancy, having received the consent of their main-households, tenants could decide their children's spouse without consulting their landlords. Involuntary tenants did not have this privilege. In the case of a disaster, however, the tenants under voluntary tenancy could expect no assistance from their landlords except from main-households, but the tenants under the second variety<sup>42</sup> received all possible help from the landlords. The pattern of distribution of economic resources in a community seems to condition the locus of authority and to govern the people's behaviour in the social system.

Change in the distribution of economic resources changed this institution. The decline and fall of landlord-tenant relationships is so important to the later discussion that the Land Reform is briefly

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41. Ariga, 1939.

42. Ariga, 1943.

outlined here. The Land Reform (1946-1948) had been unsuccessfully instituted in Japan, until the Allied Powers ordered the Government of Japan to implement a land reform programme.<sup>43</sup> After continued pressure from the Allied Powers, the Farm Land Adjustment Law was established on October 21, 1946. Under this law, absentee landlords had to sell all of their land to the government. Non-cultivating resident landlords might retain 1 ha. on the average (except in Hokkaidō). Farmers who had cultivated their own land were not allowed to own more than 3 ha. (in Hokkaidō, 12 ha.). Land in excess of 3 ha. was to be purchased by the government unless the owner-cultivator could cultivate the excess land without hiring labour, or if subdivision of his holding, in the opinion of the Land Commission, would reduce its productivity. Such purchases were to be completed by December 31st, 1948; the law provided that the government was to purchase the land and resell it to the tenants. The tenant farmer who had engaged in cultivating this land had first options on its purchase. Because of the long-standing and complicated "forms" of land possession, mountainous areas were excluded from the application of this law. Because of this reform, the number of landless tenants decreased from 28% to 1.8% of the total farming households -- thus most contemporary farmers possess their own land. The principle of small land-holding cultivators was fixed by the Farm Land<sup>44</sup> Law. The Land Reform wiped out the pre-war institution of tenancy

43. The best presentation of this process in Western language appears in Dore, 1959.

44. See Section II-B-2.

as well as the economic basis of dōzoku, except in the mountainous areas.

#### 8. The Institution of Irrigation

The question of irrigation water was critically significant  
<sup>45</sup> to rice-growing farmers, for if there was not enough water the rice-yield was affected. There were three aspects to utilizing water in irrigation: the rules to legitimize the allocation of water; the necessary facilities; and personnel to maintain the rules and facilities. In brief, irrigation was an institution for farmers. Location of paddy-fields in relation to water-ways was of decisive significance in irrigation, and landlords often held the land in the most advantageous  
<sup>46</sup> location. The institutions of tenancy and the dōzoku overlapped and, in turn, these two institutions overlapped the institution of irrigation.

#### 9. The Institution of Exploiting Grass Land

Grass lands were either uncultivated (usually unirrigated) lands or mountainous areas covered with trees. The farmers needed grass to feed their domestic animals and to use as the raw material for manures, however, they could not afford to grow grass on plains fields. They needed fallen twigs and logs for fire-wood. As in the case of irrigation, they developed an institution for exploiting the grass

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45. In Chapter Three, I deal with this point in detail.

46. Nakamura, ed., 1956, Ch. 2, Sec. 2.

land.<sup>47</sup> Throughout the Tokugawa Period (1600-1867) and until 1945, only farmers from certain fixed households were appointed as leaders of this institution.

During the Tokugawa Period the trees in the mountainous areas belonged to feudal lords, who appointed leaders of rural communities to maintain this resource. These leaders were influential landlords, and also househeads of main-households. After 1868, ownership of the majority of mountainous areas was transferred from the feudal lords to the central government; only a small portion of land remained in the hands of individual landlords or hamlets.<sup>48</sup> Institutions for exploiting grass land existed under both landlord ownership and government ownership of the mountainous areas. Landlords allowed their tenants to exploit their private resources under certain conditions which varied from place to place. The institution for exploiting jointly owned grass land was also frequently controlled by landlords in the hamlet. In brief, the leaders of this institution were chosen from among the landlords, and the other farmers had to utilize the resources in accordance with the rules administered by the authority of these leaders. Thus, this institution overlapped the dōzoku, the institution of tenancy, and the institution of irrigation.

#### 10. Other Institutions

Farmers joined various groups organized for satisfying specific needs in their community life. Some institutions such as the parishes

47. Nakamura, op. cit., Ch. 2, Sec. 3.

48. K. Mori, 1953.



of the shintō shrines or the religious and recreational groups called kō had households as their composing units. In principle, other institutions such as the youth association, the women's association, and various kinds of co-operatives had individuals as their basic components. In practice, however, these individuals were representing their households and were forced to join by either community social pressures<sup>49</sup> or the central government. Some of these institutions were related directly to production activities, and others were not. In any case, the community's resource distribution pattern was reflected in the rules of social behaviour that governed the members of the institutions. Persons from the households with larger acreages tended to accept leadership in institutions. In return, they were socially obliged to donate larger sums of money at special occasions such as festivals or<sup>50</sup> youth association programmes. If larger farmers failed in this regard, they knew there would be a buzz of gossip about them throughout the community.

### C. Summary

The household comprised the basic unit of institutions in the pre-war farming communities. These institutions were mutually interconnected. In general, the distribution of economic resources affected the human behaviour in an institution. Hence, cumulative social pressures from the various institutions conditioned the farmers' choice of

49. Nakano and Matsushima, 1958, pp. 186-189.

50. Op. cit., Ch. 3.

alternatives. Farmers could not behave as they personally liked to: they behaved as others expected them to. This was particularly true of those who had little in the way of economic resources and who therefore stood low in the social status of the community. They had "unsatisfied<sup>51</sup> desires", a situation which is "the essence of dynamic process". If the distribution pattern of economic resources changed, the rules of social behaviour in the social system would also change. If the economic alternatives increased, farmers in the lower social status would choose to leave farming. If the distribution pattern of economic resources and the number of economic alternatives were changed simultaneously, more radical social change would occur in the rural communities. In the pre-war period, however, neither condition appeared and farmers remained group-oriented rather than individual-oriented.

## II. Changing Conditions in the Japanese Nation in the Post-War Period 113

This section, outlines the changes in conditions in the society at large after the Second World War. The passage quoted from Embree's<sup>52</sup> writing suggests that a peasant society is part of a larger nation and is affected by two sources: (1) change in economic conditions in the larger society; and (2) change in policies and programmes of the government. After the Second World War, these factors in the larger nation changed dramatically. Shiwa Community must have been affected by these

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51. Firth, 1951, p. 86.

52. See Chapter One, Section II-A.

changes in the same way as other rural communities, although the reaction of Shiwa farmers was different from others due to specific local conditions.

#### A. Changing Economic Conditions in the Larger Society

The central government undertook expansionist fiscal and monetary policies in 1955, and the Japanese economy began growing at a faster rate. The impact of economic growth upon agriculture during the initial five to six years was critical; with building pressure from both farmers and financial interests, the government had to establish the Agriculture Basic Law in 1961. This section deals with the interactions between the larger society and rural communities from 1955 to 1961.

##### 1. Agriculture and Rapid Economic Growth

The Japanese economy started to grow rapidly from 1955: NNP<sup>53</sup> increased annually at the rate of 9.8% between 1954 and 1964. Rapid economic growth did not take place evenly in every economic sphere, however. Taking the average figures of fiscal years 1957-1959 as 100, the<sup>54</sup> agricultural productivity index rose from 68 in 1953 to 116 by 1961,

53. Original source: Bureau of Economic Planning, Kokumin Shotoku Hakusho of each year. Quoted from S. Endō, 1966, p. 35. Average growth rate of GNP between 1957 and 1967 was 14.5%. See Ienohikari Kyōkai, ed., 1968, (A) p. 52.

54. The concept of the productivity index follows: Take figures of any two years as the original point, and establish the average as 100; compute the ratio between the average figures and any annual figures of output and working population. These are the output index and working population index. The productivity index is the value of the output index divided by the working population index.

55

while the industrial productivity index climbed from 66 to 157. The share of the primary industries in NNP dropped 23% in 1955 to 14% by 1961, but that of secondary industries rose from 30% to 39%. What the primary industries lost equalled the increment of secondary industries: the rapid economic growth was mainly due to the latter. In the same period, 1955-1961, primary industries produced 30% more output while, secondary industries produced 173%.<sup>56</sup> Despite the fact that agricultural production increased during this period, agriculture's share in NNP declined. Consequently, the gap between agriculture and manufacturing industries in terms of income per capita and expenditure per capita<sup>57</sup> widened.

During the period of rapid economic growth, increase and differentiation of income resources developed. The number of employees in secondary and tertiary industries soared from 18.4 million in 1950 to 35.9 million by 1965. In particular, the number of jobs increased after 1955,<sup>58</sup> and rural residents were absorbed into the industrial centers.<sup>59</sup>

55. Nōgyō Kindaika Jiten Kankōkai, ed., 1964, p. 8. From now on, this publication will be referred to as "Jiten".

56. Endō, 1966, p. 35.

57. This is inspite of the fact that expenditure for food in the total household expenditure, or "the Engel's co-efficient" became closer -- both in urban and rural households, it was about 35 in 1965. See Chapter Six, Section I-A.

58. Census data. Quoted from Ministry of Labour, 1968, p. 39.

59. For details, see Section II-A-3. Economists do not argue that a rapid economic growth will always cause a decrease in the farming population. Such a relationship would depend upon the "maturity" of the national economy. According to past statistics, when the proportion of farmers in the total working population reaches about 30%, there begins a slow decrease in the farming population, which suddenly accelerates. In the case of Japan, the economists argue, the economic maturity and rapid economic growth co-incided. See "Symposium" in Y. Kondō, et al., eds., 1965, pp. 209-223.

As discussed in the following sub-section, the expansion of the labour market had a grave impact upon farming households.

## 2. Change in Rural Labour and the Social Consequences

Demographers have noticed an enormous population change in the 1950's in rural areas: new farmers dropped from 400,000 per annum to 170,000 in that decade. The great majority of emigrants from the rural areas were youths from 15 to 19 years old. Between 1950 and 1955, the number of youths joining the farming population decreased about 40%.<sup>60</sup> A survey of working hours in farm operations also revealed a decrease of 40%.<sup>61</sup> In these changes, demographers observed no significant differences between sexes. And as the number of births in rural areas between 1935 and 1940 remained almost the same, the above phenomena could only be due to social mobility. Demographers described this exodus from rural areas as "land-slip". Consequently, the proportion of the farming population in the total producing population decreased from 45% in 1946 to 31% by 1960, and to 19% by 1967.<sup>62</sup> But, the number of farming households did not decrease that fast; it slowly slipped from 6.18 million in 1950 to 5.98 million by 1960, and to 5.42 million by 1967, or a decrease of 12% over 17 years.

Expansion of the labour markets in the 1950's and the consequent decrease in the farming population had at least four social conse-

60. S. Namiki, 1960, p. 6.

61. Op. cit., p. 8.

62. See Ienohikari Kyōkai, ed., 1968 (A), p. 102.

quences. First, those households in which the househeads or heirs worked for other firms more than 60 days per annum increased. They are called "part-time farming households".<sup>63</sup> The proportion of "full-time farming households" in 1941 was 41%, and it fell to 34% by 1960.<sup>64</sup> Second, the quality of farm labour deteriorated remarkably. Because youths emigrated and househeads and heirs worked at non-farm activities,<sup>65</sup> older people as well as women began to accept more responsibility in farming. In 1950, about 10% of the farmers were over the age of 60,<sup>66</sup> and the proportion doubled by 1967.<sup>67</sup> In 1950, 52% of the farming population was made up of women: the proportion rose to 55% by 1961 and 58% by 1967.<sup>68</sup> Third, wages rose rapidly for labourers during the peak of farm practices such as transplanting or harvesting. In 1960, the average wage per man day in transplanting was 435 yen; it rose to 680 yen in real terms by 1965.<sup>69</sup> Finally, re-organization of farming under the new conditions made farmers more dependent than before upon non-farm activities.

63. The Ministry of Agriculture and Forestry defined the categories of farming households as follows. Those which have more than 0.5 ha. (in Hokkaidō, more than 1 ha.) or those who have smaller acreage but satisfy one or more of the seven conditions established by the Ministry are the "First Class Farming Households". Others are the "Second Class Farming Households". Among farming households of both classes, there are "Full-Time Farming Households" and "Part-Time Farming Households".
64. Endō, 1966, p. 103. The proportion further dropped to 27% by 1965. See Nōrin Tōkei Kyōkai, ed., 1967 (A), p. 97.
65. See the definition of "part-time farming households".
66. N. Kayō, ed., 1958, p. 166.
67. Ienohikari Kyōkai, ed., 1968 (A), p. 102.
68. The following sources were referred to. a) Namiki, 1960. b) Kondō, et al., eds., 1965. c) Ienohikari Kyōkai, ed., 1968 (A).
69. The original surveys were conducted by the Ministry of Agriculture and Forestry. The figures were quoted from Iwateken Nōgyō Kaigi, ed., 1967 (A), p. 14. The money wage has been converted to real terms by division by a price deflator. On the deflator, see, Nōrin Tōkei Kyōkai, ed., 1967 (B), p. 12.

During the period between 1957 and 1964, the index of farm management cost increased from 100 to 230, and the "ratio of farm income" <sup>70</sup> relatively decreased from 65% to 57%. Among the farm management costs in 1957, fertilizers occupied 24%, farm machines 15%, and food-stuffs 13%. In 1964, however, food-stuffs occupied 26%, farm machines 19%, and fertilizers 13%. <sup>71</sup> These figures reflect the rapid development of dairy farming and the mechanization of farm practices. The weight of farm income in the farming household economy decreased in the same period. Farm income occupied 57% of the household income and 60% of the household expenses, but the proportions dropped to 48% and 53% respectively <sup>72</sup> in the period between 1957 and 1964. Farmers balanced the shortage of farm income by following full-time or part-time non-farm activities. Full-time commuters increased from 1.79 million in 1960 to 1.85 million in 1965; part-time engagement in non-farm jobs increased from 4.5 <sup>73</sup> million to 5.9 million.

### 3. Change in the Consumption Patterns of Farm Products

Prior to 1945, the price of rice was the yardstick for general price levels. The indices of consumption between pre-war days and post-war days are based on the price level of 1934-1936. Table 2-1 shows that the level of consumption immediately after the last war dropped to 55% of the pre-war average.

70. The ratio of farm income =  $\frac{\text{Gross Farm Income}}{\text{Farm Management Cost.}}$

71. T. Kikuchi, 1968, p. 357.

72. Op. cit., p. 350.

73. Nōrin Tōkei Kyōkai, ed., 1967 (A), p. 77.

Table 2-1 Level of Consumption in Cities

<u>Year</u>	<u>Food</u>	<u>Housing</u>	<u>Light &amp; Heat</u>	<u>Clothing</u>	<u>Other</u>	<u>Total Average</u>
1947	58.6	35.3	110.6	22.4	100.9	55.4
1950	79.4	44.8	103.8	35.7	85.8	69.8
1955	112.0	78.7	135.0	89.3	126.4	106.5
1960	131.9	128.7	161.7	130.0	168.0	137.4
1965	147.0	184.9	230.8	170.3	233.3	174.0

Note: average of 1934-36 = 100.

Source: Ministry of Welfare, ed., Kokumin Seikatsu Hakusho - 1965.  
Quoted from Endō, 1966, p. 180.

By 1955, the average of the personal consumption index had almost returned to the pre-war level. From 1955 to 1960, the indices of comparative personal expenditure for shelter, clothing, and light and heat computed in real terms increased 50, 40, and 27 respectively. Despite the general increase in expenditure, money spent for food increased only 20: the demand elasticity of farm output is low.

The increase in consumption of farm output accompanied remarkable changes in consumption patterns. According to Table 2-2, consumption of rice slightly decreased, but consumption of vegetables, fruits, meat, eggs, and dairy products increased from 100 to 127, 173, 130, 141, and 211 between 1955 and 1960. Among vegetables, traditional varieties became less popular, and Western varieties replaced the former. Japanese women began to try more Western cooking: the increase in oil consumption reflects this change. In brief, Westernization in food habits developed, forcing farmers to change their variety of output.

74. This gap became wider by 1965. See Table 2-2.



Table 2-2 Supply Index of Food per Capits (1955-100)

<u>Items</u>	<u>Average of 1934-1936</u>	<u>1955</u>	<u>1960</u>	<u>1964</u>
Rice	100.4	100.0	98.2	96.0
Vegetables	109.1	100.0	127.1	147.9
Fruits	139.7	100.0	173.3	222.6
Fish	--	100.0	105.4	102.9
Meat	65.7	100.0	129.6	247.8
Eggs	67.6	100.0	141.2	252.9
Dairy Products	25.8	100.0	211.6	308.3
Oil	33.3	100.0	159.3	248.1

Source: Endō, 1966, p. 187.

A comparison of the food trend in Japan with the real situation in Western countries immediately reveals that Japan is still far behind in terms of consuming animal protein. As an index, taking the per-capita consumption of milk in Japan as 1, that in Canada and the United States was 15 in 1960.<sup>75</sup> The government has assumed that the Westernization of food habits will develop further, and has developed programmes to allow for this changing consumption pattern.

#### 4. Increase in Imported Farm Products and the Japanese Economy

From 1955 until 1960, imported farm products in terms of monetary values remained at a level of 800 million dollars. In the same period Japanese total imports almost doubled, so that the proportion of farm products in total imports decreased from 36% to 20%.<sup>76</sup> The heavy proportion of imported farm products had an impact upon Japanese agriculture and upon the Japanese economy at large.

75. Source: Ministry of Agriculture and Forestry, the material submitted to the national diet in 1961. Quoted from Jiten, p. 17.

76. Suzuki, H., 1968, p. 64. By 1965, the import of farm products rose again to 1.9 billion dollars, occupying 24% of the total import.

Before 1961, an increase in imported farm products was already weakening the competitive power of Japanese agriculture in domestic markets. Because of limited natural resources, Japan has to depend upon foreign products to some extent. The recent increase in imported farm products has seriously damaged the market for some domestic crops.<sup>77</sup>

The growing importance of foreign imports in the development of some farm products has raised production costs. As mentioned in the preceding sub-section, consumption of the output of animal husbandry rose remarkably, but farmers had to depend upon foreign products for one-half of the feed-stuff.<sup>78</sup> Japanese agricultural prices became higher than international prices. Had the government's protective control over imports been removed as a result of international political pressure, Japanese farmers would have been confronted with direct and severe competition from foreign products and Japanese agricultural producers would have been severely hurt.

Japanese leaders were quick to realize that Japanese agriculture -- which had very little to export to balance the increasing burden of imported products -- would become a dead-weight on the Japanese economy, and from 1959 they began to search for a solution.<sup>79</sup> In brief, the industrial and financial leaders aimed at "industrialization" of Japanese agriculture to increase their own profits.<sup>80</sup> More specifically, their policies publicized in 1960 may be summarized in the following three terms: (1) the lowering of prices of domestic farm products by "industrializing" agriculture;<sup>81</sup> (2) the curtailment of government expenditure

77. Suzuki, *op. cit.*, p. 67. The rate of self-sufficiency of farm products for food dropped from 86% in 1960 to 76% in 1965.

78. *Ibid.*

79. Jitin, p. 21.

80. J. Matsubara, and O. Hasumi, 1968, Ch. 1.

81. See the discussion in Chapter One, Section I-B.

on various subsidies by re-organizing agricultural policies, programmes, and relevant institutions; and (3) the expansion of domestic markets for farm machines, fertilizers, pesticides, and feed-stuff by developing agriculture. Paralleled with the moves within farmers' groups,<sup>82</sup> the keen interest of industrial and financial leaders in the development of agriculture stimulated the central government to promote industrialization.

#### B. Changes in the Central Government's Policies and Programmes

The relationship between the central government and rural communities in Japan was very close, and change in government policies immediately affected farmers.<sup>83</sup> Tsutomu Ōuchi summarized changes in the post-war agricultural policies as follows.<sup>84</sup> Between 1945 and 1950, farmers were exploited, for farming was the only taxable economic activity in this period. From 1950 until 1955, the government curtailed taxes upon farmers, raised the price of rice, and invested capital to improve farm facilities.<sup>85</sup> After 1955, the government was requested to clarify policy goals and establish basic policies as both farmers and non-farmers felt anxious over the rapidly changing socio-economic conditions. The Agriculture Basic Law was the policy decided upon by Japanese leaders at that time.

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82. See Section II-B-1 of this chapter.

83. See Chapter Five.

84. T. Ōuchi, 1968, pp. 92-105.

85. Later chapters deal with this point.

# 1. Establishment of the Agriculture Basic Law in 1961

In 1957, the National Council for the Development of Farming and Fishing Communities applied political pressure on the government to legislate certain basic policies in farming. According to the council, cabinet level policy decisions would have no lasting effects as the policies might change along with the cabinets. Since farming and fishing communities were to change radically, the council insisted that basic government policies be established as law.<sup>86</sup> This proposal, together with the suggestions from industrial and financial leaders, stimulated political parties to clamour for the establishment of an agriculture basic law. Many groups produced individual drafts.

In 1961, a draft of the Agriculture Basic Law written by the Ministry of Agriculture and Forestry and modified by the Liberal Party passed both the House of Commons and the House of Representatives. The law was comprised of seven parts: (1) preface; (2) statements of general policies; (3) policies for farm production; (4) policies for market-transactions and prices of farm products; (5) improvement in the structure of farm production; (6) re-organization of the government bureaucracy and farmers' groups; and (7) the establishment of the Council for Research of Agricultural Policies. In brief, this law aimed to increase farm productivity and restore a balance between non-farmers' and farmers' level of consumption.<sup>87</sup> The aims were to be achieved (1) by government aids and (2) by the development of "independent farmers".<sup>88</sup> Evaluative

86. Jiten, p, 38.

87. The Agriculture Basic Law, Article 15.

88. Op. cit., Art. 16.

research was to measure achievements constantly and identify difficulties; the annual report on the research was to provide relevant information and recommendations for future programmes.<sup>89</sup>

Groups reacted to the law in a variety of ways. Financial and industrial leaders supported the government because their own ideas had been incorporated in the law.<sup>90</sup> Farmers' groups did not put up any strong opposition. Left wing parties and some scholars from the social sciences opposed the law, because the government proposed to help "rich" farmers and to "abolish the poor".<sup>91</sup> To delineate the opponents' points: unless a farmer had 1 ha. of land or more, he could not support his household from his farming income alone, and 70% of farmers had less than 1.0 ha. in 1960.<sup>92</sup> Government aid would benefit only 30% of the farmers, not all of them. In essence the Agriculture Basic Law would jeopardize the majority of farmers. Thus the opponents of the law invented the phrase: "Agricultural Policies for 30%". In spite of the opposition to the law, the government programmes were implemented as soon as the bill passed the diet.

## 2. Re-Organization of Programmes and Administrative Institutions

### a. Amendment of the Farm Land Law

The Land Reform abolished landlords on the plains but did not attempt to modify small farms. The basic ideal of the Farm Land Law

89. Op. cit., Art. 7.

90. Jiten, p. 48.

91. A representative analysis of this process appears in I. Katō and K. Sakamoto, eds., 1965.

92. Endō, 1966, pp. 103-104.

which passed the diet in 1952 was that farmers should have their own land. To translate the ideal into more empirical terms, the possessors, the managers, and the labourers of the land would have to be identical  
93  
regardless of the acreage. However, under such circumstances farming would persist as a household occupation, and large scale farms depending upon hired labour would not develop. In effect, emphasis upon small farms prevented the rise of farming as a profit-making enterprise.

At the same time, the rapid economic growth in the society at large absorbed the surplus rural population, causing the farming population to shrink, thus providing an opportunity to eliminate the extremely small farms. If the low productivity in farming and the low income in farming households were to be overcome, intensive capital investment was required and large acreage per farm was necessary to maximize the effects of invested capital. As small farms would be maintained by the Farm Land Law, any attempt to expand acreage needed amendments in the law. These amendments were added in 1962.

First, the ceiling on maximum acreage was modified. In the old law, the maximum acreage on all islands except for Hokkaidō had  
94  
been 3 ha. for fields and 5 ha. for pasture. By the amendment, any household which was the core of a prospective larger farm and which could provide more than one half of the necessary labour was entitled to possess and manage larger acreage. Second, if farmers wish to pool resources and jointly operate farms, they were entitled to establish a

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93. The Farm Land Law, Article 1.

94. In actuality, each prefecture regulated its own maximum acreage. The quoted figures are the averages.

limited company, but persons not living on the land could not join the company. Third, when farmers wish to briefly leave their community or temporarily quit farming, they could entrust their land to a local agricultural co-operative to administer it.

In spite of the amendments, the basic problem of small farmers still persists; the Ministry of Agriculture and Forestry intends to make a second and more radical amendment in the near future.<sup>95</sup>

#### b. Re-Organization of Government Loans

Farmers have to invest capital to increase labour productivity, as labour is scarce. If the government provided funds to make long term but low interest loans, it would give farmers the incentive to develop their farms. Prior to this new programme, two kinds of funds were available for farmers: (1) private funds established by the national associations of agricultural co-operatives; and (2) public funds established by either the central or prefectural government. Private funds charged a relatively high interest of 8.5% to 9.0% per annum, so few farmers could use this resource. Public funds defined objectives too narrowly and so were not readily available.<sup>96</sup> The rural exodus of young labour made it necessary for farmers to increase the labour productivity, but they could not mechanize their practices because of a shortage of credit.

Under the Agriculture Basic Law, the central government established two sets of funds: (1) the "Agriculture Modernization Funds"

95. Ienohikari Kyōkai, ed., 1968 (A), pp. 113-114. 1968 as present.

96. Jiten, p. 108.

and (2) the "Funds for Managerial and Structural Improvement". Agriculture Modernization Funds were a modification of the "Agriculture Improvement Funds" established in 1955, involving six categories of funds for individual farmers and groups of farmers. Farmers could borrow money from the local co-operative, paying interest rates varying from 5% to 7.5% per annum, and could return it within five to fifteen years.<sup>97</sup> The central government subsidized the balance of interest rates to co-operatives and guaranteed the possible loss. At the outset this programme was not successful, because of a lack of enthusiasm on the part of the co-operatives.<sup>98</sup>

The Funds for Managerial and Structural Improvement were to be a remedy for the limited availability of private funds. To achieve sustained economic growth, "the initial stimulant or stimulants to development must be of a certain critical minimum size."<sup>99</sup> Although farmers pooled their funds in the local agricultural co-operative, the total amount was not large enough to stimulate development.<sup>100</sup> Realizing this problem, the central government established these funds for a pilot project in each rural community. Individual farmers and groups of farmers who planned to introduce a set of expensive machines or other facilities to improve the structure of farm production could borrow large sums of money from these funds. A later sub-section, consi-

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97. Ministry of Agriculture and Forestry, ed., 1967 (B), pp. 14-15.

98. The Council for Research of Agricultural Policies, ed., 1966, p. 17.

99. Leibenstein, 1957, p. 94.

100. Ministry of Agriculture and Forestry, ed., 1967 (B), p. 3.



ders the programmes that are important to this study.

c. Re-Organization of Farm Insurance

At the end of the 1940's, the central government introduced insurance for farm output, but farmers did not participate actively because the premiums were high and the coverage limited.<sup>102</sup> In 1964, more generous policies were established. Taking the index in 1964 as 100, farmers' participation increased to 164 by 1967.<sup>103</sup> These insurance schemes covered individual crops: hence, farmers had to pay separate premiums for rice-growing, cattle-raising, or other operations. For example in rice-cultivation, the policy covers up to 90% of the fixed rice-price of the year in cases of total damage. Ninety-four percent<sup>104</sup> of the rice-growing farmers purchased the policy in 1967.

d. Improvement of Extension Services

Prefectural governments began extension services in 1948, but extension officers could not function well because of severely limited resources.<sup>105</sup> The new policies revised this programme. In 1963, amendments increased the extension officer's responsibilities and scope of authority. In turn, their salary rose and they gained easier access to various resources. For instance, under a current scheme ex-

101. The case in Shiwa Community appears in Chapter Four, Section II-B.

102. Jiten, p. 119.

103. Ienohikari Kyōkai, ed., 1968 (A), p. 259.

104. Op. cit., ibid.

105. Jiten, p. 137.

tension officers can obtain information and other necessary resources from prefectural and national agricultural experimental laboratories. They can take re-training courses or study at universities at the expense of the prefectural governments to refresh or to develop their knowledge and skills. The government realized the need to strengthen  
106  
change-agents.

e. Amalgamation of Agricultural Co-Operatives

Under strong pressure from the Allied Powers, agricultural co-operatives, covering every farming household, were established in each rural community in 1947. The co-operative movement in Japan had existed for half a century, but the co-operative had not been a powerful institution until the war-time government, a military government,  
107  
began to manipulate the co-operatives for their own aims. The new agricultural co-operatives in post-war Japan theoretically should have brought economic benefits to the farmers, and the central government encouraged its development in many ways. Besides managing the market-transactions, the new co-operative functioned as a credit-union, and  
108  
helped old tenants to become independent of their old landlords.

Although the agricultural co-operative was not a government agent, its potential as a change-agent for developing industrialization of agriculture became significant under the Agriculture Basic Law. The

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106. On change-agents, see Chapter Five.

107. J. Saito, 1968, p. 170.

108. See Chapter Four, Section III-B.

co-operative in the latter part of the 1950's had two problems. First, the co-operatives were not large enough to loan private funds to development-minded farmers: the average number of households per "general co-operative"<sup>109</sup> was 471. Second, the small co-operative could not compete with other business firms in marketing. To eliminate these bottlenecks, the central government established a new law to amalgamate small co-operatives. Consequently, the general co-operatives decreased from 12,000 in 1961 to 7,000 by 1968. The average number of member-households was 736 in 1968 compared with 471 in 1961. In the same period, "specialized co-operatives"<sup>110</sup> decreased from 16,800 to 12,700. One remarkable change was the increase in the number of extension workers on the co-operative's staff. The total number of extension workers increased<sup>111</sup> from 6,200 in 1960 to 14,700 by 1966, implying that co-operative leaders realized the need to strengthen their agents of change.

### 3. The Programme of "Structural Improvement of Farms"

"Structural Improvement of Farms" was the only new programme<sup>112</sup> developed under the Agriculture Basic Law. In brief, the Ministry of Agriculture and Forestry selected about 300 villages and towns per

109. One can distinguish two types of co-operatives: (1) special co-operatives and (2) general co-operatives. The former manages only specific tasks such as marketing milk. The latter has four major tasks. It functions as a credit-union, purchases goods, supplies a market, and manages an extension service.

110. Ienohikari Kyōkai, ed., 1968 (A), p. 278.

111. Op. cit., p. 279.

112. Ouchi, op. cit., p. 116.

annum and let them implement their own programmes under certain conditions. The ceiling and the minimum size of the project and budget were regulated. The project had to be completed within three years and the average budget was 100 million yen. By the end of 1971, the Ministry assumes that all administrative units in Japan will be covered under those projects. The basic feature of this programme is to introduce improvements universally. The government subsidizes 40% to 70% of necessary costs and makes various funds available to farmers.

In the seven years after 1961, 70% of Japanese towns and villages implemented the programme. Scholars tend to be sceptical of the success of this programme.<sup>113</sup> Since one project covered only a part of one or two hamlets in a community, the proportion of farmers participating in the project was 8% of the total community population. In addition, not all the participants in the project took advantage of the benefits.<sup>114</sup>

### C. Summary

In summary, post-war reforms and rapid economic growth since 1955 changed a number of conditions that had governed the behaviour of farmers in pre-war days. Re-allocation of farm lands by the Land Reform, establishment of land-ownership by the Farm Land Law, and development of services by agricultural co-operatives eradicated the basic conditions that supported dōzoku, thus enabling old tenants and branch-

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113. Ōuchi (1968) and Matsubara et al. (1968) are a few examples.

114. Ienohikari Kyōkai, ed., 1968 (A), pp. 88-90.

households to be independent from old landlords and main-households. The increase in economic alternatives in the larger society promoted emigration of youths and increased full-time commuters in the farming communities. At the same time, the development of a monetary economy made farmers more dependent upon non-farm income resources. The increase in household income in turn made farmers strive for further mechanization of farm operations, enabling them to maintain and even increase the quantity of farm output in spite of the rural exodus of youth.

Change in conditions in the society at large affected the farmers' decision-making in two additional aspects. First, Westernization of food habits in the larger nation obliged farmers to give up certain sets of traditional farm practices and to adopt innovations such as new cash crops or dairy farming which required capital, a body of knowledge and skills in production as well as in market-transactions. As farmers became more intensively involved in a monetary economy, their production activities became more strictly conditioned by market demands. Second, the shortage of labour due mainly to the continuing youthful emigration makes labour-costs high, thereby pushing up the production cost of farm output, and weakening the competitive power of Japanese products against foreign products. As imports of foreign products increase, farmers are more openly exposed to competition with other suppliers. In brief, farmers' production activities have become more strongly affected by market conditions.

The government, urged by various groups including industrial and financial leaders, farmers' groups, and political parties, established the Agriculture Basic Law to industrialize Japanese agriculture. Conditions favorable to the expansion of the size of individual farms were created by amending the Farm Land Law and providing relatively abundant financial resources. The government tried to protect against crop-damage from natural disaster by providing several kinds of insurance. Attempts were made to improve communication channels for farmers, to improve various local services through extension officers and local co-operatives, and to improve the structure of farm production. The government is waiting to see the farmers' reactions.

In brief, Japanese agriculture is beginning to satisfy the <sup>115</sup> three conditions for industrialization. In these general terms, this statement will be true for all of Japan, in spite of the fact that individual communities will reveal different reactions as local conditions vary from one community to another. The following chapters, are devoted to a close examination of the situation in Shiwa Community.

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115. See Chapter One, Section I-B.

## CHAPTER THREE

## ECONOMIC INSTITUTIONS IN SHIWA PRIOR TO 1954

Some institutions experienced changes after the Second World War when the Allied Powers and the Government of Japan removed certain conditions which had supported them. Revision of the Civil Code (1947), establishment of agricultural co-operatives (1947), implementation of the Land Reform programmes (1946-1948), and the reorganization of administrative units which began in 1953 are the examples mentioned in Chapter Two. As a part of the Japanese nation, Shiwa Community like other communities was effected by the above changes, but due to particular local conditions, Shiwa farmers reacted to these changes in their own distinct fashion. This chapter deals mainly with the functioning of institutions in pre-war Shiwa and how they changed before the emergence of the rapid economic growth of post-war Japan.

In pre-war Japan each institution had a history of several centuries but its individual structure was conditioned and modified by events in local history. In order to understand the reactions of the local people, post-war institutional change must be examined in the context of local history. Long standing particular conditions that deeply affected the local institutions must be dealt with in depth.

Until recently Japanese farming for the most part consisted of rice-cultivation by the wet-system, and its development was dependent on three conditions: (1) opening up of rice-paddies; (2) use of

irrigation-water; and (3) the increase in labour productivity.<sup>1</sup> Under the wet-system, the amount of water resources determined the acreage in which rice could be grown. Increase in labour productivity also partly depended on the availability of irrigation water.<sup>2</sup> Hence, how to allocate limited water resources, including the construction of reservoirs and artificial irrigation channels or "canals", became crucial. Allocation of water resources is the particular local condition which characterized production activities in pre-war Shiwa.

Shiwa farmers suffered from a shortage of irrigation water, and so constructed canals as early as the sixteenth century. The construction work required the co-operation of people beyond individual households, and the administration and maintenance of irrigation facilities required the emergence of an institution. The availability of irrigation-water affected farmers' production activities, and as a result affected the community's institutions. This chapter focuses on one institution, the institution of irrigation, and discusses other institutions as they relate to it.

### I. The Institution of Irrigation Prior to 1954

For centuries Shiwa farmers have used four sources of irrigation-water in their farm practices: (1) water from the Takina River, which originates in the mountains of the Shiwa Community, passes through

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1. K. Mori, 1953, p. 374.

2. See Section II-D of this chapter.



the community and finally flows into the Kitakami River; (2) the water from the Kurosawa River, which irrigates a couple of southern hamlets in Shiwa;<sup>3</sup> (3) a number of small creeks coming down the foothills and (4) rain. In the twentieth century the farmers dug reservoirs, thus adding another source. The farmers have no means for controlling precipitation and had no reservoirs until recently so these two sources are excluded from the present consideration. Among the remaining three sources, the Takina River has been the most important for the purpose of this study because it irrigates more than one half of the paddy fields in Shiwa, and runs through almost all of the twenty hamlets in the community. According to the survey conducted by a group of engineers in 1950, the resources of the Takina River were limited in spite of its wide coverage. During the dry season, the river could supply enough water to irrigate only 63 ha. of the 1,150 ha. of paddy fields which depended upon irrigation from this source.<sup>4</sup> Another group of researchers from the Tōhoku National Agricultural Experimental Laboratory, studying the institution of irrigation in Shiwa for a three year period (1955-1957), discovered that maximum utilization of the water resources from this 19 k.m. river was reached by at least 1600 A.D.<sup>5</sup>

Shiwa farmers were vulnerable to natural hazards. During the period from 1626 to 1942, they experienced once every 3.4 years some serious natural disaster such as droughts, long rains, floods, wind,

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3. See Map 3.

4. Quoted from Watanabe et al., 1958, p. 77.

5. Op. cit.

cool weather or combination of these elements. They suffered a drastic crop failure once every 6.3 years. Until 1868 there was death from starvation among the people once in every 18 years. From 1626 to 1942, water disputes occurred once every 7 years, mostly at the junction of the main-channel and the branch-channel of the Takina River. According to available documents, several thousand farmers swarmed to the disputes and became involved in bloody fighting. Two farmers were killed in 1852 during a fight.<sup>6</sup> Allowing for minor hazards, crop failures or water disputes too mild to be recorded, the frequencies of disasters was surely greater. Thus, the allocation of the limited water resources has been a critical question for farmers in this area.

Local farmers developed several independent institutions of irrigation from different water-sources and called them "water-systems"; the Takina River water-system was one. In the jargon of the farmers each institution was a "system". The members of an institution had rigid rules for resource allocation. A small number of leaders had authority to allocate the irrigation-water and to sanction those who did not behave according to the rules. Each institution was an aggregate of sub-units each of which shared the rules for resource allocation. The institution as a whole maintained irrigation facilities, allocated water resources among the members, claimed the members' loyalty, and to a certain extent managed conflicts among the members. This section will provide a description of the Takina River Water-system.

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6. Computed from the chronological table attached to Watanabe et al., op. cit., pp. 173-175.

## A. Sub-Units of the Takina River Water-System

Two criteria determined the grouping of farmers who used the water from the Takina River: (1) the water-way from which farmers took water and (2) the distance from the junction. As will be substantiated later, these criteria roughly determined the amount of resources allocated to individual farmers so that those who shared common interests organized themselves into loose groups or the sub-units of the system.

### 1. Groups Around Water-Ways

At the junction, the Takina River was divided into the main-channel, which irrigated the Shiwa Community and another community, and the branch-channel which irrigated three other communities. A number of canals took water from each channel; from each canal a number of sub-canals took water to the individual paddy fields. Those who used water from each of these water-ways formed organizations.

#### a. Channel Groups

Farmers who used water out of the main channel organized a "channel group", as did those on the branch channel. Leaders of the two groups met each year to determine the ratio of water allocated to each channel. On average 60% of the water went to the main-channel and 40% flowed into the branch-channel. In the Tokugawa Period (1600-1867) the main channel irrigated paddy fields which yielded 690 koku or 3,423

bushels of rice and the branch-channel irrigated fields which yielded  
 460 koku or 2,282 bushels of rice.<sup>7</sup>

Farmers in a channel group shared a common interest in water rights. In general farmers had the right to obtain water for their farms from each of the sources (rivers, springs, reservoirs, or dams) in accordance with the accepted rules. In the Takina River water-system farmers finalized the rules for allocating water in the sixteenth century. The dividing ratio at the junction determined the amount of water each channel group obtained, which in turn determined the amount of resources allocated to each canal, each sub-canal, and ultimately each farming household. The decision on the ratio was thus a life or death matter for farmers in dry years. During droughts, each channel group bargained with group pressure or alternately physical pressure for the best portion of the ratio. The balance of power between the two channel groups affected the ratio, so the ratio had to be re-determined each year.

Communities were the constituent units of the channel groups. Farmers of one community never belonged to both channel groups -- a community was homogeneous. Potential hostility existed between the two channel groups, and the local people urged farmers of the two channel  
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 groups not to intermarry, thus enabling the groups to demonstrate hostility to their opponents without reserve.

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7. Computed from the table attached to Watanabe et al., op. cit., p. 74.

8. There is evidence of intermarriage but the number is small.

b. Canal Groups

Groups organized around the individual canals of a channel are "canal groups". At the end of the sixteenth century there were twenty-six canals in the main-channel group and, accordingly twenty-six canal groups. In old documents, each canal had a proper name like Umeda-zeki as well as a reference number attached to the canal like Canal No. 19. The numbers went from one to twenty-seven, based on distance from the junction. The branch-channel group was called Canal Group No. 2. The farmers had to abandon canals number 22 and 23 in the Tokugawa Period for reasons which are elaborated in later sections.<sup>9</sup> This sub-section will focus on the twenty-four canal groups in the main-channel group.

Farming households were the constituent units of the canal groups. However, it must be noted that not all Shiwa farmers belonged to canal groups of the Takina water-system. Those few farmers who relied solely on water from other sources and did not receive any water from the Takina River did not have membership. Among canal group members, some belonged to more than one canal group, but each individual considered his membership in one group most significant. The water allocated to each canal irrigated only two categories of paddy fields:

- (1) those registered in old documents of the seventeenth century and
- (2) those cultivated by the members of a canal group.<sup>10</sup>

9. See Section I-B and Section III-A of this chapter.

10. Satō, M., 1955, pp. 23-24.

c. Sub-Canal Groups, Day-Water Groups and Night-Water Groups

In dry seasons, the Takina River could not sufficiently irrigate the paddy fields under its coverage. Farmers in this locale agreed to use the water by turns with the exception of canal groups numbered 1 and 4, which had the privilege of receiving as much water as they needed.<sup>11</sup> The rotation practices fell into two categories: (1) those who were allowed to use water only in the day hours, or the "day-water groups"; and (2) those who were allowed to use it at night, or the "night-water groups".

The constituent units of both the day-water group and the night-water group were the groups organized around sub-canals or the "sub-canal groups". The distance between the canal's water-intake and the water-intake of each sub-canal determined the category of membership in the group. As a rule, those sub-canals located close to the canal's water-intake belonged to the day-water group and the rest to the night-water group. The definition of the "day" and the "night" lacked any objective standard and summer days were long when farmers were engaged in irrigating. Subsequently, night-water groups suffered all the inconveniences of working at night as well as suffering from a scarcity of water resources. Among sub-canal groups in each of the day-water groups and night-water groups, farmers practiced further rotation of water resources. For instance, if there were three sub-canal groups

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11. See Section I-C of this chapter.

in a night-water group, the farmers in each sub-canal group would use water only once in every three days and then only at night.

## 2. Groupings in Terms of Distance from the Junction

The advantageous water rights in the main-channel group went to the eight canal groups numbered 1 to 9,<sup>12</sup> the canals closest to the junction.<sup>13</sup> Local farmers called the area irrigated by these canals the "upstream area" and referred to these privileged farmers as the "upstream group". Likewise, the area irrigated by canals numbered 10 to 27 was the "downstream area" and the members of these canal groups were the "downstream group". The upstream groups were the "haves" in terms of irrigation-water, whereas the downstream group were the "have-nots", thus, creating conditions for mutually conflicting interests.

Farmers in the upstream area exercised influence over those in the downstream area. Those farmers in the downstream area, who had disadvantageous water rights, always suffered from a scarcity of water and so had to curry the favour of the upstream groups. A few farmers from the downstream area, representing a canal group, brought gifts to leaders in the upstream area, pleading for a donation of their "surplus water". The arrangement was usually made between two canal groups, such as No. 4 and No. 19. But even if group No. 4 agreed to give water to group No. 19, farmers in between these two often stole the resources, diverting the extra flow away from the intended recipient. In pleading

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12. Present discussion excludes Canal Group No. 2, the branch-channel group.

13. On water rights, see Section I-C of this chapter.

for favours from the upstream group, the downstream group had to accept  
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 an inferior social status.

## B. Hierarchical Organization and Authority in the Water-System

To summarize the organization of the water-system, the farming household was the basic constituent unit of the institution. A certain number of households composed a sub-canal group which formed first a part of a canal group, then a part of a channel group, and ultimately a part of the water-system. In a channel group, those canal groups located close to the junction enjoyed more advantageous water rights, forming the upstream group. Particularly in the downstream area, the sub-canal groups in the canal groups had to practice rotational use of irrigation water.

In each of the sub-canal groups, canal groups, and channel groups, the members selected their leaders or the "water-chiefs". The higher the level of a group, and the larger the size of the group at this level, the more authority the water-chief held. He arbitrated conflicts within his group, in addition to representing his group in inter-group conflicts. Failure to arrive at an agreement meant water-chiefs of a higher group level would arbitrate the case, until the case reached the level of channel groups.

Water-chiefs had authority as well as responsibilities. The responsibilities of the water-chiefs included: (1) financial respon-

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14. Parallel phenomena exist in other social systems. See Homans, 1961, Ch. 17.



sibilities, such as the pre-payment of maintenance expenses for the irrigation facilities; (2) the administration of water allocation, which required specialized skills and knowledge; (3) arbitration of conflicts within and between groups; (4) application of sanction on "offenders"; (5) organization of farmers and supervision of the fighting at the junction when disputes took place; and (6) appealing cases to the court.<sup>15</sup>

To fulfill these responsibilities the water-chiefs had to exercise great influence on the other group members, and the latter had to obey the orders of the water-chiefs. "Authority depends on the fact that disobedience brings about a number of punishments<sup>16</sup> and not just one."<sup>17</sup>

Those who satisfy the following four minimal conditions may hold authority in an institution: (1) greater access to economic resources as well as to information; (2) high social esteem among the group members; (3) norm-conforming interactions with other group members; and (4) access to advantageous water rights<sup>18</sup> so that they can punish "offenders" by manipulating the allocation of water resources. Only resident landlords and male househeads of the main-household in the dōzoku could satisfy the above conditions. Therefore, they filled these positions, which were afterwards inherited by their descendents, thus re-enforcing the social structure of the community.

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The Land Reform barely affected the authority of the water-chiefs because most of the conditions discussed above did not change.

15. Watanabe et al., op. cit., p. 97.

16. See Section I-D of this chapter.

17. Homans, 1950, p. 420.

18. Op. cit., pp. 417-420.

19. On the Land Reform in Shiwa, see Section II-C of this chapter.

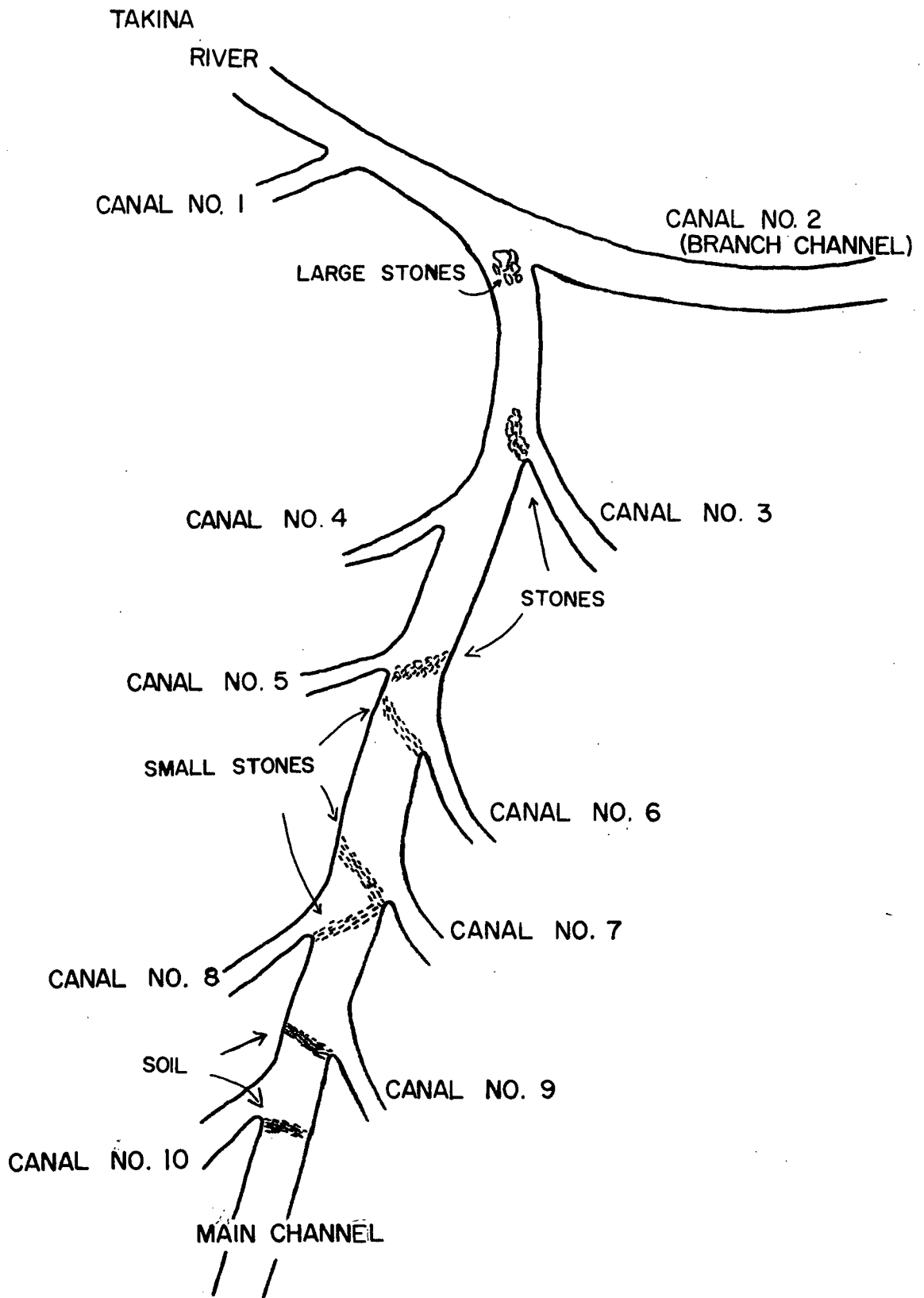
First, despite the re-allocation of land resources, the water ways and water rights in the institution remained constant, and water-chiefs continued to have access to advantageous water rights. Second, the need for the body of specialized knowledge and skills in the institution survived: ex-landlords and main-households which had monopolized them continued to fill the positions. Third, despite changes in the economy, there was a cultural lag and as a result other group members did not instantly abandon their social esteem of ex-landlords and main-households. Hence, old water-chiefs maintained their positions and exercised influence over other group members as they had done before the Land Reform.

#### C. The Rules of Allocating Resources

The basic rule of water allocation was that the closer the water-intake of a canal and a sub-canal were located to the junction, the more advantageous were the water rights. According to available documents, Shiwa Community began to develop from the foothills of the mountains toward the valley lying to the west. In keeping with the above rule, priority was given to the old paddy fields.

The eight canal groups located in the upstream area had more advantageous water rights than the rest. Farmers in this district acknowledged the privileged position of canals numbered 1 and 4, by allowing them to take as much water as they needed any time. Canal Group No. 3 had the right to build a stone wall half-way across the river and take "one half" of the water into its canal. (See Diagram 3-1) Each of the

DIAGRAM 3-1. WATER ALLOCATION OF CANALS No. 10.



canal groups numbered 5, 6, 7, and 8 could place a wall of small stones entirely across the river. In this way, they channeled the current into their canals. Canal Group No. 9 had the right to make a bund with soil, stopping the current for their canal. In no case, however, were any of these canal groups permitted to use any other material such as wood or clay that would completely stop the water. Canal groups numbered 10 to 27 obtained only the water which leaked through all the other barriers; and the amount each canal could take was determined by the amount of the rice-yields officially registered with the feudal authority.

When Shiwa Community was transferred from the Nambu Clan to the Hachinohe Clan in 1644, the feudal authorities concerned signed a treaty, reconfirming the "traditional practices" of irrigation from the Takina River. They needed a treaty because farmers in this district were to belong to two different administrative authorities and yet were to share the limited water resources from the same river. The traditional practices acknowledged in the treaty included the following three items. First, farmers would use water resources in the manner described earlier. Second, farmers could not construct any new canals under any circumstances. Third, farmers could not make any new paddy field which would require additional water from the Takina River. The above treaty implies that the traditional practices might have been as old as the completion of the twenty-six canals. Except for the abolition of two

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20. Watanabe et al., op. cit., pp. 78-79.

canals (No. 22 and No. 23) in the downstream area at the end of the Tokugawa Period, the resource allocation rules were strictly observed until 1952.

Generally speaking, the farther one's paddy fields were from the junction and the lower the sub-canal group to which one belonged, the more limited was the amount of water obtained. As the amount of water became more scarce, the rules of allocating resources became fairer and the equipment to measure the quantity of flowing water became more exact. Farmers in canal groups, day-water and night-water groups, and sub-canal groups used wooden measure-rods with increasing exactness. The lower the level of the group, the higher the group members' concern over water allocation practices.<sup>21</sup>

According to the survey of Watanabe, landlords and main-households cultivated paddy fields located close to the water intakes and rented out fields remote from the intakes. By the rules mentioned earlier, the distance of a water-intake from the junction determined the amount of allocated water resources. Landlords and main-households thus grew rice in "advantageous" fields and the smaller and poorer farmers such as tenants and branch-households farmed in less advantageous areas. These rules have a correlation to the social stratification in the community.

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21. From my field notes.

#### D. The Rules of Applying Sanction

Shiwa farmers regarded stealing water as an offence against the communal codes, and in each sub-canal group the group members had their own institutionalized procedures for applying sanctions. The procedures shared a general pattern. Farmers defined "offenders" as those who took more water into their own paddy fields than had been allocated by the water-chiefs. If any farmer discovered an offender, he would report him to the water-chief of the group to which the offender belonged. The water-chief would immediately close the water-intake of the offender's fields and call a general meeting of the group. The offender had to bring a pack of dried fish and a certain amount of sake, to the meeting at which he would have to apologize for his offence and swear to commit no further offence. If the offender satisfied these two conditions, the group usually forgave his misdeeds.

Considering the critical significance of the offense, the above sanction seems generous. Specification of the following two conditions will help to explain the farmers' behaviour. First, water was a matter of life or death for any rice-growing farmer particularly when he had only limited access to income resources. If an offender was severely punished, he might set fire to the house of the person who proposed the punishment. This action actually occurred as recently as the 1940's. Because they were afraid of a desperate reaction on the part of the accused, farmers had to pretend that they cordially accepted the offender's apology and oath. In addition, every one of the farmers was

a potential offender. If circumstances allowed, all of them felt motivated to introduce "more water" into their fields. Therefore, farmers were suspicious of each other.<sup>22</sup> In this sense, an offender was a farmer who satisfied the following two conditions: (1) he introduced "more water" into his fields; and (2) his offense was discovered by somebody. Some accusers might well be undiscovered offenders, and the same severe punishment imposed upon the discovered ones might be applied to them in the future. On the other hand farmers had to accept certain rules to protect their own interest and had to punish offenders. Under these circumstances, sanction had to be applied in a manner which would not further develop social tensions in the group.

Farmers intentionally avoided recording the names of offenders, but clearly they saw a pattern to the offenses.<sup>23</sup> According to informants, tenants and branch-households tended to be the ones most at fault. These smaller farmers had to cultivate the disadvantageous fields, scarce in water resources. In dry years, the scarcity of water often obsessed them to the point of desperation, particularly in the downstream area. Hence, the discovered offenders tended to be poor farmers.<sup>24</sup> Consequently, the rules of applying sanction more frequently punished poor farmers than the better-off. The pattern of punishments also seems to correlate with the social stratification in the community. Therefore attention is devoted to the relationship between water resources and other institutions.

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22. From my field notes.

23. From my field notes.

24. I could not discover any institution by which small farmers mutually overlook each other's offense, protecting the interest of the poor.

## II. Water Resources, Production Activities and Institutions

To maximize the rice-yields, farmers needed a supply of water that they could drain off at the desired time. <sup>25</sup> If water was scarce, they had to limit the paddy acreage to what they could adequately irrigate. Farmers delayed the completion of farm steps on their remaining land until more water became available. Shortage of irrigation-water thus had two consequences for their production activities: (1) delay in completing farm steps; and (2) investment of more labour per any given unit of land. Second, as discussed in the preceding section, farmers developed a rigid institution of irrigation in which how far the water-intakes were from the junction determined the nature of the water rights, and farmers with more advantageous water rights had greater access to the water resources. The scarcer the water, the greater the labour farmers have to put on the land. Hence, the less advantageous are their water rights, the more labour farmers have to invest. Third, farmers in the upper social strata enjoyed more advantageous water rights whereas farmers of the lower social strata had little in the way of water rights so they had to invest a greater amount of labour on their farms. Fourth, scarcity of irrigation-water prevented the adoption of advanced farm techniques. Advanced farm techniques increased labour productivity, but scarcity of water resources forced farmers to delay farm practices. In delaying farm practices, farmers cannot solely depend on hired labour for considering the size of farm output it was

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25. See Chapter Two, Section I-A-1.



too costly in a developed monetary economy. The most economic way to deal with the labour shortage was an exchange of labour among equals. Finally, an irregular supply of water resulted in crop-failure and therefore in an irregular income. Because of this, farmers had to find alternative sources of income, developing another set of institutionalized behaviour. Thus, a scarcity of water resources had an impact on production activities as well as on other institutions in the community; this is the focus of this section.

#### A. Water Resources and Labour Investment

Particularly when water was scarce, farmers had to prevent leakage from the paddy fields. To accomplish this they resorted to thorough puddling and bund-coating when preparing fields. Shiwa farmers in the 1960's puddled a total of three times. Until 1952 they puddled nine times: six times with horse-plows in the preliminary operation, once in the secondary operation, and twice in the final. When water was really scarce, farmers made an extra fund in a paddy field and puddled only the enclosed smaller portion, waiting for the next ration of water to flood the remainder of the field. By doing this, the step of preparing the fields dragged on and a greater amount of labour was needed.

It appears that the scarcity of water demanded a greater investment of labour. Table 3-1 summarizes the results of two comparable

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26. Watanabe et al., op. cit., p. 119.

Table 3-1 Investment of Man-Days per 10 Ares by Operations

	Nursery Beds	Appli- cation of Fer- tilizer	Plow- ing	Puddl- ing	Bund Coat- ing	Trans- plant- ing	Irriga- tion	Weed- ing	Harvest- ing	Thresh- ing & Husking	Total
Shiwa Community											
Day- Water Group	1.2	1.3	1.5	1.8	0.8	2.9	1.6	5.7	3.3	3.9	24.0
Night- Water Group	1.1	1.3	1.0	1.8	?	3.4	1.7	5.2	3.3	3.7	22.6
Rikuchū County	1.0	-	0.5	0.4	-	1.5	-	3.6	2.0	3.5	--
Iwate Prefecture	1.1	-	0.4	0.6	-	2.2	-	2.4	1.9	3.3	--

Source: Data on Shiwa Community in 1949 were taken from Watanabe et al., 1958, p. 130. Watanabe and his colleagues gave the breakdown of 17 households, but I quote only average figures.

Data on Rikuchū County and Iwate Prefecture were based upon the survey in 1941 by Teikoku Nokai.

surveys on the amount of labour invested per 10 ares in major operations. According to this table, Shiwa farmers, compared to farmers in other parts of Iwate Prefecture, had to work longer in all operations which required water. They even invested more labour than others in harvesting, for the ripening-period of rice plants varied with the transplantation dates. Other conditions being equal, we can hypothesize that the scarcer the water resources the greater was the amount of labour farmers had to invest on rice-cultivation.

#### B. Water Rights and Labour Investment

The time best suited for transplanting in Shiwa is from the middle of May until the early part of June. Before 1952, Shiwa farmers did not have enough irrigation water in this period and so the transplanting step took longer. For instance, a farming household in Canal Group No. 19 cultivated 3.3 ha. of paddy fields, 0.8 ha. of dry fields, and rented out 1 ha. before the Land Reform. Between 1937 and 1949, the househead recorded each year the dates on which transplanting began and was finished. The household could finish transplanting in seven days with the help of hired labour. However, due to the irrigation rotation practice, the average span of transplanting was 21 days. In 1940 and 1942, particularly dry years, it took 40 days for the household to finish the step.

Table 3-1 is an average of the time invested by Shiwa farmers. However the distance from the junction, or water rights, was a variable

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27. Teikoku Nōkai, ed., 1943.

which caused differences in time invested among some Shiwa farmers. In Shiwa, transplanting should have been completed before June 20. In the downstream area, however, a number of farmers could not complete the step by this date. Watanabe and others developed an index which is called<sup>28</sup> the "ratio of unfinished paddies" to measure the degree of delay. The results of their survey of June 20th, 1949 are summarized in Table 3-2. Hamlets numbered 13, 15, 16, and 19 had access to creeks coming from the foothills and to another river: other hamlets in the downstream area did not. We can see then that the ratio of unfinished paddies was high in the downstream area and low in the upstream area. In Shiwa Community, other conditions being equal, the farther paddy fields are located from the junction, the longer the period required for the step of transplanting. If a step took longer to complete, farmers of course had to work longer. Hence, the distance of paddy fields from the junction roughly determined the amount of labour necessary for certain steps.

### C. Social Stratification and Labour Investment

The pre-war institution of irrigation required a large amount of labour to keep up the facilities. Maintenance works included the following: (1) clearing canals and branch-canals; (2) digging canals and branch-canals deeper whenever necessary; (3) "water-receiving" (described below); and (4) "watching water", a patrolling duty to discover

28.  $\text{The ratio of unfinished paddies} = \frac{\text{Acreage of unfinished paddies}}{\text{Total Acreage in the area}} \times 100.$

Table 3-2 The Ratio of Unfinished Paddies by Hamlets (June 20, 1949)

The Hamlet Number	Number of Households	Total Acreage of Paddy Fields (ha.)	The Ratio of Unfinished Paddies (%)
1	99	183.3	2
2	96	283.7	2
3	53	627.9	1
4	52	821.7	3
5	53	762.0	4
6	52	545.4	0
7	63	492.9	0
8	39	515.8	2
9	58	695.5	8
10	41	268.3	13
11	45	546.2	46
12	48	683.0	68
13	39	491.8	0
14	37	538.8	15
15	36	692.7	3
16	47	733.1	4
17	33	594.4	39
18	36	678.9	58
19	40	511.2	3
20	17	310.2	not applicable

Notes: 1. Hamlet No. 20 is not relevant as the farmers could not grow rice until the completion of the dam in 1952. Hamlet numbers were assigned by the Shiwa Agricultural Co-operative.

Source: The number of households is taken from Shiwa Village Office, 1954.

The total acreage of paddy fields is based on Shiwa Agricultural Co-Operative, ed., 1962, p. 1.

The ratio of unfinished paddies is quoted from Watanabe et al., 1958, p. 137.

offenders. Water-receiving is as follows: a ritual which involved all the farmers. When farmers were engaged in rotation-practice, each sub-canal group had an assigned schedule for receiving water, and all the group members except for the water-chief went at the scheduled time to their canal's water-intake. To bring water into their sub-canal, the farmers closed the water-intakes of all other sub-canals located upstream. Then, accompanying the flow of water as a group, the farmers walked down to the water-intake of their sub-canal. When the water reached their sub-canal, the water-chief stood there to allocate the resources to each member. No one else was allowed to touch the water-intake: it symbolized the water-chief's authority.

In all maintenance works, all members of a sub-canal group began to work from a certain starting line. As the operation progressed, those whose fields were cleared through the co-operative work would withdraw one after another. Generally, small farmers such as tenants and branch-households cultivated fields remote from water-intakes. Although they got smaller benefits, they had to work for longer hours. According to Watanabe's study in 1949 of invested man-days per 10 ares, farmers with 2 ha. or over invested from 19 to 22 man-days per 10 ares, which conformed to the national average, while some small farmers with less than 1 ha. had to invest 27 to 29 man-days for the same work.

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The above study suggests the hypothesis that the lower the social strata,

29. Watanabe, et al., 1958, p. 130.

30. In rice-cultivating communities which had no other comparable farming operations, the size of acreage virtually determined the social stratum a household would belong to.

the greater the labour investment, hence, the higher the water-cost in rice-cultivation.

Even after the Land Reform (1946-1948) small farmers worked harder. One is tempted to hypothesize that lower class farmers lived in radically more depressing circumstances during the pre-war period. In Shiwa Community, this was not necessarily the case. Compared to the average figures for Iwate Prefecture, Tōhoku District (which includes six prefectures) and the nation, Shiwa Community had two characteristics relating to social stratification: (1) a lack of large landlords; and (2) a smaller proportion of landless tenants. These conditions prevented sharper social differentiation between upper and lower class farmers, making a contrast to the have/have-not polarization observed in  
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the mountainous communities in Iwate Prefecture.

To elaborate the first condition, large landlords with 10 ha. or over made up 1% of the Japanese farmers in 1936. According to the statistics in 1924, there were about 3,000 landlords who possessed more  
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than 50 ha. and 4 very large ones who owned 1,000 ha. or more. In 1939, only two Shiwa farmers or 0.2% owned more than 10 ha. and none  
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had 20 ha. This did not mean that land-holdings in the area were generally small: in Hizume Community there was a landlord who owned more than 100 ha. Second, according to the national statistics in 1932, the proportions of landlords and independent cultivators, partial ten-  
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ants, and landless tenants were 31%, 42%, and 27% respectively. The  
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parallel figures of Shiwa Community in 1929 were 47%, 36%, and 17%.

31. See Ariga, 1939.

32. Dore, 1959, pp. 29-30.

33. Takahashi, M., 1941, p. 5.

34. Ōuchi, 1952, p. 17.

35. Takahashi, op. cit., p. 9.

Generally speaking, Shiwa had a group of small farmers with a strong sense of group solidarity,<sup>36</sup> who were relatively free from exploitation by absentee landlords. In 1929, 76% of the farmers owned 1 ha. or less of paddy fields, and 87% held the same amount in dry fields.<sup>37</sup> In 1946, 99 absentee landlords owned 96 ha. or 8.5% of Shiwa farm lands, but 76% of these owned less than 1 ha. and only one possessed 10 ha. or more. In addition, particularly in the downstream area, landlords and independent farmers suffered equally with smaller farmers from scarcity of water resources. Despite the relative advantages, larger acreage did not automatically bring the handsome income it did in other parts of the Iwate Prefecture or in other parts of Japan. Shiwa farmers had a history of revolting against their feudal lords,<sup>38</sup> but these smaller farmers did not revolt against the larger farmers in the community because they didn't feel that they were exploited.

Lack of large landlords and minimal absentee landlordism in the case of Shiwa minimized the effects of the Land Reform because there were only limited land resources to be re-allocated. The following two facts will demonstrate how limited were the effects. First, small landlords in Shiwa cultivated their own land: they resisted the Reform more obstinately than absentee landlords. They brought informal pressure to bear on their tenants, a number of whom had to return their rented land to their landlord.<sup>39</sup> Second, even after the Reform, small

36. Shiwa people, people in neighbouring communities, and some prefectural government officials echoed this statement.

37. Takahashi, *op. cit.*, p. 5.

38. Sato, M., 1955, pp. 33-40.

39. Watanabe et al., 1958, p. 72.



farmers holding 1 ha. or less had to lease from 0.3 to 0.4 ha. of land as "new tenants".

Despite the limited effects of the Reform, at least two changes occurred in Shiwa. First, 52 landlords who had rented out more than 1 ha. completely disappeared between 1946 and 1948. Second, landless tenants decreased from 17% of the farming households to 2% in the same period.<sup>40</sup> The Land Reform weakened the economic basis of the landlords and of the main-households, creating more independent cultivators who began to develop an incentive to increase their economic standing.

The impact of the Land Reform upon social stratification and labour investment was minimal. During the implementation of the Land Reform programmes, two conditions remained constant: (1) the institution of irrigation; and (2) the shortage of the water resources. In accordance with the Reform, ex-tenants purchased the land they had cultivated, which were the "disadvantageous" fields.<sup>41</sup> It is unlikely that ex-tenants would become by 1949 larger land-holders than ex-resident landlords. With some modification, the social stratification immediately after the Land Reform was not radically different from the pre-Reform period. Thus, even in 1949, farmers in the lower social stratum had to invest more labour in their farm operations.

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40. Op. cit., p. 71.

41. See the last paragraph of Section I-C of this chapter.

D. Water Resources, Adoption of New Techniques and the Institution of Labour Exchange

Shortage of water prohibited the adoption of certain advanced techniques in rice-cultivation. Until 1952, Shiwa farmers had to employ the old method of cultivating nursery beds inspite of new techniques available in other parts of the Iwate Prefecture. They had to keep seedlings in beds until transplantation was completed and the tillering of rice-plants had begun. During the step of transplanting farmers were usually engaged in the irrigation rotation practice. In Canal Group No. 11, for example, farmers in the day-water group could obtain water once in every three days, and those in the night-water group, once in every six days. If Shiwa farmers had adopted the new technique of nursery beds which grew strong seedlings in a shorter period, the seedlings would mature too soon, leading to total crop failure. Because maximization of benefits from new farm techniques requires certain conditions,<sup>42</sup> farmers in Shiwa and the neighbouring communities which used water from the Takina River could not adopt new farm techniques which assumed an abundant water supply.

The amount of work that the farmers invested remained almost constant because they could not adopt certain labour saving techniques. When labour productivity did not change rapidly, coping with labour shortages in the busy seasons became crucial. Farmers were accustomed to dealing with the labour shortage, through the institution of labour exchange. Before 1945, two types of yui, the institution of labour

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42. See Chapter One, Section II-B.

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exchange, existed: (1) yui in dōzoku; and (2) yui among neighbours.

In the pre-war period, main-households and landlords asked their branch-households and/or tenants to help in their farm practices without pay. The favour was repaid later in other forms of assistance. Yoshiharu Nakamura and his colleagues studied yui in a community 3 miles north of Shiwa and found that between 1925 and 1942 the first type of yui disappeared, replaced by wage labour, but the second type persisted<sup>44</sup> through the period and even after the Land Reform. Apparently, the Land Reform was not the cause of the elimination of the yui in dōzoku. According to Nakamura et al., the development of a monetary economy in this region forced the disappearance of the yui in dōzoku. The Land Reform wiped out the basis of this type of yui, eliminating any opportunity for its revival. The second type of yui was the institution for exchanging equally valued labour among farmers with "equal" social status. The Land Reform re-organized farmers as equally independent units. As long as labour productivity and the amount of work were constant, the second type of yui persisted, because no condition arose to undermine the basis of this institution. Scarcity of water re-confirmed the above two conditions because it caused the rejection of certain new farm techniques.

#### E. Water Resources and Seasonal Emigration for Subsidiary Income

Farm output in Shiwa and the neighbouring communities was irregular, because the rice-yields varied with annual weather conditions.

43. See Chapter Two, Section I-B#6.

44. Y. Nakamura, ed., 1956, p. 226.

During the period from 1899 to 1929, paddy-fields in Shiwa increased 45 ha., and Shiwa farmers had the option of adopting certain advanced farm techniques including new varieties of rice-plants and inorganic fertilizers. Under these favourable conditions, rice-yields should have increased. In actuality, however, the yield size in 1899 and 1929 was exactly the same: weather conditions, and more significantly the amount of available water, determined the yields of any given year.

The seasonal nature of rice-cultivation and regular crop-failure strengthened the need for subsidiary income. In the case of Shiwa farmers, one of the major sources of non-farming income was the brewing of sake, Japanese liquor. Farmers had engaged in this occupation during the winter slack season since the Tokugawa Period; as early as 1661 there were 33 sake brewing manufacturers in the fief of<sup>45</sup> the Nambu Clan. Within the following two decades, there were 186<sup>46</sup> sake manufacturers, producing 632,000 litres. By 1665, Shiwa Com-<sup>47</sup>munity was known for the best quality sake in the fief.

The manufacturers and farmers maintained a symbiotic relationship because of the conditions necessary for the chemical process<sup>48</sup> of brewing. Three processes are involved in sake brewing. First, the polished rice is steamed and cooled to 37°C. Malt-fungus is sprinkled upon the cooled rice, and it is put in an insulated room for 48 hours at 37°C. Second, at a room temperature of 8°C., one part of malt is mixed with two parts of steamed rice and clear water is added. Yeast

45. Mori, 1967, p. 895.

46. Op. cit., ibid.

47. Op. cit., p. 896.

48. K. Sakaguchi, 1964.

is sprinkled on the mixture, which is stirred thoroughly and left for 70 to 100 hours at 8<sup>0</sup>c., the final product is called moto. Third, more malt, steamed rice, and clear water is added to the moto at a room temperature of 8<sup>0</sup>c. and the mixture is left for three weeks; then the sake is ready. When the level of technology was low, the manufacturers could not keep the mill at a temperature of 8<sup>0</sup>c. by artificial devices, so they brewed sake only in winter, which coincided with the slack season of the farmers. Thus, the manufacturers could depend on hiring skilled farmers who willingly worked for low wages. Those farmer-brewers in Iwate Prefecture were and still are called Nambu brewers.

The Nambu brewers were primarily from the same part of Iwate Prefecture. The proportion of brewers from both Rikuchū and the neighbouring counties was as high as 88% in 1941. In Rikuchū County, four communities that shared irrigation water from the Takina River supplied 64% of the brewers in the county, and Shiwa Community alone supplied 49%<sup>49</sup>. Indeed, Shiwa Community had the largest number of chief brewers, who maintained the fame of the Nambu brewers.<sup>50</sup>

The Nambu brewers developed an institution of their own. A chief brewer organized a working-team of nine members. He was the superintendent and had a foreman, a moto-maker, a maltster, a rice-steamer, a rice-polisher, and three assistants. Status in a team was arranged hierarchically as listed above, and as long as farmers worked

49. Watanabe, et al., 1958, p. 68.

50. Information provided by the Nambu Brewers' Association, located in a neighbouring community.

in the team the institutionalized social relations among the statuses governed their behaviour. The hierarchical relations in the team had nothing to do with social relations in their natal communities. The brewers developed different social rules which affected people only during the seasonal employment.

The major determinant for legitimatizing authority and allocating resources in the working-team was the amount of experience or "seniority" of an individual. As a person acquired seniority he had more access to various resources such as finances and prestige. The status of a rice-polisher or a rice-steamer usually required a person to work for three winters as an assistant in any team. Membership in a team was flexible. Persons in the lower status positions changed their teams almost every year. A rice-polisher or a rice-steamer became a malster after three winters. A moto-maker needed at least three years experience as a maltster before he officially reached this position. Five winters later, the moto-maker became a foreman, the candidate for a chief brewer. Thus, any chief brewer had 15 or more years of experience, and was familiar with every step in the operation of brewing.

The chief brewers applied sanction to the members by raising or lowering wages. It was the chief brewer who made a contract with a manufacturer to produce a certain amount of sake and who was paid the wages by the manufacturer. Team-members were paid their wages by the chief brewer after brewing was completed. A rough wage-scale existed for each status and the chief brewer manipulated the flexible portion

of the wage. With the legitimate authority of seniority and control of the financial resources, the chief brewer's authority was guaranteed and he led his team as he wished.

In spite of cheap wages, Shiwa farmers and other Nambu brewers continued in the brewing occupation for several reasons: first, brewing required a body of highly sophisticated knowledge and specialized skills so that it was non-competitive on labour markets. Second, the economic demand for sake in the markets did not disappear even in periods of depression during the great depression or the Second World War. Third, the strong seasonal nature of rice-cultivation and the irregularity of rice-yields due to water shortages forced farmers into seasonal emigration for subsidiary incomes.

### III. Re-Organization of the Institution of Irrigation in 1952

During the 350 years in which the institution of irrigation operated as described earlier, three conditions changed. First, the bed of the Takina River gradually filled with silt, and it became difficult to introduce water into the canals. Because of the ban on new canal construction, two old canals were outdated and abandoned by the end of the Tokugawa Period. Second, inspite of the ban, additional paddy fields were slowly created. During the period from 1674 to 1952, at least 330 51 ha. of paddy fields were added to the land irrigated by the Takina River. Third, farmers discovered by chance the benefit of interim drainage and

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51. Watanabe et al., op. cit., p. 111.

adopted this practice which required large quantities of water by the end of the nineteenth century. Thus a subsidiary source of water became critical for farming in this area. This section deals with the farmers' attempts to cure the water shortage problem, and with the reorganization of the institution of irrigation arising out of the construction of the Sannōkai Dam in 1952.

A. Farmers' Attempts to Alleviate the Scarcity of Water Resources

From the 1920's to the 1940's, farmers in this area tried to solve the water resource problem by two means: (1) adopting technically improved equipment and (2) persuading privileged farmers to consent to the construction of a new dam.

1. Adoption of Technically Improved Equipment

To obtain more water, some farmers installed pumps, others dug wells, and still others constructed reservoirs. In the 1920's wealthy farmers in the downstream area began to use power-driven pumps. Before 1948 there were 2 electric pumps and 76 gasoline pumps among the users of the water from the Takina River. These pumps were not effective because: (1) their horse-power was too small to obtain enough water; and (2) the under-ground currents were quickly drained and dried up. Those who could not afford expensive pumps dug wells, but the results were poor. In the 1940's, the farmers used the 56 wells only for a couple of hours per day, because the power-driven pumps had left little



water. In the 1920's and 1930's, some canal groups in Shiwa Community jointly constructed reservoirs at their own expense, but the achievement was by no means remarkable. All attempts short of a dam failed to cure the chronic problem.

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## 2. Farmers' Movement to Construct a Dam

As early as the 1920's some farmers wanted to construct a dam in the upstream area of the Takina River. Those who wished to build the dam and tried to persuade their fellow farmers will be called "innovators" in this sub-section. As required by the Land Reclamation Co-Operative Law, the innovators first attempted to organize a legally responsible body which had to include two-thirds of the land-owners in the area. If the group could be organized, they could apply for ratification of their project by the Minister of Agriculture and Forestry. The farmers could not legally re-construct canals without such an institution in spite of the fact they could get no financial assistance from the central government for their projects.

Innovators were mostly "downstream" landlords. In 1921, the largest landlord in Hizume Community, 3 miles east of Shiwa, tried to organize 41 smaller landlords in 6 communities with the hope of organizing the necessary legal institution. His attempt failed because the acuteness of the problem varied greatly from community to community and because the six communities belonged to two large water-systems,

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52. The sources of information on this subject are: Satō, 1955 and Watanabe et al., op. cit.

the Takina River Water-System and the Shizukuishi River Water-System. Even if they had organized, the farmers concerned did not have enough financial resources to undertake such a costly joint-project.

The first attempt did not succeed, but the idea was not forgotten. The 1920's were particularly dry, and big fights at the junction occurred twice in 1924. The innovators still committed to their idea made a second attempt. Fortunately, the central government passed a law in 1923 to subsidize 50% of the total cost of large scale land reclamation projects. Wealthy farmers in the downstream area in Shiwa again took the initiative to construct a pond in Shiwa Community. Government engineers answered their request to inspect the situation and concluded that the scale of the proposed project was too small. In the third attempt, Shiwa innovators tried to persuade the landlords in the six neighbouring communities which suffered from a water scarcity. But conflicting local interests blocked the movement.

When the innovators realized that they could not sway the people they tried to get financial aid by political manipulation. The innovators in Shiwa persuaded the mayor of their community, a man from the downstream area, to run for office and elected him as a member of the prefectural parliament in 1927. They urged him to get to know the local M.P., and used the M.P. to help get government assistance. At the same time, they organized a new land reclamation co-operative aimed at constructing a pool to irrigate "newly opened paddy-fields". This was the innovators' effort to camouflage their real purpose in the hopes

that the politicians could be more easily persuaded to spend government money. Finally in 1932, the innovators convinced the government to spend 2.5 million yen for the proposed pool, or more accurately, the dam. With the decision the canal groups in the upstream area suddenly began to oppose the proposal for they realized the dam would eliminate their advantageous water-rights. Sannōkai Hamlet, which was to be flooded by the new dam, joined the opposition campaign. In the end, the money was spent to complete a project in another prefecture.

Another incidence occurred in 1940 to encourage the innovators' effort. A severe drought hit the area and several thousand farmers swarmed around the junction. In 1941 the innovators organized themselves to initiate another campaign. In the same year the Imperial Diet passed the Farm-Land Development Law, which was more generous in assisting farmers. The Shiwa innovators did not ignore the opportunity and persuaded landlords in two neighbouring communities to establish jointly an "irrigation co-operative". The prefectural premier had the authority to ratify an irrigation co-operative if more than five farmers jointly applied. The mayors of the three communities and 12 representatives, all of them innovators in their community, together decided to establish the irrigation co-operative. They submitted an application together with the blue-print of the project to the Iwate Prefecture. Thus, the innovators avoided the necessity of obtaining the agreement of two-thirds of the land owners in the area.

Community reaction was varied. When the premier sent back the proposal to each community council, Shiwa Community Council ratified it unanimously. Another community council accepted it but only conditionally, while the third one voted against it. The premier ratified the original plan without any modification inspite of the opposition in the two communities and ordered the project to begin in 1944. In addition he sent prefectural officers to persuade stubborn opponents. Thus the innovators successfully organized the legally responsible body and obtained a subsidy for 75% of the total cost: 50% from the central government and 25% from the prefectural government.

The remaining problem concerned the allocation of the water to each household. In this area, there were five water-systems. The Irrigation Co-Operative estimated the amount of water each institution would consume and computed ratios, allocating local shares accordingly. In each institution, the people concerned were to develop their own cost allocation method, based on the household. In some institutions, farmers determined the cost by the size of their acreage. In other institutions, including the people in the Takina River Water-System, farmers adopted a more complicated procedure. They set up a committee to develop rules for grading paddy fields into several classes and to decide the rates for each class. The committee members visited water-chiefs to explain the rules and then requested the latter to implement the plan. The farmers had no opportunity to influence the grading of their fields or to determine the amount they had to pay as the decisions were made by the water-chiefs.

Twenty-one households of the Sannōkai Hamlet lost their lands and houses because of the project. The government cultivated wasted lands on the southern edge of Shiwa for the victims and built new houses for each of them. In addition, individual households were to receive about half a million yen in cash, equivalent to 5,400 koku of rice on the market in 1944. In actuality, only 14 households settled down in the offered land, the other 7 left the community. The opposition movement by the Sannōkai people quickly subsided when they realized the conditions of compensation. The new dam was to be named after their hamlet: the Sannōkai Dam.

#### B. Change in the Institution of Irrigation

In 1944, the central government began two projects in the Shiwa area, the construction of the dam in the Sannōkai Hamlet and the creation of 603 ha. of new paddy-fields in the area that was previously  
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 wasted land. This sub-section, explores the changes brought about in the institution of irrigation by the completion of the dam.

##### 1. Completion of the Sannōkai Dam

The dam itself was completed in 1952, while the new canals were completed two years later. The total project cost 767 million yen and 1.03 million man-days. For several reasons the construction of the dam took eleven years. First, the government institution which had been

53. Nōsangyoson Bunka Kyōkai, ed., 1969, p. 10.

responsible in 1944 for building the dam was abolished during the radical re-organization of the administrative system immediately after the Second World War. The Ministry of Agriculture and Forestry had to accept the pertinent administrative responsibilities from 1946. Second, in the period of construction, even the government found it difficult to obtain construction materials. Third, construction techniques were still primitive; the builders were largely dependent upon manual labour. Finally, during this construction period, four additional land reclamation co-operatives in the vicinity successively asked to join the project. Each time the project had to be re-designed. In the process of expansion, the Sannōkai Irrigation Co-Operative re-organized itself as the Sannōkai Land Improvement Office, and the new dam was designed to irrigate 3,260 ha. instead of the 1,590 ha. projected in the original plan.

The Sannōkai Dam could hold 9.5 million cubic metres of water, enough to irrigate all the paddy-fields in the area in 1954. The water went through the water-intake gate and flowed into the Takina River. At a point 3 k.m. farther downstream, a portion of water was taken from the river into the water-dividing tank which divided the resources into two main canals: the Northern Main Canal with 7 branch canals and the Southern Main Canal with 16 branch canals. At a point 4 k.m. farther downstream the Central Main Canal with 5 branch canals started, taking water from the Takina River. To sum up, there were three main canals, with a total of twenty-eight branch canals. A number of sub-canals went off each branch canal, to introduce water into

each paddy-field. Except for canal No. 1, old water-intakes were abandoned, and replaced by new ones. The Sannōkai Land Improvement Office was responsible for the administration and maintenance of the three main canals and the 28 branch canals; the sub-canals were the responsibility of the farmers concerned.

## 2. Change in the Institution of Irrigation

The completion of the dam considerably re-organized the traditional groups around the water-ways: first, the groups belonged to different main canals; and second, new branch canals also re-organized old groups. For example all of the eight most privileged canal groups in the main channel group of the Takina River water-system were split up. The eight groups which had belonged to one channel group were forced to take water from the three main canals. Old canal groups No. 3, 6, 7 and 9 and a portion of group No. 5 were to take water from the Northern Main Canal; old canal group No. 1 was to take water from the Takina River; and old canal groups No. 4 and 8 and a portion of group No. 5, from the Southern Main Canal. In addition, the old eight groups were assigned to five branch canals, causing the groups themselves to be reorganized. In essence, the traditional privileges of these canal groups in terms of water-rights became completely meaningless in the new institution.

When dam irrigation of the paddy fields began in 1952, there was sufficient water for everyone. Farmers in the upstream areas, as well as in the downstream areas enjoyed equal benefits. The farmers in

this region began to make new paddies after 1954 and an acute shortage of water resources developed by the early 1960's. Until that time, groups loosely organized in terms of geographical areas had less significance than in the pre-war period. Indeed, the old and rigorously defined upstream group was completely dissolved.

Under the new conditions, the old pattern of water rights in terms of the distance from the junction persisted with considerable modification. In principle, any farmer could introduce as much water as he wanted into his fields anytime he liked. In practice, distance from the water-dividing tank -- not from the junction -- determined the amount of water resources farmers in downstream areas could obtain, although the amount was significantly greater than in the pre-dam days. As early as the 1950's, in dry years farmers in the downstream areas had to organize themselves to adopt a new rotation practice under newly developed rules.

Water-chiefs were still necessary. Under the new conditions, some co-operative works such as water-receiving and water-watching disappeared completely, but farmers were responsible for maintaining the sub-canals. Water-chiefs had to organize people for the co-operative works. In downstream areas, when the farmers had to adopt the rotation practice, representatives who were water-chiefs were selected from the groups concerned. The nature of water-chiefs changed remarkably. One of the sources of their authority had been their knowledge and skill in water allocation. Under the new conditions, these had no significance at all. Disputes within and between groups over water-rights were almost



completely eliminated so that water-chiefs were freed from their former social and political responsibilities. The new water-chiefs were a kind of steering committee on sub-canal maintenance affairs. In Shiwa Community, farmers filled the water-chief positions by turns, inheritance of the position was completely eliminated.

Rules of applying sanction changed, too. There was no "stealing" of water any longer, for there was practically no limit to the use of water resources. If some farmers in the upstream areas used water extravagantly, farmers in downstream areas would receive less water. Such extravagant users were punished by informal gossiping -- but no institutionalized procedures for public apology existed after 1952. Consequently, revenge by setting fire to a house to avenge an accuser disappeared also. Local farmers agreed that they became more frank and relaxed after the completion of the dam, because they no longer saw others as potential water-stealers.

#### IV. Summary

In rice-cultivation, two variables are critical: (1) holding of farm lands; and (2) irrigation water. Prior to the Land Reform, the Shiwa farmers had few problems in terms of farm lands although their acreage was small. They were relatively free from exploitation by either gigantic landlords or absentee landlords, and the proportion of landless tenants was low compared with other parts of Japan. Shiwa farmers, however, had a history of suffering from a scarcity of irriga-

tion-water. They worked harder than farmers in other parts of the Iwate Prefecture and received fewer rewards. The institution of irrigation was established as early as the sixteenth century and rigidly governed the farmers' behaviour. Under this institution, old paddy fields located close to water-intakes and the upstream area had more advantageous water-rights than the rest. The institution was run by water-chiefs who were resident landlords and/or househeads of main-households. They accepted social and political responsibilities and exercised authority over others. They had a monopoly on the specialized knowledge and skills in water-allocation and on the position itself, the water-chief position passed by inheritance from one generation to the next.

Scarcity of irrigation-water and weather conditions brought about irregular rice-yields or regular crop-failures. Rice-cultivation is a set of production activities with a strongly seasonal character, particularly in the northern part of Japan. Under these conditions, Shiwa farmers had to strive for a subsidiary income during the winter slack season. Since the seventeenth century they emigrated to other places and brewed sake; their wages were low despite their skilled labour, for both manufacturers and farmers were aware that brewing was the latter's subsidiary income. Shiwa farmers stayed in this occupation for centuries hence this source of income was stable.

The Land Reform did not change the social structure of Shiwa Community drastically because there were limited land resources to be re-allocated. The programmes wiped out landless tenants and weakened the economic basis of landlords and dōzokus. But, the Land Reform did

not affect the institution of irrigation. Although ownership of certain paddy-fields was transferred from landlords to tenants, the ex-landlords continued to cultivate advantageous fields and the ex-tenants to cultivate disadvantageous ones. In spite of their weakened economic basis, specialized knowledge and skills were still monopolized by the old wealthy farmers, who continued to enjoy social esteem. As long as the institution survived, water-chiefs could influence new land-owners.

The change began with the completion of the Sannōkai Dam in 1952, and the main canals in 1954. The innovators who struggled for the realization of this project were the ones who would obtain the maximum benefits out of the dam -- landlords in the downstream area. They manipulated politicians, tricked their own people, and finally convinced the government to give aid to their project. Under the new institution of irrigation, radical changes occurred: the sources of legitimatizing the authority held by water-chiefs, the rules of allocating water resources, and the rules for applying sanction were all modified or abolished. The structural change of the institution of irrigation, which had prevented structural changes of other institutions, encouraged rapid social change in Shiwa Community.

This chapter, discussed two points: (1) the functioning of economic institutions in the pre-war period under a peculiar condition of water shortage; and (2) changes in some of the institutions. The following chapter deals with the impact which re-organization of the institution of irrigation had upon other social and economic institutions and upon the farmers' production activities.

## CHAPTER FOUR

## CHANGE IN THE LABOUR FORCE AND PRODUCTIVE TECHNOLOGY

## IN SHIWA IN THE 1950's AND 1960's

In Shiwa Community, the Land Reform and the completion of the Sannōkai Dam re-allocated economic resources by 1954 as substantiated in Chapter Three. Chapter Two noted that the rapid economic growth of the society as a whole began in 1955, and eventually increased the total amount of resources available to people in the farming communities. Shiwa farmers came to have greater access to economic resources in the 1950's than in the pre-war days. Pre-war farmers valued such virtues as frugality, piety, resignation, devotion to duty, and hard-work in farm practices; they had to work hard in conformity to the above values to produce any possible surplus during depressed economic conditions. Despite the undermining of piety due to the frustration of defeat in the Second World War and the modification of the value of frugality due to increased access to resources, the other values have persisted until 1968, the operational "present". Chapter One assumes that man has the propensity to increase his personal satisfaction and that he has "unsatisfied desires" because the above propensity is modified by his limited access to resources, cultural values and the rules of social behaviour in the social system. This chapter examines what will happen to the social structure if there is a change in two of the above three modifiers.

If the amount of economic resources available to rural communities increases, the number of alternatives rural people can choose will increase. As economic growth in the larger nation is the assumed prior condition, the alternatives will first increase in the industrial centres. To take advantage of the additional alternatives, the majority of rural people must emigrate and only a small number will commute from their natal households. Consequently, the farming population will decrease. The number of farming households, however, will not decrease as rapidly as the farming population, because farmers value maintaining and passing on the institution of the household from one generation to another. The household is the unit of production activities or a working-team, as it was in the pre-war days. The rules of social behaviour in this institution basically contribute to its maintenance and success. By the old rules of resource allocation, farmers emphasized primogeniture and expected their second and younger sons as well as daughters<sup>1</sup> to leave the natal households. It is these people, traditionally expected to leave the household who become the emigrants. The emigration of second and younger sons from the working-teams causes the teams to decrease in size.

The value of hard-work in farming may have persisted inspite of the defeat in the last war, because agriculture was the only persistent production activity in the midst of destruction immediately after the war. The whole nation heavily depended upon the farmers for the food supply<sup>2</sup> and for taxes, the nation's financial resources. Farmers

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1. See Chapter Two, Section I-B-1.

2. Ouchi, 1968.

could obtain social esteem as well as economic rewards through working hard on their farms. The re-allocation of land resources by the Land Reform strengthened the incentive of the independent farmers to increase their farm output.<sup>3</sup> Because the amount of farm land is constant, a decrease in farming population by emigration will increase the amount of work per capita in the working team. In pre-war days, farmers so valued hard-work that it is assumed their working-time per day could not be increased. To satisfy the farmers' incentive to increase farm output under these conditions, they have to increase their labour productivity by adopting innovations, including farm machines.

As emigration increases and farmers mechanize their production activities, there is an impact on the social institutions. For example, adoption of new farm techniques requires a new body of knowledge and skills. From the discussion of technology in Chapter One, new techniques include the re-organization of scientific knowledge. If one has more formal education in natural sciences he will find it easier to adopt new techniques. Hence resources such as higher formal education and access to sources of latest information become significant in the social system. These resources may be unequally distributed in terms of age. If this is the case, the old rule of resource allocation according to seniority ought to be modified. Thus, the above two phenomena can modify the rules of social behaviour, that is, the social structure.

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3. Dore, 1959.

This chapter deals with the following three subjects: (1) the increase in access to resources and the decline of the farming population; (2) the adoption of new farm techniques and (3) the impact of these two sets of phenomena on social and economic institutions in Shiwa Community particularly in the 1950's and 1960's.

#### I. Recent Change in Resources and the Labour Force in Shiwa

This section examines two subjects: (1) the change in the resources which became available to Shiwa people; and (2) the change in the labour force in the community.

##### A. Change in Resources

A greater amount of resources, mostly economic, became available to the Shiwa people with the change in conditions in the larger nation and the change in conditions in the community. In this sub-section, these changes will be briefly examined.

##### 1. Increase in Gross Farm Income

Gross farm income in Shiwa increased by two factors: (1) the central government's price control policy and (2) the completion of the Sannōkai Dam. In 1942, the central government fixed the annual price of rice with a view to keeping it as low as possible for consumers and guaranteeing a fairly high level of income for farmers. Until 1952, rice prices were kept at a relatively low level compared to the price of industrial products, and the government relied on force to ensure

deliveries. In 1953 the government raised the price to a higher level and in 1955 the system of imposed delivery quota was abandoned. Instead, the government offered its set price for whatever the farmers offered to deliver. At the same time, the law forbidding the sale of rice to anyone except government agents remained in force.<sup>4</sup> Therefore, the more rice farmers produced, the larger the size of their gross farm income.

Some favourable conditions brought about by the Sannōkai Dam increased rice-yields, and consequently farm income. First, because of the dam, traditional water-rights became meaningless and all farmers were entitled to change location of their water-intakes. During the five year period from 1956 to 1960, Shiwa farmers undertook projects to re-arrange the irregular shape of 79% of their paddy-fields, to put in below-surface drainage pipes, and to widen farm roads.<sup>5</sup> When the project was over, every one of the re-shaped paddy fields had at least one water-intake. Adequate irrigation increased the rice-yield. Second, the increase in the temperature of the irrigation-water while it was backed up behind the dam was a favourable factor for the growth of the rice-plants. Third, the existence of the dam allowed farmers to complete the transplanting step at the best time of year. Fourth, the farmers could adopt advanced farm techniques as will be examined later.<sup>6</sup> All these factors contributed to a raise in the rice-yields per 10 ares from 2.7 koku<sup>7</sup> in 1952 to 3.3 koku<sup>8</sup> in 1961. In addition, the dam made

4. Dore, 1959, pp. 229-231.

5. Watanabe et al., 1964.

6. See Section II-A and B of this chapter.

7. 1 koku is 4.96 bushels.

8. Shiwa Agricultural Co-Operative, ed., 1963, p. 42.



it possible to use waste lands and dry fields as paddy-fields. From 1952 to 1961, the acreage of paddy-fields increased from 729 ha. to 1,007<sup>9</sup> ha., and the total rice yield from 19,300 koku to 33,200 koku.

The increase in gross farm income in rice-growing communities was reflected in the increase in sales of rice and in the increase in farmers' savings. In 1947, farmers organized their co-operatives under<sup>10</sup> the direction of the central government. The government appointed agricultural co-operatives as the agent to handle the rice deliveries, and asked them to store the output in local storehouses. The government paid the farmers the fixed price through the co-operatives, and paid the costs incurred by the co-operatives in handling and storage. Therefore, all rice-growing farmers became members of the co-operative in their area. Co-operatives established savings accounts for each member, who was to visit the local co-operative to get his money when necessary. Hence, the amount of rice sold to the government and the amount of saving at co-operatives are a plausible index of the increase in gross farm income.

In Shiwa, the total amount of rice sales to the government increased from 100 million yen in 1952 to 200 million yen by 1957, to 300 million by 1961, and to 670 million by 1968. The amount of farmers' saving at the local co-operative increased from 60 million yen in 1952 to 120 million yen by 1957, to 180 million by 1960, and to 670 million

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9. Op. cit., ibid.

10. See Chapter Two, Section II-B-2.

by 1968.<sup>11</sup> The above figures are not in real terms, but one can at least see the increasing trend.

## 2. Greater Access to Commercialized Materials

The rapid economic growth in the larger nation increased output, including farm materials such as fertilizers, pesticides, feed, farm machines, and other productive materials. Section II of this chapter will provide more information on each of these items. The average wholesale-price index of production materials in Japan was relatively stable: taking the index in 1965 as 100, the index in 1960 was 99.3,<sup>12</sup> while that of 1967 was 105.6. Most Shiwa farmers purchased fertilizers, pesticides, and feed through the local co-operative, while they bought farm machines from local merchants. Table 4-1 summarizes the approximate purchases of farm materials in Shiwa, which increased from 28.7 million yen in 1952 to 81.6 million by 1960, and to 141.2 million by 1968. Considering the relatively stable wholesale-price index, the increasing access to commercialized materials seems evident.

Farmers also had greater access to consumer goods such as clothing, T.V., sewing-machines, refrigerators and, recently, used cars. The average wholesale-price index of consumer goods varied more than production materials: taking the index of 1965 as 100, the index in

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11. Nōsangyōson Bunka Kyōkai, ed., 1969, p. 166. The savings figure for 1968 includes income from various sources other than sales of rice. See Chapter Five.

12. Bureau of Statistics, ed., 1969, p. 142.

Table 4-1 Increasing Access to Commercialized Commodities in Shiwa  
(million yen)

	1952 <sup>1</sup>	1960 <sup>2</sup>	1968 <sup>3</sup>
Fertilizers	14.3	36.3	50.0
Pesticides	0.6	5.4	16.0
Feed-Stuff	0.5	8.1	8.7 <sup>5</sup>
Farm Machines <sup>4</sup>	1.8	21.8	30.0 <sup>5</sup>
Other Production Materials	1.5	10.0	36.0
Consumers' Goods <sup>6</sup>	0.7	7.2	65.5

- Notes: 1. Shiwa Agricultural Co-Operative, ed., 1962, p. 82.  
 2. Op. cit., ibid.  
 3. Nōsangyoson Bunka Kyōkai, ed., 1969, p. 170.  
 4. Estimate made by the Shiwa Agricultural Co-Operative.  
 5. This figure is 1966 as present.  
 6. Sales amount at the co-operative store -- farmers' purchase from other local merchants is not included.

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1960 was 92.5 while that of 1967 was 104.1. More than 70% of Shiwa farmers purchased consumers' goods from local merchants rather than from the local co-operative store.<sup>14</sup> In spite of the low percentage of customers, the co-operative store increased its sales of consumer goods from 0.7 million yen in 1952 to 7.2 million by 1960, and to 65.5 million by 1968. Despite the great variation in the wholesale-price indices of the 1960's, Shiwa farmers' increasing access to consumers' goods also seems evident.

### 3. Increase in Non-Farm Income

A peasant economy lacks institutions organized solely for production activities, implying that there is no sharp distinction between

13. Op. cit., ibid.

14. Information provided by the Shiwa Agricultural Co-Operative.

farm expenditure and domestic expenditure. Farmers thought of these two categories of expenditure as the "household expenditure". When gross farm income increased, household expenditures increased in two spheres: (1) farm materials and (2) consumer goods. With increased investment, the production cost climbed, but rice-prices were fixed by the government, thus diminishing the farmers' net income. The proportion of net to gross farm income decreased from 63% in 1960 to 57%<sup>15</sup> by 1966. If this trend continued and expenditure of farming households either remained constant or increased, farm income would eventually diminish. Table 4-2 reveals changes in the proportion of farm income in the household economy. In general, farm income occupied more than 80% of household income until the end of the last war. In 1955, the proportion dropped to 71%, and it further decreased to 47% by 1965. On the other hand, household expenditure began to rise exceeding farm income, particularly after 1950. To balance the shortage, non-farm income began to rise from 1955 when the rapid economic growth in the nation<sup>16</sup> began and the amount of non-farm employment increased dramatically. Eventually, the proportion of non-farm income became extremely important; in 1960, the proportion in household income was 47%, it climbed as high as 53% by 1965. In sum, the ratio between farm income and household expenditure made a change unfavourable to farm income: during the post-war economic growth, the ratio of farm income dropped from 82% in 1955 to 48% by 1965.

15. Ienohikari Kyōkai, ed., 1968 (B), p. 139.

16. See Chapter Two, Section II-A-2.

Table 4-2 Change in the Proportion of Farm Income in Farming Household Economy 1925-1965 (Yen)

	Household Income	Farm Income	The Proportion of Farm Income in the Household Income (%)	Non-Farm Income	The Proportion of Non-Farm Income Household Income (%)	Household Expenditure	The Ratio Between Farm Income and Household Expenditure
1925	1,432.79	1,162.35	81.1	270.44	18.9	1,169.61	99.9
1930	810.35	590.10	72.5	220.25	27.5	749.03	78.9
1935	864.70	694.95	80.2	169.75	19.8	639.00	108.1
1940	1,813.68	1,497.74	82.8	315.94	17.2	1,280.24	116.2
1945	13,762	11,869	86.2	1,893	13.8	6,595	208.6
1950	207,235	147,355	71.4	59,880	28.6	174,145	83.2
1955	358,098	255,584	71.5	102,514	28.5	312,757	82.2
1960	411,300	219,300	54.4	192,000	46.6	368,400	59.3
1965	760,700	356,300	46.8	404,400	53.1	652,500	47.5

Source: 1920-1955 Kayō, 1958, p. 438.

1960 Tohata, ed., 1968, pp. 348-349.

1965 Norin Tokei Kyokai, ed., 1967 (B), p. 16.

Original Sources are: Ministry of Agriculture and Forestry, Nōka Keizai Chōsa.

The Shiwa Agricultural Co-Operative did not have detailed members' figures on farm income, however a rough inference can be made from the preceding discussion. Gross farm income in Shiwa increased as did household expenditures both of production and consumption.<sup>17</sup>

Shiwa farmers' net profit must have decreased as they depended heavily on commercialized materials like other farmers in Japan. Hence, their household expenditure exceeded their farm income. This, however, had been a regular pattern for Shiwa farmers in past centuries, and they depended upon their non-farm income.<sup>18</sup> Shiwa farmers still find non-farm jobs important, inspite of the dam and its benefits, and they will not easily give up seasonal emigration to the breweries.

#### B. Change in the Labour Force

An increase in non-farm income has a number of implications: for example, (1) increase in non-farm jobs; (2) decrease in the farming population; (3) increase in part-time farming households and (4) wage inflation among part-time farm labourers.<sup>19</sup> This sub-section examines the increase in non-farm jobs. Chapter Two treated the increase in employment in the secondary and tertiary industries.<sup>20</sup> In short, the total working population increased from 36 million in 1950 to 48 million by 1965.<sup>21</sup> During the same period, the proportion of farming

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17. See Table 4-1.

18. See Chapter Three, Section II-E.

19. In Shiwa, full-time farm labourers were fewer than 5 in 1968 so that this category will be omitted.

20. See Chapter Two, Section II-A-1 and 2.

21. Ministry of Labour, 1968, p. 39.

population in the total working population dropped from 45% to 23%. The situation in Shiwa is examined to determine whether it conformed to the general trend in the nation.

#### 1. Increase in Emigrants

The population of Shiwa Community in the long run was stationary. From 1930 to 1965, the total number of households increased from 863 to 1,018, and the total population decreased from 5,393 to 5,205.<sup>22</sup> Particularly before 1945, there was only a negligible population change. During the same period, farming households increased from 759 units to 802 units. The farming population slightly decreased from 2,301 in 1939 to 2,242 in 1965.<sup>23</sup>

In the short run, the local population changed conspicuously because of two factors. First, immediately after the Second World War, dismissed soldiers, repatriated people from overseas, and the unemployed in cities returned to the community, resulting in a temporary population increase. In 1947, the total population reached a peak of 6,783 and the farming population was up to 2,810.<sup>24</sup> When the rapid economic growth in the nation as a whole began, those temporary settlers left the community. Second, the rapid expansion of the labour markets absorbed 20% of the farming population in Shiwa between 1947 and 1966. During the period from 1947 to 1966, members of farming households decreased from 5,370 to 4,443.<sup>25</sup>

22. Iwate Prefecture, ed., 1948, p. 10 and Census Data of 1965.

23. Op. cit., ibid.

24. Op. cit., ibid.

25. Iwate Prefecture, 1948, p. 35 and Shiwa Agricultural Co-operative, ed., 1967, p. 4.

Those persons who are socially and economically discriminated against by the rules of social behaviour in households emigrate first to industrial centres. Resource allocation in households was determined by distance from the ancestral line.<sup>26</sup> By this, eldest sons usually inherited the household property. The second and younger sons had five alternatives: (1) to establish a branch household; (2) to become an adopted-son in another household; (3) to take a local job; (4) to remain in their native household with little possibility<sup>27</sup> of becoming independent and (5) to emigrate to industrial centres. The Land Reform diminished the acreage of larger farmers, making it economically difficult to establish a new household. The second alternative was not popular as only those households without sons needed adopted-sons. Local jobs had been always limited; and immediately after the war, labour markets were particularly small. Thus, the discriminated youths had to remain at home with unsatisfied desires. As soon as other alternatives became apparent, these youths chose new opportunities and left their community, causing the farming population to drop.

Although direct data on Shiwa, to support the preceding discussion, does not exist, the national trend does provide a set of supporting data. In a survey in 1939-1940, which covered 6,900 farming households in four prefectures including Iwate, the proportion of eldest sons among emigrants reached 20%. The researchers also found that the

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26. See Chapter Two, Section I-B-1.

27. Op. cit., ibid. and discussion of dōzoku in Section I-B-2.



larger the acreage or the household property, the smaller the proportion of emigrated eldest sons. They divided the samples into three categories, "upper", "middle", and "lower" in terms of land-holding. The proportion of emigrated eldest sons in each category was 10%, 17% and 31% respectively.

<sup>28</sup> In 1950, another survey covering 2,094 persons in 14 prefectures including Iwate found that a strong emphasis on primogeniture persisted in post-war rural Japan. The researchers categorized the respondents by seniority in the household, as "eldest son", "second son", "third son", and "fourth or younger sons". The proportions of emigrants in each category at the time of the survey was 10%, 37%, 51% and 53% respectively. In the same survey, the researchers found that the proportion of those who inherited the household occupation in each category was 87%, 23%, 10%, and 6% respectively.

<sup>29</sup> Between 1950 and 1952, there were 400,000 young new farmers (15 to 19 years old). By 1959, the number decreased to 170,000. In 1955, the proportion of emigrated young heirs (15 to 19 years old) was 26%. From the above, the researchers inferred that the majority of emigrants around 1955 were second or younger sons and daughters. By 1959, the average proportion of emigrated young heirs climbed to 52%. In the districts located close to the highly industrialized areas between Tōkyō and Ōsaka, the proportion of young heirs rose to 66% or over, while the more remote districts like Kyūshū Island or Tōhoku District had fewer emigrated heirs, i.e. less than 35%.

<sup>30</sup> According to another

28. S. Nojiri, 1942, p. 490.

29. Japanese Ethnological Association, ed., 1957, Vol. III, p. 1154.

30. Namiki, 1960, pp. 7-13.

nation-wide survey in 1965, 84% of the farming households in the mountain communities, 79% in the plains communities, and 66% in the suburban communities left their inheritance to the eldest son.<sup>31</sup> From the above, we can hypothesize that: first, by the rules of resource allocation, eldest sons tend to be the heirs and to remain in their native communities. Second, the larger the household property, the greater the number of heirs who remain on their farms to inherit the household occupation. Third, the distance between a given community and the industrial centres will determine the degree of persistence of the above two tendencies. The above implies that more heirs will remain in Shiwa which is remote from industrial centres. When households have larger acreages, the remaining heirs will farm. And the majority of emigrants would be daughters and the second and younger sons.

With the increase in emigration came a shrinking of the size of working-teams and of households. Available statistics on pre-war Shiwa did not distinguish farming households from non-farming households. The average size of households in Shiwa Community, including both farming and non-farming households, steadily diminished from 6.9 persons in 1921 to 6.4 in 1930, to 6.3 in 1940, and to 6.1 in 1945. Statistics on farming households alone are available from 1950. In that year, the average size of a farming household in Shiwa was 6.7 persons. The average size decreased to 6.5 in 1955, to 6.1 in 1960, and

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31. Fukutake, 1968, p. 493.

to 5.4 in 1966.<sup>32</sup> The decrease in the size of the working-team is particularly evident after 1955.

## 2. Increase in Part-Time Farming Households

With the rapid economic growth of the larger nation, part-time farming households increased. Part-time households are defined as households in which the househeads or the heirs engage in non-farm jobs for more than 60 days each year.<sup>33</sup> According to Table 4-3, full-time farming households decreased from 62% of the total households to 22% of the total households in the decade between 1950 and 1960. When Shiwa Agricultural Co-Operative conducted a survey in 1966, out of 732 respondents only 70 or 9% replied that they were solely engaged in farming.

Table 4-3 Increase in Part-Time Farming Households in Shiwa

	<u>Full-Time Farming Households</u>		<u>Part-Time Farming Households</u>		<u>Total</u>
	Real Number	%	Real Number	%	
1950 <sup>1</sup>	498	61.8	308	38.2	806
1955 <sup>2</sup>	243	30.1	565	69.9	808
1960 <sup>3</sup>	185	22.2	657	77.8	832

Sources: 1. Census Data.

2. Information provided by the Shiwa Town Office.

3. Census Data.

Quoted from the Shiwa Agricultural Co-Operative ed., 1963, p. 38.

32. I used the following sources to compute the size of households: (a) Takahashi, M., 1941; (b) documents provided by elementary schools; (c) information collected by the Shiwa Village Office; (d) census data; (e) information provided by the Shiwa Town Office; and (f) Shiwa Agricultural Co-Operative, ed., 1967.

33. See Chapter Two, Section II-A-2.

The category of "full-time farming households" in the census data was not strictly applied in the case of Shiwa. The concept of "full-time" is the reciprocal of "part-time". If we strictly apply the latter term, in 1939 when non-farm employments were still limited, out of 758 households 447 or 63% were part-time farming households.<sup>34</sup> Watanabé and his colleagues claimed that 67% of the households in 1949 were part-time farming households.<sup>35</sup> The high percentage is attributed to the popularity of brewery work among the Shiwa farmers. At the time of the 1965 census, some farmers might not have considered brewing a part-time job important enough to mention. If this is the case, the increase in part-time farming households in the 1950's and 1960's must be due to an increase in the availability of other jobs.

A comparison of non-farm jobs in 1939 and 1966 provides a base for the following discussion. In 1939, the Shiwa Village Office conducted a survey of "seasonal emigrants" defined as "those who emigrate for more than 30 days a year, but will surely come back as soon as the contracts are over".<sup>36</sup> The Shiwa Agricultural Co-Operative conducted a second survey in 1966, obtaining 802 responses out of the 824 households which included at least one "farmer".<sup>37</sup> In the 1966 survey, there were three categories of non-farm jobs. First, in 1966, 77 households or 10% of the farming households engaged in a household occupation besides farming, for example, store-keepers, carpenters,

34. Computed from information in Takahashi, M., 1941, pp. 9-20.

35. Watanabe, et al., 1958, p. 68.

36. Takahashi, M., op. cit., p. 19.

37. 1965 census data. The statistical definition of a "farmer" is "the one who is engaged in farming for 150 days per annum or over."

plumbers, veterinarians. Personnel of the village office did not count this category in the 1939 survey, thus preventing a meaningful comparison. Second, in 1966, 785 farmers (not 785 households) took non-farm jobs on a part-time basis, including 406 brewers. The length of engagement was not clearly defined in the 1966 survey. In 1939, 591 farmers, 541 men and 47 women, temporarily worked out of the community. Among the seasonal emigrants, 73% were brewers, 10% were factory workers, and 4% housemaids. The significance of brewing dropped from 73% of the temporary emigrants in 1939 to 52% in 1966, implying the differentiation of income resources in the larger nation. Third, in 1966, those who were engaged full-time in non-farm jobs and were commuting from their home amounted to 356 persons. They were distributed in the following occupations: manufacturing industries (119); construction (92); trade and commerce (63); civil servants (55) and so on.

The farming households which engaged in another occupation in general had little land. Fifty-four households out of 77 or 68% had less than 1.5 ha., and 36 households or 45% had less than 1.0 ha.<sup>38</sup> Seasonal emigrants, however, were not necessarily from smaller farms. The Shiwa Agricultural Co-operative conducted a third survey in 1968 and determined that the correlation co-efficient between acreage and seasonal emigrants was 0.088.<sup>39</sup> This co-efficient is explained by the historical importance of the brewing occupation. Regardless of acreage, most farmers who suffered from an irregular water supply engaged in

38. Shiwa Agricultural Co-Operative, ed., 1967, pp. 18-19.

39. Op. cit., 1968 (A), Table 62.

brewing. In addition, the farmers' esteem of hard-work supported per-  
sistence of this practise, and informal gossip punished the lazy youths. 40

Assuming that each household had one commutor, Table 4-4 reveals more commutators among the smaller farmers. Columns A and B are the distribution of farming households and commutators in each category of acreage. Column C is the proportion of B in A. Column C shows that smaller farmers needed their subsidiary income more keenly than larger farmers.

Table 4-4 Relations Between Acreage and Commutators in Shiwa (1966)

ha.	(A) Number of Households	(B) Number of Commutors	(C) (B)/(A) x 100
-0.5	78	57	73
0.5-1.0	139	91	66
1.0-1.5	183	96	52
1.5-2.0	161	62	39
2.0-	241	50	21
Total	802	356	--

Note: Computed from the Shiwa Agricultural Co-Operative, ed., 1967, pp. 16-20.

In brief, small farmers began to give up farming and followed another occupation at home or in an urban area. Many of the commutators still conform to the rules of social behaviour in households. The question arises: "Why do they not give up the rural life?" Interviews 41 with Shiwa farmers provided a few answers to the question. First, the commutators feel that they have a responsibility to continue the succession of their households, and so to stay in the community. Second, they

40. From my field notes.

41. Op. cit.

are emotionally attached to their land. Third, they need the security that land ownership implies. However, small acreages did not produce enough output to support the household. In addition, production-costs rose recently, diminishing net-profits, so they needed a subsidiary income. The commuters felt, however, that even if they farmed only on a small scale their household economy would be more secure. The men obtained full-time jobs in the vicinity, and left the farming to their wives. Consequently, in spite of the decrease in the farming population and the increase in part-time farming households, the total number of farming households did not change greatly in Shiwa Community.

### 3. Labour-Shortage in Farm Practices and Wage-Inflation

In addition to the dropouts who left farming, development of higher education caused a decrease in the labour force as will be treated in Chapter Six. The following example will illustrate the situation. Farmers in the Shiwa region were accustomed to spending 10 days on trans-<sup>42</sup>planting. According to a survey of the Nambu Town Office in 1967, Shiwa had 1,134 ha. of paddy fields and 1,995 farmers. To completely transplant 1 ha. of paddy fields, required 30 man-days. Shiwa farmers needed 34,000 man-days to complete the step of transplanting rice. They had a supply of 19,950 man-days, and hired from outside the community<sup>43</sup> 11,121 man-days. Consequently, they were short of 3,000 man-days or 300 workers.

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42. Shiwa Town Office, ed., 1968 (A), p. 8.

43. Op. cit., ibid.

Potential labourers, students and/or commuters, lived in households, but the farmers did not use these human resources in farming. The farmers' aspirations for their children to have a good education were stronger than their desire to employ their children during the busy seasons. In addition, they preferred that commuters should earn regular cash-income rather than remain in the household and earn an occasional income. Consequently, the price of labour which Shiwa farmers had to pay for occasional work during the busy seasons rose considerably, from 100 in 1960 to 428 by 1967.<sup>44</sup>

## II. Technological Change in Farm Practices

One can distinguish two spheres of technology relating to rice-cultivation: (1) techniques to encourage the healthy growth of rice-plants; and (2) techniques which save labour in farm practices. The first kind of techniques have developed gradually since the pre-war period, but the second kind developed mostly in the post-war period. This section discusses the technological change in these two spheres and the factors which influenced the farmers' adoption of innovations.

### A. Varieties, Fertilizers, and Pesticides

There are three basic techniques which provide conditions favourable for rice-plants: (1) producing more suitable varieties; (2) producing adequate nutrients; and (3) eradicating natural harm, such

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44. Op. cit., p. 9.



as weeds and insects. This sub-section, treats each of these elements<sup>45</sup> briefly, assuming adequate irrigation.

# 1. Improved Varieties

After 1904, Japanese scientists began to develop new varieties of rice-plants<sup>46</sup> which were suited for three specific conditions: (1) varieties immune to over-application of fertilizers; (2) those less vulnerable to irregular weather conditions and (3) those which would<sup>47</sup> mature at different intervals. The Tōhoku National Agricultural Experimental Laboratory was responsible for developing varieties suited to conditions in northern Japan.

The Shiwa Agricultural Co-Operative surveyed varieties and the acreage planted from 1960 to 1967. The change in varieties was remarkable. For example, the proportion of acreage devoted to Variety X in the total acreage in 1960 was 28%, dropping to 2% by 1967. During the same period, Variety Y which had initially been planted in 13% of the paddy fields disappeared completely, while Variety Z in-<sup>48</sup>creased from 2% to 52%. According to the Extension Department of the local co-operative, until the completion of the dam the range of alternative rice varieties open to Shiwa farmers was very limited. Scarcity of water prohibited over-application of fertilizers and irregular weather

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45. On significance of irrigation in rice-cultivation, see Chapter Two, Section I-A-1, and Chapter Three.

46. Nōgyō Hattatsushi Chōsakai, ed., 1955, Vol. 5, pp. 678-683.

47. Tōhata and Isobe, eds., 1957, pp. 196-197.

48. Information provided by the Extension Department, Shiwa Agricultural Co-Operative.

conditions easily damaged new varieties. The regular delay in transplanting required varieties with definite intervals of maturity. After the dam, farmers began choosing from a wider range of varieties.

## 2. Fertilizers

Commercialized organic fertilizers appeared as early as the  
<sup>49</sup> eighteenth century, and chemical or "inorganic" fertilizers were first  
<sup>50</sup> produced in 1888, but became popular only after 1920. Farmers at  
 present apply farm-produced fertilizers or "manures" to fields immediately before spring cultivation and apply purchased fertilizers basically as top-dressing.

Before 1952, delayed transplantings in Shiwa frequently caused a plant disease which was aggravated by over-application of fertilizers. After 1952, farmers were able to apply more fertilizers. Consequently, sales of fertilizers at the local co-operative increased;  
<sup>51</sup> taking the index of sales in 1949 as 100, it increased to 165 by 1960.

## 3. Pesticides

Pesticides include weed-killers and insecticides. About  
<sup>52</sup> thirty kinds of pesticides competed on the market before 1941, but  
 Japanese farmers began to use pesticides extensively only after the

49. I. Nagai, 1959, p. 153.

50. Nōgyō Hattatsushi Chōsakai, ed., 1956, Vol. 8, p. 208.

51. Information provided by the Shiwa Agricultural Co-Operative.

52. Kayō, 1958, p. 204.

war. Most of the advanced pesticides were initially imported from the United States after 1945. To give an example of diffusion of innovations the total consumption of pesticides more than doubled in the three years between 1951 and 1953.<sup>53</sup> Again, a new hormone weed-killer, 2-4-D, was first introduced in 1948. Within 15 years, farmers were applying this chemical to 2,320,000 ha. or 73% of the total Japanese paddy-fields.<sup>54</sup>

In the case of Shiwa, a survey in 1939 shows that farmers applied no pesticides.<sup>55</sup> Unlike the new varieties of rice-plants, Shiwa farmers did not adopt pesticides until 1957, five years after the completion of the dam. The farmers gave two reasons for their slow response to pesticides: first, unless other neighbours applied the same chemical simultaneously, the effect was limited. Second, pesticides often have to be applied within a few days in order to be effective, therefore the farmers needed power-driven sprayers. The farmers could not economically invest in the application equipment. To meet these needs, the local co-operative since 1957 has organized teams to spray the fields of all its members. Farmers now individually apply pesticides only before the rice-plants are put into the fields.

#### B. Mechanization of Farm Practices

One can distinguish two types of mechanization: (1) a "light machinery system" which refers to various small machines; and (2) a

53. Tōhata and Isobe, eds., op. cit., p. 200.

54. Op. cit., ibid.

55. Takahashi, M., op. cit., pp. 26-27.

"heavy machinery system" which is the combination of a tractor and its attached equipment, a combine, and a rice-mill. Mechanization before 1945 included only a few small machines; heavy mechanization began after 1950.

In Japan, mechanization of farm practices by light machinery began in the pre-war period but was limited in two ways: (1) the machines operated only in buildings -- not in fields; and (2) the number of machines utilized was small. This was true of Shiwa as well. In 1945 the mechanization of farm practices was almost negligible. At the most a couple of wealthy farmers in each hamlet possessed power-driven threshers, hullers, and rice-polishers. Post-war mechanization changed the above conditions by (1) the introduction of garden tractors for use in fields and (2) an increase in the number of machines, which began mainly after 1955. Shiwa also shared these characteristics with other farming communities in Japan.

Until 1945, Shiwa was noted for raising good horses, and the farmers used these animals in their farm practices. The greatest source of demand for horses, the Japanese Army, dissolved in 1945, and the number of horses raised began to decrease. Farmers raised 958 head in 1939,<sup>56</sup> but only 833 head in 1950.<sup>57</sup> Few farmers had garden tractors before the completion of the dam, as conditions were not satisfactory for the use of these machines. After 1952 garden tractors became very popular. In 1968, 80% of the farming households in Shiwa either owned

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56. Takahashi, M., op. cit., p. 13.

57. Shiwa Agricultural Co-Operative, ed., 1963, p. 41.

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or jointly owned a garden tractor. After 1952 the number of horses<sup>59</sup> decisively declined from 597 head in 1955 to 27 in 1968. Few contemporary farmers use animal power in farm practices; power-driven machines have replaced the horse.

At each step of rice-cultivation, light machines have helped the farmers. Garden tractors are used for making the nursery-bed and preparing the paddy-field. A group of three households adopted an inexpensive but efficient transplanter in 1968. In the intermediate step, farmers used weeding-plows for the weeding operation and sprinklers to top-dress. The local co-operative accepted the responsibility of applying pesticides by heavy machines. In 1968, 10% of farming households used their own harvesters in the harvesting step. Farmers mechanized the post-harvest step first: in 1968, 80% of households owned power threshers; 67% had power-hullers and 70% had rice-polishers. Except for germination, all the farming steps were partially or fully performed by machines in 1968.

Some wealthy farmers in downstream areas wished to introduce a system of heavy machinery. Fortunately, the central government agreed to subsidize one half of the cost under a programme of structural improvement of farms.<sup>60</sup> The government established a number of conditions which had to be met in order to qualify for a subsidy. The government required that the acreage under the project be more than 100 ha. in one

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58. Computed from information in Shiwa Agricultural Co-Operative, ed., 1968 (A).

59. Op. cit.

60. See Chapter Two, Section II-B-2 and 3.

location. In 1962, 101 farmers organized an association and obtained the subsidy. They began a heavy mechanization project in 1963. The 1963 project of the association was to install below-surface drainage pipes, making 93 ha. of land "dry". In 1964, the farmers introduced 4 large tractors and the necessary attachments: rotaries, land-levelers, plows, manure-spreaders, mowers, and loaders. By 1968, the group of farmers had introduced 3 combines, 6 harvesters and 6 raw paddy-threshers. A rice-mill which would winnow, dry, hull and pack the grain was completed in 1967 by the local co-operative. Thus, in the 107 ha. project, by using the heavy machinery system, 101 farming households mechanized all the farm practices except for germination and transplanting.

### C. Farmers' Adoption of Innovations

Change in varieties of rice-plants, increased use of fertilizers and pesticides, and the mechanization of farm practices were the result of the farmers' adoption of innovations. Factors that influence the farmers' choice of innovations include access to resources, incentive to increase farm output, cultural values, and rules of social behaviour in the social system. This sub-section examines these four factors with special reference to the mechanization of farm practices.

#### 1. Greater Access to Resources

Until the completion of the Sannōkai Dam, farm output and farm income were irregular. After 1945, the significance of horse

raising as a source of subsidiary cash-income declined.<sup>61</sup> When farmers emigrated every year, they learned of garden tractors and other machines, but these machines were expensive and the majority of them did not have access to financial resources. These machines also required more water for puddling, and Shiwa farmers could not afford this water.

Changes in two conditions encouraged farmers to adopt innovations: increased access to irrigation water and the availability of financial resources. With the dam, water resources became abundantly available, increasing farm output and income. The dam also allowed farmers to apply more inorganic fertilizers, reducing the amount of manure. In Shiwa, horses were important despite their decreasing market demand because they produced manure and worked in water-scarce fields.<sup>62</sup> The dam removed this condition and so horses were replaced by machines. Besides the increase in farm income, Shiwa farmers continued to receive an income from brewing sake. The local co-operative developed after 1952, had more money to loan to its members. In the 1960's, the government provided funds for farmers;<sup>63</sup> if Shiwa farmers had the incentive to mechanize the funds were available.

## 2. Incentive to Increase Farm Output

According to an earlier postulate, after the Land Reform many Shiwa farmers began to have a strong incentive to increase farm output but could not adopt certain innovations because of the scarcity of water

61. See Chapter One, Section IV, and Section II-B of this chapter.

62. See Chapter Three, Section II-A.

63. See Chapter Two, Section II-B-2-b.

and financial resources. The dam and increased access to financial resources eliminated these obstacles. However, the dam created another problem; it increased the acreage of paddy fields, necessitating more man-hours of labour.<sup>64</sup> As discussed earlier, the farming population began to decline rapidly in 1955. Horses were not ideal to increase farm output because they required a considerable amount of labour. Daily farmers had to feed them, prepare their feed and change their stable bedding. Farm machines did not require this extra labour. In addition there was no market demand for horses and the dam allowed farmers to reduce their manure requirement. A farmer expressed his feeling this way: "Farm machines do not 'eat' when idle."<sup>65</sup> After 1967 farmers began to replace horses with farm machines.

### 3. Cultural Values

Anthropologists have found that a general characteristic of Asian peasants is that the individual is willing to set aside personal interests in favour of the community.<sup>66</sup> Japan is not an exception to this observation. Despite bitterness and group tensions, Japanese farmers valued resignation and devotion to duty. Rural Japanese hamlets laid serious claim to the individual farmers' loyalty and the rules of social behaviour in the hamlet governed the farmers' actions. Farmers behaved in ways which did not disturb the order, harmony and welfare

64. See Chapter Three, Section III-B.

65. From my field notes.

66. Potter, et al., eds., 1967, p. 298.



of the hamlet; a set of rules including informal gossip applied sanctions to offenders.

A government policy initiated in 1947, of relying on legal force to ensure rice deliveries, affected the rules of social behaviour in the hamlet. The system adopted established delivery quotas on the basis of harvest forecasts for each prefecture. These quotas were then broken down into community quotas, hamlet quotas, and into individual quotas, the delivery of which was a legal duty.<sup>67</sup> But in the period from 1947 to 1952, as mentioned earlier, rice-yields in Shiwa were irregular. If an individual failed to fulfil his legal duty, other members of his hamlet had to supply his quota; and so on to the community level. To minimize social tension, any legitimate means of increasing farm output including capital investment was encouraged in each hamlet.

In addition to the voluntary incentive of farmers to increase farm output, pressure from other hamlet members promoted the adoption of innovations. For example, the introduction of farm machines began with the wealthier farmers and was followed by the less well-off.<sup>68</sup> According to informants, there was a "critical threshold" in the process. After a point, those who had not introduced machines became targets for criticism and gossip. Thus, except for those whose acreage was too small to mechanize, 0.5 ha. or less, the majority of farmers were obliged to introduce machines. A late adopter confessed: "Who needs

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67. Dore, 1959, p. 229.

69. Shiwa Agricultural Co-Operative, ed., 1962, p. 21, 1967, p. 21, and 1968 (A), Table 75.

these machines? Me or my neighbours? I had to buy these machines because of the pressure from my neighbours!"<sup>69</sup>

#### 4. The Rules of Social Behaviour in Households

Farmers' conformity to rules of social behaviour in households contributed to their adoption of innovations. Until 1955, most young heirs (15 to 19 years old) did not consider other job alternatives. They felt that inheriting the household occupation was their duty. After 1955, however, the young heirs began to consider other alternatives, comparing working conditions in industrial centres with those at home. They found five unattractive conditions at home: (1) long, hard, dirty work with little net profit; (2) no regular day-off such as Sunday; (3) nature as the determinant of output; (4) lack of personal spending money;<sup>70</sup> and (5) conflicting notions, between the old and the new.<sup>71</sup> Young heirs put common demands on their househeads including: (1) mechanization of farm practices; (2) adoption of new farm techniques; (3) high-school education; (4) respect for heirs' independence, including days-off and spending money; and (5) freedom of choice of marriage. When househeads did not take these requests seriously, some young heirs left the community. To maintain the farming population of 1968 in Shiwa, forty new farmers had to engage in farming every year. After 1964, however, the number of new farmers began to decrease, reaching a low of five by 1968.

69. From my field notes.

70. Information provided by the Extension Department, Shiwa Agricultural Co-Operative.

71. Ibid.

Most househeads, however, seem to wish to keep their heirs at home in order to maintain the institution.<sup>72</sup> Consequently, they had to comply with the demands of the heirs in order to keep them at home. Statistical data to show the frequency of Shiwa househeads' compromises does not exist, but many farmers, staff members of the local co-operative and officials of the Nambu Town Office agreed that the high innovation adoption rates in production and consumption were due to compromises between househeads and their heirs. In 1957, a public organization conducted a sampling survey of 1,000 farming households which had heirs who had finished their formal schooling in the past five years (1953-1957). One of the questions asked of househeads was: "Did you ever buy farm machines and/or adopt new farm techniques in order to keep your heir at home?" About forty percent of househeads with 1 ha.<sup>73</sup> or more of farm land replied "yes".

### III. Impact of Changes in the Labour Force and Productive Technology upon Institutions

Change in two conditions, the labour force and technology in farm practices, had an impact on the social structure. In this section, institutions outlined in Chapter Two are examined in terms of changes in the rules of social behaviour under these changing conditions.

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72. Chapter Six, Section I-B.

73. Namiki, 1960, p. 48.

### A. Household

In pre-war days, competence in farm management, devotion to duty entrusted by ancestors, and the Civil Code legitimized the authority of the househeads. Community pressure punished the househeads.<sup>74</sup> They praised a househead who increased the acreage by legitimate means during his headship, because they interpreted this as the manifestation of his hard-work, his competence in farm management, and his devotion to the duty entrusted by his ancestors. If the acreage remained constant, they accepted him as a reasonably good farmer. If the acreage decreased, critical gossip in the community punished him.<sup>75</sup> A group of scholars who studied a community three miles north of Shiwa found that in pre-war communities in this area, changes in acreage in one's life time frequently occurred. In turn, commitment to the ancestors' trust became a popular social criteria to evaluate househeads and the empirical scale to measure the degree of their commitment was variation in the size of farm land. Among pre-war farmers, farm land was more than a mere commercial commodity. Generally speaking, however, poor tenants as well as new branch households had little chance of becoming independent farmers, except for the exceptionally capable and lucky ones.<sup>76</sup> When few alternatives existed in the locale, the competence of househeads in farm management had relatively little significance among the poor, who tended to remain in poverty regardless of behaviour.

74. See Chapter Two, Section I-B-1.

75. From my field notes.

76. Nakamura, ed., 1956, pp. 814-832.

The defeat in the Second World War decreased the importance of the supernatural in general, and ancestors in particular. The Land Reform shuffled land-holdings in farming communities, challenging the belief of farmers that ancestors protected their descendants and that descendants had a duty to respond by hard-work. Shiwa farmers stopped evaluating househeads by variations in acreage. Revision of the Civil Code in 1947 abolished the legal "family system", subsequently abolishing the legal authority of the househead. It also legally abolished primogeniture and declared that household property was to be equally divided among the children. In turn, the great majority of farmers became independent of landlords after the Land Reform, and the size of their farms depended on their competence in farm management.

The competence of a farmer in farm management is based on superior knowledge, long experience and farm skills. In the pre-war period, when farm techniques remained relatively stable, the older people were superior to the young in these resources. But when the rate of technological change became rapid in the 1950's and 1960's, the resources of the older people became outdated. As seen in an earlier discussion, technological change includes re-organization of the body of knowledge concerning the laws of nature.<sup>77</sup> During rapid technological change, therefore, the greater an individual's knowledge in natural science (mostly provided by the schools), the easier it is for him to employ new techniques. Hence, the higher the formal training one re-

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77. See Chapter One, Section I-B.

ceives, the more able he is to adopt new farm techniques. According to a survey of the Shiwa Agricultural Co-Operative in 1968, the correlation co-efficient between age and formal education among respondents, not all of them farmers, was -0.29; <sup>78</sup> younger farmers received higher education. If all farmers had responded to the survey, the co-efficient would have been higher. Thus, the old and the young competed in the period of rapid technological change.

In the pre-war period as well as today, "those who work will eat" has been an implicit but legitimate rule. One's contribution to the household occupation, including consultant services and taking part <sup>79</sup> in the labour force has been his "union ticket on the working team". Younger farmers respected the technical advice of their elders and appreciated their help as a supplementary labourer during the busy seasons. The adoption of new farm techniques since the 1950's has dated the resources of the old people. In addition the mechanization of farm practices increased labour productivity, thus jeopardizing the labour contribution of the old. In a community in Iwate Prefecture, a household pleaded with his son who operated a garden tractor to leave a small portion of farm land uncultivated so that he could cultivate it <sup>80</sup> himself in order "to keep his union ticket valid." When a group of Shiwa farmers introduced a transplanter in May, 1968, the old people observing the operation of the machine were uniformly upset. Later, they anxiously discussed whether machines would eventually dismiss the

78. Shiwa Agricultural Co-Operative, ed., 1968 (A), Table 206.

79. Information provided by Mr. R. Ōmura.

80. Ibid.

old, because improved farm practices would require "skilled" labour while they were "unskilled".

The anxiety of the old people was not without foundation. In Shiwa, most male farmers in their fifties or younger could operate light machines, but heavy machines could only be operated by a small number of farmers in their thirties or younger. Also, young extension workers from the local co-operative, rather than the aged people, advised farmers on how to increase farm output. The young workers had higher formal training and access to the latest information.

In sum, new resources such as advanced training or access to the latest information became important in farm practices and in the community. The emergence of these new resources conflicted with a pre-war rule of resource allocation in the households and challenged the last significant legitimatizing source of the househeads' authority.

Mechanization of farm practices by the heavy machinery system had a serious impact upon the traditional division of labour by sex. Until recently, women worked as hard as men at rice-cultivation and they accepted the additional responsibilities of housework and raising children. In 1952, the Ministry of Agriculture and Forestry conducted a time-study of 459 households selected by the stratified sampling method out of six prefectures in Tōhoku. To quote figures of harvest and post-harvest steps, men worked for 35 hours per 10 ares while women worked for 30 hours.<sup>81</sup> Table 4-5 summarizes the Shiwa situation in 1968.

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81. Ministry of Agriculture and Forestry, 1954, pp. 10-11.

Table 4-5 Mechanization of Operations in Harvest and Post-Harvest Steps in Shiwa (1968)

<u>Farm Practices</u>		<u>Degree of Mechanization</u>				
<u>Step</u>	<u>Operations</u>	By "Human Labour" <sup>1</sup>	By "Reaper" <sup>2</sup>	By "Binder" <sup>3</sup>	By "Raw-Paddy Thresher" <sup>4</sup> and "Rice- Mill"*	By "Combine",* and "Rice- Mill"*
Harvest	Reaping	mannual	machine	machine	--	machine
	Binding	manual	manual	machine	--	unnecessary
Post-Harvest	Drying on the ground	manual	manual	manual	unnecessary	unnecessary
	Drying on frames	manual	manual	manual	unnecessary	unnecessary
	Transporting	manual	manual	manual		
		or	or	or	machine	machine
	Threshing	machine	machine	machine	machine	machine
	Hulling	machine	machine	machine	machine	machine
	Packing	manual	manual	manual	machine	machine

Notes: \* Heavy machines.

1. "Human Labour" is the local term, denoting the least mechanized farming in the community.
2. "Reapers" reap rice-plants.
3. "Binders" reap rice-plants and bind them into bunches.
4. "Raw-Paddy Threshers" thresh raw paddies by-passing operations of drying the ripe rice on the ground and on frames.



Although threshing and hulling operations have been mechanized since the 1940's, men and women have had to work together with light machines. The adoption of light harvesters such as reapers and binders has saved a certain amount of female labour in the harvest step, because men operated these machines. When farmers adopted heavy machines -- combines, dump-trucks, and the rice-mill -- women have nothing to do in the harvest and post-harvest steps. Heavy machinery used in the step of preparing paddy-fields and the operation of applying pesticides also eliminated work for women.<sup>82</sup> With the adoption of the heavy machinery system, women will gradually withdraw from rice-cultivation.

Neither the Land Reform nor the dam and other technological changes affected the household as the unit of production despite modification in rules of social behaviour. Light machines were designed for use in small acreage and to save some human labour, hence they were adopted for use in households. The large machinery system, however, has the potential to re-organize households as a social unit when farmers jointly use them. Large machines not only decrease the amount of work of each household but also control the farm schedule. The schedule for harvesting fields by a combine roughly determines the varieties of rice-plants and the dates of transplanting. The dates of germination, preparation of nursery beds, and sowing seeds is determined by the harvest time. If the operation of large machines is to determine a household's farm schedule, the household has to relate the schedule to

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82. See Section II-B of this Chapter.

the network of inter-household-relations. In the pre-war period, each household developed its farm schedule by the rules of allocating water resources.<sup>83</sup> In the near future, each household using the heavy machinery system will develop its farm schedule as a member of a larger group jointly using the machines.

#### B. Dōzoku

One of the basic conditions supporting the institution of dōzoku, the main-household's economic supremacy over the branch-households, was undermined by the Land Reform. After 1949, practically all farmers became independent cultivators, and their greater access to resources decreased the branch-households' economic dependence on main-households. To give an example, until the 1920's and the introduction of inorganic fertilizer, farmers in this area applied about 2,600 k.g. of manure per 10 ares,<sup>84</sup> using horses to spread it. Branch-households had to ask their main-household to lend them the animals. The adoption of inorganic fertilizers, particularly after 1952, reduced the use of manure to about 400 k.g. per 10 ares, thus decreasing the need for horses to transport and produce manure. The means of transporting the manure was mechanized in the 1950's by the use of pull-type garden tractors. Branch-households purchased their own machines either with their own funds or with the money borrowed from the local co-operative -- not from the main-household. The high productivity of heavy machines made

83. See Chapter Three, Section I.

84. T. Sasaki, 1964, p. 3.

it unnecessary in many steps to exchange labour in dōzoku. The post-war technological changes decreased the frequency of economic interactions in this institution.

The existing economic relations in dōzoku can be characterized as mutual assistance among equal households. In capital investments, for example, member-households of a dōzoku acknowledge equal partnership. In some hamlets there were movements to introduce heavy machines. The volunteers jointly purchased large tractors and the joint-owners in most cases were members of a dōzoku in which branch-households held equal status in the group in terms of financial obligations as well as privileges.

#### C. Yui

In the pre-war period, two types of yui existed: (1) yui in dōzoku, which disappeared by the 1940's; and (2) yui among neighbours, which have persisted until today. In 1966, 560 Shiwa households out of 802 received 31,800 man-days of labour from outside of the household, and yui provided 9,200 man-days or 29% of the supplementary labour.<sup>85</sup> Farmers paid wages for the other labour.

The basic unit of yui has been a household, and the institution has functioned in a way relatively fair to all the member-households. In the past, all farmers of a yui worked on a member-household's fields for one day. On the following day, they worked for another household until all member-households' operations were completed. The

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85. Shiwa Agricultural Co-Operative, ed., 1967, p. 13.

acreage of each household varied, and so some households contributed more labour than they received. After the operations were completed the farmers computed the balance and paid what they owed to others.

The above practice obliged each farmer to grow several varieties of rice-plants. Farmers with paddy fields 1.5 ha. or more could not finish transplanting in one day if they received labour solely through yui: they had to wait for the second round. Hence, farmers particularly after 1952, had to grow varieties which matured several days later, or they missed the period most suited for transplanting.

Combines operate most economically in large acres, that is, in adjacent fields where varieties of rice-plants mature at the same time. However, farmers' rice-paddies are usually scattered widely as Table 4-6 shows, and farmers grow several varieties of rice in their fields. Each paddy has a different condition and combines cannot operate in a large area at a given time. To move heavy machines by narrow farm roads from one paddy to another is a waste of time, as some paddies are located over one mile away. In order to operate combines economically, farmers have to choose one of the following two alternatives: (1) through exchange of land, farmers must collect their fields in one location and grow varieties of rice agreed upon by other partners, or (2) they must develop a schedule of each household's harvest before germination and cultivate the varieties agreed on by the group. In either case, the previous practices of yui are changed so that the varieties agreed on are grown disregarding the boundaries of

Table 4-6 Dispersal of Paddy-Fields in Shiwa (1961)

<u>Distance of paddies from owners' residence</u>	<u>Acreage</u>	<u>Percentage</u>
(metres)	(ha.)	(%)
500 or closer	621.0	80.7
501 - 1,000	85.4	10.4
1,001 - 1,500	42.5	5.3
1,501 - 3,000	25.0	3.2
3,001 or farther	3.2	0.4
Total	777.9	100.0

Note: Seventy-three farmers refused to answer the question, so the total acreage of this table is not identical with that in Shiwa.

Source: Shiwa Agricultural Co-Op., ed., 1962, p. 42.

individual farmers' fields. In Hamlet No. 18, which includes 36 house-  
86 holds and is the nucleus of the heavy mechanization project, two yui out of three changed to the second alternative in 1968. In that year the hamlet people discussed whether they should abolish the third yui and hire labour from outside, or revise it to operate like the other  
87 two.

In sum, when heavy machines increase labour productivity, the yui must modify its rule. Farmers cannot continue to proceed through the fields from household to household but must cultivate the fields in one location, ignoring boundaries, otherwise, this institution will disappear.

#### D. The Institution of Exploiting Grassland

In the pre-war period, farmers exploited grass-land for three purposes: (1) they reaped grass as feed for their domestic animals;

86. See Section II-B of this chapter.

87. From my field notes.

(2) they produced manure out of grass; and (3) they collected fallen  
 twigs for fire-wood.<sup>88</sup> Post-war changes in conditions decreased the

farmers' dependence upon grass-land. First, as discussed in the following chapter, farmers began to raise domestic animals for market and gave them high quality feed. Hence, they either purchased the commercial feed through the local co-operative or grew high quality grass in specially prepared pastures. Second, as already mentioned in the preceding sub-section, consumption of farm-made manure decreased as inorganic fertilizers were adopted. Third, farmers began to have greater access to commercialized resources and changed their sources of energy. In 1966, 649 households out of 791 respondents had propane-gas ranges,<sup>89</sup> 465 had electric heaters, and 131 had electric ranges. Contemporary Shiwa farmers grow trees on their grass land to sell to finance special occasions such as weddings or to use in the reconstruction of their homes. This institution does not have the control over farmers' behaviour that it had in the pre-war period.

#### E. The Institution of Brewing

In the post-war period, technological change in rice-cultivation did not modify the seasonal nature inherent in rice farming; to mechanize farm practices required enormous capital investment and heavy household expenditures. Both the possibility and need for subsidiary income during slack seasons remained constant, and Shiwa farmers continued

88. See Chapter Two, Section I-C-4.

89. Shiwa Agricultural Co-Operative, ed., 1967, p. 100. These 'ranges' do not have ovens.

to engage in brewing. In 1966, 54% of the total working population in farming households engaged, part-time or full-time, in non-farm jobs. 90 In 1939, 73% of the seasonal emigrants worked in the brewing industry. The proportion dropped in 1966, because young people object to the hierarchical order of the brewing institutions and preferred non-brewing employments when it was available.

The following changes have condemned the future of brewing 91 as a source of subsidiary income in this area. First, despite an increase in the consumption of sake, there has been a greater increase in the consumption of Western liquors such as beer, wine and scotch whiskey. Change in the alcohol-consumption patterns in the nation at large has threatened both manufacturers of sake and the brewers. Second, large manufacturers adopted advanced techniques and are able to brew sake all through the year. If all manufacturers adopt the new techniques, farmers in Shiwa area will lose their jobs. Third, in order to compete with Western liquors, the large manufacturers began to advertise their products through the mass communication media -- and so their products invaded the local markets where small manufacturers had traditionally supplied sake. The small manufacturers cannot compete with the big ones in the market, so Nambu brewers employed by the small manufacturers have accepted worsening working conditions. Finally, youth does not like working at this occupation; when better paid employment is available, youth select it over brewing. In the near future, the Nambu brewers will be without successors.

90. Shiwa Agricultural Co-Operative, ed., 1967, pp. 16-20.

91. The following information is based on Y. Kondō, ed., 1967.

#### IV. Summary

In the 1950's, two epoch making changes took place in the life of Shiwa farmers. First, the completion of the Sannōkai Dam in 1952 had a great impact upon farmers' production activities: farmers adopted advanced techniques and increased rice-yields. With government control of the rice-price, the rise in output resulted in an increased gross farm income. Second, the rapid economic growth in the larger nation had two effects upon the behaviour of Shiwa farmers. On one hand, the farmers' access to commercialized resources became greater and their household expenditures soared, requiring subsidiary income. Very small farmers began to leave farming by taking non-farm jobs, on a full-time basis; others continued to engage in seasonal emigration. On the other hand, differentiation of income resources in the society at large attracted bilateral members of households and eventually heirs. This trend may in the future jeopardize the succession of households.

Changes in rice-cultivation techniques occurred in two spheres. First, to provide conditions favourable for the growth of rice-plants, Shiwa farmers adopted new varieties, inorganic fertilizers, and pesticides. The dam made it possible to adopt the first two items. The local co-operative acknowledged the members' needs, and helped accordingly. Second, the decrease in the farming population due to the emigration of bilateral household members, and the increase in both part-time farming households and farm lands required farmers to increase their labour productivity. To maintain, and if possible to increase farm output



under the new conditions, Shiwa farmers introduced two kinds of machines (1) light farm machines; and (2) heavy farm machines. The following four conditions had a favourable effect on the adoption of innovations: (1) the greater access to resources; (2) the farmers' incentive to increase farm output; (3) cultural values and (4) compromises between househeads and their heirs in order to keep the latter at home.

Technological changes increased the importance of certain resources, causing a conflict with the rules of social behaviour in households. In the pre-war period, when technological change was relatively slow, older people were competent in knowledge, skills, and experience. With rapid technological change, those who received advanced training and had access to the latest information obtained the more advantageous positions; the pre-war rule of resource allocation in terms of seniority was modified, particularly in the operation of heavy machines.

It was not light machines, but heavy machines which are currently having a significant impact upon the social institutions. First, heavy machines change the pre-war pattern of division of labour by sex: women are withdrawn from many of the steps in rice-cultivation. Second, jointly owned heavy machines have the potential to determine a household's behaviour in production: each household is re-organized as a component of the larger productive unit. Third, heavy machines made it unnecessary in many steps to exchange labour in dōzoku; and so they decreased the frequency of economic interactions in this institution. Fourth, heavy machines required the modification of the old function of yui, the farmers do not rotate work on household's fields but operate on fields collected in one location.

When access to resources increase through government policies and technological change in the larger nation, and when certain cultural values such as "piety" and "frugality" are modified, farmers develop secularized views. They stop evaluating househeads in terms of their degree of commitment to their ancestor-entrusted duties. Some young heirs find non-farm jobs more attractive than accepting the duty entrusted by ancestors of inheriting and managing the household occupation. To keep their heirs at home, some househeads adopt new farm techniques and improve living conditions, leading to the economic affluence of the household. The emphasis of contemporary farmers on new techniques will

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increase the secularization. Despite the decreased farming population, increase in labour productivity through technological change created "surplus" labour. The following chapter will examine how the surplus labour was invested.

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92. This question is treated in Chapter Six in some detail.

## CHAPTER FIVE

## DIFFERENTIATION OF PRODUCTION ACTIVITIES IN SHIWA IN THE 1960's

By the end of the 1950's, four significant changes had occurred in the economic aspect of the social system in rural Japan: (1) certain kinds of farm output, including rice, had increased; (2) farming household income had increased; (3) the farming population had decreased<sup>1</sup> and (4) farmers had mechanized their operations. Chapter One discussed "economic growth" as quantitative increase in per capita output while "economic development" was quantitative increase in per capita output<sup>2</sup> accompanying increasing institutional complexity in the social system. According to these definitions, "economic growth" certainly occurred in Shiwa as it did in other parts of the nation, but economic development requires further examination. The adoption of new farm techniques, particularly the mechanization of farm practices in extremely small<sup>3</sup> farms like those in Japan, tends to be an excessive capital investment, resulting in rising production cost. Labour productivity increased by mechanization in spite of the numerical decline in the farming population through the investment of surplus labour. In order to maintain or increase net household income, farmers had at least four alternative ways to invest their saved labour: (1) they could differentiate their farm production activities so that they could increase profit from various sources on their farms; (2) they could take non-farm jobs in slack

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1. See Chapter Four.

2. See Chapter One, Section I-B.

3. See Chapter Two, Section I-B-7.

seasons, with no deliberate differentiation of farm operations; (3) they could combine the above two alternatives or (4) either househeads or heirs could leave farming and become commuters. This study is interested in economic development and social change in a rural community<sup>4</sup> and is mainly concerned with what happened to the farm economy. The second and fourth alternatives do not "develop" the farm economy, because farmers do not increase the complexity of the institution relevant to the farm production activities. Therefore, farmers' differentiation of their farm production activities is a necessary condition for economic development in farming communities with which this study is concerned.

In Japan as a whole, part-time farming households increased from 1.67 million out of 6 million farming households in 1955 to 2.59 million out of 5.4 million by 1968.<sup>5</sup> In the Tōhoku District, farmers who chose seasonal emigration as the means to increase the household income went from 12.6% of the total farming households in 1960 to 27.3% in 1965.<sup>6</sup> In an extreme case, all households except for the large farmers had to leave farming eventually and left the community because of the high cost of mechanization.<sup>7</sup> Despite the many changes brought about, the economic development of farming communities was not automatic.

In order to develop the farm economy, farmers have at least two alternatives: (1) they may differentiate farm production activities

4. See Chapter One, Section III.

5. Bureau of Statistics, ed., 1969, p. 38.

6. Ministry of Agriculture and Forestry, 1967 (B), p. 116.

7. The Tōhoku National Agricultural Experimental Laboratory, 1964.

in a voluntary and unorganized manner; or (2) they may differentiate activities in an organized manner, through the work of change-agents. If farmers adopt the first alternative, some may differentiate their farm production activities, but others may not. No one can prevent the trend toward part-time farming households, because farmers have no legitimate rules for applying sanctions to the "dropouts". The presence of change-agents thus is significant to the economic development of farming communities.

Farmers may have several potential local change-agents: (1) administrative agencies such as a town office or a village office; (2) a group of volunteers in a community; (3) farmers' associations which perform specific functions and (4) a special form of farmers' associations, agricultural co-operatives. The Asahi Press, the most distinguished newspaper in Japan (issuing 5.5 million copies every morning and 3.7 million copies every evening in 1969)<sup>8</sup>, and one of the leading institutions in contemporary Japan, has annually awarded seven outstanding farmers' groups each year since 1963. The newspaper appointed from top scholars and active civil servants thirty members of a Selecting Committee. It divided the nation into seven districts, established nine criteria for examination of each candidate, and asked the committee to select one group from each district. Acting on the committee's nomination, the Asahi Press made awards to 28 groups in the period from 1963 to 1967: 18 agricultural co-operatives; 5 communities; 2 farmers' asso-

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8. Asahi Press, ed., 1970.

ciations; 1 village and 1 town. Apparently, agricultural co-operatives have the most celebrated potential as change-agents.

It will be remembered that each community or village has one or more local co-operatives which mediated between the larger nation and the farmers. First, it linked farmers to the government by selling their rice to the latter and collecting bills on behalf of the farmers. Some of the loan-funds and subsidies provided by the central government became available to farmers through the local co-operative. In addition, the co-operative could obtain a subsidy from the government for big projects such as construction of a rice-mill. Second, the co-operative connected farmers with the society at large. (a) It mediated farmers' marketing transactions. For example, it purchased fertilizers, pesticides, feed, machines, and other necessities from markets and sold these items to farmers. In turn, it collected farmers' produce to sell it jointly in markets. (b) The co-operative collected the latest information, including new farm techniques, and distributed it to its members.

In Shiwa, the co-operative even developed various projects to satisfy the needs of its members. For example, some organized farmers provided equipment to apply pesticides efficiently, or constructed a rice-mill. In addition, the local co-operative conducted a few surveys to develop certain programmes. In brief, the Shiwa Agricultural Co-Operative functioned as an active change-agent; whatever choice the

Shiwa farmers made, the co-operative was an important factor in their decision-making. This chapter has three foci: (1) the interactions between the co-operative and its members; (2) the output; and (3) the impact of the output on institutions.

#### I. Shiwa Agricultural Co-Operative and Its Members

The Shiwa Agricultural Co-Operative is a "competent" change-agent; on the empirical level, Shiwa farmers have accomplished differentiation of farm production activities. Analytically, the action of the co-operative or the change-agent and the reaction of the farmers or the "recipients" resulted in achieving their common goals. In other words, farmers have found it satisfactory to exploit the resources provided by the change-agent. Because, the co-operatives are local institutions and the staff members are local people, both the change-agent and the recipients share to a great extent the rules of social behaviour in the social system and cultural values, with only the degree of access to resources varying between the two. According to the model of decision-making discussed in Chapter One, when the recipients find satisfaction in exploiting resources provided by the change-agent, they adopt innovations. How the change-agent approached the recipients and how the recipients reacted to the change-agent is the foci of this section.

##### A. Economic Development Project of the Co-Operative.

This sub-section, describes the local co-operative's approach to farmers in the light of the farmers' motives. Neighbouring communi-

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10. Niehoff, 1966, p. 11.

ties in Nambu Town, each of which had a local co-operative, were unable to achieve what the Shiwa people achieved. From limited comparative data, this section articulates the characteristics of the Shiwa Agricultural Co-Operative's approach.

### 1. Outline of the Co-Operative

The Shiwa Agricultural Co-Operative was organized in 1947 by the Agricultural Co-Operative Law; it included all the farmers in the community in its membership. In 1968, it had 1,221 members distributed in 832 households, a board of trustees with 11 members, and 48 full-time staff members. The staff members were relatively young, the average age in 1968 was thirty-two.<sup>11</sup> Only six members were forty or over. Except for a few members in the Extension Department, this co-operative was made up of entirely local people.

The co-operative owned nine buildings, a broadcasting studio, a telephone-exchange system, a service station for both motor vehicles and farm machines, and an electronic mini-computer. With these facilities, it provided four categories of service: (1) credit union functions; (2) farm produce market; (3) purchasing agent of necessities for farmers and (4) extension services. In all fields of service, the co-operative had good access to sources of information.

In addition the co-operative had good access to sources of information about its members.<sup>12</sup> (1) It had complete information on

11. Nōsangyoson Bunka Kyōkai, ed., 1969, p. 190.

12. See Chapter One, Section III.



its members' households, including names, sex, age, acreage, and farm machines. (2) By handling its members' money, the co-operative was familiar with the economic situation of each household. Its control over the members' money was so strong that no commercial bank attempted to advertise in this community. (3) Finally, to keep its members informed on local affairs, it broadcasted local news every evening, and in return received information from the members.

The co-operative was held in high social esteem. In the period between 1947 and 1967 its activities obtained many prizes from various institutions. Six times it was praised by agencies and departments of the central government; five times by the prefectural government; 18 times by national associations of co-operatives, including the grand-prize for "The Most Distinguished Medium Sized Co-Operative of the Nation in 1967"; twenty times by the prefectural federations of co-operatives and twice by other distinguished institutions such as the Japan  
13  
Broadcasting Corporation. Newspaper men in Morioka City often visited the co-operative and reported on its activities. Numerous farmers from other villages and towns flocked to the co-operative to see the programmes. In 1969 the co-operative had to refuse all "observers" as it could not  
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serve for its own members.

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13. Shiwa Agricultural Co-Operative, 1967, p. 20.

14. Correspondence from the Shiwa Agricultural Co-Operative.

## 2. The Leaders

The Shiwa Agricultural Co-Operative had good leaders who kept the morale of other staff members high. In 1968, the president was an octogenarian who had been a hard working farmer before the war. During the war he assisted the mayor in the community office, familiarizing himself with most of the leaders in the community. He committed himself to the farmers' movement for more than thirty years, acquiring wide knowledge and experience. In 1968, the central government awarded him a medal for his contributions to the farmers' movements. He was the first in this field in Iwate Prefecture. He was a well known figure and was respected as a leader of the farmers' movement in his community as well as in Iwate Prefecture.

The vice president, Kyū Kumagai, in his forties, was the son of the largest landlord in Shiwa Community. Kumagai received the highest education available to his generation. He was trained as a veterinarian. During the war, he served as an army officer in China where he was when the war ended. General Chiang Kai-shek's famous speech to  
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excuse the vices and crimes of the Japanese deeply impressed him.

Kumagai, ashamed of what the Japanese people had done to the people of China, thought that one way to respond as a Japanese to the generous treatment of the Chinese people would be to give youth a "good" education, to build respectable communities, and to develop Japan as a peace-loving nation. Kumagai determined at that time to devote the rest of

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15. In the summer of 1945, General Chiang Kai-shek made this speech over the radio, and I heard it myself.

his life to the development of his own community, Shiwa. On returning to Japan, he was convinced that he could serve the community best through the co-operative. He was a diligent worker and had the support of the staff members. He was devoted to the co-operative and refused to leave it even when his aging mother pleaded with him to manage the family farm. His sincere personality and logical presentation of ideas impressed all the community people, whether they were for or against his personal notions.<sup>16</sup> When local people criticized him, the typical complaint was: "Mr. Kumagai is too science oriented: he has too much trust in natural and social scientists in universities. He is too logical and 'theoretical'<sup>17</sup> to admit the 'emotional' elements of farmers."<sup>18</sup> As will be described, Kumagai was the core-leader of the co-operative's economic development project.

The third man, the foreman, also in his forties, was the househead of a leading dōzoku in the community. His grand-father had been a mayor. In his boyhood, he had a reputation as a sharp, mischievous, and a bit "deviant" student. While serving in the front in China, he was wounded and was dismissed from the army. In the 1950's, because he could not farm himself he began to serve in the co-operative. Some local people who found Kumagai "too theoretical" went to the "mischievous"<sup>19</sup> foreman to talk over their problems.

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16. From my field notes.

17. When Shiwa farmers talked about 'theory', they meant anything abstract and universal rather than empirical and local.

18. From my field notes.

19. Op. cit.

The three leaders had different merits and shortcomings but a common affiliation to local interests; their harmonious co-operation however, then supplemented their shortcomings. Shiwa was one of Nambu Town's nine communities and seven co-operatives. By comparison a couple of co-operatives in the neighbouring communities lacked competent leadership. At the Federation of Agricultural Co-Operatives in Iwate Prefecture, which had comprehensive and comparative information, the staff members evaluated highly the distinguished local leadership of the Shiwa Agricultural Co-Operative.<sup>20</sup>

### 3. The Leaders' Awareness of "Problems" and Attempts to Alleviate Them

At the end of the 1950's, Kumagai began to realize a few growing "problems" in the community.<sup>21</sup> First, the increase in rice-yields reached a plateau and there was no possibility of creating more paddy-fields.<sup>22</sup> Second, technological change increased household expenditure, while the need for subsidiary income remained constant. Third, Shiwa farmers traditionally depended upon the brewing occupation, but technological change in the manufacturing processes doomed their future.<sup>23</sup> Action would have to be taken to develop Shiwa's economy.

Despite the acute need for subsidiary income, Kumagai disliked the brewing occupation for two reasons. First, the farmers had

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20. Op. cit.

21. The information in this paragraph was provided by Mr. Kumagai.

22. For the conditions of increasing rice-yields, see Chapter Four, Section I-A-1.

23. See Chapter Four, Section III-E.

to leave their home for six months every year, causing tensions in their family life. For example, each November when farmers were to leave their community, young school children frequently became more emotional and<sup>24</sup> disturbed classes. Some women confessed that while their husbands were away in the winter season they tended to scold their children more<sup>25</sup> than necessary.<sup>26</sup> Conflicts between house-wives and young-wives became more serious in the winter than in the summer. According to a post-war record, a young wife committed suicide a couple of days before her husband was to leave on the seasonal emigration; she thought she would be unable to get along with her in-laws. Second, the men's absenteeism slowed down economic development projects. In winter when the co-operative held meetings in each hamlet and discussed plans, the majority of attendants were women who had little authority in decision-making on farm management. Kumagai reasoned that to increase the speed by which programs were developed men had to stay in the community and stop working as brewers. The co-operative had to offer alternative sources of comparable income to entice men away from brewing.

Kumagai studied the changing trends in rice-cultivation and concluded that the operation eventually would be mechanized by heavy machinery. To utilize heavy machinery like tractors, however, the number of days of operation had to be increased. To get maximum use of

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24. Information provided by school teachers.

25. Information provided by the Extension Department of the co-operative.

26. On conflicting relations in households, see Chapter Two, Section I-B-1.

the machinery, additional farm operations requiring tractors had to be introduced: the new farm operations might be animal-husbandry, which would require labour in winter, or a cash-crop such as apple-growing, which would require tractors for pesticide-application by speed-sprayers.

Kumagai discussed his ideas with his colleagues and won their support. The co-operative then asked the help of economists in the local university. The economists carried out the Agricultural Basic Survey<sup>27</sup> of Shiwa in 1961. Based upon this information, the economists and the co-operative developed in 1964 a long-term plan which they called<sup>28</sup> the Shiwa Agriculture Modernization Plan. (The plan will be referred to as the "economic development project" or simply as the "project".) Staff members of the co-operative held discussion meetings in each hamlet and tried to explain the basic ideas. The project was ratified at the general meeting in April, 1964.

Other neighbouring towns and villages also asked the help of either the local university or the Tōhoku National Agricultural Experimental Laboratory in conducting surveys, producing reports, and in formulating economic development programmes.<sup>29</sup> None of the communities, however, made any commitment to work with the research agencies: the completion of the contracted research marked the close of the interaction. In the case of Shiwa, however, interaction between research

27. Shiwa Agricultural Co-Operative, ed., 1962

28. Shiwa Agricultural Co-Operative, ed., 1964.

29. See Tonan Village Office, 1961, and Yahaba Village Office, 1957 and 1963, and Tōhoku National Agricultural Experimental Laboratory, 1970.

agencies and the co-operative which began in 1961 was a continuing process. This was partially due to Kumagai's friendship with an economist who used his own resources to introduce Kumagai to other research agencies.

#### 4. The Outline of the Economic Development Project

The co-operative produced a booklet in 1964 outlining the following three aims of the project.<sup>30</sup> First, the project ought not to decrease Shiwa farming households. Second, Shiwa farmers ought to increase their income by differentiating farm operations. Third, Shiwa farmers ought to "industrialize" their economic activities.<sup>31</sup> In brief, the co-operative wanted to industrialize farming without modifying small farms. This goal included a discrepancy: industrialization usually requires large scale farming,<sup>32</sup> but the co-operative sought to resist this general trend.

The co-operative adopted two strategies: (1) minimize risks and (2) produce output before diminishing returns begin on the markets. To implement these strategies, the project adopted three rules. First, rice-cultivation ought to be the "basis" and further differentiation of farm operations ought to be the "additions". Compared to the 28 other communities in the vicinity, Shiwa farmers had relatively large paddy-fields. They had the fourth largest acreage per household and

30. Shiwa Agricultural Co-Operative, ed., 1964, Mr. Kumagai wrote this.

31. Definition of "industrialization" appeared in Chapter One, Section I-B-2.

32. For example, see Halpern, J., 1967, p. 115.

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the third highest proportion of rice-paddies in the total acreage; resources which ought to be utilized. In addition, the government controlled rice-prices at a high level, an advantage which other crops did not have. Rice was the securest crop under the given conditions. Second, Shiwa farmers ought to produce a sizable output of the best quality rice. According to the co-operative, this rule seemed the

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best policy for competing in the market. The co-operatives were to provide technical assistance and to closely control marketing trans-

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actions to eliminate produce of inferior quality. Third, the project ought to be flexible. This rule had two aspects: (1) flexibility in the project itself and (2) flexibility in the manner in which each farmer made decisions. In other words, the co-operative tried to implement the project by consensus, not by coercion.

The third rule does not imply the lack of programmes. On the contrary, the co-operative proposed very detailed programmes. The first proposal was an eight year project. The project set a goal for each sphere of farm operations: (1) co-operative rice-cultivation by the heavy machinery system; (2) development of animal husbandry and (3) development of cash-crops. It proposed three stages: (1) the stage for indoctrination of the "basic ideas" of the project; (2) the stage at which farmers would choose a couple of new farm operations and (3)

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33. Tonan Village Office, 1961, pp. 16-17.

34. As an example of the application, see Section II-A-2-a of this chapter.

35. The first and second rules are discussed in Section II-B-1 of this chapter.



the stage for achieving the goals. The proposed project imposed certain responsibilities upon the co-operative: (1) to conduct evaluating surveys every year; (2) to conduct comprehensive surveys at least every five years and (3) to improve the quality of services with special reference to the Extension Department. Finally, the project estimated that both farmers and the co-operative would have to invest 893 million yen over eight years.<sup>36</sup> In 1968, the co-operative revised the programmes:<sup>37</sup> the project would last for an indefinite period. Instead, the co-operative established sub-goals for every five years or so. In sum, the project had continuity.

Except for Hizume Community, in which only 13% of the working population were engaged in farming,<sup>38</sup> each of Nambu Town's co-operatives had its own economic development project. In most cases, leaders were more interested in the plans and neither admitted the need for flexibility nor acknowledged farmers' needs. For example, in Community A, the co-operative constructed an expensive rice-mill according to plan, but not many farmers used the facility, and consequently, it was heavily in debt. In Community B, the local co-operative emphasized rapid mechanization of rice-cultivation, thus, increasing farmers' debts. As a result, farmers began to take non-farm jobs, instead of introducing new farm operations which would require more capital. The Shiwa Agri-

36. All the information in this paragraph is based on Shiwa Agricultural Co-Operative, ed., 1964.

37. Shiwa Agricultural Co-Operative, ed., 1968 (B).

38. Computed from Shiwa Town Office, ed., 1967 (A), p. 9. In the case of Shiwa, the proportion was 76%.

cultural Co-Operative had constant access to outside change-agents who warned of such pitfalls, and was more cautious in this respect than other communities.

## 5. Implementation of the Economic Development Project

The co-operative seemed to make the following implicit postulates on farmers' behaviour. First, Shiwa farmers had a strong economic incentive. To express this assumption, people said: "Shiwa farmers will do nothing unless it is profitable."<sup>39</sup> Second, it was assumed that greater access to resources such as information, technical assistance, and loans would motivate the farmers to adopt innovations. Third, they assumed that Shiwa farmers would like to behave as members of a group and would need groups to belong to. Incidentally, the third postulate conformed to the project's first goal. In order to maintain the present farming households with limited resources, farmers would have to co-operate as members of larger groups. Therefore, the change-agent had to "educate" farmers through group activities. The co-operative seemed to assume that if these three postulates were satisfied by programmes, Shiwa farmers would support the project proposed.

The co-operative supplied the necessary information to its members through the following five channels: distribution of printed matter, a telephone system hooked up to the central studio from which<sup>40</sup> the co-operative staff broadcast, discussion meetings in each hamlet,

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39. The original was: "Shiwa no Ningen wa, Son ni naru-koto wa zetai shinai."

40. The co-operative installed this system in 1958.

organized lectures and/or demonstration meetings, and visits to individual households.

The co-operative developed the Extension Department from  
<sup>41</sup> seven workers <sup>42</sup> in 1958 to thirteen by 1968. This department was the sixth largest of the 127 agricultural co-operatives in Iwate Prefecture and had the most intensive service network for its members. An average extension worker in the prefecture had to cover 256 farming <sup>43</sup> households while Shiwa extension workers covered 64 households. The extension department had a head, two men responsible for rice-cultivation and mushroom-culture, one for apple-growing and tobacco-growing, one for dairy-herds and poultry, one for cattle-raising, one for pig-raising, and six others. The department head had seventeen years experience in this field, or out of 457 workers in the prefecture, he ranked <sup>44</sup> fifteenth in terms of experience. He was one of the most highly educated and had first class qualification according to the ranking system established by the national association of co-operatives. Other members in the department were younger: the average age was thirty in 1968. All of them had a grade 12 education plus a couple of years of special training. One had his B.Sc. from the local university plus one year of special training at a larger university. The members had access to

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41. Two staff members in charge of communication were included.

42. Shiwa Agricultural Co-Operative, ed., 1958, p. 12.

43. Computed from: Federation of Agricultural Co-Operatives in Iwate Prefecture, ed., 1967.

44. Federation of Agricultural Co-Operative in Iwate Prefecture, op. cit.

sources of latest information, such as universities and national or prefectural agricultural experimental laboratories. They also had access to printed information such as monthly technical magazines published by the prefectural government, agricultural newspapers, and other periodicals, references and books. The younger extension workers were active and ambitious; many of them admitted that if it had not been for Kumagai and the department head, they might not have stayed in the co-operative. Kumagai emphasized at every possible occasion the importance of the department to other staff-members<sup>45</sup> so that extension workers could maintain their high working morale. The department head's quality of leadership maintained harmonious peer-relations.

In 1964 the co-operative set up seventeen funds for different purposes. The interest rates varied from 6.5% to 8.5% per annum, but were cheaper than the 11% offered by commercial banks. Any farmers in Shiwa could borrow up to 6.7 million yen with a mortgage and had to repay the debt within one to eleven years, depending on the arrangement.

In 1955, the co-operative organized all the farmers in each of Shiwa's hamlets and called the hamlet group the Farmers' Association; there were twenty farmers' associations in Shiwa. The association members' common interest was limited to rice-cultivation, in which everyone was engaged. Under the project, however, the association was as powerless as a household in adopting "new" farm operations.<sup>46</sup> The op-

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45. From my field notes.

46. See the project's third principle in Section I-A-4 of this chapter.

erations were called "new" because farmers were to attach new meaning to them.

In 1960, the co-operative began to organize farmers who were to engage in specific operations such as cattle-raising. In general terms, it called these groups 'Producers' Associations. In specific terms, for example, it referred to the Cattle-Raisers' Association. Shiwa farmers organized eight producers' associations by 1968. These were voluntary groups, and the members had certain privileges and obligations. They were entitled to receive free technical services from the Extension Department, had easier access to financial resources, and had access to other sources of information. On the other hand, the members had to purchase necessary items and sell their output through the co-operative. Each association elected its own executive, who was also an auxiliary member of the Board of Trustees. An association decided its programmes at its general meeting -- not by instructions  
47  
from the co-operative.

In 1967, the co-operative tried to renovate the farmers' associations. It established five criteria for the renovation and asked farmers to discuss them in the winter of 1967-1968. The main points were: (1) to establish closer relations in each hamlet between the farmers' association and members of the producers' associations; (2) to establish closer relations between farmers' associations and the co-operative by appointing the executive of each farmers' association to

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47. Nōsangyoson Bunka Kyōkai, ed., 1969, pp. 184-186.

the Board of Trustees as an auxiliary member; (3) to include non-production activities within the functions of farmers' associations; and (4) to "educate" farmers by encouraging them to develop and implement programmes and to establish a budget for each fiscal year. In the spring of 1968, Shiwa farmers renovated the farmers' associations as the co-operative suggested.

In addition, the co-operative supported the Women's Association, the Youth Association, and the Young Heirs' Association. When the co-operative was to propose new programmes, representatives from associations listed above -- thirty-one persons altogether in 1968 -- discussed the draft as auxiliaries and submitted critiques to the Board of Trustees. The co-operative thus succeeded in organizing its members.

All the co-operatives in the other communities of Nambu Town had the same channels of communication as Shiwa. In this respect, no difference existed among the seven local co-operatives. But Shiwa had an advantage in terms of its Extension Department. First, the extension departments of other co-operatives were much smaller; they had<sup>48</sup> eight or less workers in 1968. Second, all the extension workers in Nambu Town had equal access to the sources of information, but Shiwa workers had more intimate involvement with universities and government<sup>49</sup> laboratories. Financially, Shiwa had another relative advantage in<sup>50</sup> possessing the largest acreage of rice-paddies in Nambu Town. There-

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48. Federation of Agricultural Co-Operatives in Iwate Prefecture, ed., 1967, pp. 6-8.

49. From my field notes.

50. Shiwa Town Office, 1967, p. 9.

fore it had the largest gross farm income and the largest amount of members' savings. Finally, according to informants in other communities, the Shiwa people had a stronger sense of solidarity and supported their co-operative as their own institution. For example, when the central<sup>51</sup> government encouraged amalgamation of co-operatives and when the Federation of Agricultural Co-Operatives in Iwate Prefecture and other local co-operatives invited Shiwa people to join, the latter refused<sup>52</sup> the proposal, and were supported by 82% of their members. The total survey conducted by the Nambu Town Office in 1967 also illustrates the<sup>53</sup> above point. In three of the communities, only 10 to 12% of farmers were in favour of their co-operatives' extension services. In two other communities, 38% of farmers supported their extension workers. In Shiwa and in a neighbouring community, 43% of farmers exploited ser-<sup>54</sup>vices they could obtain from the local co-operatives. Compared with other communities in the town, Shiwa had more favourable conditions for implementing the project.

#### B. The Members' Reactions to the Programmes of the Co-Operative

As the change-agent, the co-operative tried to influence its members to adopt innovations. Niehoff pointed out four role character-<sup>55</sup>istics of innovators to be seriously considered. The staff-members

51. See Chapter Two, Section II-B-2-e.

52. Nōsangyoson Bunka Kyōkai, ed., 1969.

53. Shiwa Town Office, 1968 (B).

54. The 1968 survey showed higher support. See Section I-B-1 of this chapter.

55. Niehoff, A., 1966, p. 12.

of the co-operative were practically all local people, thereby satisfying three of his categories: "personality", "use of local language", and "affiliation". The preceding description also indicates that the staff-members had technical competence, good communication channels, provided a number of opportunities to recipients, utilized local resources,<sup>56</sup> and had flexibility and continuity in their project. Under these conditions the recipients ought to show a favourable reaction to the programmes offered. This sub-section, deals with the farmers' reactions to the co-operative's implementation of the project.

In the summer, 1968, the co-operative conducted a survey of its members.<sup>57</sup> The respondents were divided into three acreage groups: (1) those farmers with 2 ha. or over, who composed about one-third of farming households; (2) those with 0.5 to 2.0 ha. or about 58% of farms; and (3) those with 0.5 ha. or less, or 10% of the population. In this chapter, these groups are referred to as "larger farmers", "smaller farmers" and "very small farmers" respectively.

#### 1. Farmers' Reactions to Sources of Information and Extension Workers

The co-operative selected four sources of communication: (1) printed matter; (2) lecture meetings; (3) discussion meetings at each hamlet and (4) individual households visits. Then it selected concrete examples from each source and asked farmers' reactions.

56. Niehoff, op. cit., pp. 13-23.

57. I actively participated in this survey.



In 1964, the co-operative distributed a booklet which outlined the economic development project, and which staff members assumed should have been widely read.<sup>58</sup> At the time of the survey 23% of 795 respondents did not have the booklet, but only 23% of the respondents had read the booklet. Forty-five percent of the larger farmers had read it while 21% of the smaller farmers and 10% of the very small farmers had read it.

Since 1966, the co-operative sponsored a series of lecture meetings by university professors. Twenty percent replied that they had no knowledge of the series, and 16% knew of it but showed no interest. Of those who were interested in the series, 36% of the farmers wished to have more lectures on rice-cultivation, and 29% of the farmers wished more on farm management. Both larger and smaller farmers equally showed interest in improving their rice-growing techniques; however,<sup>59</sup> more larger farmers wished to improve their farm managerial skills.

Fifty percent of the farmers held a favourable opinion of discussion meetings held in each hamlet, and 23% felt negatively. The remainder did not have clear reactions. Generally speaking, larger farmers were positive and smaller farmers were inclined to be negative.<sup>60</sup> Very small farmers did not state their opinions. According to the extension workers, larger farmers tended to speak more than the rest of the farmers at the meetings in the hamlets. Thus, they concluded, the

58. Shiwa Agricultural Co-Operative, ed., 1968 (A), Table 93.

59. Op. cit., Table 94.

60. Op. cit., Table 96.

larger farmers might feel more satisfied than the rest of the attendants.<sup>61</sup>

Those staff members who most frequently visited individual households were extension workers. In the survey by the Nambu Town Office, Shiwa farmers responded as follows: (1) 43% of them would like to discuss their technical problems with the extension workers; (2) 11% of them would do the same with the extension officers of the prefectural government; and (3) 34% of them would prefer to study by themselves.<sup>62</sup>

In the survey of 1968, the respondents were more favourably disposed to the local extension workers: 56% of them were contented with the services of the Extension Department, 13% were critical, and 31% were indifferent. Larger farmers were more pleased with the services than smaller farmers, and very small farmers were indifferent.<sup>63</sup>

There are two obvious trends in the above discussion. First, farmers' interests were selective. Those who would obtain more benefits seemed to show more enthusiasm than those who obtained fewer benefits. Farmers also showed their interests in the subjects which would increase their benefits. Second, farmers seemed to like personal communication such as extension workers' visits to their homes or hamlet meetings more than impersonal communication such as printed matter or lecture meetings in which communication was one-sided.

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61. Information provided by the Extension Department.

62. Shiwa Town Office, 1968 (B), p. 3.

63. Shiwa Agricultural Co-Operative, ed., 1968 (A), Table 95.

## 2. Farmers' Reactions to the Loans

During the period from 1956 to 1963, there was a relatively slow rate of increase in the co-operative's loans: the amount increased from 26 million yen to 93 million yen.<sup>64</sup> After the co-operative set up various funds, the amount immediately soared: it rose from 178 million yen in 1964 to 240 million yen in 1966, and to 316 million yen in 1968.<sup>65</sup>

In the 1968 survey, the co-operative asked its members which services the farmers wanted improved and developed. It offered nine alternatives and asked farmers to select three. Then it gave three points to the first priority, two to the second, and one to the third. The members' four highest priorities were: (1) to sell on the market at higher prices (1,204 points); (2) to strengthen technical services (761 points); (3) to assist the members in improving farm managerial skills (580 points) and (4) to increase funds for loans (491 points).<sup>66</sup> Contrary to staff members expectations, the farmers seemed satisfied with the financial services.

## 3. Reactions to the Organizing of Farmers by the Co-Operative

By organizing producers' associations, the co-operative had to compete with local dealers. Cattle-Raisers' Association, organized in 1960 is an illustration. In Shiwa, cattle-raising began in 1931 but

64. Information provided by the Shiwa Agricultural Co-Operative.

65. Op. cit.

66. Shimo, 1968, p. 33.

had been overshadowed by horse-raising until the 1950's. At the end of the 1940's local animal-dealers suggested that some farmers raise cattle<sup>67</sup> instead of horses and in 1950 farmers raised 97 head of cattle. The farmers raised cattle to produce manure rather than for sale on the market. It was after 1960 that Shiwa farmers started to raise cattle for market and the co-operative helped them financially, technically, and in marketing transactions. The local dealers felt threatened and attempted to persuade cattle-raisers to sell their animals through them. Members of the Cattle Raisers' Association also visited farmers to convince them of the benefits of joint-shipping. The co-operative won the support of the people because they could sell a cow for 240,000 yen,<sup>68</sup> while local dealers could raise only 220,000 yen. In the process of winning support the local co-operative created social tension between local dealers and farmers.

Some representatives of the Women's Association were critical of the co-operative's programmes. They complained of being utilized to distribute commodities and to collect money, transactions which not only took time but brought them criticism from those who used to purchase goods from local dealers. The women claimed that the small handling charges the co-operative paid did not compensate for the psychological pain of being labelled an agent of the co-operative. Some of the representatives wished to resign from office. One of them put

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67. Nōsangyoson Bunka Kyōkai, ed., 1969, p. 141.

68. Op. cit., pp. 142-143.

her feelings in the following terms: "We know the co-operative is trying to serve the farmers and we are content with its services in many respects. However, it tends to forget that we are serving it as well."

In the 1968 survey, 43% of respondents found the renovation of the Farmers' Association beneficial while 31% were not certain and 22% were critical. There was no correlation between acreage and the farmers' reaction to this question. In addition there was no significant relation with other variables such as labour force in households, respondents' age, or respondents' school career.<sup>69</sup> In brief, farmers were still not certain as to the benefits of the renovated Farmers' Associations.

#### 4. Summary

To summarize the empirical findings in the light of the co-operative's postulates on farmers' behaviour:<sup>70</sup> the first postulate was correct. Farmers selectively exploited the resources provided. Certain information increased their profits better than other information. Those farmers who would obtain larger benefits had stronger motives to absorb the information. Farmers requested the co-operative to improve the following services: (1) services which would increase their income; (2) services which would eventually increase output and (3) services which would assist them to "rationally" allocate limited

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69. Shiwa Agricultural Co-Operative, ed., 1968 (A), Tables 91, 191, 226, and 250. The co-relation co-efficients between these variables and the responses were, 0.116, 0.082, 0.054, and 0.011 respectively.

70. See Section I-A-5 of this chapter.

resources. In brief, farmers exploited resources when they found them profitable.

The second postulate, "an increase in access to resources would motivate farmers", was partially true. The farmers' selectivity was a modifier, that is, greater access to resources was a necessary but not sufficient condition for farmers' adopting innovations. If the co-operative could provide resources "beneficial" in the eyes of farmers, the latter would exploit them. With the best intentions, however, the co-operative staff often made available resources which that staff considered "beneficial". They frequently anticipated high rates of adoption and were shocked when these were not forthcoming.

Finally, the co-operative postulated that the farmers needed to belong to groups; this hypothesis was partially true. The co-operative organized producers to increase farmers' profits as well as its own profit. It organized women according to their interests as well as for its own convenience. In brief, the co-operative and farmers exchanged mutual benefits through new groups. Some farmers who felt their interests threatened were critical: they wanted to see the co-operative serve them but not "exploit" them.

In sum, the co-operative staffs were familiar with local situations and had good insight into the farmers' behaviour. In spite of their best intentions and self-criticisms, however, the local co-operative tended to see the situation from its own viewpoint and often organized the members for its own convenience. Farmers seemed well

aware of the co-operative's good intentions as well as the discrepancies between its motives and its deeds.

## II. Differentiation of Production Activities in Shiwa in the 1960's

If farmers supported the co-operative's project, or if the recipients adopted innovations proposed by the change-agent, two consequences took place: (1) development of animal husbandry and (2)  
<sup>71</sup> development of cash-crops. It was suggested earlier that action would occur when the propensity to increase subjective satisfaction and the  
<sup>72</sup> modifiers balanced. From the standpoint of the co-operative, farmers' characteristics were the modifiers; while from the farmers' standpoint, the co-operative's characteristics were the modifiers. According to Niehoff's terms, the "plan-integration line" -- the economic development project and the achievements -- was in the midst of two forces:  
<sup>73</sup> the change-agent's actions and the recipients' reactions. This section, deals with how farmers adopted innovations proposed under given conditions.

### A. Differentiation of Farm Operations

Empirical data on the development of animal husbandry, cash crops, and how "new" operations were combined in individual farms is discussed in this sub-section.

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71. See Section I-A-3 and 4 of this chapter.

72. See Chapter One, Section I-B-3.

73. Niehoff, 1966, p. 10.

# 1. Animal Husbandry

In 1961, the total output value of animal husbandry in Shiwa was 20.5 million yen in monetary terms, which equalled 7% of the value of rice sales. The sale of draft-cows was occupied the largest portion of animal husbandry output consisting of 61% of the total; sales of other items -- dairy products, poultry, and pigs -- were about 12% each. <sup>74</sup> Sales of horses were negligible. This section treats cattle-raising in some detail, and other items very briefly.

## a. Cattle-Raising

Cattle-raising in 1961 was primitive: Shiwa farmers engaged in this operation not for marketing but for manure. Among 491 cattle-raising households, 320 households or 65% raised 1 head; 141 households or 29% raised 2 head, and only 5 households or 1% raised 4 head. <sup>75</sup> Their raising techniques were poor, and their cows brought low prices in the market. Because of the horse-raising industry in the pre-war period, the Shiwa farmers had the potential resources for developing this operation but lacked access to technical services and the necessary market orientation.

The co-operative developed three programmes to promote cattle-raising: (1) they sent an extension-worker for advanced training; (2) they educated farmers on marketing transactions and on the need to adopt

74. On the insignificance of horse-raising in the 1960's, see Chapter Four, Section II-B.

75. Shiwa Agricultural Co-Operative, ed., 1962, p. 57.



advanced raising techniques and (3) they established a fund for raisers. Larger farmers with some experience in cattle-raising were convinced of the profitability of the "new" operation. As the goal of the operation changed, the practices also changed: farmers began to purchase young cattle in the market, raise them for three to five months with enriched feed, and sell them again. This practice was institutionalized by 1966 as men's work. During the period between 1961 and 1968, the number of raisers increased from 491 to 522, the number of cattle from 697 to 1,305, and the number of cattle sold increased from 77 to 771. <sup>76</sup>

The co-operative managed to organize 301 or 58% of the raisers in the Cattle-Raisers' Association by 1968. In doing so, it had to compete with the local animal-dealers as mentioned earlier. The co-operative had to compete with local veterinarians, too. The extension worker who was the specialist on dairy-cattle had extended training and long experience: he performed simple operations in emergencies. For serious problems, the co-operative had access to a prefectural veterinarian. Both of them patiently educated the farmers on how to look after their cattle. The local veterinarians felt threatened. They complained of "over-trained" farmers and tried to persuade farmers not to put their faith in "amateurs". Some farmers, however, preferred the free services of the extension workers to the expensive local veterinarians. According to some informants, veterinarians' services improved particularly after the project was initiated.

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76. Shiwa Agricultural Co-Operative, ed., 1962, p. 57 and 1968 (A).

One of the reasons for the success of the co-operative was its greater access to resources. For example, it had access to a more favourable market. In 1966, the co-operative set up a long-term contract with a big dealer in Ōsaka, who paid higher prices for Shiwa beef than local dealers. Naturally, farmers began to ask the co-operative to ship their animals. In 1968, the non-association members primarily depended upon local dealers only for the purchase of young cattle.

b. Other Spheres of Animal Husbandry

In pig-raising there were two operations: feeder-pig and brood-sow. Feeder-pigs were bought as piglets and fed enriched feed, kept for several months, and later shipped to market as mature pigs. Brood-sows, on the other hand, were female pigs; artificially inseminated, their piglets were kept for three months and shipped to market. Women engaged in these operations. In 1961 when the Pig-Raisers' Association was organized, 93 households raised 173 feeder-pigs.<sup>77</sup> On the advice of the economists, the co-operative tried to persuade its members to change from the feeder-pig to the brood-sow operation. The innovation was adopted and by 1967, Shiwa farmers shipped 269 feeder-pigs and 3,138 piglets to market. The average size of pig-raising was still small -- 3 sows in 1968. The co-operative encouraged the farmers to control the varieties of sows, checked the quality of piglets a couple

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77. Shiwa Agricultural Co-Operative, ed., 1962, p. 57.

of days before shipping, and sent the inspected ones to market. By 1968, Shiwa farmers produced one-fourth of the piglets on the market in the central and northern part of the prefecture. The quality of Shiwa piglets was superior and they were priced from 8% to 15% higher than other piglets.<sup>78</sup> The co-operative and the association established a profit-guarantee system in 1965, jointly forecasting variations in market prices and agreeing on an "upper ceiling" and a "lower ceiling". If market prices went through the upper ceiling, raisers were to save 500 yen per head at the co-operative. If the prices dropped below the lower ceiling, the raisers were to withdraw from their savings up to 500 yen per head. In case there were no savings, the co-operative would give raisers loans with reasonable interest rates.<sup>79</sup> By 1968, the co-operative managed to organize 92% of 101 pig-raisers in the community.

Dairy-cattle keeping was mostly the men's job and developed only slowly. In the period between 1961 and 1968, the number of dairy-cattle increased from 110 head to 230, and the number of dairymen from 43 to 72.<sup>80</sup> The Dairymen's Association, which was organized in 1960 and included 50% of dairy-cattle keepers by 1968, predicted that farmers ought to keep at least four head to obtain a sizable profit. To achieve the above hypothetical goal, farmers needed 1 ha. of pasture-land. Shiwa farmers could not afford this unless they managed to:

78. Information provided by the Extension Department.

79. Nosangyoson Bunka Kyokai, ed., 1969, p. 156.

80. Shiwa Agricultural Co-Operative, ed., 1962, p. 47 and 1968 (A).

(1) to grow grass in winter, requiring below-surface drainage pipes and (2) to improve jointly-owned pasture. To fulfill these conditions, <sup>81</sup> the co-operation of the entire community was indispensable.

Poultry-keeping was not popular in Shiwa. In 1961, <sup>442</sup> households kept birds but 75% of them had less than 10 layers. Even the largest keeper had less than 70. In 1968, 79 households raised layers and birds for consumption, but the output was still limited. In 1968, only five farmers kept over 300 birds and only three of them more than 1,000. Men accepted the major responsibility in sizable poultry-keeping. The Poultry-Keepers' Association had 25 members, but was not active.

## 2. Cash-Crops

Compared with seed-crops and animal-husbandry, the proportion of cash-crops -- apple-growing and tobacco-growing -- in Shiwa economy was small. In 1961, out of the total sales which amounted to 281 million yen, the proportions of seed-crops, animal-husbandry, and cash-crops <sup>82</sup> were 92.2%, 7.2%, and 0.5% respectively. A more significant crop was mushroom-culture, innovated in 1962. This sub-section treats the case of mushroom-culture in some detail and other items only briefly.

<sup>83</sup>

### a. Mushroom-Culture

In the winter of 1961, two farmers visited the co-operative to borrow money. They had seen some farmers in a neighbouring community

81. On difficulty of obtaining the entire community's agreement, see Chapter Three, Section III-A-2.

82. Computed from the data in Shiwa Agricultural Co-Operative, ed., 1962.

83. Information provided by K. Kumagai.

cultivating mushrooms in winter and wanted to do the same. The co-operative examined the operation and showed enthusiasm. The co-operative wished to use the operation as a model case in the economic development project, which was then in its embryonic stage. The co-operative wished to develop a good marketing image of Shiwa produce by shipping a sizable amount of good quality produce.<sup>84</sup> In 1962, the co-operative announced to all farmers a new programme for mushroom cultivation, asking them to start the operation on a limited scale under the strict supervision of experts. In return, the co-operative offered 100% loans with a generous repayment period. All the interested farmers -- fifty of them -- organized the Mushroom-Cultivators' Association in 1962.

The rate of adoption was remarkable. In the winter of 1963, the 50 cultivators harvested 20,000 k.g. of mushrooms and earned 6 million yen. Seeing this achievement, 77 more farmers joined the association. By 1967, the output increased to 50,000 k.g. and the income to 30 million yen. In 1968, the association included 172 members. The above achievements were due to the cultivators' motive to produce a quality output. An extension worker and the executives of the association asked a group of experts to supervise their operation -- and the experts charged very high supervising fees. All the cultivators interviewed admitted that the high charge motivated them to learn the techniques well.

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84. See the second strategy and the second rule of the project in Section I-A-4 of this chapter.

The association had strong control over its members. It institutionalized four technical study meetings per annum, sent representatives to ascertain market needs, and imposed high standards on its members' output. Consequently, Shiwa mushrooms maintained a high quality. For example, in February of 1968, 220 mushroom cultivators in Iwate participated in a contest, and 112 of them were from Shiwa. Experts awarded prizes to 26 cultivators, 23 of them from Shiwa. By 1967, the brand of Shiwa Mushroom was established in Hokkaidō markets as the co-operative had wished.

Mushroom-culture was suitable to the economic pattern of Shiwa. Its seasonal characteristics matched the slack season of rice-cultivation. In addition, either women or old people could manage the operation. Due to pressure from rice-dealers, the farmers had to adopt linen bags since 1964. The women "unemployed" from straw-bag making adopted mushroom cultivating as their new winter job.

b. Other Spheres of Cash-Crops

In contrast to animal husbandry and mushroom culture, Shiwa farmers grew apples jointly: out of 60 ha. devoted to apple growing in 1968, 30 ha. were joint-orchards. One hundred and twenty-four growers, including 100 joint owners of orchards, organized the Apple-Growers' Association in 1963. They handled all operations jointly and shipped their output through the co-operative. Except for the

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85. In Chapter Six, Section I-C-2-a, treats this point again.

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application of pesticides by heavy machines, most apple growing steps were performed by women. In addition to the above association, thirty-nine farmers organized the Pesticide Applicants' Association, which arranged to borrow speed-sprayers. These farmers performed other operations individually and sold their produce to either local merchants or through the co-operative. The quantity of apples doubled in the period between 1961 and 1966 and continued to rise as the trees matured. In spite of the increase farmers did not receive a significant profit, for acreage was too fragmented and the market prices varied.

During the period from 1961 to 1966, tobacco output increased from 3.7 tons to 35 tons, and the number of growers from 17 to 72. All the growers were members of the Tobacco-Growers' Association. Women and older people were primarily engaged in this operation. Since 1967, the tobacco growers co-operatively worked in seed-sowing and nursery-bed making in two jointly-owned frame-houses. Three factors prevent the increase in tobacco output in the foreseeable future: (1) demand in the market reached a saturation point;<sup>86</sup> (2) the tobacco growing fields have to be fallowed for at least two years, but Shiwa has few dry fields and (3) the same labourers are needed in December for mushroom culture and tobacco-growing.<sup>87</sup>

### 3. Differentiation of Farm Operations

With the exception of the milk and tobacco operations, for which either firms or the government fixed low prices, the operations

86. Information provided by the Extension Department.

87. Nosangyoson Bunka Kyokai, ed., 1969, pp. 140-141.



described in preceding paragraphs did not have fixed market prices.

The co-operative encouraged farmers to adopt a few operations so that probable loss in one operation might be compensated by profit in other operations. Ideally, Shiwa farming looked like the following:

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by the first rule of the project, all farmers were to make rice-cultivation their economic base. In addition, farmers were engaged in a couple of new farm operations. Kumagai coined a term "compound farming" to describe this ideal pattern.

Table 5-1 Combination of Production Activities by Acreage (1968)

<u>Combination of Production Activities</u>	<u>Acreage (ha.)</u>					<u>Total</u>	<u>%</u>
	<u>-0.5</u>	<u>0.5-1.0</u>	<u>1.0-1.5</u>	<u>1.5-2.0</u>	<u>2.0-</u>		
1) Full-time Non-Farm Jobs & Others	63	79	39	26	15	223	28
2) Animal Husbandry	2	7	16	17	20	62	8
3) Cash Crops	0	2	3	1	2	8	1
4) An. Husbandry & Cash Crops	1	1	12	13	45	72	9
5) Seasonal Emigration & An. Husbandry	7	22	58	46	64	198	25
6) Seasonal Em. & Cash Crops	1	3	1	0	5	10	1
7) Seasonal Em. & An. Husbandry & Cash Crops	4	17	50	50	104	221	28
Total	78	131	179	153	252	793	100
%	10	17	22	19	32	100	

Note: All farmers were engaged in rice-cultivation.

Source: Shiwa Agricultural Co-Operative, ed., 1968 (A), Table 82.

88. See Section I-A-4 of this chapter.

Table 5-1 summarizes the condition in Shiwa by 1968. In the combination of farm operations other than rice-cultivation, three basic patterns are observable. First, 28% of the farmers took full-time non-farm jobs and some of them adopted other farm operations; farmers with smaller acreages tended to belong to this category. Second, 18% of farmers adopted either animal husbandry or cash-crops or both. Third, 54% of the farmers continued seasonal emigration but also adopted the above operations. Generally speaking, Shiwa farmers preferred the combination of seasonal emigration and animal husbandry probably because they were familiar with this pattern. In the pre-war period they raised horses and emigrated every winter as brewers. After completion of the dam in 1952, cattle replaced horses, but the pattern remained the same.

Table 5-1 does not show which particular operations farmers preferred most. The distribution of combinations of operations is so diversified that it is meaningless to try to compute preference. The amount of investment of each farmer in each operation is not known. Therefore it is assumed that the amount of labour invested in each operation is an index of the farmers' preference. The Ministry of Agriculture and Forestry conducted a survey in Iwate Prefecture in 1966<sup>89</sup> and computed average labour per certain unit in many operations. For<sup>90</sup> cattle-raising, a local farmers' detailed record was used. No reliable figure was available for mushroom-culture. In the survey of labour

89. Ministry of Agriculture and Forestry, 1967 (C), p. 6.

90. Shiwa Agricultural Co-Operative, 1963, p. 86.

investment per operation in each household, the largest figure other than rice-cultivation was assumed to represent the "new major operation". Table 5-2 summarizes the results. Twenty percent of Shiwa farmers took non-farming jobs instead of differentiating their farm operations, and the proportion of the people in this category became larger as acreage became smaller. Sixty percent of Shiwa farmers regarded cattle-raising as their new major operation: the larger the acreage, the larger the proportion of cattle-raisers. Mushroom-cultivators were about 22% of the farming households and shared the same pattern as cattle-raisers.

Table 5-2 Major Operations in Compound Farming (1968)

<u>"New" Major Operations</u>	<u>Acreage (ha.)</u>					<u>Total</u>	<u>%</u>
	<u>-0.5</u>	<u>0.5-1.0</u>	<u>1.0-1.5</u>	<u>1.5-2.0</u>	<u>2.0-</u>		
Draft-Cattle	10	53	124	112	177	477	60
Dairy-Cattle	3	6	15	12	31	67	8
Brood-Sows	7	11	6	9	14	47	6
Apples	6	7	8	4	23	48	6
Others	52	54	26	16	7	156	20
Total	78	131	179	153	252	793	100
Mushroom	4	12	38	36	80	172	(22)

Note: Except for 3 farmers, "others" were those whose main occupations were not farming.

Source: Shiwa Agricultural Co-Operative, ed., 1968 (A), Supplement.

#### B. Evaluation of the Economic Development Project

This sub-section examines the economic development project from three aspects: (1) the project's strategies and rules; (2) far-

mers' subjective evaluation and (3) how the project achieved the goals or changed previous economic patterns.

### 1. The Project's Strategies and Rules

The two strategies of the project and the rules were in agreement. In order to minimize risks (the first strategy) the project put prime emphasis on rice-cultivation. This strategy was based on the postulate that the central government's policies on rice-prices would not change in the near future.<sup>91</sup> Extension workers tried to teach farmers how to increase their rice-yields and farmers learned new techniques and applied them in their practices. The dramatic increase in rice-yields after 1952 taught farmers the benefits of improved techniques. The Farmers even demanded that more lecture meetings on rice-cultivation be provided,<sup>92</sup> and that technical services be strengthened.<sup>93</sup> Innovators' actions and recipients' reactions coincided in this goal, resulting in the production of high quality rice. A group of journalists pointed out that one of the characteristics of Shiwa was the small difference in rice-yields per 10 ares among the 824 farming households,<sup>94</sup> implying uniformly good growing techniques from the adoption of innovations.

In order to establish a market before competition from other producers caused a drop in sales (the second strategy), the project empha-

91. See Chapter Four, Section I-A-1.

92. See Section I-B-1 of this chapter.

93. See Section I-B-2 of this chapter.

94. Nosangyoson Bunka Kyokai, op. cit., p. 158. The empirical data accumulated by the Extension Department since 1961 supported this statement.

sized producing sizable output of the best quality. This rule was based on the idea that the early establishment of a good image would have lasting results. Extension workers applied this rule in production activities; the co-operative tried to apply the rule in marketing transactions. As mentioned, farmers asked the co-operative to improve its technical services, i.e., they were motivated to learn new farm techniques to produce high quality output. In return farmers asked the co-operative to sell their produce at good prices in the market.<sup>95</sup> Thus, innovators' actions and recipients' reactions were in agreement, and the latter were ready to adopt innovations.

## 2. Farmers' Evaluation of the Project

The 1968 survey asked farmers three questions concerning the project: (1) whether their economic life improved as a result of the project; (2) whether they felt physically more tired than before due to the introduction of new farm operations and (3) their general evaluation of the project.<sup>96</sup> As discussed earlier, most of the very small farmers and some smaller farmers took non-farm jobs and let their wives farm. Hence, their farm activities did not differ and the above questions were "not applicable". The following discussion is limited to an examination of the adopters' responses.

In response to the first question, 33% of the adopters replied that their life was now better off, 55% were uncertain, and 12% answered

95. See Section I-B-2 of this chapter.

96. See Chapter Four, Section I-B-2.

negatively.<sup>97</sup> Second, 45% of the adopters thought that they had to work harder, 45% were uncertain, and 10% answered that life was easier.<sup>98</sup> Finally, 45% of adopters were favourable to the project, 31% reserved their opinions, and 24% were unfavourable.<sup>99</sup> In all the responses, there was a slight correlation between adopters' acreage and the reactions: (1) a greater proportion of larger farmers regarded the project as beneficial and they were more favourably disposed toward the project than were the smaller farmers; and (2) a greater portion of larger farmers felt that they were tired.<sup>100</sup>

The Chi-test was applied to examine the relationship between reactions to the above three questions and the groups of new major operations shown in Table 5-2. The only significant result showed that mushroom-cultivators and those who were involved in animal husbandry were more positively disposed to the project.

### 3. The Achievements of the Project

The project had three goals: (1) to maintain the number of farming households in the community; (2) to develop self-supporting farmers; and (3) to "industrialize" farming. The project aimed at achieving these goals within eight years according to the first draft, implying that no evaluation would be final at least until 1972. Ack-

97. Shiwa Agricultural Co-Operative, ed., 1968 (A), Table 87.

98. Op. cit., Table 88.

99. Op. cit., Table 90.

100. The correlation co-efficients in the above three cross tables are: 0.386, 0.326, and 0.332.

nowledging this limit, the section re-examines the empirical data in the period from 1961 to 1968. The first goal was successful: farming households increased only from 820 to 824. We do not have evidence to prove<sup>101</sup> the success of the second goal. As many farmers took non-farming jobs in the winter season of 1968 as did in 1961. There is no indices with which to measure the degree of industrialization of farming. In sum, the evaluation is not only incomplete but also lacks objective scales. A more indirect method is therefore devised to infer the achievements.

Basically, the project aimed "to develop the Shiwa economy,"<sup>102</sup> therefore, failure in economic development denotes the failure of the project. In the period after 1952, farm output per capita increased in Shiwa. In addition, Shiwa farmers adopted both new farm techniques and new farm operations which resulted in changes in farm practices. The new farm operations were institutionalized by 1968, increasing complexity: Shiwa farm economy "developed" as the co-operative had aimed.

A more critical question is: "How firmly were the new institutions internalized in the social system?" The project's first rule postulated non-change in the government policies, but the postulate was challenged after 1967. The public began to criticize the government policies on rice-prices, because excessive supplies of rice would increase<sup>103</sup> government expenditures. In 1969, the government announced a new

101. See Table 5-1, and Shiwa Agricultural Co-Operative, ed., 1968 (B), pp. 51-69.

102. See Section I-A-e of this chapter.

103. Ienohikari Kyokai, ed., 1968 (A), p. 374.

policy to decrease the rice-yielding acreage of Japan by 10% and imposed  
 104  
 on each community a quota for decreasing its paddy-fields. If Shiwa  
 farmers were to accept the government's new policy, they would have to  
 develop their economy by "new" operations rather than by increasing  
 rice-yields, thus modifying the first rule.

The government's new policy was a challenge to economic development programmes in many rice-growing communities in Japan. In a neighbouring prefecture, where farmers aimed at developing their economy exclusively by improving the rice-cultivation, the farmers were upset, resentful, and decided to reject the quota imposed by the govern-  
 105  
 ment. Despite the modification of the first rule, the impact of the new policy was less acute in Shiwa, where new farm operations were established to bring additional farm income. Thus, the new policy became a critical test for the project.

According to correspondence from the co-operative, the leaders held meetings in each hamlet in February, 1970, and discussed "solutions". In addition, the co-operative conducted an opinion survey of its members and found that only 10%, mostly larger farmers, replied that they could afford to decrease rice-paddies "because of the new farm operations". In sum, the project was not a failure, but it was  
 106  
 still in the second stage in which a majority of farmers would choose alternatives and try to incorporate them in their farm management.

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104. Information provided by a letter from the co-operative.

105. Op. cit.

106. On stages of the project, see Section I-A-5 of this chapter.



### III. Impact of the Economic Development on Institutions

As stated in Chapter One Nash used the following four terms to characterize a peasant economy: (1) small working-teams with a low level of division of labour by seniority and sex; (2) lack of institutions organized solely for production activities; (3) difficulty in estimating cost and profit in monetary terms; and (4) entanglement of the rules of resource allocation with other social institutions.<sup>107</sup> In the process of economic development in Shiwa, some of the above characteristics disappeared and new patterns emerged. In this section, changes in the economic aspect of the social system and the impact of economic development on institutions is treated.

#### A. Changes in the Economic Aspect of the Social System

The size of working-teams in the rural community shrank as the larger nation developed economically.<sup>108</sup> The co-operative aimed at realization of co-operative rice-cultivation by the heavy machinery system,<sup>109</sup> but this was not yet realized by 1970. Hence, the small working-teams became even smaller.

To some degree, division of labour in working-teams is still based on seniority and sex, but new resources such as longer formal training and access to information are additional criteria for deciding division of labour. When two generations of farmers were under the same

107. See Chapter One, Section II-A.

108. See Chapter Four, Section I-B-1.

109. See Section I-A-5 of this chapter.

roof, (that is, when the househead and his wife and the heir and his wife were engaged in farming), the younger generation tended to accept the major responsibility for rice-cultivation and the older generation  
 110  
 for the new farm operations. When men emigrated during the winter, women tended to work in the new farm operations. Mechanization and differentiation of farm production activities made new resources significant in farm practices. Operators of heavy machines, for example, take specialized training and receive their licence after which they are specialists despite their age and they earn a relatively good income (2,000 yen per day in 1968). Each new farm operation requires a specialized body of knowledge and skill, and the local co-operative emphasizes "training" of farmers. Generally, one person accepts the responsibility for learning one new farm operation so he or she is a "specialist". No one in the household can give technical advice to the specialist except for extension workers: a new pattern of division of labour based upon distribution of new resources is emerging.

Second, in the process of economic development, a number of institutions like producers' associations and farmers' associations which were organized for production activities increased. In addition to the non-economic aspects of the associations, the common goal of the producers' associations is to increase the profit of a specific farm operation. If an association failed to achieve this goal, it would dissolve.

Third, increasing commercialization of farm practices made farmers realize the need for computing costs and profits in monetary

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110. Nosangyoson Bunka Kyōkai, ed., 1969, p. 43.

terms. Particularly, all the new farm operations required cash in the initial period. For example in cattle-raising, farmers purchase animals from markets, feed from the co-operative, and sell the product on the market again. To trace the flow of money, some larger farmers began to introduce book-keeping in their farm management. The co-operative also strongly encourages the adoption of book-keeping.

In addition, farmers began to evaluate the labour force in monetary terms. When they farmed at a relatively primitive level of technology, the yields brought joint-income, and the economic value of individual members' labour was not expressed in monetary terms. Hence, individuals' contribution to the household economy was not defined. By differentiating the farm operations, however, individual members began to accept the major responsibility in different operations, and their output brought a clearly defined cash-income. The labour of women and older people began to be expressed in monetary terms. A househead in Hamlet No. 15 took boxes of his apples to the co-operative for shipping, and his wife took her mushrooms. The co-operative priced his apples at 400 yen per box, which weighed 18 k.g., and his wife's mushrooms at 400 yen per 1 k.g. According to the husband, he was shocked to find that his wife's labour was equal to or even more valuable than his. Farmers had to re-evaluate women's labour, modifying the pre-war rules of resource allocation.

Fourth, the division of labour by distribution of new resources did not keep second and younger sons on the farms. Because operators of heavy farm machines were specialists and earned a relatively good in-

come, one is tempted to hypothesize that the second or younger sons might take these jobs. In actuality, however, the number of days machines were operated was so limited that the annual income of an operator was far below the annual income of full-time non-farm jobs. Hence, only heirs worked as operators, which gave them more economic independence in their household. The impact of economic development was not strong enough to modify the traditional pattern of emigration of second and younger sons.

#### B. Change in Co-Operative Works

Expression of human labour in monetary terms changed the form of co-operative work. In the pre-war period, farmers organized yui to cope with farm operations requiring intensive labour. Before 1952, co-operative work in the institution of irrigation was also not paid.<sup>111</sup> Recently in Shiwa, when farmers organized an association for a farm operation, pooled their resources, they paid wages to participants in co-operative works: hiring specialists to run heavy machines in cultivation was one example. Wage inflation caused by the increase in emigration strengthened the above tendency. As mechanization by the heavy machinery system and differentiation of farm operations develops further, wage payment for co-operative work will become a dominant pattern in Shiwa.

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111. See Chapter Three, Section II-C.

### C. Weakening Control of Territorial Groups

In the pre-war period, kumi and hamlets laid serious claims<sup>112</sup> to the individual farmers' loyalty; but "success" in the economic development project modified the above claims. The project allowed individual farmers to adopt any combination of new operations. Consequently, the operations adopted had no distinct local pattern. Producers' associations as well as the joint-owners' association of heavy machines organized farmers and crossed the boundaries of territorial groups. The frequency of interaction among association members increased as the groups developed. Instead of revitalizing Farmers' Association which covered a hamlet, the territorial groups lost the strong control they once had.

In the period before the 1960's when Shiwa farmers were mainly engaged in rice-cultivation, each hamlet decided its "day-off". In average years usually two days a month were selected. The "day" was announced well in advance and members of the hamlet tried to finish certain operations or steps by the agreed date. If some households were behind schedule, other members of the hamlet helped them. On the "day", none of the farmers in the hamlet worked. In the 1960's, each household in a hamlet adopted some different combination of new farm operations and could not stop working on the agreed day because busy seasons in each operation varied. Some larger farmers still tried to observe the hamlet's common day-off, but not all the members in the hamlet could keep the "agreement".

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112. See Chapter Two, Section I-B-3 and 5.

Leaf 244 omitted in page numbering.

D. New Development -- Farmers' Increasing Dependence on the Co-Operative

In the pre-war days, there was no mediator between the farmers and the larger nation. In the post-war period, co-operatives emerged as the mediators; this was particularly true in Shiwa Community. The Shiwa Agricultural Co-Operative had good access to information about the policies of the central and prefectural government, conditions in the larger nation, marketing transactions, new farm techniques, and its own membership. It had access to the financial resources provided both by the central and prefectural governments, national associations and prefectural federations of co-operatives, and the savings of its own members. The co-operative was highly respected by its members. It provided free technical services to its members, which in turn obliged the members to support the co-operative. Under these conditions, the co-operative could apply sanctions to its members by rewarding "active ones" and punishing "offenders" through manipulation of loans. Farmers borrowed money from the co-operative as its interest rates were lower than that of commercial financial agencies. If the co-operative refused to lend money to a farmer, he would be in financial trouble. In brief, the co-operative or the change-agent had authority over its members or the recipients.

Using the same technique described on page 217, the co-operative in 1968 asked its members to show a preference for three of nine facilities proposed. The three facilities farmers wanted most

were: (1) a service station for farm machines (1,044 points), (2) a shopping and service centre (837 points), and (3) additional rice-

113  
mills (744 points). Shiwa farmers wished the co-operative to provide practically all of the larger society's services. The co-operative in Shiwa became a primary source for accessible resources, and farmers came to depend upon it.

#### IV. Summary

In the 1960's, farm operations in Shiwa were differentiated and each individual in a working team began to accept the major responsibility for a specific different operation. The differentiation of farm operations was not automatic: not all the communities in Nambu Town achieved what Shiwa achieved.

Political and economic influences from the larger society affected other communities as well as Shiwa. All town offices in Rikuchū County developed programmes based on professional research, as did Shiwa. The channels of communication and technical assistance services available in Shiwa also existed in all the communities in Nambu Town. Except for the size of the Extension Department, Shiwa farmers had no unique source of information compared to the other farmers. Access to economic resources did not distinguish the Shiwa people, either. Farmers in other communities had equal access to loans provided by the central and prefectural governments and could mechanize their rice-cultivation. Other communities enjoyed water resources from

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113. Shimpo, 1968, p. 33.



the Sannōkai Dam as Shiwa did. To obtain subsidiary income, other farmers in Nambu Town were engaged in brewing as the Shiwa people were. Despite some relative advantage, Shiwa farmers had no monopoly on any of the resources mentioned above.

What made Shiwa unique was the pattern of interactions between change-agents and recipients. The interaction took place on two levels: (1) interaction between the change-agent outside of the social system, e.g. economists in the local university, and the co-operative as the recipient; and (2) interaction between the co-operative as the change-agent in the social system and its members as the recipients. On the first level, the interaction based on friendship between the economist and Kumagai helped to integrate ideas into plans and to implement the plans into practices. On the second level, the co-operative and its members interacted relatively harmoniously. From their past experiences, Shiwa farmers were favourably disposed to innovations: the increased rice-yields after 1952 taught them the probable effects and benefits of new farm techniques. The co-operative tried to meet their needs by increasing the range of alternatives, as suggested by the outside change-agent. The change-agent had an opportunity through recurrent evaluative surveys to re-examine the rules and strategies of the project. The Shiwa farmers developed their economy through this interaction and through the access to resources.

The economic development project involved one problem. In accordance with point two of their basic strategy, Shiwa people had to maintain dependable standards of high quality and quantity. If other

communities achieved the same size and quality of output, Shiwa's profits would diminish. Therefore, the co-operative and its members are constantly searching for profitable new operations and adopt them when possible. The question remains: "How long will present farm operations be sustained in Shiwa?" If the above trend continues, farm practices in Shiwa will change rapidly.

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In the process of economic development, certain characteristics of the peasant economy disappeared while others persisted. The size of working-team became even smaller, but new division of labour based on distribution of new resources emerged. A number of institutions which were organized mainly for production activities developed in each sphere of farm operations. Farmers came to realize the significance of computing cost and profit in monetary terms, including human labour. Despite the above changes, economic development did not undermine the household as an institution and primogeniture persisted.

Differentiation of farm production activities based on farmers' will weakened consensus in territorial groups. Increase in new institutions mainly organized for production activities increased the frequency of interactions across the territorial group boundaries. Cash payment for tasks earlier done on an exchange basis changed the form of co-operative works. In pre-war days, all exchange labour was unpaid.

114. In the two years since I left the field, three new operations have appeared: (1) cultivation of cucumbers in greenhouses; (2) cultivation of pumpkins, and (3) high quality rice seed production.

Exchange labour has become wage-labour in contemporary Shiwa. As the economy developed, the change-agent -- the co-operative -- became more significant and powerful, because it had access to various information sources, and to financial resources. It provided technical services so that members were obligated to the co-operative. It commanded high social esteem, and had the means to apply sanctions by manipulating loans if it so desired. However other aspects of the social system changed or persisted under the economic development are treated in the following chapter.

## CHAPTER SIX

## CHANGE AND PERSISTENCE IN SOCIAL ORGANIZATION IN SHIWA

Human actions have various aspects; therefore changes in the economic aspect must accompany changes in other aspects. The Japanese farm economy is moving from a peasant economy to an "industry", as substantiated in preceding chapters. In the process of economic growth, the size of working-teams diminished, implying that certain re-organization of social relations took place in the households. The emergence of a new division of labour in terms of new resources modified the old rules of resource allocation by sex and seniority, a fact that is reflected in the re-organization of social relations in the households. Those who have new resources have a better opportunity to increase farm output and thus to increase farm income if market prices are stable. The farmers' incentive to increase monetary rewards gives a favourable evaluation to those who bring cash income into the households; the larger the size of the income, the more favourably those people are evaluated by other farmers. Under these circumstances, persons such as a young-wife or an adopted-son, who occupied the lowest status in the household in pre-war days, obtained more independence if they received a cash income from a new farm operation or a non-farm job. In turn, an old man who enjoyed relatively high social status in pre-war days lost some status in the 1960's, because technological change outdated some of his resources such as his knowledge and skill in farming. In spite of these changes, the household as an institution did not disappear.

Similar changes have occurred in other institutions, too, and, as in the case of households, some aspect of each institution persisted. In this chapter, the discussion will focus on change and persistence in the institutions outlined in Chapter Two, Section I-B.

## I. Change and Persistence in Households

Under economic development, consumption patterns changed<sup>1</sup> along with change in production activities. In this section, change in consumption patterns of households, change and persistence in the rules of social behaviour, and change and persistence in the basic socio-economic conditions of this institution are examined.

### A. Change in Consumption Pattern of Households

In the pre-war period, farmers lived a poor life.<sup>3</sup> In 1935, the proportion spent on food in the total household expenditure or "the Engels' co-efficient" in farming households, other than landlords, amounted to 51, while it was 36 among urban households.<sup>4</sup> Most farmers could not afford to introduce the improved appliances and facilities that urban people enjoyed. Farmers had limited means for interacting with the larger nation -- for example, they did not have access to mass communication media.<sup>5</sup> Only landlords could afford wireless-radios or

1. See Chapter Four, Section I-A-2.

2. See Chapter Two, Section I-B-1.

3. The best description of farmers' life in this period in Western language appears in Embree, 1939.

4. Fukutake, 1968, p. 497.

5. Op. cit. p. 481.

newspapers. Farmers did not have telephones and no access to improved means of private transportation other than horses and bicycles. Domestic facilities were still primitive, with toilets and bath tubs located outside of the houses. The facility for water supply was inconvenient: farmers had to haul water from outside wells for bathing, washing and cooking. Fuel-woods and charcoal were the two major sources of energy for cooking and heating.<sup>6</sup> To cook rice, farmers burnt rice-hulls. Cooking facilities were not functionally arranged: women had to cover a wide area while cooking. Although Shiwa Community introduced electricity in the 1920's, no electric appliances such as washing-machines, refrigerators, or vacuum cleaners existed in any household. In pre-war houses, sliding-doors and paper-screens enclosed the space which farmers called a "room". At big gatherings such as funerals, weddings, or festivals, farmers took away these sliding-doors and paper-screens to make a wider space. The easier space arrangement sacrificed individual residents' privacy.

Until 1945, farmers' poor living conditions were justified by what has been called "Agriculture-Is-The-Base-Ism", or an ethic of austerity for the sake of the common goal of the nation.<sup>7</sup> The austerity policy of the government during the last war strengthened this tendency. After the war, however, the loss of common national goals undermined the validity of this philosophy, and farmers began to acquire consumer goods. The increase in household income and the greater

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6. See Chapter Four, Section III-D.

7. Fukutake, 1959, pp. 558-561, also see Chapter One, Section II-A.

access to commercialized materials accelerated the adoption rate of improved appliances. The differences in the living standard between rural and urban areas decreased quickly: the Engel's co-efficient of farming households dropped from 51 in 1935 to 36 by 1965, almost equal to that<sup>8</sup> in cities.

Shiwa farmers began to have access to mass communication media,<sup>9</sup> among which T.V. was the most popular: T.V. owners increased from 23% in 1961 to 97% by 1968.<sup>10</sup> In this same period, ownership of radios<sup>11</sup> dropped from 81% to 47%.

In 1958, the co-operative installed a telephone system hooked up to the central studio from which the co-operative staff broadcast. This facility was limited to communication in the community. In 1970, seven co-operatives in Nambu Town jointly installed an improved telephone system which it operated in conjunction with their broadcasting systems. Farmers in Nambu Town were able to communicate with any other farmer in the locale. In 1968 the number of Shiwa households connected to the national telephone network was limited to less than 10%.

Shiwa farmers also adopted improved means of private transportation. By 1966, 80% of Shiwa farming households owned motor-cycles.

8. Fukutake, 1968, p. 483.

9. Otherwise specified, figures in this sub-section are quoted from the three sources. Shiwa Agricultural Co-Operative, ed., 1962, 1967, and 1968 (A).

10. In 1967, 83% of Japanese farmers owned T.V. sets. Iyehohikari Kyōkai, ed., 1968 (A), p. 308.

11. According to a nation-wide survey in 1967, 91% of Japanese farmers read newspapers every day. See op. cit., p. 311. I could not obtain reliable statistics on newspaper and periodical subscribers in Shiwa.

12

Both men and women used them on daily errands. After 1956, motor-vehicles became popular in Shiwa. By 1968, 19% of the farmers owned passenger-cars, while 13% of them had 1 ton trucks. Thus, one-third of farming households owned motor-vehicles of some kind, operated by young men and women.

Farmers adopted improved domestic facilities. In 1961, 56% of households had either manual or power-operated pumps, and 25% of households had running-water. In 1966, no farmer carried water from outside wells. By 1970, running-water reached 83% of the households, and in the foreseeable future pumps will become obsolete. By 1966, 81% of farming households adopted propane-gas and 16% of them electric stoves, thus replacing traditional sources of energy. The only exception was a rice-cooking utensil burning rice-hulls: 74% of households still cooked rice with this at least once a day in 1966. Electric appliances became popular as well. In 1968, 80% of households were equipped with electric washers; 75% of them had refrigerators; 33% of them used vacuum-cleaners and 83% of them owned sewing machines.

Finally, one-half of Shiwa farmers renovated their houses by 1968, and 25% of all the households renovated their houses in the

12. 61% of Japanese farmers owned motor-cycles in 1967. See op. cit., p. 321.

13. 13% of Japanese farmers owned motor-vehicles in 1967. Ibid.

14. The national figures in 1967 on these items were as follows:

	<u>Rural</u>	<u>Urban</u>
Washers	76.3%	81.3%
Refrigerators	49.2%	76.9%
Vacuum Cleaners	18.7%	56.1%
Sewing Machines	86.3%	82.1%

Quoted from op. cit., p. 321.



eight year period from 1960 to 1968. When farmers renovated their houses after 1955, they adopted three "new ideas" promoted by the Ministry of Agriculture and Forestry: (1) they installed the toilet and bath inside the house; (2) they re-arranged the distribution of cooking facilities and (3) they compartmentalized each room with walls and wooden doors. Farmers called the innovations "life-improvements".

#### B. Persistence of Household Succession

One of the fixed ideas which governed farmers' behaviour in  
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 the pre-war period was household succession. By the rules of resource allocation in terms of distance from the ancestral line, seniority and sex, the eldest son inherited the household property. The eldest son or the heir was specially treated and socialized to accept the responsibility of inheritance. The larger the size of the household property, the larger the heir's responsibility. Hence, heirs in larger farming households tended not to consider any alternative other than farming. No farmer worried about his heir; he worried about how to place his  
 16  
 second and third son in an adequate occupation.

To 1968 Shiwa farmers still desired to maintain the institu-  
 17  
 tion of household and they needed to keep their heirs at home. Increasing the accessibility to income resources was a factor in attracting  
 18  
 the heirs. In addition, change in the traditional virtues such as

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15. See Chapter Two, Section I-B-1.

16. See Chapter Four, Section I-B-1.

17. See the first goal of the economic development project in Chapter Five, Section I-A-4. About persistence of primogeniture in the nation, see Chapter Four, Section I-B-1.

18. See Chapter Four, Section I-B-1.

"frugality", "resignation", and "piety" allowed heirs to widen the scope of alternatives from which they could choose. Contemporary heirs tended to compare working conditions in industrial centres with that at home. Househeads who wished to maintain the institution had to make compromises so that their heirs would find satisfaction in staying at home. Some househeads tried to keep their heirs through the mechanization of farm practices, adoption of other new farm techniques, and/or the improvement of household facilities. Certain househeads whose heirs were still young had to satisfy one or both of the following conditions: (1) give them a higher education and (2) find brides for them.

To give a higher school education to children including heirs was a great sacrifice to farming households. First, working-teams could not exploit young labour; until 1948, Grade 6 or Grade 8 graduates helped their parents. The extension of compulsory education to Grade 9 in 1948 delayed the utilization of young labour. If youths wished to go to high school, the household had to wait for an additional three years before they could obtain their help, and then the majority of high school graduates left for other industries. Second, higher school education was expensive. Until 1948, the cost of school education was from 1 to 2% of the domestic expenditure of average households. The proportion rose to 3% when compulsory education was extended. One senior high school student cost 3%, and a university student exploited 22% of the domestic budget.

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19. Ministry of Agriculture and Forestry, ed., 1962, p. 27.

In spite of the burden on households, the level of school education rose in Iwate Prefecture as well as in Nambu Town.<sup>20</sup> This trend became conspicuous in the 1960's. In 1968, 80% of Grade 9 graduates in Nambu Town went to high school, and 38% of the local high school graduates attended universities.<sup>21</sup> Since some youths attended high schools in other cities, the rate of university attendants from Nambu Town was really higher. The rising level of school education increased accessibility to better jobs, thus increasing emigration. In Shiwa Community, in the five years from 1963 to 1968, the number of new farmers fell from 50 to 5. None of the five new farmers remained at home because they liked farming, but because they felt obliged to work for the households.<sup>22</sup> Many other heirs who finished schooling the same year as the new farmers did not stay at home.

Finding brides for heirs was no easy task, but for some households it was a necessity, otherwise their heirs might change their minds and leave home. In 1967, the Nambu Town Office conducted a survey of 1,941 unmarried youths in farming households. As many as 282 young male farmers wished to marry, but only 217 single girls were willing to farm.<sup>23</sup> The prefectural figures showed a more acute situation. There were 2,467 farming bachelors, but only 1,503 single girls who regarded farmers as potential spouses.<sup>24</sup> The higher the girl's school education,

20. Iwate Prefectural, 1968, p. 3, pp. 11-12, and p. 16.

21. Shiwa Town Office, 1968 (A), p. 10.

22. Information provided by the Shiwa Agricultural Co-Operative.

23. Shiwa Town Office, ed., 1968 (A), p. 28.

24. Iwate-Ken Nōgyō Kaigi, ed., 1967 (B), p. 5.

the less willing she was to marry a farmer. Among female graduates from farming households, 32% of Grade 9 graduates, 19% of Grade 12 graduates, and 11% of college graduates were willing to become young-wives<sup>25</sup> in farming households. Farmer-parents had ambivalent feelings toward this question. They resented those girls who would not wish to marry farmers, including their sons, but they did not want their daughters to become farmers' young-wives.<sup>26</sup> The difficulty in finding brides forced household members to treat their daughter-in-laws with greater generosity, thus, the rules of allocating resources in terms of seniority were modified.

In Shiwa, in 1968, 15% of the farming households included adopted-sons of various ages.<sup>27</sup> Some househeads wish to adopt boys for their daughters in order to ensure the succession of the household and the household occupation. Candidates for adopted-sons were second or third sons who now had greater access to income resources. Unless the boys were in love with eldest daughters of boy-less households or were desperate, they would not agree to become adopted-sons in a farming household. Between 1965 and 1968, no cases of adoption based on romance were found. The few farming adopted-sons interviewed had very few alternatives. For example, one boy had served in a business firm and was involved in a traffic accident, damaging the firm's property: he was desperate. A househead offered to adopt him and the boy agreed.

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25. Ministry of Agriculture and Forestry, 1968, p. 5.

26. Op. cit., ibid.

27. Shiwa Agricultural Co-Operative, ed., 1968 (A), Table 107.

If adopted-sons were allowed to engage in non-farm jobs they were more inclined to accept the offer. Boys considered two conditions when deciding whether or not to become an adopted-son: first, the size of his income in industrial centres. Unless the boy was employed by gigantic corporations,<sup>28</sup> his expenses for rent were high. If the boy could not obtain a job in a large firm, becoming a commutor from his native community was an attractive alternative. Second, farmers valued production activities which would increase the cash income of the household. Non-farm jobs paid the employees' wages in cash. Therefore, in-laws of commuting adopted-sons treated the latter generously. Adopted-sons in this category satisfied the need for the succession of the household but not for the succession to the household occupation.<sup>29</sup>

The rule of household succession still persists. From the farmers' viewpoint, however, a decrease in farming households is a necessary consequence in spite of the goal of the economic development project. In the past young people's emigration increased and some househeads could not keep them at home even if they were willing to farm. If this trend continues, the farming population will age, and when the present active farmers retire, many households will have to abandon farming.

#### C. Changes in the Rules of Social Behaviour in Households

In this sub-section, change in the rules of social behaviour which have governed household members is briefly treated.

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28. Large firms have accomodating facilities at reasonable rates.

29. See Chapter Four, Section I-B.

## 1. Changing Authority

In the pre-war period, the Civil Code, ancestors and competence in administrative skills legitimized the authority of the household. The "symbolic authority" was united with the "administrative authority". After the war, the revision of the Civil Code, the Land Reform<sup>30</sup> and technological change challenged all three sources of authority. In technologically changing communities, the administrative authority began to split from the symbolic authority. In the 1950's and 1960's, household heads still held authority in deciding large expenditures and the income of the household, but younger farmers in the household began to accept pragmatic responsibilities: they developed plans for farm practices and allocated domestic resources according to these plans. The farmers responsible for administration are referred to as "farm managers". Among full-time farming households, one-half of the respondents to the 1968 survey regarded themselves as farm managers. In sum, the centralized authority of household heads began to be differentiated in the households.

## 2. Changing Resources Allocation in Terms of Sex and Seniority

The three traditional rules of resource allocation in households were modified in the 1950's and 1960's as second and third sons emigrated. This sub-section treats the changing status of women and old people.

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30. See Chapter Four, Section III-A.

a. Women's Status in Changing Households

In the pre-war period, women in rice-cultivating areas had to accept inferior positions in the households. Students of family sociology in Japan argued as follows: <sup>31</sup> in rice-cultivation, farmers had to work as members of working-teams and regarded the income as a joint one. No index explicitly expressed the individual labourer's contribution to the household economy. Hence, the traditional rules of resource allocation operated smoothly. To support their argument, the sociologists referred to the Tokugawa Period, when women in fishing communities or those who engaged in silk-worm culture enjoyed more independence in households than women in rice-growing communities. Women in rice-growing households were theoretically assumed to be "ignorant" on farming and had to accept instructions from the househeads. Men represented the working-team and women were to stay in the household. Among women, however, the rule of seniority allocated to house-wives greater access to resources than to young-wives. The young-wives were evaluated by two indexes: (1) conformity to the group norms of households, <sup>32</sup> and (2) as a member of the labour force.

After the war, Shiwa women had greater access to various resources. The "surplus" labour produced by technological change was re-invested in new farm operations. Under the new circumstances, women became responsible for various farm operations, and their contribution to

31. See T. Koyama, 1961, Ch. 3.

32. See Chapter Two, Section I-B-1.

the economy of the household became clear. In accordance with the second rule of the economic development project, the local co-operative emphasized raising the level of farmers' skills and held a series of lecture meetings in each hamlet to discuss each farm operation. The individuals responsible for the individual farm operations were to attend. Thus women came to have greater access to technical information than before. Women were no longer "ignorant".

The economic development project emphasized rice-cultivation as its base. Every winter since 1964, the Extension Department held a series of lecture meetings in each hamlet and taught farmers how to increase rice-yields. The acute need for subsidiary income meant that the men still worked in the brewing industry. Hence, more than two-thirds of the attendants were women who became better informed on rice-cultivation than their husbands. <sup>33</sup> Particularly in the 1960's, the local co-operative became active in developing the Shiwa economy and it held a number of meetings to discuss and decide various programmes. In the absence of men, a number of women attended and voted at such meetings: they participated in the decision making of community affairs.

The persistence of primogeniture and the difficulty in finding young brides modified the conflicting relations between house-wives and young-wives. Increasing access to economic resources also contributed to more generous treatment of the young-wives. Until the 1960's, young-wives had no spending money unless they received some from their

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33. Information provided by the Extension Department.



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parental households: even house-wives had no money of their own.

As farm operations began to differentiate, the young-wives not only brought a cash income into the households but they obtained spending money out of their income. To give one example, a number of young-wives worked at joint-orchards and received wages in cash. A few of them had to surrender all the earnings to the household, but in many cases they could keep a certain portion of their wages for themselves.

Researchers of the Tōhoku National Agricultural Experimental Laboratory

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observed the same tendency in another community in Nambu Town. Motorization is the third condition favourable to young-wives. According to the women interviewed, they formerly married in early spring before farm practices began; they were the new labour in their married households. Until the step of transplanting was over, the young-wives had no opportunity to leave their married households. Several of them who were from other towns commented that they did not even know the road leaving the community. In Hamlet No. 18 it was observed that some young farmers took their wives to visit their parents every two weeks or after the completion of a step. They went by car. According to Shiwa women over the age of thirty, "the younger the young-wives, the greater the freedom they enjoyed."

The modification of conflicting female relations was still not universal, but was rather just beginning. The persisting rules of households' succession implied the retirement of house-wives and the

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34. From my field notes.

35. C. Satō, 1963.

succession of young-wives; so the basic source of conflict did not disappear. Consequently, despite the generous treatment of young-wives by house-wives, their mutual hostility still persisted. A young-wife in another community explained her feeling this way:

'When I knitted straw-bags, I had confidence in myself, because I was 'earning'.<sup>36</sup> I could ignore the in-laws' hostile stares: the straw-bags were my arm. When the local co-operative switched from straw-bags to linen-bags, I was shocked, losing my arm. I felt the hostile stares stung my naked skin: I had to take other non-farming jobs."<sup>37</sup>

The same thing happened in Shiwa: a number of young-wives with the same motive were either engaged in mushroom-culture as their new "arms",<sup>38</sup> or else they took prefectural government road-mending jobs. The rules of resource allocation and farmers' values influenced Shiwa farmers' adoption of new farm operations.

The value of hard-work persisted and oriented rural women's behaviour. In 1967, a team of researchers from the Tōhoku National Agricultural Experimental Laboratory conducted an exhaustive time study of fourteen households in a rice-growing community thirty miles south of Shiwa. They surveyed each farmer's labour investment during harvest and post-harvest steps and computed hours per 10 ares. In average, househeads and house-wives worked in these steps for 625 hours and 624 hours respectively, while heirs and young-wives worked 1,143 hours and

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36. What this young-wife tried to say was: "I was contributing to the household economy by saving the production cost of the rice."

37. Information provided by Mr. Ryō Omura.

38. Information provided by the Extension Department.

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1,074 hours. From their findings, it can be concluded that: (1) women worked as hard as men and (2) the younger generation was the major labour force in rice-cultivation. The Shiwa Agricultural Co-Operative conducted time studies among the Women's Association's 860 members three times a year from 1965 to 1968: during the May busy season; during the summer slack season in August, and in the winter slack season of February.<sup>40</sup> The results showed that the time for housework and sleep was not evenly distributed throughout the year. Farmers tended to sleep less during the busy seasons, and devoted more time to housework during the slack seasons. Women had even less leisure-time than men, as housework was traditionally the responsibility of women: Shiwa women worked even harder than men.

The hard-working women liked labour saving devices. In the 1968 survey, the co-operative asked women's reactions to mechanization of farm practices.<sup>41</sup> Out of 795 respondents, 4% of farmers did not answer this particular question, and 15% of them replied that their acreage was too small to mechanize. Out of 652 farmers who answered the question, 69% of them replied that their women were happy about it, 20% of them did not show a clear reaction and 11% of them were critical. The larger farmers were more favourable to mechanization than the smaller ones,<sup>42</sup> which had to endure a relatively greater financial burden for mechanization.

39. Nōka Seikatsu Kenkyū-kai, ed., 1967, p. 10.

40. Information provided by the Extension Department.

41. Shiwa Agricultural Co-Operative, ed., 1968 (A), Table 86.

42. The correlation co-efficient between acreage and reactions was 0.501.

In summary, contemporary Shiwa women, compared to pre-war women, both young and old, became more independent and more important to their working-team. First, their contribution to the households became very clear, a fact the men could not ignore. Women were well informed and hard working. They proved their farm skills, and brought home a cash income. Particularly in the part-time farming households,<sup>43</sup> women had authority in decision-making on farm affairs. Second, they participated in decision-making on community affairs. Third, the notorious conflicting relations between house-wives and young-wives were beginning to change. Contemporary women were not as submissive as they had been. Some Shiwa men said that women became "willful", while others said that they became "human". The traditional rules of resource allocation in terms of sex and seniority became favourable to women.

b. Old People's Status in Changing Households

In the pre-war period, retired old people were regarded as expert farmers and were resource persons. They helped with farm practices in the busy seasons. They produced straw-shoes and straw-boots for other household members. They looked after little children, their grandchildren, and told them old legends and stories. The old people's retirement was gradual, and they maintained frequent interactions with all other age groups.

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43. Information provided by the Extension Department.

The adoption of new techniques in the 1950's and 1960's made old people's knowledge and experience outdated: old people ceased to be resource persons. Mechanization of farm practices made their help unnecessary in many steps of rice-cultivation, diminishing their contribution to the household economy. In some cases, old people were responsible for new farm operations, but not in all households. As farmers came to have greater access to commercialized materials, other household members stopped using straw-shoes and straw-boots, subsequently, the old people stopped producing them. Contemporary children were fascinated by T.V. shows; they had little time for old people's stories. The frequency of interactions between old people and other household members quickly decreased. An old women wrote:

"Snowing outside. Killing time at the stove all day long, day after day! No visitor speaks to me. Old ones literally have nothing to do."<sup>44</sup>

Some of the old people, according to the ones interviewed, thought that they were not needed. Renovated houses seemed to strengthen old people's feelings of isolation. They used to live in houses with little privacy and it is said that they felt the "oneness of household mem-<sup>45</sup>bers." Some old Shiwa women commented that they felt as if they were imprisoned in solitary cells: the "warm and personal contact" between household members has disappeared, they said.

Some old people tried to compensate for the lack of personal contact by visiting hospitals and clinics. When old people complained

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44. Shiwa Women's Association, ed., 1967.

45. I owe this insight to Mr. Ryō Omura.

of physical discomfort, no household member stopped them from going to the hospital. Old people visited hospitals, looking for warm treatment from physicians and young nurses. According to public nurses of the Nambu Town Office, some old people visited the hospital every three days in spite of the fact that they were healthy. The same informants said that some extreme cases established rapport with one hospital and two clinics, visiting each twice a week. The informants added that when some old people were visiting the clinics, they looked very happy! An accurate breakdown by age groups of treated cases was not obtainable, but the number of elderly cases certainly increased.

Between 1955 and 1966, the index of local insurance tax rose from 100 to 407, and the index of medical expenses per household rose from 100 to 574.<sup>46</sup> Among the nine communities in Nambu Town, people of Shiwa Community paid the largest medical bills per household.<sup>47</sup> The above trend existed in other communities and towns as well. To give an example, in an economically developing rural town located forty miles north of Shiwa, old patients monopolised the town hospital's beds and refused to leave.<sup>48</sup>

In summary, new resources became significant in the 1950's and 1960's, and younger people had greater access to them than old people. As old people had fewer resources they could not maintain their previous authority; they were unable to apply sanction upon the

46. Shiwa Town Office, ed., 1967 (B), p. 10.

47. Op. cit., p. 36.

48. Information provided by the Extension Department.

younger generation. Younger people had more independence in the households then in the pre-war period.

#### D. Persistence of Basic Conditions for Households

In Chapter Two, three basic socio-economic conditions which are necessary to maintain the farming household as an institution were<sup>49</sup> mentioned. First, farming must be the household occupation. Second, farm land must be regarded as more than a mere commercial commodity. Third, the household must have an heir. If these conditions persist, the household as an institution persists.

Shiwa farmers desired to maintain the household and made efforts to keep their heirs at home. Not all the heirs, however, showed a willingness to farm. Hence, the third condition was satisfied, but the first condition was challenged.

Assessment of the second condition is more difficult. Shiwa farmers seemed to have a weaker commitment to the ancestors than they did in the pre-war period. The defeat in the war and the Land Reform secularized the farmers' belief in the supernatural. However, the ethos and the common goal of the economic development project seemed to reflect Shiwa farmers' determination to reserve Shiwa land for themselves. In 1968, a critical test emerged. The central government announced a new project to construct a freeway in the 1970's, connecting Tōkyō and Aomori, the northern ferry port for Hokkaidō. According to a blue-

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49. See Chapter Two, Section I-B-1.

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print, it was rumoured, the proposed freeway would pass through Shiwa Community. If this were true, Shiwa people would have to sell about 10% of their farm land. The Shiwa farmers were anxious, and talked about the freeway, but did not know what to do.

According to the same rumour, the freeway would pass through Hamlet No. 8. The hamlet people spontaneously conducted an opinion survey of the househeads. Main-household heirs of the two leading dōzoku took the initiative. They constructed a questionnaire and distributed it to all the househeads. The question read as follows:

"It is rumoured that the freeway recently proposed by the central government will pass through Shiwa Community. If this is the case, some households will have to sell a portion of their farm land to the government. A household may tolerate the loss of 10 to 20% of its farm land, but it will have to quit farming if it has to sell more than 40%.

Let us assume that all those who would have the luck not to lose any will contribute some amount of their land to the 'victims'. Instead, the hamlet will pool the compensation from the government and re-invest the money to improve all the farm land belonging to the hamlet members.

In this way, we may raise the land productivity, increase farm output, and maintain farm income despite certain loss of land.

Do you think such a project feasible? Please state your opinion."

Out of 34 househeads in Hamlet No. 8, four did not answer, and one did not give a clear opinion. Eight househeads were critical, but twenty-one househeads supported the idea. There was no significant correlation

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between acreage and the above response. Apparently, a majority of househeads did not want to give up their land.

50. The government's policy was not to announce the final plan until the last moment, assuming the earlier announcement would raise land prices.

51. Shiwa Agricultural Co-Operative, ed., 1968 (A), Table 523.



In summary, the present Shiwa househeads are anxious to maintain farming households as an institution, satisfying the three basic conditions. In spite of many changes after the last war, farming households have persisted in Shiwa and will persist in the foreseeable future. However, the future of "farming" households will depend upon how the young heirs regard the land.

## II. Change and Persistence in Local Corporate Groups

This section, deals briefly with three local corporate groups: dōzoku, kumi and hamlet.

### A. Dōzoku

In the pre-war period, the authority of the main-household over the branch-households was maintained by two basic conditions: (1) their symbolic authority to preside over ceremonies for their joint ancestors and (2) their greater access to resources. Main-households were landlords in terms of their large land-holding and asked their branch-households to serve them without pay whenever necessary. In turn, the main-households loaned money, rented farm materials and implements, rented other utensils in emergencies, and supervised branch-households' decision-making.

After the war, the main-household's economic supremacy was lost. By the Land Reform, the landlord-tenant relationships in a dōzoku disappeared: branch-households received land sufficient to sup-

port themselves or had access to other income resources. Branch-households had access to financial resources provided both by the government and the local co-operative, and so they ceased to depend on their main-households. Most branch-households possessed their own farm machines; when a dōzoku was to purchase heavy machines jointly, branch-households accepted equal financial responsibility. The local co-operative was responsible for purchasing the necessary farm materials; when farmers were short of money, they could get materials on credit. In contemporary Shiwa, farmers mutually helped in the second type of <sup>52</sup> yui. Individual households became economically independent units, and the influence of main-households over branch-households in economic spheres became negligible: when necessary, households in a dōzoku co-operated as equal partners rather than as superiors and inferiors.

In a dōzoku frequency of obligatory interactions in non-economic spheres decreased. Traditional houses could easily change their room arrangement, but the renovated houses compartmentalized rooms. At weddings, for example, when farmers had to invite a number of guests, they could not accommodate the visitors in their renovated houses. With the persisting social norm to celebrate weddings extravagantly, increased household income, and motorization, farmers began to invite the guests to either the Town Hall or to restaurants in Morioka City: by 1968, the above practice was institutionalized. Consequently, branch-households neither borrowed utensils from the main-households

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52. See Chapter Two, Section I-B-2.

nor asked the latter to supervise the arrangements. All the branch-households did was to pay respect to the symbolic authority of the main-households in the seating arrangement.

The main-households' symbolic authority still persists, but their influence decreased in the dōzoku. Heads of branch-households visit their main-households to salute before the joint altars at seasonal rituals such as New Year's Day or the Bon festival. In many cases, branch-households consult on various affairs with the main-households before they make decisions; but all these are formal rituals. What main-households suggest and what branch-households actually<sup>53</sup> decide frequently does not agree. If main-households actually had authority, what they decide would be the "order" in their dōzoku and be obeyed by branch-households as long as the decision was congruent with the duties entrusted by the joint ancestors. In ideology, any effort to preserve the inherited land ought to be appreciated by ancestors, therefore, have legitimacy. The two heirs of main-households in Hamlet No. 8, however, conducted the survey because they were well aware that branch-households would not support main-households unconditionally even if the latter's intention had ideological legitimacy. In sum, the significance of main-households and the dōzoku in general declined and it will not be revitalized if present trends continue.

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53. This is a general tendency. See Fukutake, 1968, p. 501.

B. Kumi

In the pre-war period, this local corporate group was a political unit of self-government in the hamlet and provided mutual services for its members. Farmers regarded kumi as a sub-unit in the hamlet and elected by turns a messenger who mediated between the hamlet and the members of kumi. They exchanged labour in farm practices and co-operated on such occasions as roof thatchings, weddings, or funerals. The reciprocal services were the exchange of equivalents: (1) the members of a kumi shared common interests in the above services and (2) their access to outside resources was so limited that members need reciprocal services.

Each kumi spontaneously accepted its responsibility for certain co-operative work such as farm road repairs, but such co-operative works have decreased in contemporary Shiwa. Since 1958, the telephone system, which was also used for broadcasting, made a messenger unnecessary. In some hamlets such as Hamlet No. 18, kumi and yui shared the same membership, co-operating in farm practices; but this was not the case in all Shiwa hamlets. As discussed earlier, because of the introduction of heavy machines, the yui in Hamlet No. 18 were re-organized.<sup>54</sup> Hence, the exchange of labour in production activities is a function of kumi. Particularly since the 1950's farmers have begun to renovate their houses with tile-roof, and the traditional reed-roofs are

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54. See Chapter Four, Section III-C.

disappearing. Those who renovated their houses with tile-roofing left the roof-thatching co-operative. The roof-thatching co-operative required a certain number of members, and the renovators' withdrawal jeopardized the co-operative work. This institution completely disappeared by 1965. As commercialization of wedding celebration was institutionalized, kumi members did not need to co-operate reciprocally. At funerals, however, kumi still serves co-operatively for fellow members.

In summary, greater access to resources diversified the kumi member's interests, and a number of traditional reciprocal services became outdated. Unlike suburban rural communities in which non-farming households were included, kumi in Shiwa still had farmers as its members and the members could more easily co-operate.<sup>55</sup> The significance of kumi in Shiwa life, however, declined in the period of economic development.

### C. The Hamlet

In the pre-war period, the hamlet was the farmers' world. It was the political unit in the community and had a clear boundary. The members of the hamlet shared common interests in community politics and in farm practices through the institutions of irrigation and exploiting jointly owned grass-lands. In the hamlet, certain fixed households

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55. On difficulty in co-operation in suburban rural communities, see Fukutake, 1968, p. 514.

monopolized authority: the leaders were landlords who were also house-heads of main-households, water-chiefs, and the leaders of other economic institutions. The hamlet was the only institution except for the household which claimed the individual farmers' loyalty. Farmers excommunicated the deviants from the group norms. Unless the hamlet members shared common interests, the hamlet failed to claim each member's<sup>56</sup> loyalty. And unless the hamlet included a certain number of households, it could not function.

Post-war changes such as the Land Reform, the Sannōkai Dam, technological changes and increased access to commercial goods undermined the monopolizing of authority by certain fixed households in the hamlet: leadership in the hamlet diversified by specific functions. The hamlet, however, continued to be important to community politics and influenced the members' behaviour. The following illustration of a local election will illuminate the contemporary situation in Shiwa.

In April, 1968, the local co-operative held an election for the Board of Trustees. The importance of the co-operative in Shiwa made the competition acute. As soon as people heard about the election, househeads in the hamlets gathered together in small groups and discussed the matter. Representatives of each small group exchanged information with representatives of other groups, and in the process, hamlet support for potential candidates became clear. By this stage, those who secretly wished to run for office could make a rough estimate of the

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56. The critical number might vary with the degree of access to resources and the level of technology.

support they would probably obtain from their hamlet. When farmers said so-and-so has a good chance, they meant fellow hamlet members would vote for that person. In actuality, therefore, a hamlet nominated a candidate. As soon as the co-operative officially announced the date for the election, 12 candidates started to compete for 11 positions. Five of them were the old trustees while seven others were new. Among the seven, some were from branch-households, and some were farm managers. The Board of Trustees of the co-operative and the opinion manipulators in each hamlet were not necessarily the same persons. In sum, the leaders' backgrounds diversified and their functions became more specific.

During the campaign, strong supporters tried to re-confirm the support within the hamlet rather than to obtain supporters in other hamlets. When election day came, the number of ballots each candidate obtained and the number of hamlets which had been presumed to support him did not agree.<sup>57</sup> Not all the members of a hamlet supported their hamlet-candidate: some farmers must have voted for friends or kin in other hamlets. But, the members of the Board of Trustees perfectly represented their locality in the community. In spite of the change in power structure, the significance of hamlets in community politics revealed itself on this critical occasion.

Until 1968 to a certain extent the hamlet continued to sanction the behaviour of its residents. To give a few examples, the Nambu Town

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57. Information provided by the co-operative.

Police warned three delinquent Shiwa boys in 1967. All the residents of the hamlets concerned were ashamed: they were hesitant to release any information concerning the case, while people in other hamlets were more frank and talked about the incident with a tone of contempt. In 1968, for the volley-ball tournament in the community, a women's team in one hamlet practised until 11:00 p.m. every night for almost one month. Considering the hard work of Shiwa women mentioned in Section I-C, the practice ought to be "a great personal sacrifice."<sup>58</sup> The "day" came, and the team obtained first prize. Most of the hamlet members seemed to interpret it as their own victory. In the weeding operation, farmers tended to weed from the rice-paddies located close to wide farm roads because they were afraid that fellow hamlet members might criticize their "laziness" in informal gossip. The sanction, however, was no longer strong enough to punish the "offenders" by an institutionalized manner such as excommunication. Some farmers did not keep<sup>59</sup> the agreement of the hamlet's common holiday. Some of them even engaged in inconsequential work on the community's Field Day. In farmers' daily conversation, they deplored the rule-breakers as "offenders" and remembered that it had not happened in the "old days". But, no physical sanction was applied to the "offenders".

The hamlet could not function when its members decreased to a certain point. In the Sannōkai Hamlet located in the mountains eight

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58. Smith, R., 1961, p. 247.

59. See Chapter Five, Section III-C.



miles west of the plains area, twenty-one households out of thirty-four were to be flooded by the dam and in the late 1940's they emigrated.<sup>60</sup> Fourteen households remained in the hamlet and tried to continue farming. Both the town and the community helped them by providing services. In 1956, Nambu Town built a new school building in Sannōkai Hamlet. In 1960, television sets were brought in. In 1962, the local co-operative extended the local telephone service, connecting Sannōkai Hamlet to other hamlets in the community. However, other public services began to withdraw. For example, the post office stopped winter delivery in 1958. One household left the hamlet in 1960. According to an informant, the househead found that his relatives who previously emigrated to the plains area were better off and had easy access to the co-operative's extension services and other resources. The Sannōkai people had less access to resources, and were left behind in the economic development in Shiwa, and could not expect improvement of the situation in the near future. The househead decided to leave the hamlet, making his children an excuse for his decision. He told the remaining people that his children missed their friends who were on the plains. In 1961, another family left. When only ten households remained, all of them left the hamlet. The farmers could not continue to farm, because they did not have enough labour to exchange at busy seasons and they could not obtain labour from the plains: by 1964 Sannōkai Hamlet

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60. See Chapter Two, Section III-A.

was deserted. The same phenomena was taking place in the mountainous areas of Iwate Prefecture. In hamlets located in the bosom of deep mountains, households began to decrease. When the number reached a certain point, which varied from place to place, the remaining households came down to service centres located on prefectural highways.<sup>61</sup> In some villages, the village offices deliberately planned to re-locate isolated hamlets before the residents even considered deserting them.<sup>62</sup>

Hamlets in Shiwa other than Sannokai Hamlet have persisted until the present. Except for hamlets number One and Two, which were the commercial centre of this community, few non-farming households settled on the land. Nor has the number of households decreased. The co-operative renovated Farmers' Associations in each hamlet with the aim of making the hamlet a well coordinated productive unit. As long as Shiwa farmers desire to maintain farming households, the present twenty hamlets will survive.

### III. Change and Persistence in Religious and Recreational Institutions

Despite the farmers high regard for hard-work, they had time to relax, because rice-plants did not require equally intensive labour all through the growing period.<sup>63</sup> Farmers were religious as their crops depended heavily on weather conditions over which they had little con-

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61. Information provided by both Mr. Ryō Ōmura and the Tōhoku National Agricultural Experimental Laboratory.

62. Hashimoto, 1969.

63. See Chapter Two, Section I-A-2.

trol; in slack seasons they observed religious ceremonies which included recreational activities. The institutions related to religion and recreation, however, changed greatly in the post-war period. This section, deals with changes in these institutions.

#### A. Religious Institutions

Religion is broadly understood in this study as "man's attitudes and actions to his ultimate concern"<sup>64</sup>. Religion includes ceremonies which have close relevance to production activities,<sup>65</sup> and farmers have observed these ceremonies during slack seasons.<sup>66</sup> In Shiwa, four categories of religion existed: (1) Shintō, (2) Buddhism, (3) folk-beliefs, and (4) new religions. There were only a few adherents of new religions and their influence was negligible, so only the first three are covered.

##### 1. Shintō

Shintō in Shiwa had two features which did not agree with the general rules.<sup>67</sup> First, Shintō objects and those of Buddhism were mixed: Shiwa farmers regarded a Yakushi-dō, which was a Buddhist object, as a

64. Bellah, 1957, p. 6.

65. Japanese folklorists led by the late Kunio Yanagida exhaustively studied the relations between production activities and religious ceremonies. As a representative paper, see Japanese Ethnological Association, ed., 1960, Vol. 7, pp. 1-166.

66. Beardsley et al., 1959, Ch. 14.

67. Beardsley et al. asserted that their community people never confused Shintoism and Buddhism. Op. cit., p. 448.

kind of Shintō shrine. Second, in some cases, residents of one hamlet belonged to two different shrines. As a rule, the basic unit of the group of Shintō adherents or "parishioners" was the household, and the household's locality determined the shrine to which it belonged. The hamlet was a local corporate group; hence, its residents belonged to the same shrine. <sup>68</sup> The above rule was not applicable in Shiwa.

Shiwa people belonged to eight shrines, including the Yakushi-dō. In the pre-war period, the boundary of each parish roughly coincided with a "water system". <sup>69</sup> Not every water-system had a shrine: a few water-systems shared one, while other systems had more than one, depending on the number of households. When a group of households in a hamlet took water from Water System A and were the parishioners of Shrine X, the rest of the farmers belonged to Shrine Y. Hamlet No. 12 did not follow the above rule; two groups of farmers who used water from two different systems belonged to one shrine in the hamlet. None of the shrines had a full-time priest: the parishioners elected an elder who was to accept administrative duties and they jointly maintained their shrine.

Present parishes do not strictly reflect the pre-dam water systems. In the middle of the 1940's, two conditions changed. First, construction of the dam started in 1944, and farmers came to have brighter prospects for solving the water-shortage. Second, farmers lost

68. Op. cit., p. 452.

69. See Chapter Three, Section I.

enthusiasm for the supernatural when it became evident that their gods could not bring victory to Japan. As scholars agree, one of the most important functions of religion is to maintain solidarity within the

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group. In the pre-war period, the authority of the gods had some effects on preventing exploding hostilities between upstream hamlets and downstream hamlets in the Takina River Water-System. When the above two conditions changed, some farmers refused to remain in the same parish with other hamlets with whom they had conflicting interests. In 1946, five hamlets of the downstream area withdrew from their traditional parish and joined other parishes.

Technological change in farm practices caused change in ceremonial patterns. Each shrine had its annual festival which was one of a few institutionalized occasions when farmers could spend money for expensive food. Farmers awaited the day eagerly and invited their kin to big feasts. Until the 1950's, farmers celebrated the festivals by the lunar calendar just before the harvest so that they could emigrate immediately after the harvest. Adoption of new farm techniques in the 1950's outdated the use of the lunar calendar and farmers began to celebrate festivals by the solar calendar which differed from the lunar calendar by up to a month. Farmers fixed the date of the celebration and changed the month, for example, changing it from "August the 8th in the lunar system" to "September the 8th in the solar system".

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70. For example, see Geertz, 1957, and Dore, 1958, p. 295.

After the adoption of technological change holidays sometimes conflicted with harvest. Improved varieties of rice and other improved techniques enabled farmers to harvest rice from the middle of September. In four parishes, however, farmers were to hold festivals after September 15, conflicting with the "new" harvesting season. In 1965, the farmers in these parishes pushed back the dates of the festival one to two weeks. The farmers faced another conflict. Until 1965, festivals of the eight shrines were spread over three weeks, and reciprocal invitations among relatives did not slow down the preparation for harvesting. After 1965, however, the eight festivals were crowded into only two weeks: farmers found themselves too busy to spend time both for festivals and the preparation for farm practices.

The post-war economic development in Shiwa changed farmers' attitudes toward festivals. Farmers came to have greater household income and greater access to commercialized materials which encouraged them to improve their daily meals.<sup>71</sup> The institutionalized patterns of household expenditure in the pre-war period were undermined. Motorization and development of public transportation enabled farmers to have access to commercialized entertainments. Under the new circumstances, some farmers, particularly women, came to regard festivals as "annoying",<sup>72</sup> for only men enjoyed drinking parties and the women merely served them. Young farmers left the community and went to cities, seeking pleasures.

71. See Women's Association of Shiwa County, ed., 1959.

72. Information provided by the Extension Department and from my interviews.

## 2. Buddhism

In Shiwa, three temples had individual full-time priests. Each temple was a local unit of a larger hierarchical institution -- a denomination. The headquarters in Kyōto decided the denomination's general policies and programmes, and the community level temples implemented them in their locale. The three temples in Shiwa belonged to two denominations, one of which had evolved from the other. Both had a similar structure. Since the seventeenth century, every household belonged to a Buddhist temple of either denomination. Members of a dōzoku belonged to the same temple, but not all dōzoku in the community belonged to the same temple, hence the members of a temple were distributed over a wide area. Each of the three temples in Shiwa included adherents from several hundred households who were scattered in more than one town.

In the pre-war period, priests had great symbolic authority over the adherents due to the following four factors: (1) the two denominations in Shiwa were the most evangelical ones, maintaining close relations between priests and the adherents. (2) Priests were the more authoritative mediators between ancestors and the living household members, because of their responsibility for ceremonies and households' grave-yards. (3) The priests had close relations with older people who were committed to the priests and had authority over other household members. (4) Priests had the highest level of school education and were resource persons in the community.

Priests nominated certain adherents as elders of the adherents' groups. Elders usually came from leading households in the community or in the town. They participated in temple decision-making and their authority in the community was great enough to influence other adherents to accept the programmes proposed. The elders' administrative authority in the community strengthened the temples' symbolic authority.

After the war, changes in many conditions undermined the priests' authority. First of all, farmers' commitment to ceremonies, ancestors and priests declined. In the pre-war period, wealthy farmers in the community strictly observed ceremonies for the deceased.<sup>73</sup> If a person who had served the household as a househead or a house-wife died on April 3, for example, the househead at the time of the person's death asked the priest to observe a service on that day of that month for the following seven years. The househead, however, kept observing the third of every month as the dead person's day for the following thirty-three years after the death. He did not allow the cooking of any kind of animal protein on these days. As there were inevitably a number of deaths in the past thirty-three years, there were a number of days every month on which the household members could eat neither fish nor meat. The larger the household property, the greater the responsibility of a househead, and the more strict was the above practice after his death: very small farmers did not observe it at all. The practice had an economic aspect; it was a religiously institutionalized

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73. The information provided by Mr. Kyū Kumagai.



austerity programme. New househeads came to abandon the above practice<sup>74</sup> for the same reasons they gave up shrine festivals.

Priests still administer grave-yards, but the farmers' commitment to their ancestors has declined. In the process of economic growth, the farmers' level of education rose and they had increasing access to information through the mass communication media: the priests' social status as resource persons was devalued. Older people lacked authority in their household so priests had to keep closer contact with the younger generation if they were to maintain their influence on farmers. As the traditional leaders' authority over other community members diminished, temples' authority was undermined. Adherents' economic support of priests decreased and at the Land Reform the temples had to "liberate" the farm lands they did not personally cultivate. Consequently, priests looked for subsidiary income such as teaching school, serving at the town office, or serving as a town councillor. Priests' involvement in secular activities resulted in the relative decline<sup>75</sup> of their symbolic authority.

The Shiwa priests still tried to attract farmers by providing various programmes at the temples during slack seasons. The number of participants, however, was frequently limited to twenty to forty. More significant interactions between priests and farmers occurred at farmers' houses on three major occasions: remembrance days of deceased

<sup>74</sup>. Section III-A-1 of this chapter.

<sup>75</sup>. Fukutake, 1968, p. 516.

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persons, funerals and the Bon festival. For at least three years after the death of important household members, the househead asked his priest to observe the remembrance ceremony at his house. Funerals were observed at the dead person's house. Before the Bon festival, priests would visit all the adherents' houses and observe a special ceremony.

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Kinship organization in rural communities clearly revealed its ideal principles at funerals. Four categories of people participated in funerals: (1) the dōzoku to which the deceased person had belonged; (2) the households in marriage relations; (3) the people in the same kumi and (4) personal friends of the deceased. The part each individual accepted in the ceremony varied with his relation to the household of the deceased. One could most clearly identify hierarchical order in a dōzoku at this occasion. When asked about relationships in a dōzoku in a hamlet, a couple of informants could not readily provide the information: they tried to recollect the parts the households in question played in recent funerals in order to supply the information. The symbolic authority of a priest reached its culmination at funerals. He was treated in a special way from the beginning to the end; at this time he received his largest donation from the household. Except for minor changes in the means of transportation, ritual utensils, and materials for feasts, funerals were the most persistent aspect in the changing Shiwa Community.

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76. On Bon festival, see Embree, 1939, pp. 284-286.

77. H. Oikawa, 1939, pp. 1-40.

In the pre-war period, priests visited each of the adherents' households before the Bon festival, either on foot or by bicycle. At the festival, farmers cleaned their graveyards and dedicated food and the produce in their fields. From Hamlet No. 18, for example, farmers had to walk almost one hour to visit any of the three temples. The religious aspect of the festival required considerable time and energy. Farmers had a re-union at the Bon festival and exchanged among related households the produce of their fields as gifts. Househeads gave holidays to young-wives, who visited their parental households with gifts from the married household and returned, bringing gifts to the married household. In each hamlet, farmers enjoyed the Bon dance, drinking home-brew.

Greater access to resources changed the celebrating patterns of the Bon festival in Shiwa. Priests visited their adherents' households on motor-cycles, covering more households per day than they did in the 1940's. Farmers visited graveyards by car, driven by their sons or daughters. Some house-wives operated motor-cycles to visit temples, holding religious food and a bunch of flowers in one hand. As soon as the short services at the graveyard were over, most farmers returned directly home. Temples had to build parking-lots for the traffic jam on these occasions. Farmers came to exchange commercialized goods. Some young husbands drove their wives to their parent's households. The local farmers lost interest in the Bon dance and stopped the group recreation in the early 1960's. Contemporary aged farmers drank pur-

chased liquor and ate meat in the feasts, while young farmers (heirs) visited cities to exploit commercialized recreation resources. Increase in labour productivity by technological change and greater access to other resources widened the range of alternatives in activities farmers could choose, and the religious aspect of Bon relatively declined.

### 3. Unorganized Folk-Beliefs

Unorganized folk-beliefs were distributed throughout three  
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aspects of farmers' life: (1) in institutions such as a household; (2) in their locality and (3) in production activities. In the pre-war period, farmers attached charms to fire-places, wells, roofs and other places, to protect the residents from misfortunes such as fire, drought, flood or disease. Adoption of improved appliances changed this pattern. Contemporary farmers did not put charms on cooking stoves, pumps and faucets, or on slate roofs. On the other hand, new appliances which might cause serious injury to the operators required charms: to give a few examples, farmers attached a charm to all motor-vehicles, such as tractors, motor-cycles, combines, and other heavy machines.

In households more than one century old, the farmers had tiny altars called the "household deity". Until 1954 when Shiwa farmers started the land re-arrangement project, at the border of each hamlet they had erected stones symbolizing territory deities. After the war, whenever farmers created new social units or made a new special arrangement,

these folk-beliefs disappeared. Between 1946 and 1968, Shiwa farmers established eight branch households and none of the new social units had a tiny altar. When Shiwa farmers carried out the land re-arrangement project, they piled up corner stones for symbolic protection, but only at the less productive land; farmers did not abandon cornerstones but they had a stronger concern over production activities than over territory deities.

When new farm techniques or new farm operations eradicated the objects of ceremonies, these ceremonies disappeared in Shiwa; ceremonies for pest-control by religious means, and ceremonies for protecting horses are examples. Those ceremonies whose objects still persisted like the ceremony for transplanting survived until today.

In sum, when farmers thought they could manage satisfactorily they did not continue to observe ceremonies. When they were not sure how well they could manage the farmers thought it might be a good idea to observe ceremonies. Farmers' confidence in the probable success of the results of their actions oriented their choice. Technological change and other innovations widened the range of farmers' competence. Therefore, secularization developed in Shiwa.

#### B. Recreational Institutions

In the pre-war period, farmers had only limited resources for recreational activities. A Japanese rural sociologist listed three major sources: (1) annual festivals of Shintō shrines, (2) Bon festivals,

and (3) theatrical groups which occasionally visited the community.

Shiwa is located close to the hot spring resorts, so some people visited them after the post-harvest step; indeed, there is one hot spring between the junction of the Takina River and Sannōkai Hamlet. Only older people were privileged to go to the hot springs, however. In sum, the traditional sources of farmers' recreation had three characteristics. First, the recreational opportunities were often multi-purposed. Second, the range of activities in most cases were limited within the community. Third, older people had greater access to recreational resources.

In post-war Shiwa, there were special groups for recreation. To give an example, a number of local corporate groups called kō were distributed in each hamlet, bearing religious names but being recreational as well as educational in nature. Commensality at the ceremonial occasions attracted members, and farmers exchanged information on "new" farm techniques at the gatherings.<sup>80</sup> The Extension Department of the local co-operative held a series of lecture meetings in slack seasons, and so the "educational" function of kō became obsolete. General improvement in daily meals and the increase in frequency of interactions in various associations devalued the traditional commensality at kō.<sup>81</sup> The general decline in farmers' religious enthusiasm also made kō less attractive. Consequently, present members were limited to old people not because of rules for recruiting members but because youths did not

79. Fukutake, 1968, p. 482.

80. From my field notes.

81. From my field notes.

wish to join. Shiwa youths liked more specific associations such as the Car Owners' Association, organized in 1967.

Recent recreational activities often crossed boundaries of territorial groups such as hamlets and communities. To give an example young Shiwa farmers began to play baseball (or volleyball in the case of young-wives) in the 1960's. To practice baseball, they came to the playground of a school at 4:30 a.m., driving their cars, and played until 6:00 a.m. The co-operative organized tournament matches in the summer slack season. Teams based on each hamlet played in some games. Teams based on producers' associations such as the Cattle-Raisers' Association or the Mushroom-Cultivators' Association were composed of farmers from many hamlets. Shiwa farmers organized the Shiwa Community Baseball Team and challenged other community teams. Young-wives had a similar pattern in volleyball. Development in farm economy, and greater access to resources, particularly motorization, allowed farmers to interact beyond the traditional territorial groups.

In the 1950's and 1960's, all age groups of both sexes came to have access to recreation sources. T.V.-watching will serve as an illustration. According to a nation-wide survey on T.V.-watching in farming households conducted in 1967, 81.7% of the farming household population watched T.V. every day. Men and women had an equal chance to watch T.V.: 82% of men watched T.V. every day, while 81% of women  
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did the same. Those who were not engaged in farming on full-time

basis -- youths under 18 years and people over 60 years -- watched T.V. slightly more than full-time farmers. In the survey by the Tohoku National Agricultural Experimental Laboratory cited earlier, the researchers summarized all the recorded activities of farmers into four categories: "sleeping", "farming activities", "housework", and "T.V.-watching and other", reflecting the significance of T.V. in contemporary farming households. T.V.-watching affected the farmers' behaviour in two ways. First, conversation about T.V. shows replaced the usual pastime of gossiping about others, for example, talking about shortcomings of young-wives. Second, because farmers wanted to watch certain T.V. shows, they worked hard in order to finish their daily tasks and be able to watch their favourite programmes. As a result, a new daily resting-time became instituted for all members of the household.

A new recreational pattern emerged after the war. Farmers came to participate in tours organized for specific groups of people from various hamlets. A number of associations including the producers' associations, the Board of Trustees of the co-operative, the Youths' Association, and Women's Association, organized "observation trips" which in fact were recreational tours. As the majority of farming households adopted more than one new farm operation, and the majority of them were organized in producers' associations, each household had more than one chance to participate in observation trips organized by

83. Op. cit., ibid.

84. Nōka Seikatsu Kenkyū-kai, ed., 1968.



associations. Each household member had membership in different associations, hence, most adults had an opportunity to travel. If a housewife prohibited her young-wife from participating in the observation trip, other association members would punish the house-wife by informal

<sup>85</sup> gossip. Hence, most of the working adults had a chance to go on a group tour. In Hamlet No. 18, practically all farming adults had at least one opportunity to visit other places for recreation in 1968.

#### IV. Summary

Despite changes in many conditions, households persisted. Because it was the most basic social unit in rural communities, changes in the households affected other institutions. Traditional sources which previously legitimized househeads' authority were challenged. Technological change modified the rule for allocating resources in terms of sex, and Shiwa women came to have more economic and political independence in households than they had in the pre-war period. Technological change also modified the rule of allocating resources in terms of seniority; younger people became farm managers in many cases. Accordingly, sanction applied by old people became insignificant.

One could observe similar changes in local corporate groups. Relations between main-households and branch-households approached companionship; and the former no longer had institutionalized means to apply sanctions to the latter. Interests among members of kumi and the

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85. See Section II-C of this chapter.

hamlet differentiated, but the traditional authority in the hamlet did not have the previous significance in farmers' life. Hence, no one could punish "offenders" in local corporate groups except by the informal means of gossiping. Since the hamlet still had significance on the life of the farmers, gossiping could punish the "offenders" to a certain extent, but it was moderate compared with excommunication in the pre-war period: individual farmers became more independent than ever before.

The farmers' diminished enthusiasm for the supernatural and decaying commitment to religious institutions promoted secularization. The decreased significance of sanction by old people allowed younger ones to take part in non-ceremonial activities on religious occasions. The future of farming households in Shiwa will be affected by the accelerating secularization of young people: non-commitment to their ancestors will secularize their views on farm land. As discussed in Section I-B, if young people come to regard farm lands as a kind of commercial commodity, the "farming" household will not persist.

Change in the rules of social behaviour in the social system affected recreational institutions as well. In contemporary Shiwa, compared with women, men still enjoyed more advantageous positions in many respects. Contemporary women, however, have greater access to resources than they did in the pre-war period. Both old and young women participate in sports, in tours, and in other activities. Younger farmers are active in every field of recreational resources except for kō. Some

old people have critical views on these "easy going kids" -- but they do not express them openly, for the younger ones often have a larger cash income than the old ones.

In summary, women and younger farmers in Shiwa acquired more independence after the war, because technological change made "new" resources significant in the social system and modified pre-war rules of resource allocation. Despite this fact, the household as an institution and the hamlet still are significant in the lives of the farmers. Shiwa farmers wish to maintain their fragmental farms and also to preserve Shiwa land for themselves. What their future will look like is an interesting question, to be dealt with in the final chapter.

## CHAPTER SEVEN

## CONCLUSION

This is a study of social change in a Japanese farming community. Special attention was paid to relationships between three sets of factors and changes in the three sets of rules which govern farmers' social behaviour. The first section of this chapter summarizes the empirical findings in terms of the relations between the three sets of factors and their consequences. The second section, is an attempt to infer the future of farming communities as the projection of both the theory used in this study and the empirical findings.

I. Summary of Empirical Findings

In this study, three sets of factors were emphasized as indirect and direct causes of social change in the farming communities: (1) changes in the central government's policies and programmes; (2) changes in the economic conditions of the larger nation; and (3) farmers' adoption of advanced productive technology. On the national level, these three sets of factors are mutually related. Changes in the government's policies and programmes have affected both the national economy and the farming community. As a result of governmental policy change, which emphasized the growth of secondary industry, the Japanese economy began to grow rapidly from 1955. The rapid economic growth encouraged the government to modify or change its agricultural policies, so that agriculture would not become a burden on the Japanese economy.<sup>1</sup>

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1. See Chapter Two, Section II and III.

A series of post-war governmental programmes, including fixed rice-prices, Land Reform, construction of dams, the provision of big farming equipment, farm insurance, loan funds, extension services, and the establishment in each community of agricultural co-operatives all contributed to strengthening the farmers' incentive to increase farm output. Rapid economic growth increased the farmers' access to new farm techniques. Consequently, farmers produced rice in excess of the level of domestic consumption, proving the success of the government's programmes. The excess of rice obliged the government to modify its rice control policies. Economic growth in the farming communities expanded the domestic market for other industries, further stimulating the economic growth of the nation. On the community level, however, the above mentioned interaction was not that evident. In this section, the relations between each one of the set of factors and the farming community will be summarized based upon the findings in previous chapters.

#### A. The Central Government and the Farming Community

The central government is a well established institution; its authority is legitimized by a body of laws and regulations ratified by the national Diet and maintained by its great access to resources, including financial resources and information. The government has the resources to buy all the delivered rice, to make loans, to subsidize big projects in farming communities, to develop new farm techniques, and to spread the latest information. It has a "bureaucracy which saw no

part of life as falling outside its purview and sometimes displayed a veritable mania for recording and tabulating every bit of possibly useful information it could lay hands on." <sup>2</sup> And, it has the machinery to apply sanctions on those who do not show "loyalty" or on those who disobey its policies and programmes. The government operated in two ways to change the farm economy: (1) it eliminated or modified certain obstacles which had prevented rapid economic growth in farming communities; and (2) it provided conditions favourable to set off economic growth.

Since 1942 the government has held the authority to fix rice-prices and purchase all delivered rice, thus enabling farmers to increase their gross farm income by producing more rice. It implemented the Land Reform (1946-1948), eradicating landlordism and creating a vast number of farmers who cultivated their own farm land. The Land Reform strengthened the incentive of the majority of Japanese farmers to increase their farm output. The amendment of the Civil Code in 1947 abolished the "family system", including the legal authority of house-heads and primogeniture. In farming communities, however, the abolition of primogeniture did not have a deep impact. At the end of the 1940's, the government introduced farm insurance to help farmers suffering from loss due to natural disasters. The Farm Land Law in 1952 perpetuated small farms by prohibiting the sale of farm lands to non-cultivators, thereby preventing any movement to new absentee landlordism.

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2. Dore, 1963, p. 243.

The above were the mechanisms introduced to create independent farmers who would freely cultivate their own land.

The government provided favourable conditions other than fixed rice-prices, for farmers' production activities. In Iwate Prefecture, it constructed several multi-purpose dams in addition to the Sannōkai Dam which was solely for irrigation; farmers were then able to make more rice-paddies.<sup>3</sup> It renovated the Tōhōku National Agricultural Experimental Laboratory in Morioka City so that it could develop new farm techniques. It urged the dissemination of the achievements through extension officers of the prefectural government. It provided various loans and subsidies to improve the "structure of farm production."<sup>4</sup> In 1947, it organized agricultural co-operatives in every farming community: the co-operative became the mediator between the farming community and the government, as well as the national economy, and was a potential change-agent in the community. If farmers wished to, they could have free access to the government's resources individually or through the local co-operative and could "develop" their economy. In brief, the government aimed to "industrialize" Japanese farming.

With authority, resources, and the machinery to apply sanctions, the government was able to influence farming communities. From the viewpoint of farmers, the greater access to resources provided by the government increased the alternatives open to them. Until the government eradicated certain obstacles, farmers, particularly tenants, had only

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3. See Chapter One, Section III.

4. See Chapter Two, Section III.

limited alternatives and experienced "unsatisfied desires". In the post-war period, they came to own their own land; there were incentives toward an increase in farm output. Certain cultural values changed after the war and farmers felt free to increase their personal satisfaction more openly and to adopt new farm techniques. The farmers became increasingly dependent upon the government, and therefore more under the government's influence. For instance, change in government rice control policies meant the failure of many local projects based on developing the farm economy by renovating rice-cultivation. Such a policy change shook even sophisticated projects like the one in Shiwa. The government's proposed freeway caused great anxiety among the farmers concerned; but they could do nothing to stop or modify the programme.

The government's influence, however, was not complete. Despite the legal abolition of primogeniture in 1947, about 80% of eldest sons in farming communities on the plains inherited their household property as late as 1965.<sup>5</sup> Second sons and younger sons renounced the privilege of inheriting their share as fragmented land would not support a household. The younger ones preferred to emigrate to industrial centres rather than stay in their home communities and farm extremely small lots of land.

Farmers in some communities accepted suggestions and programmes of the central government more willingly than those in other communities. For example, some farmers agreed to give up their local co-operative and

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5. See Chapter Four, Section I-B-1.



to join a larger, amalgamated co-operative which was supposed to economize administration costs, pool limited resources, and allocate the resources in a more "rational" manner. However, Shiwa people refused to accept this suggestion and maintained their own co-operative. They developed their own projects and made efforts to achieve their own goals.

In brief, in spite of certain variations among farmers' reactions, the government could change some social and economic institutions and could influence farmers to adopt new farm techniques. The newly adopted farm techniques modified the old rules of social behaviour as will be discussed later. Therefore, it is evident that the government both directly and indirectly caused changes in the social structure of the farming communities.

#### B. Economic Growth of the Nation and the Farming Community

The post-war economic growth of the nation involved high rates of adoption of advanced productive technology; production activities diversified in the society at large. Stabilization of rice-prices by the government increased gross farm income, giving the farmers more potential for exploiting other economic resources. The pre-war austerity philosophy, which had governed farmers' behaviour, declined significantly in the post-war period. In the process of national economic growth, economic resources increased and so farmers came to have greater access to both productive materials and consumers' goods and services. Simul-

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6. See Chapter Two, Section II.

taneously, differentiation of production activities increased employment opportunities in industrial centres. Those who had limited alternatives in rural communities chose the "new" alternatives, and the rural exodus began. With national economic growth, the frequency of interactions between farming communities and industrial centres increased.

It was a feature of the national economic growth that the difference in terms of income and expenditure per capita between the primary industries and the secondary and tertiary industries became wider; alternatives in farming communities were not increasing as quickly as those in industrial centres. And so those youths choosing to become new farmers were out-numbered by those who emigrated or who became commuting non-farmers (commuters). Eventually, farm labour became scarce, the size of working-teams shrank, and wages for casual farm labourers went up.

One of the general characteristics of technology is that the national economic growth which accompanies technological change requires highly trained labour. Unless one receives high formal training, he cannot get a good job. Likewise, when post-war farmers adopted new farm techniques, young farmers had to obtain higher education in order to effectively manage their farms. The post-war extension of compulsory education, the improved academic level of popular education, and the increase in the number of post-secondary educational institutions, all motivated younger people to obtain higher education. The increase in parental income and the opportunity for work during school years

and after graduation made the youths' motive practical. Thus, not only younger sons but even the heirs began to go to high school and in some cases to universities.

Post-war farmers had an incentive to increase their farm output. But the rising number of emigrants, commuters, and students created a shortage in farm labour. In fact the increasing numbers of students put an even heavier financial burden on the household economy. If the level of farm techniques had remained the same, farm output would have decreased. In hopes of maintaining or increasing their farm output, farmers had to increase their labour productivity. The government provided loan-funds and new farm techniques: farmers had access to financial resources and technological alternatives. The national economic growth provided commercialized productive materials. Households still needed their heirs, because farming continued as the household occupation. In order to keep their heirs at home, the househeads made compromises and met the demands of their heirs -- who might otherwise emigrate or become commuters. Under these conditions, farmers adopted new farm techniques.

Mechanization of farm practices and the adoption of other new farm techniques were the result of farmers' capital investment and produced rising production costs. In addition, the high wages of casual farm labour, the increasing expenses for youths' higher education, and the improvement of living conditions inflated household expenditures. As production costs rose, the net farm income fell despite the rise in

gross farm income. The increase in household expenditures decreased the proportion of expenditure covered by farm income: a subsidiary income became necessary. The strong seasonal nature of grain-crops and the surplus labour created by the mechanization of farm practices enabled farmers to put their labour into certain production activities during summer and winter slack seasons. Employment opportunities for casual labour as well as for full-time workers emerged in the process of national economic growth. Under these conditions, there were at least three alternatives in which farmers could invest their saved labour: (1) taking non-farm jobs on full- or part-time bases, (2) differentiating farm operations, or (3) a combination of the above two. In some communities, larger and smaller farmers took non-farm jobs during slack seasons while very small farmers became commuters. In other communities such as Shiwa, farmers chose the third alternative.

In summary, compared with the situation in pre-war days, the rapid national economic growth in the post-war period together with government programmes and farmers' incentives to increase their farm output, had five consequences for farming communities. First, the national economic growth precipitated a rural exodus of young people. Second, farm labour became in short supply. Third, young people in farming communities were motivated to go to higher school education. Fourth, farmers were motivated to adopt new farm techniques, including mechanization of farm practices. Finally, it made it necessary for farmers to have a subsidiary income.

In the first statement on the rural exodus of young people, national economic growth was the necessary and sufficient condition. However, it was a necessary but not a sufficient condition in statements from No. 2 to No. 5. Fixing the rice-prices and/or the persistence of small farmers were other necessary conditions to give validity to statements No. 2 to No. 5. Without the success of the Land Reform, benefits of the national economic growth would have been more unequally distributed among farmers, and a much smaller number of young people would have been able to obtain higher education. Unless we assume that farmers have an incentive for farming, statements No. 4 and No. 5 have less validity. However, if the Japanese nation had not experienced rapid economic growth, we would not have seen any of these results.

#### C. Adoption of New Farm Techniques and the Farming Community

Post-war farmers adopted new farm techniques, including farm machines. For example, they mechanized transportation by the pull-type garden tractors, trucks, and motor vehicles. By mechanization, application of manures became easy and the adoption of inorganic fertilizers made the demand for manure less acute, eliminating horses from farming communities. Consequently, small branch-households which had no horses stopped borrowing the animals from their main-households, and the economic interaction within the dozoku decreased. Because of motorized travel, young-wives were able to visit their parent-households more frequently than in the pre-war period. Youths could make quick trips

to the cities to enjoy commercial recreational resources, rather than staying in the community on religious occasions. Mechanization of transportation not only increased labour productivity on the farm but modified the institutionalized patterns of social relations and farmers' social behaviour.

We noted in Chapter One that the adoption of advanced productive technology generally has three effects on the economy: (1) reduction of the per unit production cost; (2) re-organization in factors of production; and (3) diversification of the kinds of economic output.<sup>7</sup> In the case of Japanese agriculture, farmers individually introduced a number of different small machines on their extremely small farms and operated them for only a limited number of days each year. The per unit production cost, therefore, was increasing rather than decreasing. The total amount of farm land was practically constant. Farmers came to have greater access to financial resources for capital investment. Because of the emigration of household members in their more productive years, the amount of labour in working-teams decreased: farm machines replaced the discharged labour. In each operation and step, however, machines performed more work than the discharged labour and so farmers had surplus labour to invest in other activities. Diversification of farm output implied diversification of farm operations, which required new bodies of knowledge and skills in production as well as in marketing transactions. In the case of Japanese agriculture production costs were

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7. See Chapter One, Section I-B-2.

rising and net farm income falling, despite the inflation of household expenditures. The need to differentiate farm operations in order to obtain subsidiary income emerged in a relatively short period: roughly in the period of rapid national economic growth since 1955. Therefore, the third effect was not automatic. In order to differentiate farm operations and institutionalize them in the social system, farmers needed change-agents.

In addition to the other sets of factors examined in an earlier sub-section, farmers' adoption of new farm techniques modified their three sets of rules for social behaviour. Three minimum general characteristics were discussed in Chapter One: (1) prior existence of man's motive to modify given conditions into "more satisfactory" ones; (2) re-organization of the body of knowledge concerning laws of nature; and (3) cumulative aspect of technology because of the cumulative characteristic of knowledge concerning the law of nature. Because of the second and third characteristics, the higher a man's formal training in natural sciences, the more advantageous it is for him to adopt the new techniques. An incentive to increase farm output is assumed on the part of farmers. Long formal training and access to sources of latest information were "new" resources to increase farm output. As individual farming households adopted new farm techniques, those household members who had a greater amount of the new resources gained a greater advantage in farm practices than those who had less. In the pre-war period, sen-

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8. See Chapter One, Section I-B-2.

iority was a rule of resource allocation in the working-team, but under mechanized farming the new resources became more important than mere seniority. The three sources which had legitimized househeads' authority changed because of changes in relevant conditions. As to the first source, the old Civil Code, the househeads' legal authority disappeared upon the amendment of the law. The second source had been the farmers' devotion to the ancestors, but post-war farmers felt frustration toward the supernatural, which had not protected Japan and the family members who died in the front; they did not share the piety of pre-war farmers. The third source was the househeads' competence in farming: adoption of new farm techniques outdated old knowledge and skills, and younger people came to have more competence. The third set of rules for social behaviour, the rules for applying sanction, also changed when farmers adopted new productive technology. In the pre-war days, "hard-work" was a criterion to evaluate a farmer. In the post-war period, however, a farmer had to demonstrate competence in the "new" farming to be favourably evaluated in his community. Thus, adoption of new farm techniques modified the old sets of rules for social behaviour.

Modification by technological change of the rules of social behaviour modified institutions in farming communities, but most of the institutions persist until present because of two basic conditions: the perpetuation of the small farmer, and of farming as the household occupation. Five major institutions have fared as follows:



1. Household Compared with the pre-war period, the househead's authority declined, and women and the younger members of the households obtained a greater degree of independence. Both adopted-sons and young-wives received more generous treatment from the in-laws despite a persisting mutual hostility.

2. Dōzoku In the post-war period, the relations between main-households and the branch-households in dōzoku became relatively equal, because the latter had access to resources that exceeded those of the main-households. Increase in labour productivity through the adoption of new farm techniques increased the branch-households' independence because the need for labour exchange in dōzoku decreased.

3. Yui Two conditions still maintained the yui at present: (1) wages for casual labour are high; and (2) mechanization of farm practices has not covered all the steps and operations. But the old rule of yui and the conditions required by heavy machines have come into conflict.

4. Hamlet The hamlet was the farmers' world and demanded serious loyalty to group norms. A certain number of residents had to co-operate in their production activities in order to maintain a hamlet: for when the number decreased to a certain critical point, the hamlet disappeared. Adoption of new farm techniques differentiated farm operations when a competent change-agent was present -- thus causing a conflict of interest. When farmers' interests came into conflict, the hamlet could not control the residents' behaviour. Hence,

in such a community, the hamlet could not have as much control over the residents as it had had in the pre-war period.

5. Religious and Recreational Institutions In the pre-war period, religious rituals incorporated recreational activities. Adoption of new techniques, greater access to resources, and a decline in respect for the supernatural all gave rise to a clear distinction between the religious and recreational aspects: religious rituals became less entertaining.

As the preceding pages demonstrate, farmers adopting new techniques brought on three consequences. First, it increased labour productivity in farm practices, creating surplus labour in the working-team. Second, it raised production costs rather than reducing them, compelling farmers to choose one out of the above mentioned three alternatives. Third, it modified old sets of rules of social behaviour, modifying certain institutions in the farming communities. In other words, adoption of advanced technology widened the range of alternatives from which farmers could choose. Compared with pre-war days, farmers had alternative ways to invest their saved labour, alternative ways to allocate resources, and different methods of legitimatizing authority. And the adoption of new farm techniques caused social change in the farming communities.

## II. The Future of Japanese Farming Communities

The developmental trend in social change is defined as a process of sustained quantitative increase in output, accompanied by an increase in the institutional complexity of the social system. If we state, as a value premise, that development in this sense should be a policy goal for rural society, then it follows that farming communities should increase their economic output and institutional complexity. These are values that I personally share, and hence I wish to see, as a practical matter, that present farming households continue to remain in farming communities, "developing" their social systems. In the process of national economic growth, some institutions did in fact develop in farming communities as substantiated in the text. If the present trends continue, however, some traditional and socially significant institutions may disappear. Under certain conditions, many farmers will have to leave their natal communities and will have to adapt to new situations, which will be a painful process for them. If farmers continue to wish to increase output, farm economy will continue to grow, but the economic growth may not necessarily result in the "development" of rural Japan. If a majority of farming households in a community leave farming, and a few farmers increase produce over today's levels it will not be a "developed" community as I perceive it.

This section tries to anticipate the future of farming communities, inferring from the theory used and the empirical findings of this case study. If the present trends continue -- that is, if other

farming communities in Japan share the following three conditions -- the statements in this section will have validity outside of Shiwa Community, and therefore will be a set of hypotheses for future studies. The three conditions are: (1) the central government will continue to promote industrialization of Japanese agriculture; (2) the national economy of Japan will continue to grow at rapid rates; and (3) Japanese farmers will continue to adopt new farm techniques.

As discussed earlier, farmers had a greater number of alternatives to choose from when their access to resources increased. Under the rapid economic growth of the larger nation, resources increased more in industrial centres than in farming communities. From the above, we can say that the closer a community is to an industrial centre, the greater will be the farmers' access to resources and to alternatives. Should farmers find non-farm jobs more rewarding than farming, they will partially or fully leave farming and will take non-farm jobs, sometimes selling their farm land. Indeed, this has happened to a certain degree as described in the body. If the present trend continues, the above tendency will become more conspicuous. Compared with smaller or very small farmers, larger farmers have to choose high paying non-farm jobs in order to balance the cost of losing larger resources in the community. It is unlikely that "very good" non-farm jobs always await larger farmers. Hence, the larger the household property, the larger the probability that farmers will remain on their farms. Likewise, the larger the resources of their community, the larger the probability

that the farmers neither emigrate nor take non-farm jobs. The kinds of resources in a community can be classified as "naturally given" and "artificially developed". Compared with mountain communities, plains communities have better natural conditions such as good soil, larger acreage for grain-crops, and good access to irrigation water, markets and transportation networks. Farmers have little scope for changing these naturally given conditions. On the other hand, farmers can work with their change-agent and develop their farm economy. We have noted in other chapters that the higher the frequency of exchanges of benefits between the change-agent and the recipients, the greater success the project achieves. With two indices -- distance from industrial centres and degree of diversification of farm operations -- we can thus classify farming communities into three categories. Farming communities located close to industrial centres are "suburban communities". Other communities remote from industrial centres will include two categories: (1) "communities with economic development" in which farmers differentiate their farm operations, working with change-agents; and (2) "communities without economic development" in which the majority of farmers do not deliberately differentiate their farm operations. Logically, suburban communities ought to include those with economic development and those without it. Section II-G, however, hypothesizes that suburban communities will disappear as "farming" communities so that the above distinction will be dispensable. This section examines the variation

in institutional features associated with the threefold categories of farming communities.

A. Future of the Household

When the acreage is relatively small but is sufficient to support the household, farming continues as the household occupation, and an heir is required. From the old rules of resource allocation in terms of seniority and sex, the eldest son tends to be the heir, and the bilateral members usually are obliged to leave their natal household when alternative opportunities are available in the larger nation. As the alternatives increased in industrial centres since 1955, bilateral members have emigrated to take non-farm jobs. If the rewards of emigration (such as larger income, job security, and good working conditions) are greater than the costs of farming in their natal community (such as little monetary returns despite long, hard, and dirty work, no regular day-off, and no spending money), even heirs will emigrate or become commuters. The heirs have to make their decisions carefully since they have the responsibility of inheriting the household property. The larger the acreage, the greater is the heir's responsibility, and the harder it is to find alternatives in industrial centres attractive enough to compensate the heir for leaving farming. From the above, we can hypothesize as follows. The bilateral members will emigrate first, followed by the heirs from the households with smaller acreage. Heirs with larger acreage will remain in their natal community. The closer a com-

munity is to industrial centres, the easier it will be for heirs to make careful decisions. Hence, heirs in suburban communities will most frequently leave farming, followed by those in communities without economic development. Heirs in communities with economic development will show a greater relative willingness to remain on their farms, because they will have more resources in their community than in others.

In the pre-war household, positions were organized in a hierarchical order, and the househead was at the top. The household was a working-team and members in their productive years worked equally hard in farm practices under the direction of the househead. In the post-war period, the househead's authority declined and younger men as well as women came to have a wider range of decision-making. How this situation will develop in the future will depend on farmers' choice in forms of mechanization. If farmers continue to use light farm machines, the situation will not dramatically change. If they introduce heavy machines, at least three alternatives will become feasible. First, when farmers jointly own heavy machines and use them on individual households' farms, the following changes will occur. The participation of women and senior household members in farm practices will decline. As young male farmers will have longer formal training and access to sources of latest information, they will exercise more authority on their farms. Second, when farmers jointly own heavy machines and jointly engage in farm practices, they will develop a division of labour in terms of functions. For example, they will organize a team of operators of

heavy machines, a committee to handle the joint money, a committee to plan farm practices and farm operations, a committee responsible for marketing transactions of the output, and so on. Authority on farm practices will be allocated to an "office" rather than to individuals, just as in bureaucracy or in business firms. Third, when farmers individually own heavy machines, they have to have larger acreages so farmers will be fewer in number, and young male farmers will have authority on their farms. In any of the three cases, farm work and housework will be clearly distinguished, and women will emphasize housework more than farm work. The working-team will be re-organized in terms of distribution of authority and division of labour.

Farming small farms has survived as a household occupation. The adoption by farmers of new farm techniques, particularly the mechanization of farm practices, raised production costs. Unless farmers increase farm output, they cannot support the household. In order to increase farm output, they have to have larger acreage. Already by 1960 average Japanese farmers with 1.0 ha. or less could not support their household on the farm income alone. Production costs continued to rise, and by 1967 farmers needed 1.5 ha. to support their household by farm income.<sup>9</sup> Those with smaller acreages turned to part-time farming, and some of those with 0.5 ha. or less left farming altogether. The decline of devotion to ancestors, the tendency to evaluate labour in monetary terms, rising production costs and decreasing net farm in-

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9. See Chapter Two, Section III-A.



come oriented farmers to make many of their decisions on farm affairs in economic terms. Under these circumstances, unless farmers regard farm lands as more than a commercial commodity, their devotion to the duties entrusted by the ancestors will decline. If devotion declines, farmers will not feel obliged to pass on the household and the household occupation to the heir. According to our findings, the majority of present househeads do wish to maintain the household. If young heirs begin to hold secularized views on farm lands, they will dispose of the land in the economically most profitable manner. If this happens, most part-time farming households will disappear, and in these cases, the household as an institution will disappear. In suburban communities, heirs will have a strong tendency to sell their land and leave farming, followed by communities without economic development. Those in communities with economic development will remain on their farms longer than those in other communities.

#### B. Future of Dōzoku

Dōzoku has two basic socio-economic conditions for its maintenance: (1) the main-household's dominance in possession of the factors of production over the branch-households; and (2) the symbolic authority of the main-household to preside over religious ceremonies for the joint ancestors. By the Land Reform and the increase in access to resources outside of the dōzoku, the main-household's economic supremacy was lost. Post-war decay in piety toward ancestors is more ob-

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vious among the youths than among the aged. As Japanese farming, further "industrializes", farmers will depend upon resources provided by co-operatives, commercial institutions, or the government rather than on their related households. Youths who have familiarity with advanced technology will hold more secularized views on social relations than

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their parents..

If the present trends continue, the dōzoku will disappear in the near future. The manner of its disappearance will vary as the categories of farming communities vary. In suburban communities, access to resources outside of the dōzoku is so great that economic interactions within the institution will entirely disappear. As farmers sell their farm lands to non-farmers, the economic basis for the symbolic authority of main-households will be lost. Therefore, the dōzoku will disappear first in farming communities of this category. In communities without economic development, the majority of farmers will leave farming and emigrate to industrial centres some time in the future, if present trends continue. From our earlier hypotheses, smaller farmers -- most likely to be from branch-households -- will emigrate first. If most branch-households emigrate, the dōzoku cannot continue to be a local corporate group. Therefore, it will disappear from the communities without economic development. In communities with economic development, the majority of present farming households will remain on as

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10. See Chapter Six, Section III-A.

11. See Section I-C of this chapter.

farmers. Although economic development has weakened the main-household's economic supremacy over the branch-households, the symbolic authority of the main-household still persists to a limited degree. In communities where economic development helps branch-households to continue as farmers, the dōzoku will persist until farmers come to have a completely secularized view of their joint-ancestors.

### C. Future of Kumi

Kumi is a local corporate group, and the members co-operate in many aspects of the farmers' social and economic life. The interactions are reciprocal: those who receive services from other members are obligated to repay in services. Unless the members of kumi have homogeneous production activities, the farmers cannot exchange services. Two factors can undermine the above basic condition: (1) an increase in non-farming households; and (2) differentiation of farm operations as a consequence of technological change. In suburban communities, factory workers and salaried men will immigrate and will not exchange services with the indigenous people: the kumi soon will disappear there. Kumi will be able to survive in communities without economic development until the number of farmers decreases to a certain

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critical point. In communities with economic development, despite their conflicting interests, farmers have a common basis for agreement: they engage in farming and therefore will make some compromises to

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12. See Section II-E of this chapter.

mutually assist each other. Hence, kumi will have the best chance to persist in these communities.

#### D. Future of Yui

Yui in the dōzoku disappeared by the 1940's, however, yui to exchange equal labour still persists. Low labour productivity and homogeneous members in terms of production activities will help to maintain this institution. Farmers had two choices in deciding on new farm machines: a light machinery system and a heavy machinery system. As long as farmers use light machines, they will continue to depend on the yui. Adoption of a heavy machinery system, however, will modify or outdate yui. The basic rule of yui demands that all members in the institution work on other members' fields, and all fields are small as well as scattered. In order to operate heavy machines economically, larger acreage in one location is necessary. Joint use of heavy machines means that farmers must agree on varieties to be grown, dates for sowing, and for transplanting, dates for the application of pesticides and fertilizers, and dates for harvesting. In rice-growing areas, the heavy machinery system does not yet cover transplanting; so that farmers need yui in this step. If they follow the basic rule of yui, and work on small, scattered fields, they cannot satisfy the conditions the expensive heavy machines require. Under these conditions farmers will have to modify the rule of yui or abolish the institution altogether: in heavily mechanized farming, yui will not exist as it is now.

#### E. Future of the Hamlet

The hamlet needs a certain number of residents to maintain itself: when the number of the residents decreases to a certain critical point, the hamlet will either lose its significance as a control agent or disappear. The hamlet can apply sanctions to the residents when they have common interests, but if the backgrounds of the residents diversify, the hamlet's control will weaken. In suburban communities, non-farming households grow through immigration and "dropouts" from farming, and the hamlet will weaken or even lose control over its residents' behaviour. In communities without economic development, the hamlet will continue to control the residents until the number of farmers declines beyond a certain point. In communities with economic development such as Shiwa, the hamlet can apply sanction to the residents because they have a common basis -- farming. Differentiation of farm operations, however, will weaken the hamlet's control over the residents as mutual interests diversify.

#### F. Future of Religious and Recreational Institutions

In the pre-war period, religious rituals emphasized recreational and/or educational aspects. After the last world war, the enthusiasm of the farmers for the supernatural declined, and their adoption of new farm techniques further decreased their interactions with the supernatural. As farmers come to have more alternatives in controlling natural hazards, increasing farm output, absorbing information on farm

techniques, and entertaining themselves, they refused to depend on the old religious institutions which incorporated recreational and educational sources. Therefore, religious rituals will decline in popularity, and the farmers will increasingly exploit commercialized recreational resources. Distance from industrial centres will affect the development of commercialized recreation. That is, the closer the community to an industrial centre, the more commercialized the recreational activities will be.

#### G. Future of Japanese Farming Communities

If the present trends continue, the future of farm communities will be determined by how the farmer chooses to develop the farm economy, and a competent change-agent will be needed if the farm economy is to develop. In contemporary Japan, practically every farming community has access to a potential change-agent -- the local agricultural cooperative. When other conditions are equal, the future of the farm economy will be determined by the farmers' choice to support their change-agents, the competence of the change-agents, the kind of goals the farmers will set for themselves, the kind of policies and strategies they will adopt as how to best develop and implement their programmes. If farmers work with competent change-agents and differentiate their farm operations, a greater number of small farmers who do not have individual equipment will operate their farms with jointly owned heavy machines. The number of such communities will not be many, but Shiwa will be one.

On the other hand, if farmers do not try to develop their farm economy, only competent and larger farmers will survive and remain on farms; while smaller or very small farmers will abandon farming, becoming either commuters or emigrants. In these communities, a small number of large farmers will farm with their own equipment. Suburban communities will lose their character as farming communities as industrial centres absorb more labour force and labourers increasingly immigrate into these communities.

Finally, mention of the relevance of this study to strategies of economic development in so-called "developing countries" must be made. In the past century, Japan was a developing country and she is still "developing" as the term has been defined. According to one estimate, per capita income in Japan during the period between 1883 and 1887 was <sup>13</sup> 74 yen, which was about 74 dollars. By 1953 it reached 190 dollars, <sup>14</sup> and by 1970 it surpassed 1,000 dollars. From the above, one may be tempted to hypothesize that the strategies employed in post-war Japan may be useful for other developing countries. Unfortunately for this assumption, post-war Japan had a set of conditions which many of the developing countries have not yet satisfied. Most developing countries can be characterized as peasant societies so that a focus on the conditions relevant to the development of rural Japan is appropriate. The Japanese conditions are: relatively slow population increase, no ethnic

<sup>13</sup>. Lockwood, W., 1954, p. 136.

<sup>14</sup>. Kuznets, 1959, p. 20.

conflict, prevalent compulsory education, relatively efficient bureaucracy, various governmental aid programmes including Land Reform, development of secondary and tertiary industries which provided employment for educated rural youths, and a motivation among farmers to increase farm output for markets. In certain countries some conditions such as the complexity of ethnic composition are givens. However, despite its complex ethnic composition, Mexico was able to reduce conflicts among population components, hence it is not necessarily the primary block preventing economic development. Unbalanced movement of certain factors will frustrate people rather than raise their working morale. If non-farm employment does not increase as fast as the increase in educated youths, the latter will be frustrated. Ethnic conflict centred on scarce resources as well as rapid population growth will make the situation even more acute. On the other hand, when the population increases relatively slowly, when most youths receive compulsory education, and when the government seriously tries to develop its national economy, such as in the Republic of Korea and the Republic of China (Taiwan), the peasants have a good chance to develop their farm economy. If the central government provides financial and technical resources for the peasants, if it fixes prices of certain cash crops, if it encourages potential change-agents or sends competent change-agents into communities, and if the peasants adopt innovations, the farm economy will develop. Other countries in which these conditions are not satisfied will have to find some other path of economic development. In brief, because of the



specific conditions in Japan, the findings of this study have only limited direct relevance to strategies of economic development in developing countries.

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## APPENDIX

## DEVELOPMENT OF INTER-PERSONAL RELATIONS IN THE FIELD

A common notion held among Japanese scholars was that farmers were suspicious about three types of people who visited their communities: (1) "government officials" who might detect their "real income" and would later impose higher income tax on them; (2) "men from cities" who might exploit farmers by selling manufactured products at high prices and buy farm products at low prices; and (3) "researchers" from universities who desire to know everything about farmers and thus, take up their time without considering the inconvenience to the farmer, often disturbing social relations in the community. In order to defend their interest, the scholars suspected, farmers would provide phony information to these visitors. Unless one could "crack the hard shell", one would not obtain the "real" or "inside" information. How to crack the shell, or how to develop congenial inter-personal relations in the field, then, would occupy a researcher's attention.

Compared with Western researchers who intend to carry out a community study in rural Japan, I had a few advantages. Apart from dialectical variation I had a common language and was familiar with some village custom and belief. On the other hand, I shared common advantages as well as disadvantages with the Western scholars, for I was from a Canadian university -- a "foreigner" according to the local people's definition. Japanese farmers tend to show warm hospitality to "foreigners" and assume their ignorance. How to respond to the far-

mers' hospitality and to crack the hard shell were the tasks I had to accomplish in the initial stage of my field research.

I entered the field without my family, since if I took my family, they would command my attention. If I wished to avoid interfering in the farmers' daily practices, I would have to visit them at night. Under these circumstances, the family could be a stumbling block. In addition, my wife was not trained in field research and might or might not make mistakes. When she succeeded, the research would be more successful than otherwise. However, because of her Japanese identity, local people would criticize her mistakes more severely than in the case of a Caucasian woman who is a complete outsider. Considering the possible benefits and dangers of taking the family, I decided to conduct the study by myself. Instead, I determined to get information by making myself available to the maximum.

In the field I kept mentioning two points: (1) I was from Canada to introduce Shiwa people's life to "other foreigners"; and (2) I was attached to the Shiwa Agricultural Co-Operative during my stay, knowing that this would initially motivate farmers to speak of their life with optimism, and that this bias would be corrected through more intimate contact later. I persistently did these at the co-operative and in any interview situation I was involved in. Also, I did not take lunch with the co-operative staff for the first three months. I expected that the co-operative staff would gather together and informally talk about me, exchanging their views: in the process, they would



develop their image of me and define my position in the social system. If I joined them, I would deprive them of the opportunity, which would result in delaying their final definition of my position. Three months later when an extension worker told me that he explained my "job" in Shiwa to several local farmers who had still been "suspicious" of me, I knew that the co-operative staff had completed their definition. If the co-operative, an influential institution in the community, began to broadcast who I was, the local farmers would soon develop their definition. If local people would begin to show hospitality to the "foreigner", all I should do was to persuade them to co-operate in the study.

I also kept insisting that I was a "learner" or a "student" of the local people: without their "teaching" me, I would not pick up anything "important". Local people seemed to wish me to develop a positive image of them so that I would introduce "other foreigners" to their bright picture. In addition, they recognized that they were smart enough to have something to "teach" me, although they paid me a certain respect because I had studied in Canada, using English. In contemporary Japan, everybody who finished their compulsory education after 1948 learned some English and knew how difficult this language was. Despite my limited command of English, local people realized how "smart" I was! So, on both sides, we had something to exchange. Since I deliberately avoided "teaching" local people, the latter used to assume the teachers' role. Even the poorest farmers could teach me how to transplant and were very proud of it. Simultaneously, I took

a number of pictures and often gave one of these to my temporary "teacher", which cost me only 2 1/2 cents. I had a technique which produced a better picture than most of the local people did. In a few cases, I saw the picture I had taken was framed and placed on the shelf. The social exchange between the farmers and myself contributed to motivate some farmers to teach me more about their life.

The language was a problem. My mother tongue is close to standard Japanese and anyone in Shiwa could understand me, but not vice versa. The local people used three kinds of speech. They spoke standard Japanese with a heavy local accent on formal occasions such as at an election campaign or at the general meeting of the co-operative. They used a mixture of standard and local dialects at the co-operative or among younger people under thirty years. Older people used to speak in pure local dialect in informal situations. I had no problem with the first category of speech. When I entered the field, I could follow about 50% of the second category of speech. Within a couple of months, my local vocabulary increased and I could hear sounds more accurately so that I could pick up about 80% of what the local people said in conversation. However, I could not follow old people's speech all through my stay in Shiwa. As the local people defined me as a "foreigner", they did not expect me to use their dialect. Indeed, some of my informants openly told me that local people did not like to see me speaking the local dialect in an imperfect manner. I accepted this advice: I talked only in my mother tongue, demarcating a clear boundary between us. This was a handicap I could not overcome.

When I entered the field, I had only a limited knowledge of farm technology and agricultural terms. It did not take long before I realized its significance. The co-operative had a small library for extension workers, and I had free access to the collection. I spent an initial two weeks copying information on individual farming households, followed by the systematic study of the physiology of rice-plant and techniques of rice-cultivation. Whenever I had questions, the extension workers helped me. The knowledge from books, however, did not give me a full understanding of the practices. I could ask extension workers who were ready to answer any time, but I kept asking local farmers as a means of absorbing knowledge as well as setting up good rapport with them. Within four or five months, I came to follow farmers' conversation on farm operations and farm practices.

Thanks to the education by the local co-operative, Shiwa farmers used technical terms with which I had book familiarity, implying that I had to pick up only a limited number of local terms. By the end of the research, I could easily realize that some professional papers written by agricultural economists and rural sociologists were not based on competent training in agriculture and farm technology. My knowledge was not enough to answer very concrete and technical questions raised by local farmers, but it was sufficient to describe contemporary farm practices to a group of university students in Tokyo.

I strictly observed two policies: reliability and avoidance of informal contact with local women. In Shiwa where male dominance was still notable, a visitor who would have close contact with local

women could be regarded as a competitor. There is a very good informal communication network so that any mistake on my side could arouse the resentment of local men, which would jeopardize the whole research situation. As a policy, I was informal with any local man but was extremely formal to any woman. When I had to obtain information from women, I talked with them in the open air when they were working on the fields. Any one could see us from the beginning to the end of the interview which lasted for only a few minutes. I was particularly cautious when talking to young-wives. I could not visit them at their married households nor talk with them for a long time. I stood on the road side and talked with them for a few minutes when no body was in hearing distance. Often they revealed precious information on such an occasion, knowing that I would not reveal their information to anybody else. When the co-operative held a farewell party on my behalf, every staff member said a word of evaluation. One of the most helpful persons said: "I was most impressed by this man because he behaved as a gentleman to our women". I was successful in this respect.

I dressed in a very informal manner. Often, farmers who visited the co-operative thought that it had employed a new and a financially "poor" staff member. Once a staff member took me to the local town office. His intimate friend who was an official of the town office looked at us and seemed impressed. He told the staff member before me: "Boy, I did not know you are a somebody. You can now use a

chauffeur, right?" When the staff member explained to his friend who I was, the town official was embarrassed and apologized. In the latter half of the study, a local farmer told me that some of the farmers did not like the formal costume of the co-operative staff members. "In this regard", the informant continued, "some farmers like your 'informal' costume despite your 'formal' language". One merit could kill another fault.

I could not drink much and liked beer more than sake. Shiwa is the centre of Nambu brewers and the local people did not like anyone who did not drink sake, their product. I bought sake and began to "practice" to drink it: the practicing was successful. Farmers did not start to talk about what I wanted to know until they had consumed a considerable amount of sake. Before I practiced, I got drunk and could not recollect what had been told to me the previous night. After I had practiced, I could maintain my memory until the following morning when I wrote down the information in my field notes. The use of alcohol strengthened my link to the community. In comparison to the local people, my drinking was close to nil. However, they appreciated my effort to like their product. Local farmers often introduced me to other farmers, saying that "This guy does not drink much, but he is 'learning' it". Usually, the other party nodded with a big smile -- the token of acceptance.

I seldom revealed my personal views. I encouraged the other party to talk and I accepted the role of a "listener". Those who talked about themselves seemed to feel an affinity with their listener

though the latter might not utter a word. A young person visited me immediately before I left the community in order to demonstrate his appreciation of my "progressive" tendency. A group of middle and old aged farmers called on me to bless my "conservative" tendency. In brief, I felt that most of the local man liked me regardless of their age and beliefs: I was not sure of the local women's reactions. The Shiwa people forced me to promise them that I would visit Shiwa again, and about twenty people came to the station to see me off. I keep writing to them and they send me letters: we are friends.