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Coping behaviour of extension agents



in role conflict situations

a case study in Xinji County, China

Rui Qing Huang

Propositions

Above are the government policies; below are the people's counter-policies.
(*this dissertation*)

The strength of a role conflict is an important factor in a focal person's coping behaviour. (*this dissertation*)

In a new and difficult situation of role conflict, focal people do not have a certain fixed behaviour: they may experiment with different types of coping behaviour in order to find a suitable one. (*this dissertation*)

The agricultural extension system in China needs to be reorganised in order to fit the new environment. (*this dissertation*)

Current social scientists have an important role to play in China in understanding and solving the new problems that have emerged along with China's transitional economy.

All the world's a stage, and all the men and women merely players:
They have their exits and their entrances; And one man in his time plays many parts.
(*W. Shakespeare*)

From being muddled to becoming clever is difficult. However, from being clever to becoming muddled is more difficult. (*Pan Qiao Zheng*)

Obstacles are those frightful things you see when you take your eyes off the goal.
(*Hannah Moore*)

Know the enemy as you know yourself and one hundred battles will bring one hundred victories. (*Wu Sun*)

He who loses wealth loses much; he who loses a friend loses more; but he who loses courage loses all. (*Miguel de Cervantes*)

Make it a rule of life never to regret and never to look back. Regret is an appalling waste of energy. (*Katherine Mansfield*)

The more you try to learn Dutch, the more the Dutch refuse to speak Dutch to you and the more they complain that you have not learned it.
(*Colin White & Laurie Boucke. The UnDutchables*)

Propositions presented with the doctoral dissertation entitled Coping Behaviour of Extension Agents in Role Conflict Situations. A case study in Xinji County, China.

Rui Qing Huang
Wageningen, December 11, 1998

Coping behaviour of extension agents in role conflict situations

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To my wife, Ping

Qing



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Weights and Measurements

1 hectare = 15 mu

1 USD = 8.2 RMBY (Renminbi Yuan)

1 kilogram = 2 Jin

Acronyms and Abbreviations

ASSP	Agricultural Support Service Project
ATESC	Agro-Technical Extension and Service Centre
CAB	County Agricultural Bureau
CAP	Common Agricultural Policy
CATEC	County Agro-Technology Extension Centre
CEA	County Extension Agent
EC	European Community
FAO	Food and Agricultural Organisation of the United Nations
MERO	Moral-Expedient Role Orientation
MOA	Ministry of Agriculture
NATEC	National Agro-Technology Extension Centre
TATES	Township Agro-Technology Extension Station
TEA	Township Extension Agent
TES	Township Extension Station
VL	Village Leader

I Background

1.1 Chinese agriculture and rural reform

China's agriculture has been able to feed a population increasing from 60 - 80 million in 1400 to over 1.2 billion in 1998 representing 1/5 of the world's population. Today this 1/5 of the world's population is fed from only 7% of the globe's total arable area. Not only has China been able to bring new land under cultivation to meet increased demands for food, but, through technical innovation, unit yields have also increased steadily. Most recently, for example, the Food Production Index increased by 136% between 1979 - 81 and 1994 - 96 (World Bank, 1998).

Since the 1950s, there has been general agreement in professional circles in China and abroad that the limits to growth have been met with traditional technology and that further development would have to be brought about by using modern inputs. Traditional agriculture could not sustain a rapidly expanding population, now growing at 1.2% annually (World Bank, 1996), and there was no more land to be brought under cultivation. Furthermore, there were only few prospects for expanding the irrigated area with traditional technology (Perkins, 1969).

After 1949, there was a great development in agricultural research and education and in their linkage with agricultural extension, especially during the 1950s and 1960s in terms of number of agricultural universities and research institutes as well as of extension activities. During the Cultural Revolution (1966 - 1976) however, formal agricultural research and education were nearly brought to a halt.

1.1.1 Rural reform

In 1978, rural reform started in China. A 'draft resolution concerning some problems about accelerating the further development of agriculture.' was adopted by the Third Plenum of the 11th Central Committee of the Chinese Communist Party in December 1978. It marked the beginning of the reforms in Chinese rural economic policy.

Rural reform has been proceeding in two stages. The first stage covered the period from 1978 to 1984, when the generally acknowledged successes of the breakthrough in the rural economic system brought about a great development of the rural economy. The second stage started in 1985, with the introduction of grain purchasing by contract to replace the original method of mandatory state purchase of grain.

a) The first stage (1979 - 1984)

The first stage of the rural reform was the outcome of the given historical conditions, under the guidance of the ideological line of the Third Plenary Session of the Eleventh Central Committee of the Chinese Communist Party with its policy of opening to the outside world and of invigorating the national economy. Since 1979, China has implemented a series of reform policies, has raised considerably the purchase price of many agricultural products and has rectified structural deviations in the distribution of national income.

In rural areas, China has also universally introduced the contract responsibility system, with remuneration linked to output based on publicly owned land in 1980. The household-based contract responsibility system linking income with output emerged at the right time and spread throughout the country in just two to three years. The enthusiasm of the peasants, which had long been suppressed, rose again. This resulted in consecutive years of good harvests of grain, cotton and oilyielding crops, chalking up one record after another. The overall development of a diversified economy and of agriculture, rural industry and trade boosted the cash income of the peasants. In five years, the total agricultural output value in the whole country increased at an average annual rate of 10% and the per capita income of peasants grew at an average annual rate of more than 10%. The growth rates were unprecedented and therefore attracted world-wide attention.

The varied experience of China's agricultural economy during the 1980s highlights the challenges and opportunities facing the farm sector during the present decade. Decollectivisation and institutional initiatives provided a framework which allowed, for the majority of farmers, an unprecedented degree of independence in decision-making, but which remained well below that held by farmers in Western countries. Farming was once more practised on a household basis, farmers' activities were increasingly geared towards market signals and their economic relationship with the state was defined by legal contracts. Large increases in the purchase prices of major farm products provided the material incentive for the expansion of all branches of the agricultural economy. These same increases were the source of substantial gains in income, which contained the wherewithal for large-scale investment in agricultural production.

b) The second stage (1985 - present)

From the 1985 the story changed. It is true that in some areas - such as animal husbandry, minor crops and aquatic production - the pattern of expansion continued unchanged. In the crop sector, however, earlier growth gave way to stagnation. Simultaneously, the decline in state and local government support for agriculture (already in evidence in the first half of the 1980s) intensified, but was still unaccompanied by an offsetting rise in indigenous investment from within the farm sector. The improvement in incentives, consequent upon the earlier purchase price increases, also became eroded by a much sharper rise in input prices. This discouraged crop farming and in particular led to a disinclination to engage in the least profitable, but for the country most important, sector: grain production.

Furthermore, one thing should not be forgotten: that the food supply is still not sufficient in China. The yearly population increase in China is about 15 million, and through the increase in incomes, consumers can afford to eat more luxurious products such as vegetables and animal products; the demand from industry for agricultural products is increasing; the cultivated land is diminishing because of the urbanisation process. Thus, the shortage of agricultural products will still be a problem for a long time to come in China (Tian, 1990). 'China's growing demand for agricultural products will create problems of scarcity and inflation not just for itself, but for the whole world', warned Lester R. Brown of Worldwatch (Brown, 1995). China's increasing prosperity and growing food demands, coupled with its huge size, push up prices on the world market, according to 'Who Will Feed China? Wake-up Call for a Small Planet', a report published by the Worldwatch

Institute (Brown, 1995). China has become a net importer of 16 million tons of grain in 1994/95 after exporting 8 million tons one year ago (Brown, 1995). In 1994, grain prices rose 60 % in China because of China's poor harvest and a low world supply (Brown, 1995). In recent years (1990-1995), farmers' incomes did not increase, although production has been increasing. This brings about some serious problems for rural development since farmers do not want to invest in their farmland anymore. Thus, new policies and investment from the government as well as appropriate innovations and technology have to be diffused to small farmers. This in turn gives a new task and challenge to the extension system.

The second stage of rural reform consisted in consolidating and improving on what had been achieved during the first stage. This has been done in a down-to-earth manner while putting emphasis on making real progress bit by bit so as to stimulate the growth of the new system. The great development in the first stage benefited mostly from policy changes, while in the second stage, benefits derived mostly from the growth of technology innovations: research and education as well as the extension system have been re-emphasised in China, and the three systems are being rebuilt and expanded far beyond the pre-cultural revolution levels. The extension system has been strongly developed, now being part of a network linking it with agricultural research and education.

1.1.2 The knowledge system before and after the rural reform

Before going any further, the researcher will first relate what happened before and after the rural reform in the knowledge system and the relationships existing between different sub-systems.

In 1949, the principles of Marxism-Leninism were introduced as determinants of agricultural development. Nation-wide reforms 'returned the land to the tillers', and by 1956 nearly all farm households had joined co-operatives. These co-operatives were merged into 'people's communes' in 1958. A commune was an administrative unit of 4,000-5,000 households (corresponding to today's township), and was sub-divided into brigades (corresponding to today's villages), and into production teams. The production team consisted of 20 - 30 neighbouring households. All its resources were allocated under the unified management of a team leader, except for small plots reserved for the household's own use.

Thus prior to 1978, Chinese agriculture was collectively managed. Extension institutions were run by the State while at the same time being part of the collective institutional framework, i.e. the people's communes. In a way, it was a partnership. The counterparts of the institutions were primarily local decision-makers, such as cadres at commune, brigade, and team levels. Often, they were experienced farmers with education, influence, and power, which are some of the prerequisites for making agricultural extension effective. The rank and file team members were farming as they were told to, without holding much influence on either management or technical decision making (Delman, 1991).

Policy was executed easily by various institutions and collective farms. Agricultural extension served as the crucial link between agricultural policy formulation and implementation. At that time, emphasis was placed on linking technology with mass experience and mass organisation (collective) under local conditions, through locally institutionalised

experiments. The extension system was used as a policy instrument in order to implement the government policy. The process of policy implementation was a top-down approach, policy was formulated at the top level and carried out by various governmental organisations, including the extension organisations. Since the introduction of the contract responsibility system in 1978 (which is part of a much more comprehensive reform program which involves change in cropping structures, introduction of free markets, small-scale industrialisation of rural areas and massive transfer of labour from agriculture to other rural sectors), policy makers as well as extension agents have, in principle, been dealing with individual farmers rather than collectives. Farmers have acquired a certain, and in some cases, even a relatively wide, margin for making their own decisions on how they want to till their land and manage their farm.

After 1978, farmers, in principle, suddenly had to make their own decisions concerning all farm activities. They needed both information and advice, especially on market related management, in which the Chinese extension system is basically inexperienced. In this case, all the institutions in agriculture were faced with new tasks and a new set of clients. Before the reforms there were 6 million potential clients: the production team leaders. After privatisation was completed in 1982, there were 200 million clients: the heads of households, and the new farm managers.

Over the last few years, the household-based responsibility system has threatened to undermine many institutions in traditional agriculture such as the collective water management and the farm machinery management system, as well as traditional practices such as the collective field management system. Agricultural extension is facing similar problems. The agricultural extension system will have to adapt to treating farmers as individual clients and not as tools in a national policy. This adaptation will definitely demand serious ideological adjustment and much innovative thinking on the part of extension planners and extension agents. How can extension shift from the collective approach to the individual approach, or how to maintain the old approach to serve the new clients? How can the extension service change from an agency which implements government policies, to an educational agency which tries to increase the competence of the farm families to make their own decisions? These are very important questions for the good functioning of the extension system.

In recent years, there has been a tendency to shift from the collective approach to a more individual approach in extension. However there are still decisions to be made on a broad level. In order to reach this goal, a sound model for moving from a bureaucratic and compulsory type of participation to one based on individual commitment has to be reached. Extension can play a role in organising this type of participation.

The other important phenomenon which has occurred in rural areas is that many young and experienced farmers have gone to other sectors to earn their living, such as to construction work in cities, rural industry in towns, private firms, and so on. Employment in the rural township enterprises grew from 22 million in 1978 to 93 million in 1988, meaning that roughly half of China's farm families now have income from manufacturing and other non-agricultural work in addition to their farm income. Farmers can earn much more from other sectors than from agriculture. Most farmers would like to move to other

sectors if they have such an opportunity (Kelliher, 1992).

In some rural areas more modern technology and inputs have been adopted, such as new varieties, new pesticides, greenhouses and so on. Products are grown not only for home consumption but also to be sold on the market. Along with the reform, farmers are getting more interested in new technology and market-related information because they have to decide what to plant, in what way and where to sell their products in order to get more income.

In such cases, farmers ask all kind of questions to the extension agents and not only those limited to within production, but including the whole process of pre-production, mid-production and post-production. The farmers ask not only technical questions but also all questions and problems concerning the choice of farming system.

It is clear that the extension sub-system and the whole knowledge system have to be changed in order to fit the changing environment. In fact, at present the whole knowledge system in China is under such a process of change, but there are no clear answers on what needs to be changed and how.

1.1.3 Major changes in the rural economy and the social environment

In summary, along with China's rural reform, the rural economy and social environment have been changed considerably. The main points are:

- The managerial unit changed from commune and brigade to the individual household. As a result of these organisational changes, every peasant household runs a small farm (on average: 0.5 ha of farmland);
- Traditional agriculture switched to modern and commercialised agriculture;
- The farming system has been changed, many young farmers and many experienced farmers have gone to other sectors;
- There has been an increase in farmers' requests for technology, managerial and marketing knowledge;
- The market approach has been increasingly embraced in agricultural production.

The Chinese government is now trying to set up the necessary institutions and formulate new policies and tasks for research, extension, education and so on to support these changes.

1.2 Structure of the Chinese agricultural extension system

A national agricultural extension system in its broadest sense includes all extension organisations in a country that carry out extension in various fields of agricultural science, and is organised at different levels. All these organisations belong to the government (Wang and Liu, 1994).

Agricultural extension organisations existed early in 1949 when the Ministry of Agriculture (MOA) was established, but have since changed their forms many times (For a detailed introduction to Chinese extension organisations from imperial times to 1990, see Delman,

1991). The year of 1982 is taken as the most relevant turning point to the present study. The National Agro-Technology Extension Centre (NATEC), established in 1982 under the MOA, is responsible for extension in crop production. Together with the Department of Crop Protection, Soil and Fertiliser and Seed Supply, it is the management institution for agricultural extension at the national level. Administration of fishery, livestock, and agricultural machinery extension is implemented by the different centres or companies that are also under the MOA. This structure is also reflected at the provincial and prefectural levels. At the county level, however, departments of technology extension, plant protection, soil and fertiliser have been structured into the different sections under the umbrella of County Agro-Technology Extension Centres (CATECs). At lower levels, there are Township Agro-Technology Extension Stations (TATES), village agricultural technicians and specialised households (sometimes called demonstration households) who deal with the transfer of science and technology. The organisational structure of the Chinese extension system in field crop related extension is shown in Figure 1.1.

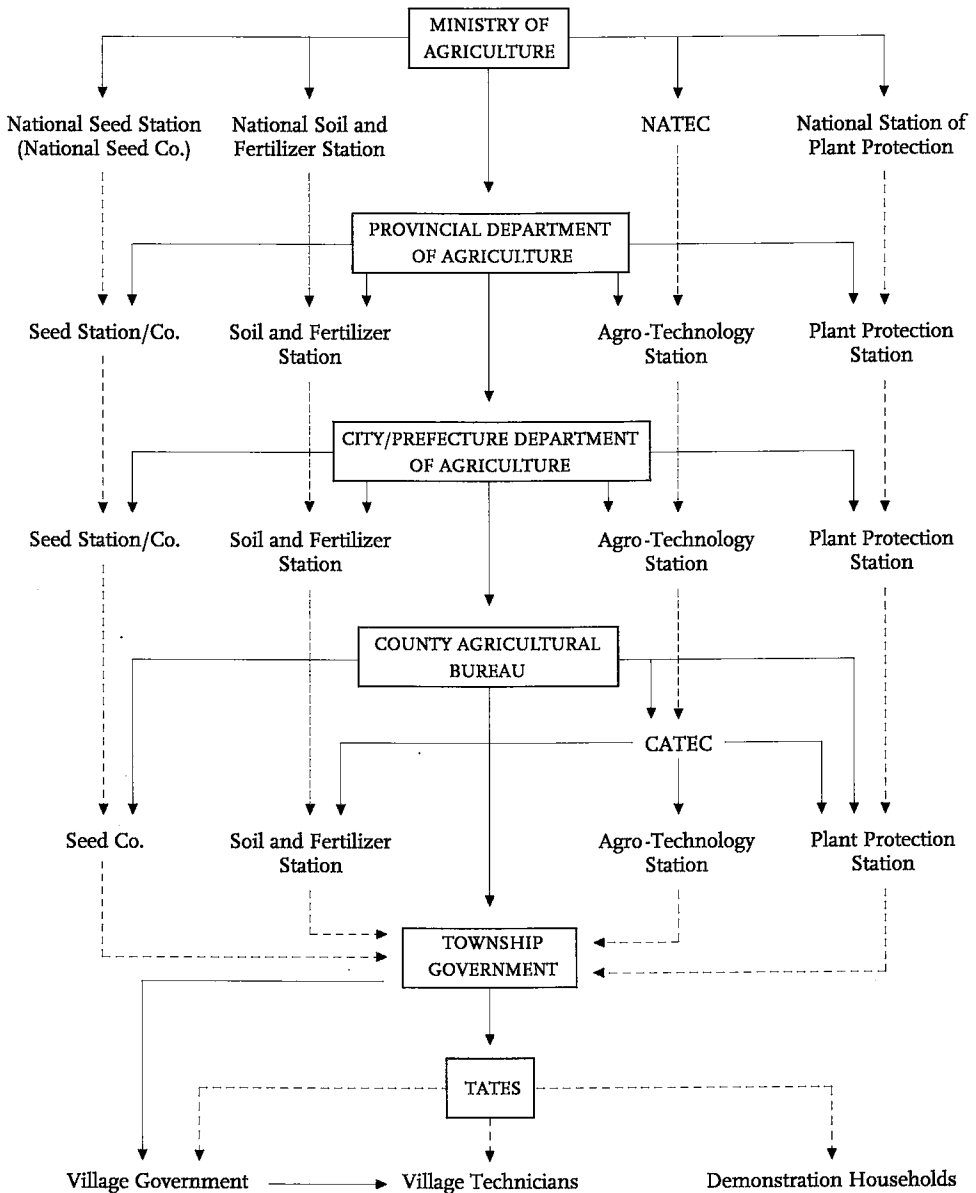
Figure 1.1 shows a complicated structure of organisations dealing with different technical aspects of agricultural extension. Added to this at each administrative level, there are individual organisations with a number of Divisions, which are also, to a certain extent, sub-systems reaching down the administrative system. The extension system is highly proliferated and fragmented at the upper levels (above the CATEC) even though there have been efforts to merge a number of agencies at both national and provincial levels into comprehensive extension organisations.

At present, a big project funded by the World Bank is reviewing the current organisational structure, including the extension system from national level to township level. The project is called the Agricultural Support Service Project (ASSP), within which the project 'Reorganisation Plan for an Agro-technical Extension and Service Centre' (ATESC) will be conducted. ATESC centres are to be created in 10 provinces located throughout China (Bentz et al, 1993). If the project proves successful, it is assumed that ATESC units will be created in the provinces not yet involved in ASSP so that the benefits of improved services can be made available nation-wide.

Up until 1996, the extension organisational structure was still represented as in Figure 1.1. The solid arrow refers to the administrative linkage between different organisations at different levels of administration. This means that the upper level organisation can give orders to the lower level organisations. For example, the Provincial Department of Agriculture can give orders directly to the City Department of Agriculture or even to the County Agricultural Bureau. The dotted arrow refers to the professional linkage, i.e. professional contacts between different levels of the same type of professional centres. Very often these linkages are based on projects. More projects mean more contacts and less projects mean fewer contacts, between different centres. Based on the project, the upper level centre or station can assign tasks to the lower level centres or stations. Besides the projects, there are also some regular contacts between these centres or stations concerning some professional duties, such as plant protection, new innovation diffusion and so on.

It is very clear that this kind of extension organisational structure has an important impact on individual extension agents: the effect has been the emergence of a system or pattern

FIGURE I.1
Agricultural Extension Organisational Structure under MOA involved in Field Crop Related Extension



NATEC National Agro-Technology Extension Centre
 CATEC County Agro-technology Extension Centre
 TATES Township Agro-technology Extension Station

————> Administrative linkage
 - - - -> Professional linkage

which Schurman (1971) calls: 'dual rule'. His definition is: 'A lower-echelon agency receives commands from two or more higher-echelon agencies, and likewise has to submit reports to two or more agencies. The problem is that sometimes the commands from the two higher-echelon agencies are not the same or do not have the same focus.' This is exactly the case for the extension agents at all levels of the extension organisation. For example, the county government (through the county agricultural bureau) may want extension agents to monitor farmers growing cotton in the village, and the provincial extension centre may want the county extension agents to monitor the process of bollworm development at the same time. These two demands are conflicting. On the one hand, conflicting demands give many difficulties to the extension agents but on the other hand they provide them some excuse for not following certain orders from one or the other higher-echelon agent. It will be shown that this has some implications concerning the coping behaviour of the extension agents (see Chapter 7).

It is important to note that not only the extension system, but also all Chinese bureaucratic organisations (systems), are under the two lines of authority: vertical 'branches', i.e. more or less specialised functional 'systems' like the MOA, or 'sub-systems' such as the NATEC-organisation, on the one hand, and horizontal 'areas', i.e. government at all levels from the central government in Beijing to the local government, on the other. These two types of administrative authority both have their proponents. 'People favouring vertical 'branches' argue that it may facilitate unified planning and management of an entire industry or professional area, whereas those supporting horizontal 'area' argue that local co-ordination and control make for more efficient administration' (Zhao, 1990). Since both types of authority have always been coexisting, therefore, they have contributed to competition and conflict within Chinese bureaucracy. Both authorities from the vertical 'branches' and horizontal 'areas' can cooperate in some issues and contend in others, depending on the issues under consideration. What is most interesting, as Shue writes (1988), is that horizontally based and vertically linked offices and authorities meet and contend with each other at each tier of state administration in a pattern moving outward from the centre towards the periphery. This kind of understanding has strong implications for the present study. When both authorities have different interests, the government goals may not always be followed by the 'areas' authority, such as the fulfilment of tasks and quotas. These will be seen in the later chapters.

From Figure 1.1, another important fact can be seen that, above the CATEC, all 'branches' have their own independent organisations at different levels. e.g. the system of Plant Protection, from national level to city /prefecture level. At the county level, three stations of Soil and Fertiliser, Agro-technology and Plant Protection are not independent organisations, but are all under the control of CATEC. Furthermore, there are no more independent professional organisations at township level: all services, including plant protection, fertiliser or seeds, are under the township government or TATES, and then the village government. Although in Figure 1.1, the village technicians and demonstration households are presented, in practice, both from researcher's own experience and other's observations (Wang and Liu, 1994), there are often no real village technicians and demonstration households in the village, therefore the positions are usually substituted by the head or deputy head of the village. This implies that, within the Chinese extension system, there is a big head at the top and very weak legs at the bottom. Actually, the extension system has not yet

been completely established, especially at township and village levels. Either there is no operational extension station or there are very few technicians at township level. A lack of technicians conducting extension activities is a very common situation in a village, and, where there is one, the management of extension does not work (Wang and Liu, 1994). The effect of this structure is that many orders (demands) coming from the top levels go to the township and village at the same time without considering if there is enough manpower to fulfil the tasks at the bottom. Furthermore, when there is something important to be done in the village, all cadres at township and village level will be used to fulfil the government's orders (tasks). This can be seen in the later chapters.

1.3 The impact of rural reform and new tasks for the extension system in China

In order to understand the behaviour of the extension agents we first need to assess the important impact of rural reform on the extension system in China. Based on the previous descriptions, the following important points can now be briefly listed:

- The extension system needs to transform itself to fit the new situation, given the change from planned economy to market economy.
- The extension system was previously only responsible to the government, whereas nowadays it has to account for farmers and adopt a more participatory approach away from the mandatory approach. Before, the extension plan was formed completely by the government, now farmers' needs will have to be considered as well. Thus a combination of both government and farmers wishes should be considered.
- The extension system has to deal with all processes of pre-production, mid-production and post-production, while previously they only dealt with the production period.
- The extension system has to deal not only with technical problems, but now with all problems concerning farming. Extension used to deal exclusively with methods to grow a better crop, while now it has to deal with defining the most profitable crops to be grown by farmers and identifying how these can be sold at a good price; in short, how to make a good decision.
- The structure of the extension system has to deal with competition and conflict between vertical 'branches' and horizontal 'areas'.

For extension agents:

- Extension agents are facing a market economy situation now, their previous education and experience do not provide them with knowledge they need for their present job. Most of them are agricultural technicians and have no economic and management skills. They also lack knowledge of social sciences such as communication and extension.
- The extension agents are used to a top-down approach, rather than a bottom-up approach. While farmers have been considered in the past as passive receivers of the technology, they now need to be considered as active participants in the whole knowledge process. The extension agents, especially those at the higher level in the hierarchy, need to learn to listen to farmers in order to discover which kind of help they need and why particular farming methods are used, or farming system are followed.
- An increased workload for extension agents has been caused by an increasing num-

ber of individual farmers to be served after the rural reform. However, the government has no money to employ more extension agents, thus increasing the workload of extension agents further. It is more difficult to extend the new technologies than before, because agents have to deal with every individual farmer who is now free to take or not to take the advice. Extension agents have been used to dealing with village leaders and technicians who were responsible for the whole process of technology transfer to the farmers.

- On the whole, it is getting more difficult for extension agents to do their job well. The extension system is not stabilised under the constantly changing situation and nobody is sure of how they should accomplish their tasks.

New tasks for the extension system

It is time now to talk about two of the important new tasks of the Chinese extension system. Firstly, the extension system will need to have the capability to collect and analyse data to respond swiftly to the demands of an increasingly commercialised agriculture. Although China has a fairly efficient system of data collection on agricultural production, it still has only limited experience in using this for a dynamic analysis.

Secondly, the Chinese extension system has to provide advice to farmers on market related management information. This is because current agricultural reforms have transferred the farm management authority from the collective to the individual farm household. Irrespective of the size of farms, when they have a surplus and when a market is accessible, farmers will need advice on market related management, about which the Chinese extension system is basically inexperienced.

In order to fulfil the above two tasks, the Chinese extension system needs to pay more attention to market-related information, and to use it to work towards a better functioning of the system. This needs some fundamental change in the current system, away from a productivity orientation towards a social-economic orientation. This also requires a different relationship between extension agents and farmers. With technical problems, extension agents can give advice with a fairly high level of certainty: if you do action A, then you will get result B; but this is not true in predicting market development and consequences of management decisions. Therefore, a more non-directive extension approach becomes necessary.

In this situation, rebuilding and strengthening the extension system in order to provide the rural population with proper knowledge and information is a very important and urgent task for the Chinese Government.

The development of science and the diffusion of innovations is now seen as the key to achieving China's overall modernisation, and the working of the whole technology sector has been scrutinised as a consequence. The new approach is encapsulated in the slogan by the government 'Science and Technology work must be geared to the needs of economic construction; vigorous economic development must rely on scientific progress' which applies to the agricultural as well as industrial and service spheres.

The Chinese Government has been putting a lot of emphasis on new institutional set ups over the past 10 years. The year of 1990 was called 'the year of agricultural extension' in China. In 1990 there were 1286 County Agricultural Technology Extension Centres (CATECs) all over China. In 1996, there were 1876 CATECs and now there are 1990 CATECs (Li, 1998). More than 78% the counties have already set up their CATECs, the remainder will establish their CATECs within a few years. The first national extension program 'Harvest Program' started in 1987. From 1987 to 1997, participation of researchers and extension agents to this program were 900000 person-time and extended a large amount of technologies to a large area in whole China. This program has contributed greatly to the rural development and farmers' income in China and is currently still in the process of development (Li, 1998). Beijing Agricultural University established an extension department in 1994. Several centres were established to use new ideas to conduct extension work, such as the Centre for Integrated Agricultural Development (a joint project of Beijing Agricultural University and Hohenheim University in Germany), FAO projects in Shuangliu and Wuxian counties and the China-EC Centre for Agricultural Technology. Besides, the Scientific Technology Committee of the Ministry of Agriculture is conducting a research project named 'Improving the Co-operation among the Three Pillars of Agriculture' (the three pillars being: agricultural research, agricultural education and agricultural extension). For some time there has been no co-operation among agricultural research, extension and education, and the old extension system, at the four levels of county, commune, production brigade and team level, is no longer existing after the rural reform. Thus the Chinese government is now trying to do two things at the same time:

- To establish a new extension system as soon as possible at all levels from state to farmers;
- To make the extension system function efficiently.

But the challenge now facing the Chinese extension system is that there is a lack of money to support the system that has been set up. An apparently paradoxical situation, the overall demand for technology innovation and diffusion now appears to be far greater than when the collective system of rural production was intact. While demand has risen, the practical difficulties of supplying this demand have also multiplied, as the system now nationally has to service 200 million production units, as opposed to 6 million under the previous collective system. This paradoxical situation is worsened because of lack of funds from the government. It seems that government extension organisations will have to find ways to earn their own living. The government will gradually reduce financial support to the extension organisation and farmers will have to pay some money for the service they get. The popular idea is based on 'extension to do business and make a good business to promote extension'. It seems that the extension system in China is expected to do more with less. This is not impossible, but in a broad sense creates a very great need for quality improvement concerning the whole extension system in China.

2 Research problem and research objectives

2.1 Research problem

Following the rural reform in China, the extension system has suddenly been faced with the need to deal with an entirely different environment than was previously the case.

Dual challenges

The Chinese extension system is currently facing dual challenges. On the one hand, the system should be efficient and convincing in carrying out the new set of policies emanating from the central leadership in Beijing on how to achieve agricultural modernisation. On the other hand, the system is faced with an ever increasing demand for reliable, effective and more varied technical and economic services from the farming population, whose economic interests are directly linked to the effectiveness of their farming activities and consequently to the number and level of technical inputs they invest in farming, and whose individual interests are not necessarily the same as those of the government.

The current tendency is for government policy to move slowly from centralised control to a more decentralised market economy, but in certain specific fields this is not happening. For example with grain and cotton production in recent years, there is even more centralised control than previously. In general, however, the extension system is more market-oriented than before. It is very clear that the extension system in China is now in the process of reconstruction under the current situation of change. New institutions and managerial styles may be needed to support the system, and new decisions have to be made concerning missions, structures, the extension process and so on. In this case, policy-makers and managers within the system have to make choices, some strategic, some operational, which affect the functioning of the system. Since this research is intended to be relevant to policy-makers and managers both within and outside the extension system, it may facilitate in making such decisions more transparent and effective.

Two driving forces

Prior to the reform, the extension system concentrated mainly on one mission: to increase agricultural production and food security in the country. This was the government's mission, and therefore, the main task of the extension system was to serve policy's interest, there being only one driving force in the system. After the reform, it has become clear that the farmers' interests also have to be served by the extension system; farmers will not follow extension recommendations unless they are convinced that it is in their interest to do so.

Thus the market has emerged as a second important driving force for the extension system, alongside policy. This new market force creates a new challenge for the extension system, which now has to serve both the interests of policy makers and farmers.

If the interests of the policy makers and farmers are the same, then the task for the extension agent is not so difficult. But in China there is a clear conflict between the goals of the government in pushing for maximum production and low food prices in order to achieve

national food security, and that of the farmers who are more interested in profits, in additional income from non-farming sectors or in growing products that serve the market, but not necessarily in the most basic food products. The farmers' goal is basically to achieve the greatest net income, while the state's goal is basically to reach the greatest production output. These different goals have contributed to many conflicts in the system. Even though the situation has changed, especially after the government dismantlement of grain-planting quotas for farmers, the conflict still remains; in certain field such as cotton production, farmers are forced to grow a certain amount of cotton for the government. Furthermore, this conflict of goals is expected to remain for a long time given the facts that China has a population of 1.2 billion, that there is a limit to land available for cultivation and that agricultural land is decreasing rapidly because of the industrial use of land and other activities. On top of this, farmers are not so inclined to make investments on their land nowadays, because of the low returns on farm products.

In China, national policy makers and farmers can be seen for being at opposite ends of the same line. Their goals are very important factors in the functioning of the extension system. If the goals were similar, then the extension system would find it easier to follow policy instructions and at the same time satisfy farmers' needs. When the goals are conflicting, then the extension system encounters difficulties in performing its tasks (for a detailed elaboration see Chapters 5 and 6).

In this case, the market message does not often coincide with the policy mandate. Farmers decide what to produce according to the market message in order to reach the highest benefit; but at the same time they have to accept an agricultural policy and its mandates, which are very often not in line with the market message.

Therefore, the two driving forces - policy and market - create a conflict situation for the extension agent. The extension agent in many cases finds him/herself exposed to conflicting expectations: the policy makers or governmental officials expect him/her to work in one way, the farmers in another, and these expectations are incompatible. How will the extension agent behave when faced with such role conflicts? This is the problem with which this study is concerned.

This problem may be better understood by using the theory of role conflict resolution (Gross, Mason and McEachern, 1958), although there are several drawbacks to this theory (for a detailed elaboration see Chapter 3). The theory still needs many modifications and improvements through empirical study, and one of my research objectives here is to contribute to this new knowledge generating process.

The study of Wagemans (1987) shows that extension agents in The Netherlands demonstrate a more professional attitude when they are facing a conflict situation. This means that, as tensions occur between the formal goals of their own organisation and the expectations of the farmers, extension agents very often give priority to the demands of farmers, rather than to following official guidelines. The situation in China is more or less the same as in The Netherlands as regards extension agents facing a conflicting demand from the government and farmers. The question arises as to whether the Chinese extension agents will respond to the conflict in the same way as Dutch extension agents. From the research

cher's own experience in China, it is surmised that there will be some different responses to the conflicting expectations. Another question then arises as to where the differences are and why. It is necessary to evaluate whether the extension agents will tend to act more as professionals or more as government cadres. This will have important implications for policy implementation and conflict resolution in China since the Chinese government is trying to make the extension system more efficient and effective.

Factors influencing the coping behaviour of extension agents and the dynamic process of role conflict resolution

To understand how the extension agent behaves when faced with a role conflict is only the first step in this study. Of more concern are the factors influencing certain coping behaviour. Many factors may contribute to the coping behaviour of the extension agents in a role conflict situation in China. Gross, Mason, and McEachern (1958) predicted that the behaviour of a focal person such as the extension agents in this study is determined by their perceptions of the legitimacy and negative sanction power of the role senders (for a detailed discussion see Chapter 3). Other researchers stress influence of the factor of the positive sanction. From researcher's own experience as an extension agent in China, it is surmised that the goals of the extension agents themselves could also be an important factor in determining their behaviour. In a mixed extension system of both policy driving and market driving like China's, there might be more important factors that determine the coping behaviour of the extension agents.

Van de Vliert (1981a) recognised that role conflict handling is a process, rather than a static coping behaviour, but he did not do any empirical research to support his theory. The role episode model (Kahn et al., 1964) depicts an interactive process which occurs over time among individuals in an organisational context (for detailed elaboration see Chapter 3). There is no systematic empirical research to show how the dynamic process proceeds, nor how the role senders and the focal person react to each other and the effect of these interactions. It is suggested (Van Sell et al., 1981) that investigation of the processes which cause role conflict and response to the role conflict can provide insight not only into role stress, but also into the dynamics of other crucial individual and organisational behaviour. Therefore, this study pays special attention to these points, in order to demonstrate clearly both the nature of the dynamic process and the effects for the next step of the coping behaviour process by both the focal person and the role senders.

A hierarchy of extension agents

From Figure 1.1, can be seen that extension agents work at many different levels. There are three levels of extension agents from county to village level: there are county extension agents, township extension agents and village extension technicians. They are all funded by and recruited from different sources and thus have different perceptions regarding policy and market forces. The extension agents at county level are employed and paid by the government. In general, about half the township extension agents are formally employed and receive their salary from the government, while the remainder are employed as farmer's technicians, and are paid by either the province, county or township. At village level, all the extension technicians are farmers who receive subsidies partly from the county, and partly from the township and village.

The researcher's own experience shows that extension agents at different levels of the extension hierarchy behave differently when faced with role conflict, and this study deals with the coping behaviour of the extension agents at these three levels, from county to village.

2.1.1 Formulation of the research problem

Previous sections have described the changing situation and its implications for extension agents: the market and policy driving forces have created a conflict situation. Because this is a relatively new situation in China, there is little knowledge on how they will react to this role conflict from both theoretical and practical points of view. This provides a unique setting for a case study. Therefore, the overall research question which the present study address is formulated as follows:

How do extension agents in Xinji county experience and cope with the role conflict generated by the increasingly opposing demands by the policy mandate and market force?

The following sub-questions will be addressed in order to answer the above question:

- What is perceived as role conflict by the extension agents?
- What are their coping behaviour in a situation of role conflict, and why?
- What are the factors influencing these coping behaviour?
- What are the dynamic processes in role conflict resolution and why?
- What are the differences in coping behaviour between extension agents at different levels of the extension hierarchy from county to village level?
- How and why are there such differences among the coping behaviour of the extension agents?

2.2 Research objectives

The central objective of this study is the identification and understanding of coping behaviour to the conflict situation of extension agents at various levels. This general objective is divided into the following six sub-objectives:

- to understand the way in which different extension agents perceive role conflict in the changing situation in Xinji;
- to identify the way in which extension agents deal with the role conflict;
- to understand the factors which influence their coping behaviour;
- to identify and understand the dynamic processes of the role conflict resolution;
- to identify and understand reasons for different coping behaviour at different levels;
- to contribute to the scientific body of knowledge through the development of an extended model of coping behaviour of extension agents and their dynamic process of interaction through empirical research in China.

2.3 Relevance of the study

After the rural reform, the existing Chinese extension system was no longer suited to the changed environment, and interventions were urgently needed to redesign it. Many efforts were made to change the system's mission, structure and process, as well as the extension methods at county level, in order to make it more effective and more responsive to the changed environment. Many new roles were given to the extension agent without considering whether they were consistent or not. Today, extension agents face more of a conflict situation than ever before. The government still does not have a detailed analysis of how extension agents cope with government policy and market forces, especially when there is conflict between these two forces. Little research has been done on the coping behaviour of the extension agents in situations of role conflict, and this study will contribute to shedding light on this issue. It is hoped that policy makers and managers in China will benefit from this research, to make decisions more transparent and more effective.

Such kind of research may also be relevant for many other countries, which are undergoing similar reform processes, especially the Central and Eastern-European countries.

Further, in the current body of literature, there are scanty scholarly attempts to explore the coping behaviour of the extension agent under the two different driving forces from the role conflict perspective.

This study will also help to generate theoretical conclusions about the way people respond to role conflict situations and the reasoning behind their responses. In role conflict theory, sanction power and legitimate power are considered as two determinants for explaining the coping behaviour of a focal person. However, there may be more behaviour determinants, such as a focal person's own expectations about him/herself and so on. A range of coping behaviour may be identified, and a general model of coping behaviour and its determinants will be developed.

In role conflict resolution theory, little attention has been paid to the broader context in which coping behaviour takes place, including the past history of the role conflict, the power status and relationship between the role senders and focal person, and the dynamic processes of interaction. This study will go one step further in this respect: deeper insights will be gained regarding behavioural determinants and influential factors, and dynamic processes of the interaction between the focal person and role senders.

3 Theoretical framework

This chapter reviews the relevant literature that can be useful in understanding and explaining the concepts and phenomena relevant to the research problem. Since the research interest is to study the coping behaviour of extension agents in a role conflict situation, concepts such as perception and coping behaviour will be explained first in Chapter 3.1. Concepts in role conflict theories and some critiques on the role conflict theory will be presented in Chapter 3.2. Two different approaches in role theory will be discussed in 3.3, the phenomenological view will be presented in 3.4 and then followed by a summary of the theoretical framework at the end.

3.1 The concepts of perception and coping behaviour

Perception is the process by which we receive information or stimuli from our environment and transform it into psychological awareness (Van den Ban and Hawkins, 1996). Human behaviour is based on an individual's perception of his/her environment. This perception is influenced by his/her frame of reference, i.e. the sum of values, norms, convictions and assumptions on the basis of which he/she imagines, judges or acts. It is influenced by the social group to which he/she belongs and/or would like to belong (Van den Ban and Hawkins, 1996). Individual experience plays a great role in this frame of reference, continuously enriched with each new experience acquired (Tossou, 1995). As such, the world is continually reinterpreted using the accumulated social experiences and culturally acquired dispositions, the ultimately source of which is a process of mutual creation with the perceived world (Checkland and Scholes, 1990). To sum up, perception is influenced by the past experiences, present and future desires, motivations and projects of the actor and by their power in terms of capabilities and autonomy, i.e. the possibility for them to adopt or reject an expected behaviour.

The concept of coping is complex and has been defined in various ways (Corbett, 1988). In this study, coping is the process through which extension agents make relevant adaptations to the environment or role conflict situation as they perceive it. Thus, coping behaviour is the outcome of the process of mutual interplay between people and change in their social system. This interplay or coping behaviour may be passive, active or even creative. It will be seen that the coping behaviour of the extension agents is more than a passive response. It is an active, creative and adaptive response to the role conflict, a way to make better use of the situation in order to achieve desired objectives.

Behaviour is generally defined as the response of people to perceived changes in their environment. Coping behaviour, thus, is the adaptation process of the individual to the perceived changes in his/her social, physical and/or political environment.

An extension agent's coping behaviour is based on his/her perception of the world around him/her. His/her sense-making process will determine his/her behaviour. It is not possible to know these processes directly. What can be done is to observe his/her behaviour and talking with these extension agents and then attempt to analyse the sense-making proces-

ses so as to understand the behaviour. This is what the study attempts to do throughout the whole research process.

3.2 Concepts in role conflict theories

Park wrote, as early as 1926, 'everyone is always and everywhere, more or less consciously, playing a role.... it is in these roles that we know each other; it is in these roles that we know ourselves' (Katz and Kahn, 1978).

The works of George Herbert Mead (1934, 1964) have, undeniably, been the most important source for the emergence and development of role theory. Within an organisational context, the term 'role' can be defined as a set of expectations applied to the incumbent of a particular position by the incumbent and by role senders within and beyond an organisation's boundaries (Banton, 1965; Gross, Mason and McEachern, 1958; Neiman and Hughes, 1951). Individuals are frequently confronted, however, with situations in which they may be required to play a role which conflicts with their value systems or to play two or more roles which conflict with each other.

An examination of the literature concerned with 'role conflict' reveals that this term has been given different meanings by different social scientists. Some have used it to denote incompatible expectation situations to which an actor is exposed, whether he/she is aware of the conflict or not. Other social scientists use 'role conflict' to mean situations in which the actor perceives incompatible expectations (Gross et al., 1958).

Some formulations of role conflict specify that the actor must be exposed to conflicting expectations that derive from the fact that he/she occupies two or more positions simultaneously (Johnson, 1960). Other formulations include, in role conflict, those contradictory expectations that derive from an actor's occupancy of a single position. Some writers limit role conflict to situations in which an actor is exposed to conflicting legitimate expectations or 'obligations' (Magid, 1968) whereas others do not make this restriction.

In view of these differences it is necessary to specify the way the problem is defined and limited. First, the interests of this study lie in role conflicts that are perceived by the individuals subject to them. Second, the study is mainly concerned with incompatible expectations resulting from an actor's occupancy of a single position, namely the position of extension agents. Third, the analysis is not restricted to incompatible expectations that are perceived as legitimate, but instead, attention will be directed to situations involving both legitimate and illegitimate incompatible expectations.

By limiting the problem in this way, the following definitions of basic concepts are used: A *role congruency* is a situation in which an actor as the incumbent of one position perceives that the same or highly similar expectations are held for him. Any situation in which the incumbent of a position perceives that he/she is confronted with incompatible expectations will be called a *role conflict* (Gross et al., 1966).

The person for whom an expectation is held may consider it to be legitimate or illegitimate. A *legitimate expectation* is one which the incumbent of a position feels others have a right to hold. An *illegitimate expectation* is one which he/she feels others have no right to hold. An expectation that is felt to be legitimate will be called a *perceived obligation*. One that is felt to be illegitimate will be called a *perceived pressure*.

A *sanction* is either a reward or a punishment, conditional on how an individual behaves. For this analysis I will not be concerned with positive or negative sanctions, but rather with an individual's perceptions of the sanctions others may apply to him/her. Whether or not the perceived and actual sanctions are the same in any given situation is an empirical problem that will not be dealt with in this analysis.

3.2.1 The theory of role conflict resolution

According to Gross, Mason, and McEachern's theory (1958), an individual confronted with two incompatible role prescriptions, A and B, has four behaviour alternatives: conform to A, conform to B, conform partially to both A and B (compromise), and conform to neither A nor B (avoidance). The behaviour he/she will select is assumed to be a function either of the legitimacy or the illegitimacy of A and B (moral type), or the negative sanctions that will or will not follow the deviation from A or B (expedient type), or both (moral-expedient type). In the following paragraphs this theory is explained in more detail.

Three types of orientation to expectations

The starting point for this theory of *role-conflict resolution* is the actor's definition of the situation according to two elements, *legitimacy* and *sanctions*. It is assumed that actors will have perceptions of whether or not the expectations to which they are exposed are legitimate. Furthermore, the authors of this theory assume that the actors will also have perceptions of the sanctions to which they would be exposed if they did not conform to each of the expectations, and that individual actors may be differentiated into three types according to whether they are primarily oriented toward legitimacy or sanctions or a balance of the two when making decisions.

The *first type* characterises the person who, when faced with a role conflict, gives most weight to the legitimacy of expectations. His/her definition of the situation places stresses on the rights of others to hold their expectations and de-emphasises the sanctions he/she thinks will be applied to him/her for nonconformity to them: such a person has a *moral orientation* to expectations. He/she will be predisposed to behave in a role-conflict situation in such a way that he/she can fulfil legitimate expectations and reject illegitimate ones. If one of the incompatible expectations is viewed as legitimate and the other is not, he/she will be predisposed to conform to the legitimate expectation, regardless of what sanctions are involved. If both are legitimate he/she will adopt a compromise behaviour in order to conform, at least in part, to both of them. If both are perceived as illegitimate, he/she will be predisposed to conform to neither of them and in consequence will adopt some type of avoidance behaviour. In short, for an individual with a moral orientation to expectations, it is possible to ignore his/her perceptions of the probable sanctions in making predictions about his/her behaviour. From his/her definition of the legitimacy of the expectations, predictions can be made about his/her behaviour.

One noteworthy remark is that there are limits to the strength of sanctions which individuals with a 'moral' orientation can ignore. When strong negative sanctions would result, then individuals would probably have to conform to the expectations to a certain degree or at least show that they are attempting this. In a worst case they could not do anything but follow orders strictly in order to avoid these strong sanctions.

The *second type* of orientation to expectations may be called *expedient*. An individual who has this orientation is one who gives priority to the sanctions that others will bring to bear if he/she does not conform to their expectations. Such a person, it can be assumed, will act so as to minimise the negative sanctions involved in the role-conflict situation. He/she will try to provide the best defence for him/herself in view of the relative severity of the sanctions he/she feels others will apply to him/her for nonconformity to their expectations. Whether others have a right to hold certain expectation is irrelevant or of secondary importance to him/her. When he/she perceives strong sanctions for nonconformity to one expectation and weak sanctions for nonconformity to the other, he/she will conform to the expectation that could result in the stronger sanctions for nonconformity. If he/she perceives that equally strong sanctions result from both, he/she will compromise in order to minimise sanctions.

The *third type* of orientation to expectations is called *moral-expedient*. A person who has this orientation does not give primacy to either the legitimacy or sanctions dimensions but instead takes both relatively equally into account and behaves in accordance with the perceived 'net balance.' For some role conflict situations, the decisions of an individual with a moral-expedient orientation are relatively simple, since both the legitimacy and sanctions elements lead him to the same behaviour. In other role conflict situations, more complex decisions of compromise or avoidance will be required by the actor.

3.2.2 Critiques on the role conflict theory and modifications

Following Gross et al. (1958), many studies have been done in the field of role conflict, for example Miller and Shull (1962), Sayan (1968), Davis (1972), Antwi (1974). However, none of them adequately verified Gross's theory until Van de Vliert (1981a). This section discusses the drawbacks to the theory, in the light of critiques made by subsequent studies, and makes modifications to adapt it for use by this research.

1 The theory is static, while conflict handling is a process.

Following the recognition that conflict handling is a process, Van de Vliert (1981a) presented a modification of Gross's theory of role conflict resolution. This theory is called 'A Three-Step Theory of Role Conflict Resolution'.

Van de Vliert suggests that choice, solution, compromise and avoidance are considered in that order in role conflict processes. First, the actor tries to decide which of the two prescriptions is preferable by judging their relative legitimacy and predicting sanctions (step 1). If he/she cannot make up his/her mind, he/she subsequently looks at the possibility and desirability of resolving his/her conflict by changing either A or B or both (A and B are two incompatible role prescriptions) (step 2). If the resolution strategies are rejected or have failed, he/she then considers a compromise (step 3). Only if and when the compromise is rejected, will avoidance result.

Van de Vliert recognised that role conflict handling is a process, not a static coping behaviour. But he did not do any empirical research to support his theory. It is important to note that most of the research investigating role conflict has not dealt directly with the role senders, but only indirectly by measuring the focal person's perception of the conflict in the role expectations sent by the role senders. Further, the reciprocal nature of the relationships between role senders and focal persons has not been investigated. The role episode model of Kahn et al. (1964) depicts an interactive process that occurs over time among individuals in an organisational context. There is no systematic empirical research to show how the dynamic process proceeds and nor how the role senders and the focal person react to each other and the effect of these interactions. This is crucial in the understanding of when and how states of role conflict become adverse. It is suggested (Van Sell et al., 1981) that investigations of the processes which cause role conflict and response to the role conflict can provide insight not only into role stress, but also into the dynamics of other crucial individual and organisational behaviour. The standard treatments assume an asymmetry in which 'alter' is a role sender and 'ego' is forced to cope. Weinstein and Deutschberger's (1963) conception of altercation is more realistic in recognising that 'ego' is not only responding to a role sender but attempting to recast the sender into a more acceptable role. The central idea that roles are negotiated (Strauss, 1978) implies that all parties in the role negotiation process are both sending and receiving roles. Therefore, this research pays a special attention to these points, in order to make a clear demonstration of both the dynamic process and the effect on the next step of coping behaviour by both focal person and role senders.

One of the reasons why there is little research into the process of role conflict is that most role conflict research is carried out in laboratories, where longitudinal and experimental designs are scarce, and the data are collected at a single point in time. To overcome this problem, this current research is carried out in a real life situation with a longitudinal research design, where the data has been gathered at two or three points in time and researcher has followed the whole process of role conflict from beginning to end.

2 *The theory overlooks solution-oriented behaviour*

Solution-oriented behaviour includes passing the responsibility back to the role senders and more direct attempts at change. According to Van de Vliert (1981b) there are two types of resolutions. One is direct resolution and the other is indirect solution. *Direct resolution* is where the focal person tries to change the role expectations of certain role senders, thus resolving the role conflict (Hall, 1972). This happens when the focal person does not accept the continued existence of the role conflict. Generally the direct attempt at role conflict resolution is aimed at one of the incompatible roles. The focal person tries to influence the role senders about the role which is the least legitimate and the furthest from his/her own role attitudes, the role which evokes the fewest negative sanctions if he/she does not fulfil it, and/or the role for which he/she does not have the capacities or the facilities to achieve anyway (Goode, 1960; Van de Vliert, 1981b). If the role senders do not agree to the change, then hard bargaining may be necessary to reach a solution. Alternatively, delegation of the required activities may also be a good way out (Goode, 1960).

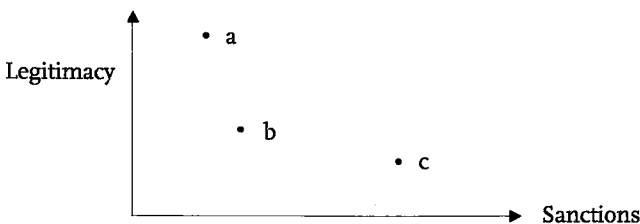
Indirect solution differs from direct resolution in that the focal person enlists others and leaves the nature of the change to them. The reason for this is that he/she wants to go out from the role conflict, but has no preference on the type of change. Sometimes it is possible to play the role conflict back to the role senders. The focal person makes them aware of the incompatibility of their role expectations with the intention that they eliminate the contradictions in one way or another (Gross et al., 1958; Merton, 1957). In hierarchical organisations, a focal person can call upon a superior with enough power to settle the role conflict (Scott, 1965).

3 *The moral and expedient role orientation test lacks validity*

A test was developed by Gross et al. (1958) to measure these orientations in a sample of 105 school superintendents. This test, called the Moral-Expedient Role Orientation (MERO) test consists of a listing of 37 activities for which every participant indicates the degree to which he/she feels obliged to carry them out, using a style of: absolutely must, preferably should, may or may not, preferably should not, absolutely must not. The test score is composed of an individual's number of 'must' and 'must not' responses. Higher scores are assumed to indicate a more moral and less expedient role orientation than lower scores. Results showed that the group could be divided into 25% moralists (Ms), 25% expedients (Es) and 50% moral-expedients (MEs). However, this test has never been validated. According to Van de Vliert and Cottrell (1979), the moral and expedient role orientation test has no validity, but more likely, the test reflects extreme scoring bias. As noticed also by Gross et al. (1958), both the legitimacy and the sanctions dimensions are dealt with as dichotomies, whereas a more precise theory would be based on their treatment as two dimensions continuous variables. The test is based on one dimension instead of, what is more realistic, two dimensions. It is rather improbable that half of the superintendents have a moral-expedient orientation and that the other half can be divided into two equal groups of moralists and expedients, since it is a well-known fact that people with the same societal position often have similar personality characteristics (Van de Vliert, 1975). On the basis of the social psychological literature, Gross et al. should also have suggested that it is unlikely that the group of Massachusetts superintendents would be neatly divided on the basis of personality orientation.

In fact it is more realistic to assume that Ms and Es do not exist in any absolute sense but that, given a large and representative sample from the population, we only have people who are more M and people who are more E. For research purpose it is alright to define

FIGURE 3.1
Measuring personality traits on the basis of legitimacy and sanctions



the more-M participants as M, and the more-E participants as E, always keeping in mind that this is a relative rather than absolute qualification.

Therefore, a new operational procedure is needed for measuring the personality trait. A two dimensional method based on legitimacy power and sanctions power is proposed. It is assumed that people are not oriented strictly to one or the other. For any role conflict situation, the focal person perceives both of these dimensions and takes them into account in his decision-making. There are different degrees of strength towards legitimate power and sanctions power. Therefore, a two dimensional measure is needed. Sanctions are on the X-axis and legitimacy on the Y-axis. People are located at different places, as co-ordinate, such as points a, b and c.

At point 'a' a person has a strong orientation towards legitimacy and a weak orientation towards sanctions. At point 'c' he/she has a strong orientation towards sanctions and a weak orientation towards legitimacy. At point 'b' the person has more or less an equal orientation towards sanctions and legitimacy power. Thus, people's coping behaviour will be different when faced with a role conflict if they have different co-ordinates.

Taken together, the most important contribution of role conflict resolution theories is that the theories put forward four behavioural types (conform to A, conform to B, compromise and avoidance) and two power factors (legitimacy and sanctions) which determine the behaviour of a focal person in a role conflict situation. In the majority of situations only one of the two conflicting role prescriptions is legitimate, has sanctions attached to it, or both. As a consequence of this, choice is the most frequent reaction to role conflict. Compromise and avoidance play an important part only in the minority of situations where the role prescriptions are equally legitimate, as well as simultaneously associated or not associated with sanctions (Van de Vliert, 1981b). Only in such a situation will personal orientation play a role for predicting the coping behaviour.

4 *The theory of role conflict resolution uses only legitimacy and negative sanctions as the two power factors that determine behaviour of a focal person in a role conflict situation.*

Actually, the positive sanction power may also play an important role for the coping behaviour of a focal person. Therefore, in this study, both positive and negative sanction powers are considered in order to determine the behaviour of a focal person.

5 *The theory as such overlooks the goals of the focal person*

The theory relies too much on the assumption that focal persons are always trying to satisfy the role senders. It assumes that the focal person has passive role behaviour without considering that his/her own goals may be very important behaviour determinants. In fact, the coping behaviour of a focal person will depend on the extent to which the influence being exerted by the role senders is in agreement with the goals of the focal person.

One reason why the theory has overlooked this may stem from previous applications of using the role conflict concept. Most of researchers, such as Gross et al. (1958), Kahn et al. (1964), Van de Vliert (1981b), focused their study within the context of one organisation, applying the theory to the roles of the 'little people' who are rendered passive by a tragic awareness of their powerlessness in large organisations (Turner, 1985). Conversely this present

study takes the context of different organisations and individuals (government and extension organisations, and farmers), while the focal persons (extension agents) are working in an independent organisation with certain amount of power.

From the above discussion it can be seen that role conflict resolution theories still need more development and support from empirical evidence, and there is no integrated theoretical perspective which clarifies the multiple determinants of role conflict and the processes of interaction between the focal person and role senders. A systematic model of coping behaviour and their determinants is needed, as well as research on the dynamic process between focal person and role senders. The aim of the present study will be the development and exploration of a general coping behaviour model and its dynamic process in the role conflict.

3.3 Two different approaches in role theory

To conclude this section, another important issue is discussed which causes much debate in role theory, and the researcher's position on this debate will influence the research approach chosen to conduct this study. There are two main streams, commonly known as the structural and interactionist approaches to role theory.

In structural theory, systemic stability and patterned conduct are explained by structural mechanisms that ameliorate the adverse consequences of conflicting expectations. The question of how the actor cope with conflicting expectations is not addressed in middle-range structural theory, although it is implied as a conceptual problem (Handel, 1979). Interactionists have addressed the negotiation of meaning in interaction as the actor's practical solution to the problems caused by conflicting social pressure. Negotiated meanings do not replace conflicting expectations, but coexist with them as a working consensus as the ways to resolve conflicts in particular situations, among actors with different preferences.

Structural and interactionist approaches to role theory are often considered fundamentally incompatible. This study argues that the two are both compatible and complementary, because the interaction is within and influenced by the existing structure. The structure itself is influenced by the interactions of the actors. Therefore, both approaches have their explanatory strengths for understanding the coping behaviour of extension agents in China.

An ideal research approach should be a combination of the two approaches. In this way, it is possible to look not only at the effect of the changing environment imposed on the extension system, but also to see how individual actors cope with role conflict.

According to the structural approach, an extension agent is influenced by a large number of different actors, to which he/she does not attach the same degree of influence. The internal conflict, and the resulting deviance, is often a reflection of external conflict or of a malintegration of the social system. Therefore, it is important to understand how the external system, such as policy and market play a role in shaping the internal conflict is

very important. For this it is useful to first study the information concerning the mixed system of policy and market at county level. By adopting the interactionist approach, the researcher can focus on each individual extension agent to see how he/she created his/her own space fighting for his/her own goals in a role conflict situation.

3.4 The phenomenological view

In this research, it is intended to gain insight into the extension agent's coping behaviour in a role conflict situation in an environment of change. In order to better understand such a complicated issue, a phenomenological position is held vis-à-vis the research subject.

According to Burrell and Morgan (1979), the phenomenological view focuses upon social contexts in which interacting individuals employ a variety of practices to create and sustain particular definitions of the world. 'Reality' and 'fact' are essentially social creations, negotiated through the interaction of various competing themes and definitions of reality.

People are acting on the basis of meanings. They attach meaning to their reality and to human behaviour. A person perceives reality through the spectacles of a certain perspective. If he/she observes reality from another perspective, reality will have a different meaning. His/her own behaviour can be perceived as an expression of these underlying processes that attach meaning (Wagemans, 1991).

This view has been useful for this research in helping to interpret the informants' answers more correctly. For example, the information received from the extension agents might not correspond to a fact, but could instead be the interpretation of the extension agents about their world.

The current study is very much concerned with the perception of the extension agents. From a phenomenological point of view, there is not only one truth, but rather, the truth is perspective-dependent. Therefore, careful interpretation of the information is of utmost importance.

3.5 Summary of the theoretical framework

Following the above discussions, some important points are summarised. As far as the analysis is concerned, a phenomenological view has been adopted and role conflict theories have been reviewed. As a result, four types of behaviour and three behavioural determinants can be put forward. The four types of behaviour are: take sides, compromise, avoid and resolve conflict. The three behaviour determinants are: legitimate power, positive and negative sanctions powers of the role sender. According to the researcher's experience there is at least one more behaviour determinant which is the focal person's own goals. Everyone has some own goals and these will also influence his/her coping behaviour when faced with role conflict. This point has been neglected in the literature reviewed.

Some critiques on the role conflict theory were discussed and from these modifications were made. It is intended that the four determinants will be used only as a starting point to the study, for explaining the coping behaviour of the extension agents in the role conflict situations. Further types and determinants of behaviour will be discovered through the fieldwork. A general model of coping behaviour of the extension agents in a role conflict situation will be developed, and more insights will be gained into the field of the dynamic process in role conflict.

It should be noted that the role conflict theory is used as a kind of facilitator to guide this study. However, there is no intention to test the theory. The theory was modified during the fieldwork in order to adjust to the Chinese situation. Since all these theories discussed above have been developed in Western society, they are not always valid in the Chinese context. For example, in China, conforming to society's and group's goals plays a more important role than conformation to individuals' goals, because the Chinese are very much influenced by Confucianism. Confucian indoctrination has made China an extremely conformist society (Chin@zone, 1997). The word 'individualism' has a decidedly negative meaning in the Chinese language, and enemies can be created if a person standing out of the crowd. This may have a significant impact on the coping behaviour of extension agents when in a situation of conflict.

4 Research approach and methodology

This chapter presents the research methodology by which the research objectives are intended to be met. First, a grounded theory approach is discussed, and then research techniques used for the data collection are presented.

4.1 A grounded theory approach

This research is concerned with the understanding of the coping behaviour of extension agents. This understanding will lead to a typology of the extension agents' coping behaviour in a role conflict situation, a theory that is grounded in the realities of role conflict in China. For this reason, the grounded theory approach will be used. Strauss and Corbin (1994) define grounded theory as a general methodology for developing theory that is grounded in data systematically gathered and analysed. This methodology may be used to:

- Create theory from the data collected and analysed; and
- Confirm, elaborate and modify theories that are currently in existence (grounded) by comparing the 'goodness of fit' with data as it is collected and analysed.

Strauss and Corbin (1990) assert that formulating theoretical interpretation of data grounded in reality provides a powerful means both for understanding the world 'out there' and for developing action strategies that will allow some measure of control over it. They described it as being inductively derived from the study of the phenomenon it represents, that is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomena.

This research started with a modified theory of role conflict. Some clear concepts such as role conflict, coping behaviour, and behaviour determinants have been developed to be used as a starting point to the study. Further understanding will be gained through the field research. The process is one of developing a theory based on emerging relationships rather than testing a previous theory or hypothesis. Elements of previous theories are incorporated but only as they prove themselves pertinent to the data gathered in the study. Qualitative methods are appropriate for such a study in which the researcher is concerned with understanding or discovering an individual's coping behaviour, when even the actors involved cannot predict the outcomes.

Strauss and Corbin offered three important guidelines for researchers developing grounded theory:

- Periodically step back and ask 'what is going on here? Does what I think I see fit the reality of the data?'
- Maintain an attitude of scepticism.
- Follow the research procedures - the data collection and analytical procedures are designed to give rigour - break through biases.

According to Glaser and Strauss (1967), theoretical sampling is the process of data collection for generating theory whereby the analyst collects data, codes it, analyses it and then decides what further data to collect and where to find it, in order to develop his/her theory as it emerges. Since accurate evidence is not so crucial for generating theory, the kind of evidence as well as the number of cases, is not so crucial. A single case can indicate a general conceptual category or property: a few more cases can confirm the indication. The pressure is not on the researcher to know the whole field or to have all the facts from a careful random sample. His/her job is not to provide a perfect description of an area, but to develop a theory that accounts for much of the relevant behaviour (Coutts, 1994).

It is this argument that adds to researcher's confidence when changing from conducting a lot of short interviews to fewer in-depth interviews in the field (see more information in Chapter 4.5).

Furthermore, in dealing with appropriate theoretical sampling for generating formal theory, Glaser (1978) stated: No one kind of data on a category, nor any single technique for data collection, is necessarily appropriate. Different kinds of data give the analyst different views or vantage points from which to understand a category and to develop its properties. There are no limits to the techniques of data collection, the way they are used, or the types of data required. The result is a variety of slices of data that would be bewildering if one wishes to evaluate them as accurate evidence for verifications. For generating formal theory this variety is highly beneficial, because it yields more diverse comparative information on categories than any one mode of known technique of collection.

Therefore, when using theoretical sampling, incidents are sampled, and not persons per se. Various sampling techniques are used for data collection in the field. The main interest is to gather data about what extension agents do and do not do in terms of their coping behaviour, the range of conditions that give rise to their behaviour and its variations, how conditions change or remain over time, and with what impact. Also, sampling and analysis occur simultaneously, with the analysis guiding the data collection. It is an ongoing process.

For the purpose of this research, the researcher entered into the data collection with some tentative categories of coping strategies based on the theoretical understanding of the subject in order to sort the data. These were open to modification or to be made redundant, should emerging analysis demand it. Later on, sampling focused on uncovering and cross-checking the new coping strategies and reasons behind these strategies. To achieve this, the researcher chose the sites, extension agents and documents that maximised the opportunities for verifying the findings and filling in the poorly explained phenomena. In all, this study is developed through a process of continuous confrontation of existing theories and empirical data.

4.2 The three stages of the research

The fieldwork was carried out from October 1994 to June 1995 and the research was divided into three stages.

The *first stage* was from October 1994 to January 1995. It was an orientation phase in order to have a better understanding of the research subject. The objective of this stage was to understand the current situation of the Chinese extension system and its changing environment; to obtain a background understanding of the general problem situation and to find out evidence of some role conflict situations; to identify a concrete situation of role conflict at the county level of the extension system.

During this stage, a review of existing Chinese literature and other sources of secondary data were undertaken. Some key informants were identified and interviewed at the national level in Beijing, and some site visits and field observations were carried out in areas that were among the potential choices for the study.

The *second stage* was from February to May 1995. For this stage, Xinji county had been selected as the case study area. All studies were conducted in Xinji from county level to village level and during this period of time the fieldwork team consisted of the researcher and the researcher's spouse. It was attempted to identify a concrete role conflict situation, the characteristics of the role conflict, perceptions of the extension agents on the role conflict, and their coping behaviour at the three levels of extension hierarchy.

With the help of a checklist prepared from the first research stage, in-depth interviews were used to find out the coping behaviour in the role conflict situation, and if there were any different coping behaviour to those proposed by the researcher, then to identify the reasons. More behaviour determinants were identified during this stage. Furthermore, insights were gained about the dynamic process of the role conflict and coping behaviour of both role senders and extension agents.

The *third stage* was from the end of May to June of 1995. During this stage a short summary was made based on the field study, and some tentative results were drawn. Some discussions were conducted in both Shijiazhuang, the capital of Hebei province and in Beijing with some of the key informants who had been interviewed previously. Some missing information was also collected during this period.

4.3 Case study

A case study was used to conduct this research, particularly in the second stage. Robert K. Yin (1984) defines a case study as: '... an empirical inquiry that: investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.' Yin's definition essentially covers the intention of this research, which is to analyse the coping behaviour of the extension agents as a contemporary phenomenon in a context where the borderlines between phenomenon and context are impossible to establish.

The case study was designed to bring out the issues of role conflict, the background to the situation, the perceptions of the extension agents towards the role conflict, the coping behaviour of the extension agents, behavioural determinants, and so on, as a study in the qualitative mode. Marshall (1989) note that the qualitative research methods have advantages compared to quantitative research methods, since social phenomena are too complex to be interpreted by using quantitative data. By doing research in one county, the study may make propositions for this county, but not for the rest of China. However, at a more general level, it is hoped to be able to extract some features of development from the case study that may prove relevant for studies in other areas. For instance, it could be predicted that similar phenomena such as we found for cotton production may be found increasingly in the areas of food production in China.

4.4 Selecting the fieldwork area and farming system

It was not an easy task to decide which area to choose for the field research. There were many differences between areas due to historical, cultural, ecological and economic conditions. Since the interest was to study the coping behaviour of the extension agents, some criteria were set before the area was selected.

First, a county extension system would be selected as the unit of analysis because county extension had been the focal point for both the government and the farmers. The county level extension system was the operational arm of the national extension network, and all actors could be found at this level.

Second, the county would be selected where there has been a potential conflict between policy mandate and market message and where extension agents felt different role expectations from government officials and farmers.

Third, there should be a sound extension system with functions of the extension organisation, because some of the county extension systems do not function well as the extension organisations in recent years.

Fourth, the area should enable the research to be carried out, as some support was needed by the researcher. Because the research was broaching a sensitive topic, some informants might not want to talk about it or might only give some casual information.

Based on the orientation study, it was decided to focus the study in Hebei Province on cotton production. This was because most of the informants at that stage, who were working in various organisations including universities, the Ministry of Agriculture, research and extension institutes, explained that there was a clear role conflict for extension agents in the field of cotton production.

In recent years, the government had forced farmers to grow cotton, even though farmers were not necessarily interested to do so. The policy mandate was thus asking extension to fulfil the government's orders, whilst the farmers would rather grow fruit or other crops, and/or prefer to work outside the farming sector. This situation could be found in many

provinces in China, but especially in Hebei, Henan and Shandong provinces as these three are the big cotton production areas. They have all experienced serious problems in producing sufficient cotton and to realise the government quota in recent years.

In principle, any of the above provinces could be chosen as the fieldwork area. Hebei province was the nearest to Beijing, the researcher's home city, and as such there were some personal networks in Hebei both at provincial level and at some county levels. Therefore, Hebei province was selected as the research area.

Some reference letters were first obtained in Beijing at various levels of the government, and then the research moved to Shijiazhang (265 km south from Beijing) where the provincial government was located. Research commenced in Hebei province by talking to some officials working in the provincial government, including the deputy governor of the province and the director of the Provincial Department of Agriculture. They expressed their interest in the research topic and willingness to help carry out the research. With their information and their reference letters, the research area was selected at the county level. The first county to be selected was found not to be suitable, as changes within the extension system had affected the conditions under which extension workers were carrying out their tasks. Following the decisions of the government in 1992 to work towards a more market-oriented approach as part of Mr. Deng Xiao Ping's efforts to accelerate economic reform, extension agents in some counties no longer received the full pay they had been entitled to previously, and were forced to look for alternative employment. In this case, the county extension system could not function as normal, and thus it did not fit within the research selection criteria.

Therefore, the researcher returned to Shijiazhang in order to find one county that would fit the criteria. Some experts on extension were interviewed and with their knowledge of extension system at both provincial and county level, another county was thus selected. This was Xinji county, 65 km away from Shijiazhuang.

The deputy provincial governor of Hebei introduced the researcher to the Department of Agriculture and requested them to send an escort to Xinji county, and also introduced the researcher to the county government officials.

Xinji county was felt to be particularly suitable to carry out the research as changes in the extension system had not been introduced and role conflict situations were clearly apparent.

So finally, the role conflict situation of extension agents involved in cotton production in Xinji county was selected as a case study. The reasons for choosing cotton production in Xinji were:

- the role conflict situation for the extension agent was very clear;
- the situation in Xinji was similar to that of many other parts of China;
- the same situation could be predicted for food production in the near future in China;
- all other criteria for selecting the research area were met.

Above all, in this county the researcher could fully utilise personal connections, and could without difficulty secure the best possible co-operation of the extension agents in general and the leaders in particular at various levels.

The aim was to study the coping behaviour of extension agents not only at the county level, but also township and village levels. Therefore, after selecting Xinji county, the researcher needed also to select the township. There were 31 townships in Xinji county. Based on the research conducted at county level, two townships were selected as the field areas. These were Junqi and Chengbei. Junqi township had a long tradition of growing Chinese leek, and most farmers would like to produce Chinese leek instead of growing cotton. Thus, there has been increasingly less land available for cotton production in recent years. Chengbei township was near the centre of the county, more jobs were available in all sectors outside agriculture, and many farmers had been working outside the farming sector. Further much of the farmland of Chengbei had been taken over by rural industry and commercial enterprises. There was reduced interest in growing cotton in this township, and both townships could not reach the cotton quota in 1994. Some informants at the county level noted that it would also be difficult for these two townships to meet the quota of cotton production for 1995. Role conflict could be anticipated for the extension agents in these two townships and they also represented the current situation of many Chinese townships.

Following more or less the same considerations, one village was selected from each township. Junqi village was selected from Junqi township and Juleitou village was selected from Chengbei township. Thus, in total, two townships and two villages were selected in Xinji county as the case study areas.

4.5 Selection of organisations and informants

In the first stage, some key informants were interviewed based on personal networks and knowledge of those persons from when the researcher had been working as an extension officer in Beijing. Through their introductions and also the researcher's own experience, some other informants who could provide useful information and ideas, were also interviewed. In total, twenty people were interviewed at this stage. The second stage of the research mainly concentrated on the coping behaviour of the extension agents in a role conflict situation. Therefore, it was clear that the extension organisation would be the main target organisation and extension agents would be the main target informants. Nevertheless, in order to understand the general background of Xinji county and other factors such as government policy, farmers' interests and so on, other relevant organisations and people would also be a target, such as government officials and farmers. The researcher was able to realise in the later stage of the study that coping behaviour was a much more dynamic process than originally thought.

After the field research team was introduced to the government officials in Xinji county, they were introduced to various officials who could potentially yield interesting information for the research work. These officials were: the Party Secretary of the County, the Deputy Director of Agricultural Bureau, and the Director of the Administrative Office of

the CATEC. During a meeting with these officials, the researcher gave an introduction about the research interests and the details to be gathered, the possible organisations and persons to be met and so on. Then, discussions were held on how to organise the research work and on the logistics. These officials were very friendly and prepared to offer their help. At the same time, they also stressed that the information collected should be used in a positive way and not bring any negative effect for Xinji county. It was apparent that they did not yet trust the researchers at that time.

The information collection began at the county level, with the head of the Secretary Department, as he had a lot of general information and a good understanding of what was going on in Xinji county. The second informant was the deputy director of the Agricultural Bureau, since the researcher had already met him earlier at a meeting. The third important informant was the deputy head of Xinji county, who was introduced by a friend. Through them, the other informants were selected. On the basis that they were in the organisations within which the research was to be undertaken. Most of the extension agents related to cotton production were interviewed at the three levels of organisation, from county to village level. Some government officials and farmers were likewise selected to include the range of expectations and interactions with the role senders and receivers in the process of role conflict.

At the beginning, it was intended to conduct a lot of interviews, but soon into the process of interviewing, it became apparent that it was better to conduct fewer in-depth interviews than more general interviews. The informants would not provide much valuable information concerning their real coping behaviour and the reasons for these behaviour on being interviewed once and for a short time, since they did not yet have enough trust. It always took some time before they would talk freely. Therefore, the way of conducting the interviews was changed. Very often, the same informants would be interviewed 2 or 3 times over a period of several days. In this way, it was able to collect more information that had previously been hidden by the informants due to lack of initial trust, and to follow his/her reasoning that was continuously changing along with the changing circumstances. Likewise the researcher's ideas, questions and checklists were changing. Therefore, the internal processing of the dynamic process, the reactions of the role senders and focal persons to each other, and the effects of these interactions could be followed through this research. In short, a systematic research with a longitudinal design was conducted.

The total number of 'substantial' (i.e. deliberate) informants interviewed during this stage was 46.

4.6 Data collection methods and techniques

In this section, the data collection methods and field techniques used will be described.

4.6.1 Interview technique

The chosen information collection technique was primarily the in-depth semi-structured interview with selected key informants. Most of these interviews took place for an extended time period - over a number of hours. In this way, a picture of the role conflict situation and coping behaviour of the focal persons was constructed on the basis of a number of individual case studies. By gaining an insight into the ways in which rural reform had affected extension agents within the system, a picture of how extension agents cope with role conflict could be pieced together.

The format was that of open-ended questions in a discussion format. Where possible, the informant took the lead in explaining his/her perception of the current situation of cotton production, the degree of role conflict he/she felt and the ways he/she dealt with it, in his/her own manner and own discussion pathway. A checklist of areas in which some coverage was desired was made up prior to each interview and, when necessary, some direct prompting was made. In some cases, direct question-answer interactions were necessary to fill in background details of the situation and behaviour.

At the beginning, it was thought to use a tape recorder for the interviews, but then it was realised that the informants might be a little frightened by the tape recorder and therefore would not talk openly. If the researcher tried to discuss with the informants then there would be difficulties to write everything down and to concentrate on the discussion at the same time. The presence of the researcher's spouse solved this problem, to record the answers of the informants while the researcher concentrated on the discussion.

4.6.2 Observations

Observations were used to gain direct insights into the ways in which extension agents actually performed in the situation of role conflict, and the kind of interactions between actors such as government officials, farmers and extension agents during their encounters. The observations used were as follows:

- to follow the work of the extension agents in the field;
- to follow the work of county cadres who were sent to the village to measure the farmer's land and to monitor the cotton production process at the township and village levels;
- to follow the work of village leaders;
- to participate in various meetings concerning cotton production.

Altogether such observations were conducted 10 times: 6 times of following the work of extension agents, county cadres and village leaders, and 4 times of participating in various meetings.

4.6.3 Other sources of information

In order to gain a broader background on governmental policy and market messages towards cotton production, various governmental documents and newspapers were collected. Particular attention was paid to the series of county governmental documents concerning cotton production. These documents not only provided background information, but also helped to gain insights on the changes in government expectations towards extension agents over a period of time.

Internal papers pertinent to cotton production at the three levels of government were also studied, where possible. Literature was also reviewed to provide background material to the study.

4.7 Experiences of undertaking social research in China

During the fieldwork, a lot of interesting experience was gained which might be useful for other researchers interested in conducting such activities in China. It may also help readers to interpret the research findings and to understand more about the country itself.

1 *The way the informants perceive the researcher will greatly influence the information given by the informants*

During the fieldwork, the informants would first make a judgement about the researcher. They would evaluate whether he/she could be trusted or not, where he/she was coming from and what he/she was going to do with their information, and whether giving a certain type of information would have a positive or a negative effect on them. Generally speaking, at the beginning the informants were reluctant to answer questions openly, especially when discussing their coping behaviour in a role conflict situation. This was because they were not sure about what would be done with their information. Therefore, the first task was to convince them that the information given would not have any negative consequences for them. This was done by reassuring them that the purpose of collecting data was for Ph.D. research and/or for evaluating the current policies in cotton production. Only when they started to trust the researcher they would begin to talk about many things that they would not tell otherwise. Very often, interviews began with general questions and then some key questions followed. In some cases, lunch or dinner were taken together, and after drinking some beers or liquor, they would begin to tell more important stories. Eating together is actually an important part of Chinese culture. Much business is done during dinner time instead of office time. This phenomenon could be called an eating culture, and may be compared with the western drinking culture. Eating and drinking make people feel closer to each other and these activities also have a positive effect on the nerve system. The researcher found that the second or third visit was nearly always better than the first one in terms of quality and quantity of information given.

A second point is that the presentation of the researcher also had an important effect on information collection. For example, two townships were visited together with the deputy head of the county. In the first township, the researcher told the head of the township that the information to be collected was for a Ph.D. study in The Netherlands. On the way to the second township, the deputy head of the county advised that it would be better to say

that the data was for the Ministry of Agriculture. He explained that if the informants thought the work was for a thesis, they may or may not assist, whereas if they thought it was for the MOA then it was part of their duties to give the information requested (in fact the researcher had an introduction letter from the MOA). In the second township, the researcher did according to the advice of the deputy head of the county, and indeed there was some difference of attitude and in terms of information given. They gave more information than in the first township. However, this difference diminished as the informants got to know the researcher better.

2 *The language used in the interviews is important*

Some terms are too sensitive and difficult for informants to talk about, such as 'conflict', 'role conflict', and 'contradictions'. Therefore, the right words were carefully chosen for the interviews. Sometimes different words were used for different informants but with a similar meaning.

3 *To have a strong back up at a high level is always important for a researcher undertaking social research in China*

Personal networks and formal and informal relationships in the research area are of great assistance in carrying out the work smoothly. In China it is most probably still better for a researcher to be introduced by a higher rank organisation to a lower rank organisation. It is good to be accompanied to the new place of research for the first time, or to have a letter of introduction written by some higher rank person, indicating what is intended in the new area. Otherwise, there may be difficulties in getting assistance if one goes to the field alone. However, it is better to conduct the actual research alone without government officials in accompaniment. Otherwise, the informants may be reluctant to speak freely during the interviews. They may give answers according to public opinion instead of their own ideas.

4 *People in China prefer to talk about the positive aspects than the negative ones to an outsider or stranger*

If the complete story is required, either a relationship must be built up with the informant, or the information needs to be cross-checked. If the informant only talks about positive aspects, this means that they have not yet trusted the researcher and have not told the complete story.

5 *People are not used to be interviewed by a social researcher*

Many local people are not convinced that social research is useful in China. Informants quite often asked what would be done with the research. The researcher has to explain to the informants very clearly the relevance of the research to China and even to themselves. People are more interested in doing business in China nowadays, and are not so interested in politics and discussions about subjects that are not relevant to them. If some business can be done, then one is welcome, but otherwise they may not be interested in what one is doing. Therefore, it is generally not a good time to do social research in China now, except on research which makes business more profitable.

5 Description of the study area and background of cotton production

5.1 Some basic facts about Xinji county

Xinji is a county in Hebei Province and falls under the jurisdiction of the provincial capital, Shijiazhuang city. Its exact geographical location is between latitude $37^{\circ}38' - 38^{\circ}08' N$ and longitude $115^{\circ}07' - 115^{\circ}28' E$. 65 km west lies the Shijiazhuang city and 265 km north is the capital of China-Beijing. Xinji county is 33 km from east to west and 55.6 km from south to north, with a total area of 960 km². It contains 15 townships and 341 villages. In 1995, the total population was 606900 of which 63700 were urban dwellers. The rural population makes up 89.5% of the total population, and of this, 270000 or 51.4% works on the land. The population density of the county is 638 per km². In 1993, the birth rate was 1.2%, the death rate 0.62% and the rate of population increase 0.61%.

Xinji county has a long history. It became a county around the year 206 BC. Since then, the county's name changed many times, but for a long period, from 756 year AC until 1986, it was called Sulu county. From March 5, 1986, the name changed to Xinji City, and it is similar to most other Chinese counties in terms of level of administration and rural population. In economic terms however, it is above the average county level and has the future potential to become a real city in the future (In this thesis it's referred to as Xinji county).

Xinji county is under the influence of the continental monsoon climate of the north temperate region of China. There are four distinct seasons: spring, summer, autumn and winter. The frost-free duration is 190 days, and the average total annual sunshine is 2653.3 hours. The mean annual temperature is 12.5 °C, with maximum and minimum temperatures of 41.9 °C and -22 °C respectively. The mean annual precipitation is 468 mm, most rainfall being concentrated between June and August. The natural agro-climatic conditions are generally suitable for crop growing. Xinji county is 25m to 37.8 m above sea level. The agricultural land is 1160000 Mu (1 ha. = 15 Mu), of which 1050000 Mu is arable land, taking 90.5 % of the agricultural land. The mean farmland area per person is 1.75 Mu. The average living space per person is 25 m².

Xinji county has a good transportation system. One railway line runs 22 km through the county from east to west, and served by three railway stations. The highway (120 km/hr.) runs parallel to the railway from Beijing to Shijiazhuang. The motorway (100 km/hr.) runs from south to north. Together with the rural roads, Xinji is easily accessible from Beijing, the sea harbour of Tongan (important in China), Shijiazhuang, as well as from other cities and areas. The convenient transportation system has contributed to good socio-economic development conditions for Xinji.

In recent years, Xinji county's economy has developed very rapidly. It has a very strong nationally owned industrial base of rural industries. In 1993, there were 1100 industrial enterprises above village level, with fixed assets worth 840 million Yuan (1 USD = 8.2

FIGURE 5.1
Location of the study area



Yuan) and employing 130000 persons. These enterprises are based on eight important industries in Xinji. These are the chemical, machinery, leather, firework, textile, construction materials, food, and casting industries. The enterprises produce more than 600 products, of which 60 are sold on the international market. In 1993, the total value of industrial production was 3.02 billion Yuan. Some factories in Xinji are famous in China, such as the Xinji Chemical factory, and the Xinji Rubber Factory. The leather industry is a traditional industry of the county. At present, various leather producing and processing factories are changing from sole State-ownership to joint ventures and to privately-owned factories, together employing more than 50000 people.

Xinji has 54 large trading markets and 17 farm product markets. In 1993, the total internal commodity retailing reached 500.3 million Yuan. One, the 'Hebei Yiji Market' is a famous market in China, with yearly turnover of more than 100 million Yuan. Another, 'The China Leather Trading City' covers 1000 Mu of land, with construction area of 380000 m² and a total investment of 300 million Yuan.

Xinji has a long tradition of doing international business. At the end of 1993, there were 39 enterprises with foreign investment, and joint ventures making a total investment of 40000000 US dollars, of which about one third (12250000 US dollars) were foreign.

Agricultural development has been reasonably successful in Xinji county. Production infrastructures are fairly industrialised and the main production processes, including irrigation, sowing, harvesting, plant protection and transportation have been semi- or fully

mechanised. The county has 12000 sets of various heavy machinery. By 1993, there were 13703 wells and all farmland could be irrigated. The good climatic conditions have enabled Xinji to become one of the important areas in China for cotton, pork and other food produce. The main crops are wheat, maize, cotton, apple, pears and vegetables. In 1993 the total food yield was 432000 tons. The sowing area for wheat was 640000 Mu, with the average yield of 338 kg/Mu; and 340000 Mu for maize, with the average yield of 407 kg/Mu. In the same year, cotton covered 200000 Mu, with the average yield of 26 kg/Mu only due to serious bollworm attacks. Fruit trees covered 200000 Mu, with average yield of 471 kg/Mu, and vegetable production covered 65000 Mu, with the average yield of 1014 kg/Mu. Vegetable production included 30000 Mu of Chinese leeks, yielding more than 100 million kg, making it the biggest Chinese leek production base in the northern part of the country. In terms of livestock, there were 12 million chickens, 40000 heads of cattle, 220900 pigs and 133000 sheep. In 1993, the total value of agricultural products was 1 billion Yuan.

The living standard of farmers has increased greatly in recent years. In 1993, the net income per farmer was 1038 Yuan, an increase of 13.7% compared to the previous year.

In 1987, Xinji was the first county among the 139 of Hebei Province to reach a GNP of 1 billion Yuan. By 1991, the GNP of Xinji had risen to 1.26 billion Yuan, an increase of 28% compared to the previous year; then 1.76 billion Yuan in 1992, and 2.11 billion Yuan in 1993, an increase of 39.9% and 41.8% respectively. The GNP was 3.0 billion Yuan in 1994, and the year 2000, is expected to be 11.5 billion Yuan.

5.2 Sectional distribution of output and income

In order to have a better understanding of the economic situation in Xinji, Table 5.1 shows the relative share held by the different economic sectors of the output value of the rural society at different administrative levels in 1992. Table 5.2 presents a further breakdown of the output value of different sectors of agriculture for the same year.

TABLE 5.1

Comparison of the gross rural output values at country, provincial and county level, China (1992)

	Total 100m Yuan	Agriculture (%)	Manufactory Industry (%)	Construction (%)	Transport (%)	Domestic Catering & service trade (%)
China	25386.28	35.78	50.09	6.18	3.57	
Hebei	1297.62	32.35	55.39	6.89	2.38	2.98
Xinji	30.45	32.70	54.28	4.04	4.03	4.95

Source: Adapted from *China Agricultural Year Book, 1993*; *Xinji Statistical Year Book, 1993*

TABLE 5.2
Comparison of gross agricultural output values at country, provincial and county level, China (1992)

	Total 100m Yuan	Crop farming (%)	Forestry (%)	Animal husbandry (%)	Sideline production (%)	Fishery (%)
China	9084.71	55.48	4.65	27.05	6.06	6.75
Hebei	419.82	62.48	3.32	25.83	4.82	3.55
Xinji	8.66	71.58	0.53	24.69	3.06	0.11

Source: Adapted from China Agricultural Year Book, 1993; Xinji Statistical Year Book, 1993

Table 5.1 clearly shows that, at all three levels, industry produced the highest output value, with agriculture coming second. Table 5.2, shows that, for gross agricultural output values, crop farming takes the lead at all three levels in China.

Over the last 10 years there has been a big tendency in China for rural industry to increase more rapidly than the agricultural sector. Xinji county has been no exception (see Table 5.3). The rural population still makes up 89.5% of the total population, but their income is no longer only dependent on crop farming. Many sectors have contributed to Xinji's income in recent years, including industry, construction, transport, and animal husbandry (see Table 5.4.).

TABLE 5.3
Comparison of the division of a total output value in 10000 Yuan between industry and agriculture in Xinji county over different years

	1985	1990	1985-1990 increase (%)	1995	1990-1995 increase (%)
Agriculture	31575	73253	132	165444	125
Industry	42947	155738	263	505229	224

Source: Xinji Statistical Bureau, 1995

TABLE 5.4

Comparison of Xinji's income from different enterprise sectors in different years
Unit: 10 thousand Yuan

	1978	1981	1984	1987	1990	1993
Total income	10102	12947	43260	77452	135278	348754
Crop farming	7211	9974	22668	29067	41137	75980
Forestry	315	185	628	645	575	1496
Animal Husbandry	57	54	1731	4103	9577	21141
Sideline production	1680	1149	3428	663	1758	
Fishery			24	36	50	210
Industry		696	10275	34558	67921	195034
Transport			1096	2366	3840	18352
Construction			501	1578	3011	9722
Trade and Catering			1551	2627	5018	22304
Service				428	547	1462
Others	839	888	1376	1390	1844	3053
Net farmer per capita income (Yuan)	88	129	487	608	679	1038

Source: Xinji Agricultural Bureau, 1994

From Table 5.4 it can be seen that, although incomes from all sectors are increased from 1978 to 1993, the rates of increases were not equal and the shares held by different sectors of the total income changed dramatically from 1978 to 1993. Prior to 1984, crop farming made the dominant sector contribution to the total income. The shares of the farming sector fell from 71.3% in 1978, to 52.4% in 1984, 30.4% in 1990 and 21.8% in 1993. Meanwhile, the industrial sector has increased from zero in 1978, 23.8% in 1984, 50.2% in 1990 and 55.9% in 1993. Many other sectors have also developed quite fast after 1984, including transport, construction, trade and catering, animal husbandry and service. These sectors hardly existed before 1984 in Xinji, but increased to 14.9% by 1993.

Therefore, great progress has been made in all sectors in Xinji over the last 10 years, especially in sectors other than crop farming. There are many employment opportunities in these sectors, and the income earned is generally higher than in the crop farming sector. Many farmers in Xinji have found other jobs outside the farm. Although figures were not available in Xinji because many farmers were working part time in more than one sector, qualitative field work data indicated that many farmers were working outside the farming sector in Xinji.

5.3 The decline of cotton production

Crop farming was and still is a very important sector in Xinji. As mentioned in section 5.1, Xinji is one of the most important areas in China for food and cotton production. In recent years, however, the area under cotton has decreased considerably and the total output of cotton has dropped dramatically (see Table 5.5).

TABLE 5.5
Food and cotton production areas, yield output in Xinji county

Year	Cotton Production			Food Production (including wheat and maize)		
	Area 10000 mu	Unit Yield (kg/mu)	Total Output (ton)	Area 10000 mu	Unit Yield (kg/mu)	Total Output (ton)
1949	29.54	18	5345	62.19	83	51810
1958	42.89	26	11050	51.60	139	76080
1966	30.89	27	8270	68.27	188	128310
1980	33.84	36	12025	61.44	333	204430
1981	33.91	28	9585	61.04	376	229195
1982	35.02	41	14335	54.93	422	231520
1983	36.06	76	27360	54.94	501	272295
1984	35.61	69	24560	54.10	535	289360
1985	34.07	69	23475	53.90	547	294985
1986	30.26	70	21010	57.86	554	320395
1987	31.55	70	22095	58.46	479	279920
1988	32.72	51	16704	55.29	577	319150
1989	28.00	46	13005	57.16	577	329860
1990	25.20	45	11310	57.83	598	345655
1991	29.00	60	17100	57.48	627	360666
1992	29.00	40	11622	57.57	692	398183
1993	20.10	26	5200	62.62	690	432115
1994	19.27	49	9442	59.34	722	428459
1995	19.92	46	9163	59.55	799	475781

Source: Xinji Rural Economic Situation Statistical Table. Xinji Agricultural Bureau, 1995

From Table 5.5, it can be seen that there was a different situation for food and cotton production. Food production had been constantly increasing in both unit yield and total output from 1949 to 1995. The only exception was in 1987. As for cotton production, there had been some fluctuations both in unit yield and total output, caused not only by the changes in production area. In 1983, Xinji had reached the highest points both for unit yield and total output. From 1983 till 1987, cotton production was quite high, but decreasing in both unit yield and total output, and from 1988 till 1990, there were continuing decreases in all three aspects: production area, unit yield and total output. Although total

output increased again in 1991 because of the increase of the cotton price from the government, it then decreased in 1992. In 1993, cotton production reached its lowest point in all three aspects: production area, unit yield and total output. The total output of cotton production in 1993 was less than half that of 1992. In 1994 and 1995, cotton production was still quite low.

It is important to note that low levels of cotton production are not only occurring in Xinji. In recent years, it has been a common phenomenon throughout the Yellow River Valley of China (Xinji is in the Yellow River Valley) because of the development of pyrethroid resistant bollworms and *Helicoverpa armigera* in these areas. The Chinese government had to make many efforts to increase cotton production, given its importance in China.

5.4 Basic facts about the two townships selected for study

The two townships selected for the case studies are Chengbei and Junqi. Chengbei township is located on the northern border of the county's capital. Junqi is located to the north-east of Xinji, 14.8 km away from the county capital. Both townships have developed very rapidly in recent years. Rural industry has developed in Chengbei, because of its good location. Junqi has developed the field of vegetable growing, especially Chinese leeks. Chengbei is much bigger than Junqi in terms of both population and arable land (see Table 5.6).

TABLE 5.6
Chengbei and Junqi -Basic Data (1993)

	Chengbei	Junqi
Number of villages	13	8
Number of households	7481	3612
Total population	25844	12938
Non rural population	679	186
Total labour force	16314	6369
Male labour force	8333	3303
Labour force in agriculture	7057	2537
Labour force in industry	8077	1368
Agricultural labour force (as % of total labour force)	43	40
Industrial labour force (as % of total labour force)	50	21
Arable land (Mu)	43221	17281
Food crops land (Mu)	32519	9184
Cotton land (Mu)	1300	1720
Cotton unit yield (Kg/Mu)	10	29
Total cotton output (Ton)	13	50
Vegetable land (Mu)	6688	7250
Total output value of industry and agriculture (10 thousand Yuan)	14814	7682
Industry output value (10 thousand Yuan)	10387	4403
Industrial output value (as % of total output)	70	57
Net per capita income (Yuan)	788	1150

Source: Xinji Statistical Year Book, 1993

From the figures above, it can be seen that in Chengbei in 1993, more people worked in industry than in agriculture (50%: 43%) and that the output value of industry make up 70% of the total output values. In Junqi, only 21 % of labour were involved in industry and the output value was 57% of the total output. However, Junqi had a much higher net per capita income than in Chengbei (1150 Yuan and 788 Yuan respectively). Two factors may have contributed to this: more farmers in Junqi grow vegetables compared with Chengbei and this could mean additional income for farmers, and figures for the real income from industry are more difficult to obtain for Chengbei than for Junqi. In China, it is a common phenomenon that most statistics for the farm household include only the farm income and not the income from other sectors, as it is difficult to obtain real figures from the household. When this study was conducted, an impression was felt that Chengbei was in general richer than Junqi. Since 1994, rural industry has developed much faster in Chengbei: the increase in output from rural industry was valued at 50000000 Yuan in 1994, and the total industry and agricultural output at 1800000000 Yuan. In this process, much arable land has been taken for rural industry. From 1989 to 1994, 3500 Mu of land was taken in

this way, but according to official figures, only 415 Mu of land had gone. This discrepancy was because the land used by the local government and farmers for the purpose of rural industry had not been approved by provincial officials. In such cases, the cotton quotas which were based on land area had not been reduced to real figures, the provincial officials still using the official figures. For example, 1000 Mu of land has been given to the Xinji County Government to build the 'China Leather Trading City', but this County Government has avoided paying tax for using the land by not notifying the Provincial Government about the land use. The County Government paid only 1/5 of the real land price to Chengbei township. Therefore, this land is still officially counted as arable land of Chengbei, although in reality Chengbei does not have so much arable land.

In recent years, this phenomenon has become quite common in China, i.e. a large quantity of good quality arable land has been taken away for other uses and many skilled farmers have shifted to other sectors. This is one of the reasons why Chengbei has difficulties in fulfilling the government's demands concerning cotton quotas: there is less land and fewer farmers available for cotton production than is assumed by the government in deciding on these quotas.

In 1994, the cotton quota for Chengbei was 8900 Mu, but production reached only 890 Mu. In 1995, the cotton quota was set at 8900 Mu, and was later reduced to 3500 Mu, but it was still difficult to meet the quantity requested.

Junqi has a different kind of story. The land is sandy and suitable for Chinese leeks which the farmers have traditionally been growing. They have been encouraged by the county government to grow more leeks in recent years. Since 1985, plastic tunnel growing techniques have been successfully developed by research and extension agents for growing leeks, and in 1986, 2000 Mu were devoted to leeks in Junqi. At the beginning of the 1990s, simple greenhouses were introduced in Junqi, so that leeks could be harvested much earlier than in the open field. By 1991, the leek area had increased to 4500 Mu. From 1992, following Deng Xiao Ping's actions to promote of a more market-led economy, the production of leeks and other vegetables increased rapidly. In 1995, 9000 Mu of land was devoted to vegetable growing in Junqi (52% of the total arable land), leeks taking 7000 Mu of this land. Junqi township is now famous for producing good quality leeks and is the biggest leek producing area in the northern part of China distributing to 28 cities. Farmers benefit from growing leeks in that it is much more profitable than any other crop. In 1993, the total agriculture output value of Junqi was 34140000 Yuan, of which vegetable production contributed 17980000 Yuan, more than 50% of the total agriculture output value.

Nowadays, nearly every farm in Junqi grows some Chinese leek, and farmers are more and more interested in growing other vegetables also. Almost nobody is interested in growing cotton. However, because of the shortage of cotton in China, the farmers in Junqi are ordered to grow it. In a similar pattern to that of cotton growing in Chengbei, the cotton quota for Junqi township was 1700 Mu in 1994, but production only reached 650 Mu. The initial 1995 quota was the same as in 1994, but then was reduced to 900 Mu. It is still difficult to realise this quota, but it is possible according to the township leaders.

Both Chengbei and Junqi have had difficulties to achieve their cotton quota and this is why both Township Governments are using the extension agents so heavily to promote the cotton production.

5.5 Some basic facts about the two villages

Two villages were selected for the case studies. One from Chengbei the other from Junqi. The village in Chengbei is called Jiuleitou, and the village from Junqi is also called Junqi. Both villages are not far away from their own township centres, but Jiuleitou village is much bigger than Junqi village both in population and size (see Table 5.7).

TABLE 5.7
Jiuleitou and Junqi-Basic Data (1993)

	Jiuleitou	Junqi
Rural population	4090	2654
Arable land (Mu)	7237	2803
Total output value of industry and agriculture (10 thousand Yuan)	1604	1389
Industry output value	1004	658
Industry output value (as % of total output value)	63	47
Net per capita income (Yuan)	770	1250

From the figures above it can be seen that, in Jiuleitou, the rural industry output value amounted to 63% of the total output value, while in Junqi it was 47%. More labour was thus involved in the rural industry in Jiuleitou than in Junqi.

In fact, Jiuleitou Village consists of four rural sections, distinguished as section 1, 2, 3 and 4. In some way, these four sections can be regarded as four villages. Previously, each section corresponded to one village. Now although the sections are combined into one village with one village head, there are still four leaders or deputy heads responsible for their own section. Each section is financially independent from the others.

In Jiuleitou, according to the village leaders, more than 60% of male labour is involved in various rural industries, such as construction work, the leather industry and so on. Because Jiuleitou is very near to the county centre, there are more opportunities to find a job in other sectors than in most villages. Also, many workers do seasonal work, such as fruit harvesting. Most of the crop farming (55%) is done by women. Some farmers work part time in farming and part time in other sectors. Jiuleitou village used to have a lot of land devoted to cotton, but there is only a little left now (see Table 5.8).

TABLE 5.8
Land use in Jiuleitou (Unit: Mu)

	1984	1990	1994
Cotton	2400	1000	350
Food crop	4400	4400	4000
Fruit trees	600	1900	3000

From the above figures, it can be seen that the cotton acreage decreased considerably in favor of fruit trees over the last 10 years. This is because the county government promoted farmers to grow fruit trees in those years, and this activity could bring much more profit than growing cotton. In 1994, the cotton quota for Jiuleitou was 1550 Mu, but production only reached 350 Mu. In 1995, the original cotton quota was also 1550 Mu, and was then reduced to 610 Mu. In 1994, 150 Mu of arable land had been removed from agricultural use and occupied for other purposes, such as animal husbandry, housing and rural industry.

In Junqi village, most of the farmers have a tradition of growing vegetables and wheat, but not cotton since the land is not so suitable. Prior to 1982, there was only 20 Mu of cotton planted in Junqi village. Land was redistributed to individual farmers in 1982 in Junqi and from this date till 1994 there were no cotton quotas for Junqi. In 1994, the cotton quotas were set at 280 Mu in area and 4200 kg in output. In 1995, the quota for cotton was the same.

Both Jiuleitou and Junqi had difficulties to meet the cotton quotas.

5.6 The importance of cotton production for China

5.6.1 General background information on cotton production in China

Cotton production can be divided into three distinct regions in China: the Yangtze River Valley, the Yellow River Valleys and the Northwest Inland Cotton Producing Region, producing 30.6%, 61.3% and 7.8 % of the total production respectively. In southern China, there are a few scattered areas of cotton production. Within the 3 main regions, cotton is produced in fourteen provinces with the main concentration in Shandong, Henan, Hebei (the province of the field research), Jiangsu and Hubei Provinces, and Xinjiang Uigur Autonomous Territory. These provinces account for 83 % of the national production. Major changes are occurring in the distribution of cotton growing areas in China because of the development of pyrethroid resistant bollworms, *Helicoverpa armigera*, in the Yellow River Valley. The main expansion in production has occurred in the Northwest while the traditional cotton production provinces of the Yellow River Valley, Shandong, Hebei and Henan are tending to cut back on cotton planting because of this pyrethroid resistance problem.

China produced an annual average of about 2.5 million mt of cotton in the period 1971-75, and 2.2 million mt for the period 1976-80. Following the implementation of marketing reforms in the 1980s, a rapid expansion in production led to an average production of 4.03 million mt during 1981-85, and of 3.97 million mt during 1986-90. This represented an increase of nearly 80% during the 1980s. However, the actual area planted to cotton increased by only about 10%, from an average of 4.77 million ha during the 1970s to 5.38 million ha in 1980. Most of the increase in production came from an increase in yield of 455 kg/ha in the 1970s to 742 kg/ha in the 1980s, i.e. an increase of 63%. The 1984 crop was a record 6.26 million mt. The government introduced controls to limit cotton production, bringing it down to 3.54 million mt in 1986. Production remained stable at about 4.0 million mt during the rest of the 1980s but then improved prices increased the competitive position of cotton and production rose to 4.5 million mt in 1990 and 5.68 million mt in 1991. The aim of the government is to sustain production at this level throughout the 1990s. During the period of 1991-95, the average production of cotton in China represented 24.69% of the world total (see Table 5.9).

China has demonstrated its capacity to raise production to match domestic demand, but in recent years China's cotton production has faced a crisis. Unrestricted distribution of registered pyrethroid insecticides has resulted in excessive use, contributing to the development of a high level of resistance in the bollworm, *Helicoverpa armigera*, population. Initially, this was confined largely to Shandong, Henan and Hebei provinces and in 1992-93, it contributed to a decline in yield from 860 to 660 kg/ha, and in production from 5.7 to 4.5 million mt, even though there had been an increase in area planted from 6.5 to 6.8 million ha for that year (World Bank, 1995). During the 1994-95 season, the resistant population in other cotton growing areas tended to increase. This is likely to have a dramatic effect on the planted area, yield and production until the problem is solved.

TABLE 5.9
Five-year average production of cotton lint in metric tones by country from 1946 to 1995

Year	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95
USA	2609	3069	2832	3240	2307	2581	2559	2590	2854	3670
China	170	606	1259	1180	1794	2493	2183	4034	3974	4719
India	544	682	830	1038	1056	1177	1236	1423	1842	2193
Others	1993	3519	4221	5209	6301	7543	7056	7522	8566	8536
Total	5316	7876	9142	10667	11458	13794	13034	15569	17236	19118

Source: World Bank Technical Paper Number 287, 1995

5.6.2 Cotton as being of utmost importance in China's social and economic affairs

There are several reasons why cotton is of great importance to socio-economic affairs in China:

- The population in China's major cotton growing areas now is about 250 million, and in terms of households, 50 million grow cotton. Cotton occupies only between two and 3% of the total cultivated area, but 7 to 10 percent of total agricultural output value. In comparison, the textile industry employs nine million workers and contributes about 25% of the total export value. The Chinese textile industry is the largest in the world (World Bank, 1995).
- China has a population of 1.26 billion, and it cannot afford to rely on cotton imports. It has to be self-sufficient. At the same time, Chinese cotton production has a big influence on the world market price of cotton.
- When cotton production is low in China, many workers in the textile industry lose their job, most of these workers are women for whom it is difficult to find a new job. It then becomes not only an economic problem for the government, but also a social and political problem. It is more likely that urban workers would cause political problems than farmers, because industrial workers are more aware of their rights and empowerment to demonstrate and demand compensation from the government. This has already happened in some cities in recent years.
- Cotton is one of the most important cash crops in China and in the world. For many farmers in China, growing cotton is one of the ways to increase their income and thus their living standard.

The four points listed show the importance of the role played by cotton in China, and it is thus understandable why the Chinese Government has paid so much attention to cotton production. In the next chapter, a brief review of the government policy on cotton production is presented.

6 Conflicting expectations for extension agents in cotton production in Xinji county

6.1 Government policy on cotton and expectations of extension agents

The Chinese government has attached particular importance to cotton production, seeking to influence the sector through implementation of a series of policies throughout its recent history. The main policy goals have been to: (a) formulate a purchase price that will result in sufficient cotton being produced to supply the domestic textile industry while ensuring an income for cotton farmers, (b) guarantee grain supply to the major cotton producing areas, and (c) provide a timely supply of inputs, such as chemical fertilisers, pesticides, and plastic sheeting to the farmers. Recently however these goals have not been achieved because of the problems facing cotton production. (as discussed in Chapter 5)

Government policy involves both extensive State regulation and policies designed to boost exports of textiles and apparel. Problems relate both to cotton production and the growth of non-State mills relative to those run by the State. Basically, the government offered a procurement price to farmers which was sufficient to maintain a relatively constant acreage in both the Yantze River and Xinjiang region, but the farmers in the Yellow River region, or so-called Northern Plains, proved to be very responsive to returns from cotton growing (both prices and yields) and significantly altered cotton plantings accordingly. Furthermore, the marketing margin from farmer to mill exceeded 20%, which is a relatively large difference by international standards (World Bank, 1995). As new machinery was installed in the State-run mills, the older machinery was purchased at discount prices by rural entities that could then compete and procure cotton fibre at a lower price than the State mills. This unofficial policy of allowing the development of rural textile industries commenced in the mid 1980's when there was a situation of excessive cotton supplies, insufficient warehouse capacity to store the cotton stocks, low spinning capacity, and large rural unemployment. This led to the establishment of large numbers of rural non-State mills that now supply more than 66 percent of China's domestic textile needs, and a State textile industry that has seen its output stockpiled, while profit margins erode, due to the necessity to raise the prices paid to cotton farmers and because of the import of cotton fibre.

In October 1992, the 14th National Peoples' Congress agreed to decentralise several controlled commodities and shift autonomy to the provinces. The Cotton Conference held by the State Council in early March 1993 adopted measures aimed at the decentralisation of the cotton market, and these were implemented on April 1st. Selected provinces were to practice a limited open market for cotton. This planned decentralisation, which called for cotton production in excess of the provincial quota to be sold in the open market, was only partially implemented due to the decline in cotton production. The Cotton and Jute Corporation, an agency of the Ministry of Internal Trade, were given responsibility for maintaining a floor price. However, these decisions are now obsolete. In the summer of 1994, as production problems persisted, the State became the only buyer once again. The government was trying to maintain a very tight control on cotton production.

Xinji county is in the Yellow River region. All the major government policies from the central government have a great impact on cotton production in Xinji county. When the central government needs more cotton, then the county government receives more quotas to supply this and conversely, when there is enough cotton produced in China, then Xinji county will receive fewer pressures to grow cotton. Therefore, the county government policy concerning cotton production changes according to the situation of cotton production in China and the central government policy. For example, following Deng Xiao Ping's new attempt to deepen the reform towards a more market oriented approach in 1992, both the central and the provincial governments promoted high profit agricultural products in rural areas, such as vegetables, fruit, livestock, fish and so on, in order to enable farmers to become prosperous quickly (Prosperity is a widely used concept in China since the rural reform). To enable farmers to become prosperous is one of the main government policies in China. Under these policies, Xinji government decided to adjust its agricultural production structure. It planned and promoted the reduction of food crops and cotton areas, and the increase of areas devoted to vegetables, fruit, animal husbandry, and fisheries at all levels from county to village. The popular slogan in both 1992 and 1993 was: 'What the market needs is what we should develop, and what can make money is what we should do'. In these two years, farmers were encouraged to do whatever they wanted. There was no pressure to grow cotton. This is one of the reasons why the cotton production area was only 200000 Mu in 1993, 31% percent less than in 1992 (see Table 5.5).

However, in more recent years, as cotton output has been decreasing greatly in the Yellow River region, there has been tremendous pressure from both the central and provincial government in Hebei for Xinji county to produce more cotton. Since 1994, farmers were asked to grow specific amounts of cotton again because of a big shortage of cotton supply to textile factories. Many factory workers had nothing to do and were so not being paid their full salary. This led to workers demonstration in some cities. Many problems associated with the shortage of cotton supply arose. Cotton production was no longer only an economic problem, but a social and political one as well, according to the perspective of the central government.

In 1995, Xinji county signed a contract with the City of Shijiazhuang. According to the contract, Xinji county should grow 190000 Mu of cotton for a total output of 9500 tons. The county government signed a contract with each township, and each township signed a contract with each village for the amount of land and output to sell to the government. In order to fulfil these tasks, the extension system has been used as an important instrument by the government at all levels from county to village.

For a better understanding of the role conflict for the extension agents and of their responses, some technical data and information on various government policies concerning cotton production are given.

In Hebei Province, cotton production is of two types: Spring Sowed Cotton (or Spring Cotton), and Summer Sowed Cotton (or Summer Cotton). Spring Cotton can produce more than Summer Cotton; in general, 1 Mu of Spring Cotton is about equal to 1.5 Mu of Summer Cotton as far as yield is concerned. Therefore, a sufficient sowing of Spring Cotton is very important for the total output.

Spring Cotton is normally sowed between April 10th and April 25th, depending on whether plastic cover is used. Another important crop, wheat, is sowed in early October and harvested in June of the following year. Thus farmers cannot grow both wheat and cotton in the same year on the same land. However, some other spring-sown crops include vegetables and peanuts can be planted also in spring (see Table 6.1).

TABLE 6.1
Seasonal calendar for wheat, spring cotton and vegetables in Xinji

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Wheat	→ sow		→ grow				→ harvest			→ sow →				
Cotton	→ harvest						→ sow			→ harvest				
Vegetable								→ sow		→ harvest →				

On December 4th, 1994, Xinji county government made a decision under pressure from higher levels and declared the following (Xin Zheng, 1994):

‘It is clear that cotton production for 1995 is a compulsory task and should be fulfilled by all townships. The county government will sign a contract with each township concerning cotton production and collection. Each township will sign a contract with every village on December 15, 1994. Each village will sign a contract with every villager before December 31, 1994’. The declaration detailed many rewards and punishments. The following are most relevant for this study:

- The county government will provide one million Yuan for cotton production.
- 40000 Yuan will be awarded to the township government if they grow cotton on more than 10000 Mu of land; 30000 Yuan will be awarded for more than 5000 Mu; 20000 Yuan will be awarded for more than 3000 Mu; and 10000 Yuan for anything less than 3000 Mu.
- Each township has to pay a fine of 100 Yuan for each Mu below the pre-agreed production quota.
- By the end of March, each township should collect 30 Yuan from every cotton farm as a deposit. After confirmation of sufficient planting by the farm, the deposit will be returned before the end of May.
- After measuring the farmer’s field, those who have not planted sufficient cotton in spring should grow more Summer Cotton and in the meantime pay 100 Yuan as a deposit. If they plant enough cotton to meet their quota in the summer than the deposit will be returned, otherwise the deposit will become a fine. All fines will be handed in to the county government before July 29th, 1995.
- Those townships which do not achieve the yield quotas will be fined 100 Yuan for each 50 Kg of cotton. All leaders in the township will also be fined, between 300 and 600 Yuan.
- All fines will be used for more cotton production, apart from the 30 Yuan for each 100 Jin less in production which will go to the upper level government (Shijiazhuang).
- Technology training and extension will play an important role in cotton production.

New technology for cotton production should be emphasised.

- The County Government will provide enough inputs for cotton production.

All government bureau and townships were instructed to implement all the items listed above. Based on the instructions, all townships gave similar instructions to each village. Most of the instructions were supposed to be fulfilled by all levels of government officers, including extension agents.

Based on the experience of 1994, all the people concerned, including county government leaders, knew that it was impossible to fulfil the quota. In 1994, Xinji county should have sown 240000 Mu of cotton and handed in 10400 tons of cotton to the city of Shijiazhuang. In reality the county officially sowed only 170000 Mu of cotton (the real figure was even lower than this, around 150000 Mu) and handed in 7650 tons. Therefore, everyone complained about the new tasks regarding cotton and fine regulations. Negotiations then took place at every level of the government, and finally, the city of Shijiazhuang made a concession and the quota for Xinji county was reduced.

On January 9th 1995, the county government signed a new contract with the upper level government—the city of Shijiazhuang. According to the contract, Xinji county should sow 190000 Mu of cotton, produce 10000 tons of cotton, and hand in 8000 tons of cotton to Shijiazhuang city.

Based on the new contract, on February 13th, 1995 the county government gave a new instruction to all townships and people concerned. According to the new instruction, the following items were included (Xin Zheng, 1995):

- Each township which has reduced sowing areas for cotton should pay 30 Yuan for each Mu reduction below the pre-agreed quota. The money collected will be used for encouraging other townships and farms wanting to sow more cotton. The money should be collected before February 28th, 1995.
- The township should make a new contract with all villages based on the new instruction.

In March of 1995, both the central government in Beijing and the provincial government in Shijiazhuang held an important meeting on rural development motivated by the serious problems related to food and cotton production in China in recent years, and particularly in 1994 and 1995. The central themes of the meeting were: to strengthen the rural position in all development programs of China; to secure agricultural production including food and cotton; and to increase the incomes of farmers. The tasks and quotas for food and cotton production were set for Hebei Province.

New policies on cotton production were set. These included the following:

- The Central Government shall increase the cotton price from 544 Yuan per 100 Jin to 700 Yuan per 100 Jin, and the Provincial Government will add another 100 Yuan per 100 Jin.
- For all counties, each 100 Jin under the production quota will be fined 960 Yuan.

- All leaders and officers should promote the government decisions and encourage farmers to grow more cotton. These policies were instructed to Xinji county on March 25, 1995.

On March 29th, 1995, Xinji county government made a new document concerning cotton production based on the instructions of the central and provincial meetings (Xin Fa, 1995). In the document, the following aspects were emphasised:

- Cotton is an important product for the whole country and for the people. To produce enough cotton is a serious political task as well as an economic task. All levels of government and all departments should make sure that the quota for cotton planting and collection would be fulfilled.
- All uncultivated land should be measured and recorded (uncultivated land means is that reserved for cotton, peanuts, vegetable and so on). All these lands, no matter for what previous purpose, should now all grow cotton. If other crops were sown, they should be removed and replaced by cotton. If there is not enough uncultivated land for cotton to meet the quota, each township has to be fined 200 Yuan for each Mu less. All fines should be collected before May 10th. At the end of year, when the township finishes delivering their cotton quota, the money will be returned (This is more restrictive than the document on 4/12/94 and the fine has increased by 100 Yuan).
- The measuring of uncultivated land will be carried out by The Cotton Office (a special office set up specially for cotton production) together with Working Groups (special Working Groups consisting of various bureau officers and extension agents of the CATEC, the Statistic Bureau and so on.)
- To encourage farmers to grow more cotton, each extra Mu will be awarded 50 Yuan and each extra 100 Jin of cotton delivered will be awarded 50 Yuan.
- All townships will be rewarded if they fulfil the quotas of both area and delivered cotton. The rewarding criterion is based on the decision of December 4th, 1994.
- Each 100 Jin of cotton less than the quota will be fined 1,000 Yuan, and all township leaders will be fined from 300 to 600 Yuan according to their position. (This mechanism works as follows: The County Government first orders the Township Government to report on the uncultivated land in their township, and then obtains some random samples based on the report. These have to be sent to the Working Groups to check if the reported lands are correct or not).
- County, townships and villages should all contribute financially to cotton production through the subsidising following: plastics, plant protection equipment, big cotton farmers, farm insurance and so on.
- To make every effort to promote cotton production, through seed supply, material supply, technology extension and technical training.
- All previous documents to be corrected by this document if there is any inconsistency.

From the above documents and instructions, it is clear that both the provincial and county governments consider cotton production a very important task. The county government follows the provincial government's orders and gives more or less the same instructions to the lower level of government, including the townships and villages. The main difference is that the provincial government only gives the orders, while the county government also has to find ways to execute them.

Three measures were used by county leaders to monitor both the leaders at the lower level of government and the farmers in order to implement the government policies. These measures were Working Groups, Field Inspections and Report Meeting, and TV coverage.

- Working Groups. Working Groups were formed in order to measure farmers' uncultivated land and to persuade (or force) them to grow more cotton. The members of the Working Groups consisted of different sections of the county government, e.g. the Bureau of Agriculture, the Tax bureau, the Bureau of Industry and Commerce, as well as extension agents from CATEC. Each Working Group consisted of three people and was responsible for one village.
- Field Inspections and Report Meeting. On April 15 in the morning, all government leaders from both county and townships made visits to various farmers' fields in different townships in order to gather first hand information. In the afternoon, each township leader reported back to the county leaders on their current situation of cotton production, in ms of cotton planted in relation to quotas and their plans on how to achieve the full cotton quota.
- TV coverage. From April 18th onwards, the county TV Station began to show a ranking of all townships with regard to the degree of the accomplishment of the cotton quotas. This put a lot of pressures on the leaders of low-ranking townships.

In order to follow the county government's orders, each township government gave a 'clear paper' to every village and farmer ('clear paper' means to provide a clear message to the farmers). In the 'clear paper', most of the county government decisions were stated, such as the price of cotton in the current year, the quotas for cotton area and quantity of cotton to be delivered by the farmers to the State, the specific rewards and fines etc. Several such 'clear papers' were given to the farmers in accordance with each policy change.

The government policies would be performed by the extension agents together with county and township cadres and village leaders. However, there were different tasks for extension agents at different levels. Twenty county extension agents were assigned to join the Working Groups. Each Working Group was expected to do the following jobs:

- to measure the uncultivated land in farmers' field;
- to implement government orders in each township to meet the cotton contracts;
- to provide technical advice to village farmers on the whole process of cotton production;
- to facilitate the process of selling cotton to the government after harvesting. The township extension agents and village leaders were to perform, all government orders, such as measuring the farmers' lands, and collecting the fines. Township extension agents and village leaders had many more tasks to carry out than the county extension agents.

Those tasks are the government's expectations for extension agents. However, many farmers in Xinji do not like to grow cotton.

6.2 Farmers' attitudes towards cotton production and expectations for extension agents in Xinji

Prior to 1985, farmers were interested in growing cotton as a cash crop, as the Government supported its production. Farmers were pre-paid in cash by the government even before the crop was established. From 1986, farmers have had less interest in growing cotton as they have been encouraged towards many other activities other than growing cotton. Many fruit trees were planted from 1986 to 1994 and the acreage for vegetable cultivation also increased. Cotton production has been less favoured for several reasons:

- The low cotton price makes this crop less profitable than others;
- Cotton production is labour intensive and labour costs are high;
- There have been serious pest problems due to bollworms in 1992 and 1993;
- Agricultural inputs such as fertilisers and agro-chemicals are now controlled by market forces, while cotton production and marketing is still controlled by the government, and this has resulted in a situation where prices of inputs increase more than those of output;
- There has been no compulsory task for farmers to grow cotton, and in fact between 1992-93 the government had encouraged farmers to grow whatever they liked in order to get more prosperous as soon as possible.

In order to become prosperous quickly, many farmers have shifted their cotton land to fruit trees and vegetables. Farmers are not familiar with these new crops, however, and they have hoped that extension agents would give them more knowledge on these subjects, as well as more information on markets such as the profitability of leeks or tomatoes. Farmers would also like to know more from the extension agents about the use of pesticides, fertilisers and other inputs for fruit and vegetable production.

It is now clear that government and farmers have different interests in cotton production and that extension agents are exposed to conflicting expectations from the government and farmers. There is a clear role conflict situation for the extension agents. This study aims to see how extension agents have perceived such a role conflict and how they have behaved in this role conflict situation and why. That is the content of the following chapter.

7 Understanding the coping behaviour of extension agents at three different levels in Xinji county

In Xinji, the important activities for field crops related extension are carried out at three levels of organisation. These are the County Agricultural Technology Extension Centre (CATEC), the Township Agro-Technology Extension Station (TATES), and the Village Leaders and Village Technicians. This chapter will first present the results of the field research: a description of the coping behaviour of the extension agents in the role conflict situation, and then will explain and analyse these results.

It is important to note that the research was carried out from county level through township to village level. The interest was not only to investigate the coping behaviour of the extension agents in the role conflict situation, but also to compare the difference in coping behaviour between extension agents at these three different levels. Thus, the research results from county level to township level and finally to village level will be presented.

At each level, there will begin with a brief introduction of the extension agents who are involved in a role conflict situation, and then a description of their perceptions of the role conflicts. After that, their coping behaviour will be discussed, and lastly some analyses will be made concerning their coping behaviour.

Bearing in mind that many socio-psychological studies of role conflicts are based on laboratory experiments, hence they often give insufficient consideration to the wider social context of perceptions and behaviour. The results of these experiments are often clear cut and straightforward. This research is an empirical one with real life evidence and the results are thus more complicated and complex. For example, the coping behaviour of the extension agents is not always so clearly defined on issues such as taking sides, compromising, avoiding, and so on, as the role conflict theory proposes. They may use different coping behaviour in different situations, or they may use two different kinds of coping behaviour at the same time. Nevertheless, the role conflict theory has been a good starting point for the development of further theory and of research. At the beginning of the fieldwork, the idea was simply to modify the role conflict theory, i.e. to add more factors that affect the coping behaviour of the focal persons. But during the research process, it was realised that the role conflict theory lacked a time dimension, failing to come to grip with the stages of role conflict and the events that occur during the process of role conflict. In short, a more dynamic approach to understanding the coping behaviour of the focal persons was needed. This new understanding was realised throughout the research process, which was also a process of learning. To demonstrate this research process, the research findings will be presented from a more static and simple model to a more dynamic and complex understanding. In this way, the study itself will display a similar evolving process of understanding. It is necessary to make one comment here. The field research of this study was too short to follow the role conflict process through to details of practice. As such, the researcher was very much dependent on the field interviews and observations made as the sole means of analysing the reality. Some understanding was also gained during the process of writing the thesis. In this way, understanding is an ongoing process throughout the whole research exercise.

7.1 Coping behaviour of the county extension agents (CEAs)

7.1.1 The CATEC and extension agents involved in cotton production at county level

In Xinji county, CATEC was established in 1988. In 1995 there were 66 staff members, of which 55 were extension agents. All the extension agents were fully paid, permanent government employees. Of the total, 16 were university graduates, 8 were college graduates, 28 were technical school graduates and 3 were high school graduates. They were all awarded professional titles after careful assessment, so that the CATEC then comprised 3 senior agronomists, 37 agronomists and 15 assistant agronomists. The educational and professional levels in Xinji CATEC were regarded by its leaders as sufficiently equivalent to those of CATECs in other counties. However, according to these leaders, the main problem from a professional point of view was that most of the extension agents were familiar with food, cotton, and oil crops, which were for years the main focus for extension agents, but were not so very familiar with vegetables, fruit cultivation and farm management, these being the new demands coming from farmers. The organisational structure of the CATEC is shown in Table 7.1.

TABLE 7.1
CATEC office and staff division

Unit	Staff
CATEC(total)	66
CATEC Office	6
Agro-technology Station	7
Economic Crops Station	9
Soil and Fertiliser station	7
Plant Protection Station	7
Financial Office	2
Library, Video and Audio Office	3
Computer Office	1
Input Materials Shop	4
Others	20

As introduced in Chapter 1.2, from an administrative point of view the CATEC is under the control of the County Agricultural Bureau (CAB). This means that the CATEC has to follow the orders from the CAB or the county government. From a professional point of view, the CATEC is responsible to the higher levels of the Agro-Technology Station at city or provincial levels. The upper level stations assign tasks to the CATEC based on the projects, such as monitoring of the process of bollworm development, innovation diffusion and so on.

In 1995, the CATEC had five main missions:

- To strengthen the extension system at all levels, from county to village. In some townships or villages, there were no real extension agents, so the CATEC was attempting to establish and strengthen extension organisations, and in doing so to set up and evaluate the necessary professional positions, at these two levels.
- To conclude the twenty-two extension projects assigned by the Agro-technology Station of Shijiazhuang City. These projects included such aspects as grain hybrid development and use, greenhouse vegetable growing, plastic sheet cover for cotton production, flower cultivation in plastic tunnels, plant protection for bollworm, use of CO² on vegetables, use of various fertilisers on different crops, and so on.
- To meet the contract for cotton production. Twenty extension agents had contracted 18 townships for cotton production, and they were each assigned to a Working Group. On average, each extension agent was responsible for one township to realise the cotton land area and output requested by the county government within each township, the extension agent should focus on one village, with five field spots to monitor the process of bollworm development, and three high yield demonstration sites to promote cotton production.
- To conduct various training programmes and diffuse innovations to farmers.
- To promote technical service by selling high quality inputs to farmers.

From the above five missions, there were clearly many different and even conflicting tasks for the extension agents in the CATEC. Tasks relating to cotton production were only some of the total numbers of tasks needed to be performed by the extension agents. Information was given that tasks concerned with cotton were mainly done by the twenty extension agents who had contracted the 18 townships. However, these twenty extension agents were not only involved with cotton production, but also other daily tasks related to the 22 projects assigned to them.

In China, there are fixed terms when referring to different tasks for different purposes. The tasks directly related to technical purposes, such as grain hybrid development and use, greenhouse vegetable growing techniques, and providing advice to farmers, are called technical missions which are more in line with the farmers' expectations. The tasks directly related to government orders for promoting government interests, such as forcing farmers to grow more cotton, promoting one child policy, are called bureaucratic missions or bureaucratic interventions. They are more state-directed.

Some extension agents in the CATEC informed that they and their colleagues work 70 percent of their time for the technical missions and 30 percent for the bureaucratic missions. The agricultural extension organisation is an excellent example of how technical and bureaucratic missions are combined together on the agenda of a bureaucratic organisation involved in intervention for local development and change.

In 1994, the government budget for the CATEC was 450000 Yuan. However, after paying salaries, there were only 40000 Yuan remained for extension work. This was too little for any efficient work. However, a fund from various projects provided 63000 Yuan. Most of these projects come from the city or provincial organisations. Income from selling inputs

made a further 40000 Yuan, although this was normally used as a bonus to the staff members. Therefore, availability of funds from projects to do research or extension work is very important for extension agents, and they are very interested in getting projects from all sources.

7.1.2 Role conflict as perceived by the CEAs

The first interview with the CEAs took place at the CATEC. The director, deputy directors and several heads of the departments were present. The interview commenced well with some general questions about the CATEC. However, when questions began to focus on role conflict, one of the deputy directors showed disapproval and responded that they were not concerned with role conflict because they only concentrated on technical problems of cotton production, and were not involved in any conflict between the government and farmers. His remarks could be interpreted in one of two ways. One was that indeed they were not concerned with the role conflict and the other was that they were concerned with role conflict but did not want to discuss it in that situation. Based on the researcher's understanding of the situation in Xinji, the second meaning was likely to be closer to the truth. This was subsequently confirmed after more interviews. Nevertheless, from that moment it was realised that the word 'conflict' should be dropped since it was a very sensitive concept for many people, and especially for government employees in the rural areas. Using the word 'conflict' might also lead to misinterpretations on the purpose of the research. The informants might think that the research was about conflict between the government and farmers. As with the government officials, they may not like to talk about such a subject to an outsider. Thus, instead the aims and reasons of the research were explained. Then, the concept of role conflict was replaced with 'incompatible expectations' of the government interventions and farmers' demands. These concepts were often used in the daily work of extension agents in China. Extension agents usually talked about the incompatible expectations of the government, i.e. bureaucratic missions (government interventions), and technical missions, and the farmers' needs. For all subsequent interviews, the purpose of the research was always explained to the informants, and similar terminology to that of their daily work was used to conduct the interviews. Only after a better understanding between the informants and the researcher had been reached could the concepts of conflict and role conflict be discussed. This strategy solved the problem of sensitive concepts.

All the people interviewed in the field stated that there was a clear conflict of interests in cotton production between farmers and the government. This may be due to the fact that cotton production had become a compulsory task for the farmers in the last two years (1994 and 1995) but that farmers did not like to grow cotton. These reasons were well known to nearly everybody in Xinji.

Although all CEAs knew that there were conflicting interests in cotton production between the farmers and the government, not everyone perceived that there was a role conflict for him/herself. Based on the interviews conducted, the CEAs could be divided into two groups in terms of their perceptions of the conflicting interests between farmers and government. Those CEAs who were not assigned to the Working Groups considered that there was a clear conflict between the government's and the farmer's interests in cotton production, but they did not always feel a role conflict for themselves, since they were not

directly involved in cotton production all the time. All twenty CEAs who were assigned to the Working Groups for cotton production perceived a clear role conflict. They were expected by the county government to stay in the townships and villages for most of the time between April to September. They were also expected to perform the four main tasks associated with cotton production, and at same time also to carry out other CATEC missions, i.e. visiting farmers and undertaking the tasks of the other projects assigned to them. The following complaints illustrated their feelings:

'The government wants us to promote cotton production to meet the cotton quotas, but farmers like us to provide advice on crops other than cotton.'

'The farmers are interested in new technology and market information and they are not interested in growing cotton, but the government likes us to advise farmers to grow cotton: they want different things from us.'

'Finishing both bureaucratic missions and technical missions at the same time is difficult. These two kinds of missions are conflicting. If I stay in the village to measure the farmers' land, then I have no time to monitor the process of bollworm development, then I cannot finish my technical missions. If I concentrate on my technical missions then I have no time to measure farmers' land.'

In fact, as a CEA stated, they had three main roles to play:

- to promote government bureaucratic missions, such as cotton production (role 1);
- to promote technical missions, i.e. to concentrate on the 22 projects (role 2);
- to provide services to farmers, such as offering technical support to those who want to grow vegetables or fruit (role 3).

The second and third roles could converge in some circumstances, when farmers' wishes overlapped with the projects proposed. However, often farmers might have different wishes and thus would need different attention from the CEAs.

Those roles were intertwined in the daily work of CEAs. Since the main focus of the study was on the role conflict between farmers and government, it concentrated on the perception of CEAs of the role conflict between farmers and government, although it was realised that each role had some impact on other roles.

In this study, the strength of a role conflict is defined as the difference, as perceived by the focal person (*extension agents*), between the expectations of the two role senders (*government officials and farmers*). Thus:

- Weak role conflict - when the perceived difference in expectations between two role senders is small.
- Strong role conflict - when the perceived difference in expectation between two role senders is big.

Although each of twenty CEAs perceived a role conflict in cotton production, the strength

of the role conflict was not perceived in the same way. Some CEAs perceived it to be weak and others strong, as not every CEA put the same weight on the different expectations (Some CEAs may pay more attention to certain expectations than to others). Another reason for the varying strengths might be that the interviews were conducted in different time periods. The role expectations from the role senders were also changing over time. Prior to April, the pressure from the government on the extension agents was not very high; whereas at the beginning of April, more pressure was put on the extension agents to work in the field for cotton production, and the perceptions of the role conflict changed too. This point became apparent only at a later stage of the interviews with the CEAs. It was more clearly demonstrated by the extension agents at the township level.

Some CEAs also stated that although they did feel a role conflict for cotton production, it was not as strong as for other extension agents at lower levels, i.e. township and village levels, since the higher level dealings in cotton production were not always directly with the farmers. Most of the time they were working with the township leaders, township extension agents and village leaders.

Nevertheless, all CEAs involved in the Working Groups said that they perceived a clear role conflict in cotton production, but that the strength depended on the changing expectations of the role senders over time and on the different weighting of each CEA (This point will be discussed in more detail later on).

7.1.3 Coping behaviour of the CEAs

In this section, the coping behaviour of the CEAs will be described. However, particular attention will be given to those twenty extension agents who were assigned to the Working Groups, since they had perceived a clearer role conflict during their daily work.

Faced with role conflict between bureaucratic missions and farmers' expectation, the CEAs adopted several patterns of response to the role conflict, as follows.

1 *Try to avoid the role conflict by not really performing government expectations*

The CEAs did this by concentrating only on technical problems of cotton production, such as the control of bollworms. They considered that only the technical problems of cotton production were their tasks. In this way, they placed more emphasis on the role 2 and avoided playing role 1.

In terms of the government request to stay with the Working Group in the townships and villages from April to September, some CEAs did not like to do this, preferring to work on their other professional activities. Thus at the time when they should be measuring the farmer's land according to county government orders, they were working on their other projects, only showing up in the village for a few days at a time. When they were called by their Working Groups, typical responses were:

'I have many tasks to do. I will go there if I have time.'

'I have to measure the rate of bollworms and predict the results of bollworms attacks and report to provincial protection stations.'

'I have to take care of my extension projects.'

'Anything will take my time and I do not have time to do other things, so maybe you can find somebody else to measure the farmers' land - it does not need any special knowledge.'

'I am an extension agent - I only deal with the technical problems of cotton production. The other things are not my duties.'

At times when there was a strong request from the institutional hierarchy for CEAs to go to the villages, they would obey orders, but would leave at the first opportunity. As a CEA informant said:

'They cannot always watch me; besides I can tell them I have to report to the provincial plant protection station about bollworms, and to complete the report I have to do a lot of work. Therefore, I have no time to go to the villages to measure farmers' land. Anyway, I can find reasons to go away, from that work (measure farmers' land and persuading farmers to grow cotton), I just do it perfunctorily, if there is no trouble for me it will be all right.'

Actually, by emphasising their technical duties (role 2), they tried to avoid doing all other kinds of activities. They narrowed their responsibilities by focusing only on the technical aspect of cotton production, and took only a part of the government's expectations as their tasks. By doing this, they could avoid direct conflict with the government and farmers.

It is interesting to note that the main excuse the CEAs used was that they had to work for the provincial projects. They showed to other people that they had more important things to do, since their tasks were set at the provincial level. These other people were mainly the county government officials who were working as the heads of the Working Groups, and were at a much lower level in the government hierarchy than the provincial officials.

- 2 *Conform to the farmers expectations and give lip service to the government expectations*
Few CEAs conformed more to the farmer's expectations in the field. One typical example was that of a CEA who was supposed to promote cotton production in the village, but the farmers asked him to give lectures on fruit tree techniques instead. He first briefly discussed the cotton problem, and then began to talk about fruit tree production techniques. In his own words:

'About cotton production I just shout slogans. When farmers need any other technologies, I just do what farmers want me to do.'

When asked about the problem of cotton:

'The cotton problem is caused by the changing government policies. Prior to 1983, farmers liked to grow cotton as the government encouraged them by giving some bonus such as pre-paid loans, grain (when farmers grew cotton, then they would have less land for food crops. The government offered some grain for those farmers who grew cotton), and low-priced diesel. However, in 1984 and 1985, cotton production was very high in both Xinji and China, and the government did not have storage capacity to buy them all, then the government can-

celled the bonus and decreased the cotton price, and opened the cotton market. Even then most farmers still liked to grow cotton if they could sell it. However, the Cotton Stations (Government organisation to whom farmers sell their cotton) forced the cotton price and the standards down. Farmers suffered a lot. Following this, the farmers had less enthusiasm to grow cotton. Then, in 1988 and 1989, there was a shortage of cotton again, and although the government had increased the cotton price, farmers here did not react to this. Besides that, in recent years it was the government who encouraged farmers in these villages to plant more fruit trees; they also asked us to give more advice on fruit trees to farmers. Now they want farmers to grow cotton. It is inconceivable. I am an extensionist. I do what farmers want me to do.'

This CEA felt that the government had no legitimacy to ask farmers to grow cotton, and that is why he conformed to the farmers' expectations. Those few CEAs who took the farmers' side had more or less the same perception about the cotton problems.

3 Try to compromise with both government and farmers

Some CEAs took a compromising behaviour, i.e. tried to satisfy both government and farmers. For illustration, the following is a question and answer session with one such CEA:

Q 'What do you think about the conflicting interests between the government and the farmers in cotton production?'

A 'I think that the government should first think about the farmers' interests. If the cotton price is high enough then farmers will grow cotton. The market should play a role. I came from a rural area, my wife now is still a farmer, I know farmers very well. I have sympathy for farmers.'

Q 'Do you think that the government has the right to ask you to work in the Working Groups?'

A 'Well, they have the right to ask us to provide technical advice to village farmers for cotton production, since we are responsible for technical matters. However, I do not think that they should ask us to measure farmers' land and to take care about selling cotton. Those things are not of our concern.'

Q 'What would you do when you were asked by the government to promote cotton production?'

A 'I am paid by the government. I cannot go against the government. Thus, I say what the government expects me to say to the farmers. I think that the main problem of cotton production is the output. If farmers can get high output then many of them still want to grow it. Therefore, I promote the technique of ground plastic cover for cotton production. I told farmers how to use ground plastic and gave them some good examples of high output by using ground plastic. I have also extended intercropping technology to farmers. Cotton can be planted with watermelon or peanuts, in this way farmers can also make a good profit and in the meantime the government will get more cotton. However, I do not force farmers to grow cotton, I only promote cotton from a technical point of view.'

Q 'Are there farmers who ask you questions other than for cotton? What do you do?'

A 'Yes. Many farmers ask me about techniques to grow vegetables. I tell them as well. I am an extensionist. I concentrate on technology innovations'.

This compromising behaviour was quite common among CEAs in the role conflict situation. As the head of the CATEC put it:

'We are not responsible for the cotton production area in Xinji, we only try to extend new technologies to increase the output of cotton, such as the intercropping technique and the ground plastic cover technique. In this way, we can help the government to promote farmers' enthusiasm for cotton production. The government needs cotton and farmers need profits. We try to satisfy both of their needs. However, we do not use bureaucratic interventions to force farmers. When farmers ask us for other technologies, we will tell them too.'

4 Concentrate on one's own goal

For some CEAs, following their own goal was more important than to conform to the expectations of the government and farmers. One such goal was to make money. In recent years, nearly everyone could see the opportunity to make money in China, and there has been a considerable change towards a market economy with some people becoming rich within a very short period of time. Those 'newly rich' people could be friends, neighbours, colleagues or relatives, and people compare themselves with others. Economic development became a strong incentive to almost everybody, including the extension agents. In Xinji, many extension agents felt that they were lagging considerably behind in terms of financial development. One CEA expressed this opinion during an interview:

'Nowadays, the extension agents have no enthusiasm for their work. We are not balanced in our hearts. Everyone earned a little before, people in the village were also poor. At that time although I did not earn much, I had knowledge, I was very much respected by people. Now, so many people without education can earn a lot, they improved their lives very much, I am still in the same position. I feel very vexed'

To catch up, some extension agents used their working hours and knowledge to do all kinds of business that might contribute to their economic goal. The following case can be used to demonstrate this point.

One 31 year-old CEA was interviewed. When we met in his office, he was wearing a suit, while all other CEAs wore Chinese or informal clothes. He came from a rural area and had graduated from a technical school. After that he had taught in an agricultural school for two years. From 1986 he began to work as a CEA. From 1989 to 1991 he was engaged in business activities for CATEC, such as selling agricultural inputs to farmers. After 1992 he had become a normal CEA again, involved only in extension. As a CEA he considered that his salary was low, i.e. that the money was not enough for a good living. Therefore, in recent years, he had been making business in the field of fruit marketing, taking one month off per year for fruit harvesting and selling. He was able to earn quite a lot of money from the fruit business. When asked what he would do if he found himself in a role conflict situation, he made sure that he could not be overheard and then replied:

'I do not care so much about the government and the farmers and I just want to earn more

money. The government should open the cotton market, and should not change the policy too often.'

Q 'What do you think about the farmers?'

A 'I came from the rural area. I know farmers well. The farmers have the right not to grow cotton. When farmers do not like to grow cotton, I cannot do anything. I am not in that position to force them to grow, that is not my duty. My parents also have farmland and I sometimes help them in the field. If I have time, I would like to concentrate on some business which can improve my living standard.'

Q 'Are you in the Working Group for cotton?'

A 'Yes. I am responsible for one township. But I did not go to measure farmers' land. I only focus on technical problems linked to cotton production. In fact, I am not interested in working as an extension agent.'

In such a situation, the expectations of the government and the farmers had less meaning for him. He overlooked the role demands, and although the sent roles remained unchanged, he chose to ignore those roles. He was giving a personal goal greater weight than that of the role senders. Such CEAs would prefer to concentrate on their own goals whenever possible.

The question arose as to why those extension agents did not resign and find another job if they did not like to work in extension. After some discussions, the answer was given by CEA:

'I do not like my job here, but I am not sure if I can do another business well. At least here I have a safe job with all kinds of social welfare. I can have some spare time for my own business while I am working here. I think I will leave here after some years when I have prepared myself well'

Such coping behaviour was not common among CEAs in Xinji, but many extension agents, and especially the young ones, were not satisfied with their current situation. However, there were not many alternatives for them, and especially not for the older ones.

5 Conform to the government expectations

During the fieldwork, there was only one CEA who clearly stated that she was conforming to the government expectations. She stressed very strongly during the discussion:

'I will stick to the government requirement, because Xinji has the tradition to grow cotton. Besides, cotton is one of their cash incomes. The worst problem for farmers is bollworms. They are mostly afraid of bollworms. They do not like to take the risk. However, we as extension agents always make predictions about bollworms. We have figures. I do not think farmers are right not to grow cotton. Now the government has difficulties. As farmers they should listen to the government and contribute to the country's needs.'

Q *'How would you act in the field?'*

A *'I tell farmers about the process of bollworm development and its effects. If they follow my advice, then the bollworm can be controlled. In fact, there are many ways to control the bollworm. Here we are the demonstration county for controlling the bollworms.'*

She was the only CEA who strongly expressed that she would conform to the government's wishes to persuade farmers to grow cotton. This was at first surprising, but soon it became clearer from her background. She was the head of the plant protection station, and her professional training was in plant protection, a field in which she had been working for 30 years. She was one of the three senior agronomists in the CATEC and was well known in her field in Hebei Province. Because of her excellent work, she was elected as Congresswoman of Shijiazhuang City and was awarded the SanBa HongQiShou (a kind of national prize for women). From her professional point of view, she did not consider that the bollworm was difficult to control, and from her political and emotional point of view she was more in favour of the government. Therefore, she was convinced that the government had the right to ask farmers to grow cotton.

However, the interview was undertaken in front of two of her colleagues, and it is likely that this had an influence on her answers. There was no opportunity to follow her work in the field. Nevertheless, one clear point was that her professional background did affect her perception of the bollworm problem. This point was confirmed through other interviews where several other CEAs also expressed the idea that bollworm could be controlled, that farmers should not be so afraid of it, and that government did have a certain degree of legitimacy to ask farmers to grow cotton. All these people had the same professional background in plant protection.

7.1.4 Analysis of the coping behaviour of the CEAs

In the above section, five patterns of coping behaviour of the CEAs have been described. In this section the factors which may affect those coping behaviour will be analysed.

1 *The goals of the extension agents*

During the interviews with the extension agents, the following questions were always posed: how did they see the role of extension? How did they see their future, or what did they plan to do in the future (whether they would continue to work as an extension agent or would try to find another job)?

Each extension agent gave different answers to the above questions. In summarising their answers, a general picture about the four different goals of the extension agents can be drawn:

- To be promoted up the hierarchy of authority;
- To be a professional extension agent and be promoted along the professional ranks
- To make more profit;
- To keep their current position.

Each extension agent would put different weight on these goals. This resulted in different

coping behaviour in the role conflict situation. To be promoted up the hierarchy of authority was not a visible option for most extension agents. As the extension agents cited, there were few positions available in the extension organisation and it was not very attractive for them. If they had wanted power, they would have gone to work in the government bureaucratic organisations such as the Agricultural Bureau or the County Government.

Most of the CEAs would prefer to be promoted along the professional ranks. To be promoted, they would have to do their professional job well, and so a focus on this would enable them to achieve their goal more quickly. This was why some CEAs prefer to concentrate on the technical mission only, and not work for a bureaucratic mission.

To measure farmers' land and persuade them to grow cotton was considered by CEAs as playing a bureaucratic role. Besides, these activities were perceived by CEAs as a temporary job, which had not really count towards their career promotion. However, as extension agents, they were paid by the government, and therefore, were obliged to do what the government asks of them. As one CEA expressed: 'we are paid by the government and we cannot go against the government'. This was one of the reasons why some of the extension agents took avoidance as their coping behaviour.

When the CEA's own goal was extremely divergent from the bureaucratic or professional goals, such as the personal goal to make more profit, then the CEA would take the fourth option, i.e. neglect both the expectations of government and farmers and concentrate on this.

2 *Legitimate and sanctions power*

For some CEAs, compromise behaviour was another option, since they considered that the government had some legitimacy to ask them to promote cotton production from a technical point of view. At the same time they also thought that farmers had the legitimacy not to grow cotton. Besides, there were no real sanctions from either the government or the farmers if they did not follow their expectations. As the CEA informants stated: 'we are not responsible for the cotton quota and delivery of cotton. The township and village are responsible for that. There is no real punishment for us'. In the meantime, to promote intercropping of cotton and other crops and ground plastic cover are considered as technical advice. It does in some way fit their professional mission and it also fits their perceptions of the legitimacy of their role senders. Thus 'it is a good way to satisfy both sides and at the meantime avoid complaints from them' as one CEA said during an interview.

When CEAs perceived that one side was legitimate and the other side was not, they would then conform to the legitimate one. This was the case for the fifth pattern of coping behaviour: conform to government expectations. However, the CEA's perception could be very much influenced by their background.

3 *Background of the extension agents*

Three CEAs conformed more to the farmers' expectations in the field. In reviewing these case studies carefully, it was found that all three had a rural background. Their spouses were farmers, and all of them had experience of growing cotton at home. In 1995, all had

a cotton quota at home. However, only one actually planned to grow some cotton in order not to be fined. The other two CEAs did not plan to grow any cotton, preferring to buy it or pay the fines. All three claimed: 'We know farmers very well and we heartily sympathise with farmers'. This was the reason that they conformed more to the farmers' wishes.

One CEA conformed to the government's expectations. Because of a professional background in plant protection, this CEA did not consider the bollworm as difficult to control; and because of the political background she was more in favour of the government.

4 *The incentive structure*

The incentive structure also played a role in influencing the coping behaviour of the CEAs. First the distinction between incentive structure and sanction power will be discussed here since those concepts may appear more or less the same. Sanction power is more direct and has a short-term effect on both the perception and coping behaviour of the situation by the focal persons, whereas incentive structure is more indirect and has a long-term effect.

For example, most CEAs preferred to have some projects sent from up the hierarchy, because the organisational structure gave incentives for these. Nearly all projects were professional jobs, and the evaluation and promotion of the extension agents was based on their professional or technical performance (for example, being recognised and known in the professional field, or a direct salary increase and promotion in the professional ranks) rather than on activities for bureaucratic missions. In fact, participation in the Working Group brought a bonus of 100 to 200 Yuan to the CEA every year, as was stated in the field, but this amount was too little to have any effect on the CEA. This direct positive sanction was far less important than the incentive structure that has a much longer effect on the life of the extension agents. That was why most CEAs preferred to concentrate on the projects or technical side of the cotton problem instead of joining the Working Group and measuring farmers' lands.

5 *The power of the CEAs*

This section will now concentrate on further understanding as to why the CEAs coped with the role conflict in the way they did.

The CEAs could act in this way because they had a certain degree of autonomy through their professional power. They were recognised as extension agents by both government officials and farmers. Thus, they had some 'expert power' to undertake their professional duties instead of other activities, without really being punished by the government even if they did not follow orders for cotton production. The County Agricultural Technology Extension Centre (CATEC) was essentially recognised as a service organisation. Therefore, principles of autonomy and self-regulation governed the CATEC, and extension agents expected to have this autonomy also. After years of schooling, professionals consider themselves capable of self-governance and believe they have the expertise to respond to the needs and demands of their clients (Kouze and Mico, 1979).

This point may also be understood from the following facts. The reform of the extension system began at county level. In 1979, the MOA (Ministry of Agriculture) initiated some CATECs on a trial-basis, which were selected from 29 provinces and cities. Each CATEC

received 190000-200000 Yuan for its physical construction. A 1988 MOA document indicated that each CATEC could be an independent professional organisation for extension. For the year 1990, the total investment for each CATEC from MOA was 30000 Yuan. By 1992, there were 1469 CATECs in China, covering 73% of the total counties, with a total investment of 882 million Yuan, in which the MOA invested 238 million Yuan (27% of the total investment). The remaining investment came from provincial and local government (Yang, 1993). One of the purposes of establishing the CATECs was to strengthen the extension system at county level and to make the CATECs a well-equipped, multi-disciplined and independent professional entity. Since then, the CATEC has become an independent professional organisation in the extension system. Therefore, the extension agents in the CATEC are also recognised as professional people and have gained a certain degree of autonomy and power for their own decision making. As such, pursuing more increasing-ly of their own goals is possible for the county extension agents in a role conflict situation.

From the case study above, it can also be noticed that there were no real material sanctions as the CEAs from either side. From the interviews, it came across that the pressures they felt were more moral. They felt responsible both for the farmers and the government. On the farmers' side, they felt responsible as many of them or their spouses were or had been farmers themselves, and most had relatives in the farming sector. They also considered that, as professional extension agents, they should help farmers to adjust to the market economy. This has been a discussion issue in China in recent years.

On the government's side, many of the CEAs said that: 'we are government employees, we are paid for what the government asks us to do'. Besides, they could also be criticised by their boss for not performing their duties well. But nevertheless situations of role conflict were much less for the CEAs than for the township and village extension agents as will be seen later. The CEAs were in a more stable situation: as there were no real sanctions from the role senders on either side, so the CEAs had more freedom to make their own choice. As Long (1992) states, they have more room for manoeuvre compared with extension agents at the lower levels. That is probably why less unexpected coping behaviour at the county level was found compared to role conflict theory. However, when research concerned at the township level, more unexpected coping behaviour appeared. These will be the subjects of the following sections.

Based on the analysis above, some conclusions can now be drawn. First, the goals of the extension agents have a big influence on their behaviour in a role conflict situation. Legitimate power and sanction power can also play a role. But there are no real sanctions towards CEAs at county level. The incentive structure and the background of the extension agents also have a role to play in understanding their coping behaviour. The professional power of the CEAs has enabled them to have a certain degree of autonomy, therefore, to respond in a certain way to the role conflict situation.

7.2 Coping behaviour of the township extension agents (TEAs)

7.2.1 The extension agents involved in cotton production at township level

Each township has one Township Extension Station (TES), and each TES has three TEAs, under the jurisdiction of the Township Government. All of them are heavily involved in cotton production. There are two types of TEA. One is a government employee who is assigned after graduation from an agricultural polytechnic school or university, and is paid from the state budget. The other type of TEA is employed and paid by the township government; most of them are working on a less stable contract base. In the two townships selected for the fieldwork, each had one state paid TEA and two contract TEAs.

All were responsible for the problems concerning cotton production, and at the same time were accountable for one or two villages to fulfil the township government's orders that were stated in the 'clear paper'.

7.2.2 Role conflict as perceived by the TEAs

As each TEA was responsible for one or two villages to fulfil the government orders. They had to go to the village personally to deal with the village leaders and farmers on issues related to cotton production.

There were two different kinds of tasks to perform: one was their professional job, i.e. to provide technical advice to farmers, the other was bureaucratic intervention. It was learned in the field that in both townships and villages this bureaucratic intervention was called 'central tasks'. Those 'central tasks' have been increasing annually since the rural reform. According to the TEAs, prior to the rural reform they did not perceive any role conflict. At that time, they considered that the goals of the government and farmers were the same, i.e. to increase food production. The TEAs mainly dealt with food crops and worked directly with the brigade leaders and team leaders rather than with individual farmers. There were no other types of rural employment, such as rural industry or sideline activities, besides agriculture. After the reform, the TEAs had to deal with individual farmers and also with new and extra bureaucratic work such as cotton production. Therefore, the TEAs have been increasingly experiencing role conflict situations.

One TEA expressed his feelings on cotton problem:

'Doing my job is difficult for me. It is a contradiction. The government wants us to persuade farmers to grow cotton and to collect a fine from them, but we know farmers do not like to grow cotton and certainly do not like to pay the money. In such a case we have two different roles to play. One as a technical duty - to offer our technical advice to farmers, the other as a government 'central task'. Those two tasks are in conflict. I do not know how to handle them well'. Another TEA said: 'We have two faces now. One is for the government. The other one is for the farmers.'

These kinds of feelings were very common among all the TEAs in the townships visited. It was clear that there were two different roles for the TEAs: one role as an extension agent to offer technical advice to farmers, the other one as a government officer to implement government orders.

Through the interviews and field observations it was realised that the TEAs had, in practice, separated the government expectations into two different parts: one was to promote cotton production and the other was to collect the money from farmers. Some TEAs considered that to promote cotton production was more or less in line with their professional duties, whilst to collect money was a completely 'central task'. In fact these two roles led to intra-sender role conflict incompatible expectations from a single role sender, referring to the government expectations. There was then also a third role that of the farmers' expectations of the TEA. Farmers' expectations were not always to provide technical advice, although some did ask for it, but this was not necessarily the same technical advice that government wanted the TEAs to provide. The farmers may have expected the TEAs to provide market information or new technology for flower or vegetable production, not necessarily for cotton. Farmers also did not expect the TEAs to collect money from them. These incompatible expectations from the government and farmers can be called inter-role conflict. (*This study focused mainly on this type of role conflict, and for the consistency of the presentation, inter-role conflict will always be called role conflict unless specified otherwise.*)

In the field the TEAs perceived these three different roles, and they felt both intra-role conflict and role conflict. However, they perceived these roles in a different way. In a normal situation, when there was not much pressure from the government to force farmers to grow cotton, the TEAs felt more intra-role conflict, due to the fact that they always received some 'central tasks' from the township government. As the TEAs stated, they had time to do only 30% of their work on extension, and 70% for other duties. With cotton production, they felt a strong role conflict. As one TEA expressed:

'In the case of cotton production, we are in a very bad situation, the government and farmers are in such a strong conflict, we do not know how to do our job well. Both the government and the farmers have complained about our performance.'

7.2.3 Coping behaviour of the TEAs

At the beginning of the field research at township level, the same path was followed as at the county level, to try to find out how the TEAs would cope with the role conflict situation in cotton production. It was necessary to know how and why each TEA adopted certain coping behaviour, such as conforming to one of the role senders, compromising or avoiding. After some interviews, it was found that it was not possible to do the research in that way, since each TEA would adopt different coping behaviour at different times. Their responses were not consistent. For example, during a first interview with a TEA, the impression was gained that this TEA was conforming to government expectations, but then at the second interview, it was discovered that the behaviour was to 'wait and see'. Even within the same day, one TEA would use different coping behaviour based on different situations. It was thus realised that the research could not be carried out in the same way as at county level, since the situation was much more complicated at the township level. It was decided to focus the research on the conditions under which the TEAs adopted certain coping behaviour. Therefore, the structure of the presentation from hereon is not the same as in Chapter 7.1. Each coping behaviour will not be discussed separately, but together the conditions under which certain behaviour is adopted by the TEAs will be identified and discussed.

In the two townships visited, there were two types of behaviour of the TEAs in the role conflict situation of cotton production: 1) wait and see; 2) behave in one way in a certain situation and in different way in another. A case is presented here to illustrate the behaviour: The TEAs were expected to collect money from the village through the village leaders. One TEA was asked what he would do in such a case.

He said: *'Doing my job is difficult for me. It is a contradiction. Farmers want us to provide them with new technology instead of collecting money from them. From my heart, I would like to serve farmers, but in practice we have to do many other things which are not relevant for farmers.'*

'Why is your heart telling you to serve farmers?'

'Because it is good for farmers: if I can do my work well the farmers can get fewer punishments; farmers need more sympathy, my family also has 9.5 Mu of farmland and my wife is a farmer. We should have grown 2.4 Mu cotton last year, and we were fined for 72 Yuan. This year we should grow 0.96 Mu, but now we only leave 0.25 Mu land free, we have not yet decided what to grow.'

'What did you tell the farmers?'

'I only said some pleasant words to farmers and told them to grow cotton, I did not say any bad words and did nothing bad to farmers. I think the farmers know why I am doing this kind of work, they know who I am. It would damage my relations with farmers if I do something harmful to them. Actually we (extension agents) are very welcome in the village. When I go to the village to extend technologies, they always ask me many questions. However, we are not welcome when we go to a village to ask farmers to grow cotton and to collect money.'

'What would you do if farmers did not like to grow cotton?'

'I would give them the 'clear paper' and I would also use local village radio to broadcast some newspapers which promote farmers to grow cotton.'

'Why do you have sympathy for farmers but at the same time you are promoting government's mandate to grow cotton?'

'Well, I think the government has its' difficulties too, our country needs cotton for both military use and ordinary people, so I do something for them, besides that I have to follow orders, I am paid by the township government, therefore I have to work for them. Nevertheless, I think the government should not show antagonism to farmers.'

'How about collecting money from farmers?'

'Well, that is a hot issue, I first wait and see how other extension agents in other villages are doing; I see what farmers would say about it. If other extension agents could not finish their job then why should I have to finish it. It does not matter to me.'

'If you collect money from farmers what would the response of farmers be?'

'Of course they do not like it. I would have many difficulties in collecting the money. It is not good for me.'

'If you do not do what the government asks you to do, what would happen?'

'I would lose face if all my colleagues finish their job (having face means having a high status and prestige in the eyes of one's peers, and it is a mark of personal dignity in China), besides, it is not good for me in the long term, because I am paid by the township government. They can punish me in terms of money and job.'

'When this interview took place, it was known from the 'Clear paper' that the TEAs should collect the money within the next four days.'

'Anyway, there are only four days left for you to collect the money.'

'Four days! Even in forty days the money may not be collected. For me the best way now is to wait and see.'

The above case illustrates that this TEA would act according to the circumstances in a role conflict situation. He had two options:

- Take the side of the government;
- Wait and see.

The field work included participating in some activities of the TEAs. Some TEAs were accompanied to villages to observe how they did their job and how they responded to the township leaders. Some observations are worth mentioning here in order to show how TEAs behaved in a role conflict situation: when they were ordered to collect money (30 Yuan and 200 Yuan) from the villages, they did not go to each farmer themselves, but instead they first went to the village to discuss this issue with all village leaders in a meeting. The TEA first talked about the difficulties of being a farmer nowadays, and then complained about the change of policies and the difficulties for both them and the village leaders to perform their tasks. After that, they told village leaders that the tasks were ordered by the county and township government, and that, if anyone had any complaints, they should see the township or county government.

By saying that the tasks were ordered from above, the TEA was actually trying to escape from direct conflict with the village leaders. Instead he handed over the conflict to the upper levels of township and county government and in this way direct conflict with the village leaders was minimised.

After the TEA delivered this message, the village leaders began to discuss how the money could be collected. For 30 Yuan it was deemed not too difficult for them to agree to collect. For 200 Yuan it was different, however, and some village leaders agreed to collect the money, whilst others did not. In general, if there were no strong objections from the village

leaders, then the TEAs would try to persuade them to pay the money, either through the village treasury or by collecting the money from each individual farmer. When this was the case, the TEAs were able to finish their job easily. This happened in one village, but not in the other. If there were strong objections in the village, then the TEAs would postpone the action. In one village there were some strong objections from the village leaders to pay the money, and even after discussion, there were still no solutions. At lunchtime the TEA was asked what he would do then. He replied:

'I have no way to force them to hand in the money. I leave the problem to the village leaders to deal with. I can wait for several days. They might change their minds later. You know, I am not responsible for such a big decision. If the village leaders could not solve the problem, they can talk to the township leaders. In the worst case, I would report to the township government and then the township government would send a special group to go to farmers' houses to collect the money.'

The above case shows that this TEA would first try to persuade the village leaders to hand in the money. If there were strong objections (strong objections in this study meant that farmers openly opposed the government's mandate of growing cotton and paying fines, while weak objections meant that few farmers openly opposed this mandate), then the TEA would wait for several days and try again. Finally the TEA would report the case to his boss. Thus, there were three response options:

- Conform to the government orders;
- Wait and see;
- Hand in the role conflict to the role sender.

Through the case studies, it was found that the above responses were very common among TEAs in the field. The TEAs had several options to choose from according to the circumstances of the role conflict situation.

Then the question arises: under what circumstances would the TEAs choose which behaviour? From the above two cases, three kinds of coping behaviour under three conditions can be summarised as in the Table 7.2:

- The government has strong expectations and the farmers have weak objections. Conform to the government orders, for example, collecting 30 Yuan;
- The government has strong expectations and the farmers have strong objections: wait and see, for example, collecting 200 Yuan;
- Farmers have strong objections, and the government has weak expectations: hand in the role conflict to the upper level.

TABLE 7.2
Coping behaviour of TEAs under different sets of conditions

Conditions	Strong objection by farmers	Weak objection by farmers
Strong government pressure	wait-and-see	conform to the government
Weak government pressure	hand over the role conflict	no role conflict

The varying conditions require some explanation, for example, how it is possible that government pressures are sometimes strong and at other times weak. In fact, the incidents occurred in a time sequence. Generally, the pressures of the government changed from weak to strong during the time approaching the sowing of cotton. Apart from this, the pressures exerted by each level of the government on the TEAs also depended on the pressures they themselves received from the higher levels. For example, Xinji county government received pressures from the higher level of Shijiazhuang city (This will be discussed in more detail in the next chapter).

During the fieldwork, it was thought to name these circumstances behaviour of the TEAs 'rotation behaviour'. However, it was observed that there was yet another type of behaviour, displayed by the same TEA in the previous case example. It concerned the collection of 200 Yuan.

This TEA, as all other TEAs, was ordered to collect 200 Yuan (per Mu) from village farmers no matter whether they had planted enough cotton or not. In the village, the TEA encountered a strong objection from the farmers who had already planted their cotton quota, and he also considered that it was not legitimate to collect the money from these farmers. Therefore, he went back to the township and discussed this issue with the township leaders, suggesting that the government should only ask farmers to hand in the money if they had not achieved their cotton quotas. After some discussion, the township government accepted this suggestion. The TEA was asked why he had discussed the issue with the township leaders. He answered:

'Firstly, I found that it was very difficult to collect the money from those farmers who have already planted enough cotton. Secondly, I did not think the government should do it in that way. It is not fair for the farmers. Thirdly, it would lead to a strong conflict between government and farmers and put myself in an even more difficult position. That is why I talked to my boss. I tried to find ways to solve the conflict between the government and farmers. Of course, I was also trying to find a way out of my dilemma position.'

'What would you have done if the township leaders had not accepted your suggestion?'

'Then I would have tried some other ways to do my job.'

It was clear that this TEA was attempting something without being certain of the outcome.

He was experimenting with his behaviour. Experiment also seemed to be the right concept to describe the coping behaviour of the other TEAs. It was a more suitable concept than rotation. Rotation behaviour would mean that an individual took a fixed behaviour and adjusted it to fit certain circumstances. Experimental behaviour would mean that an individual chose to behave in a way in which the appropriateness was uncertain. If it was appropriate then it would be all right, otherwise the TEA would have to try another behaviour. This was exactly what the TEAs were doing in the field.

At this stage in the fieldwork, the concept of experimentation had been generated, but its validity and frequency as a common coping behaviour still need to be ascertained. Thus, more attention was paid to this type of behaviour in the field. Another case of experimentation was as follows:

One TEA in Chenbei was ordered to measure the farmers' land reserved for cotton production in one village. The cotton quota for this village was 197 Mu, but on measuring, the TEA found that only 133 Mu had been reserved. Therefore, the village farmers would have to pay fines for the difference of 64 Mu. However, there were two abandoned pits that could be filled with soil and then also used for cotton growing: one pit was about 38 Mu and the other one about 24 Mu. There were two options for the TEA: he could report to the township leaders that there were only 133 Mu for cotton and then farmers would be fined for 64 Mu; or he could persuade the village leaders and farmers to fill the pits with soil and then grow more cotton.

It was interesting to observe the TEA's behaviour in such a case. At the beginning, he reported only 133 Mu to the township leaders and then waited to see what they would do. After some days, more pressure came from the township leaders, so the TEA went again to the village and persuaded the village leaders to fill in one pit of 38 Mu, which he reported back to the township leaders the new available land area of 171 Mu for cotton. Finally he persuaded the village leaders to use the other pit for cotton production also.

A long discussion was made with this TEA, and good insight gained by following his line of reasoning:

'I would first like to know how other villages are doing and what the township leaders would do if farmers do not have land for cotton. If most of other villages have not completed their quotas, then it does not matter too much for me not to finish the quotas in my village. Later on I learned that the village farmers had to pay a fine of 200 Yuan for each Mu below the quota. I would be the one who collects the fines. It is a more difficult task to complete for both the village leaders and myself than to fill the pits. Therefore, I went to the village again and persuaded farmers to fill the pits. It is relatively easier than collecting fines.'

From the above case we can see that his behaviour was also experiment. When the first behaviour was not successful he then changed to another one. If the first one did succeed then he would use that one. For example, in a case where the government would not put strong pressure on the TEA, then he would not persuade the village leaders and farmers to fill the pit for cotton production.

Not every TEA was experimenting in the field, such as one exception in Junqi (Case 2). For the cotton problem, he explained the following:

'The government is still using the old way of instructing agricultural production while the old structure is no longer there, because nowadays all the communes, brigades and teams no long exist. There is an individual contract responsibility system now. Farmers cannot be so easily forced to do what the government wants them to do. But in practice, whenever there is a problem in agriculture, the government goes back to the old way of doing things. However, this is not working well.'

When asked what he would do when ordered by the township leaders to carry out bureaucratic work, such as to promote farmers to grow cotton and to collect money from the village, he said:

'I do not like to work on those issues, it is not my real job. They had better find somebody else to do such jobs. I prefer to work on my own professional work. When there is not much pressure, then I just shout slogans in the village, I do not really follow the government orders. When farmers ask me any technical advice when I am in the field, I just tell them.'

In fact his behaviour was similar to the CEAs in such a case, i.e. try to avoid direct conflict and concentrate on his own professional job. The question arose as to how it was possible that all other TEAs were busy working in the field to promote cotton production while this TEA had some freedom to concentrate on his professional work. After more discussions with the TEA, township leaders and some farmers, it became clearer.

As previously mentioned, most farmers in Junqi have some land for growing leek. Leek is important not only as a source of income for farmers, but also in reaching one of the critical government goals: to realise the 'Xiao kang' level (the average living standard). Certain criteria are set for the 'Xiao kang' level, one of which is the average farmer's income in a whole township. Growing leek had not been so profitable prior to 1986, when they were planted in the open field, the output was low and harvesting time late. One Mu could only produce 1500kg and achieve profits of about 300 Yuan. Currently, however, one Mu could produce 4000 to 5000 kg and profits of around 3000-5000 Yuan. This increase was because 95% of leek were now planted under protection in plastic tunnels or simple greenhouses, so that harvesting would be earlier and output much higher. During the process of this technology development, the Provincial Extension Station and this particular TEA played an important role. They had introduced new varieties together and had carried out many experiments on cultivation techniques under protected conditions. They had also successfully extended their innovations to farmers. This TEA had participated in the whole process of development associated with Chinese Leek, and was even awarded a prize by the Agricultural Office of the Province because of his good research work on 'Cultivating Techniques for Chinese Leek under the Plastic Tunnel'. Thus, he was a well-known TEA in Junqi township. Apart from this, he was paid by the state budget rather than the township government, and was the only agronomist in the two townships visited, the other TEAs being agro-technicians or assistant agronomists.

This TEA was always welcomed by the village. As one newspaper described: 'he is so welcome when he is in the village that he cannot get out of the village for the whole morning. One farmer would ask him about the new varieties, the other farmer would ask him about cultivating techniques, yet the third one may ask him about the pesticides and so on'.

Over the years, this TEA had been increasingly recognised by both the township government and farmers as a well-qualified extension agent. Therefore, his requests to do experiment or extension works were normally accepted by both the township leaders and the farmers, his output can be seen as contributing to the goals of both the farmers and the government, i.e. to increase profit for farmers and to reach the 'Xiao kang' level for the whole township.

During the interviews with the township leaders, the impression was gained that the township leaders liked this TEA's work very much. If he was busy with his professional work, then the township leaders would try to give him more time to concentrate on this. As one township leader said: 'he is really a good extension agent who can do a useful job for us and for the farmers'. Thus, in general, he had more time to devote to his own job. According to the TEA himself, 50% of his time went on professional work and 50% on bureaucratic work. This meant that he had 20% more time than the average TEA for professional work, and this was why he could behave more like a CEA.

One week after the first interview with him, he was visited again, because at that time the county government had put more pressure on the townships and villages to give stronger orders to carry out the cotton task, and had sent some inspection groups to monitor the cotton production process. Under such circumstances, he might change his behaviour, and so he was asked what he would do in the current situation. He said:

'Now I have to go to the villages to really do something in order to finish the orders.'

He was then asked: 'Why do you have to do something now, what would happen if you do not follow the government's orders?'

'Because I am a government cadre, I have to follow the orders although I have my opinion. Now the county government really pushes the township government hard. If the township leaders cannot perform well for cotton, then they would suffer and we would suffer too. If I do not really follow their orders, they would say that I do not comply with them. It is not good for my job. In the meantime we (TEAs) can do a better job than normal township cadres as we have a good reputation compared to that of normal township officers since we have done many good things for farmers. We will have less trouble to carry out the central tasks. Besides, I do not want to be an outsider and only watch the fun. It is not good for all of us, including farmers, township leaders and myself.'

His behaviour was now more like that of the other TEAs. This was because the situation was not the same, i.e. the pressure was getting stronger than before.

From the above discussion 3 general conclusions could be made concerning the behaviour of the TEAs: *They experiment with their behaviour. They act according to circumstances in the*

role conflict situation. The strength of the pressure has a role to play in determining the coping behaviour of the TEAs.

7.2.4 Interpretation of the coping behaviour of the TEAs

Extension agents at township level were considered by the township leaders to be a part of the government organisation, and they had to follow what the township government asked them to do. Most of them did not have the 'professional power' and 'autonomy' of the county extension agents. Such professional power was very important in determining their coping behaviour. The TEA (Case 2) interviewed in Junqi had a higher degree of professional power than the average TEAs. Thus, he has more autonomy and had gained a certain degree of freedom. As a result, he has shown different coping behaviour compared with his colleagues. The tasks such as collecting agricultural products and money from farmers were considered by the TEAs as part of their jobs and by the township leaders as their 'central tasks'. The TEAs had been used to do these tasks for many years. Many TEAs explained that: 'We are paid by the township. Therefore, we have to listen to them and do what they ask us to do'. In this situation, they felt more strongly obliged to follow the government's mandates than the CEAs. Obedience to authority was an accepted part of their duties (Milgram, 1974). To follow government order was simply doing their job, and besides, they do not have 'good reasons' not to follow them. One extension agent expressed this point clearly during an interview: 'I do not have a good extension project now. If I had a good extension project, then I would have reasons not to always follow the township government's orders to do all kinds of bureaucratic work'.

The government also had sanction power to punish the TEAs if they did not obey orders. These sanctions could take the form of: being criticised by the township leaders; being regarded by other TEAs and township leaders as having no capabilities; receiving fewer bonuses at the end of the year; being made redundant (only for contracted TEAs).

Therefore, if there were no objections from the village leaders and farmers, the TEAs would take the side of the government. This happened when the role conflict was weak, such as in the case of attempting to promote cotton production in the field. It was not essential to the TEAs to obey such orders, and at the same time, performing their tasks was not a difficulty for them. This was why the TEAs went to the villages to talk with leaders and farmers in order to persuade them to grow more cotton.

When the role conflict became stronger, such as in the case of collecting money from the village, then the TEAs had difficulties in obeying the orders, because there were strong objections from the village leaders. In general, the TEAs had very frequent contacts with the village leaders and many extension tasks and 'central tasks' had to be done through the help of these leaders. Without their help, it would be difficult to implement projects, because the TEAs did not have the capacity to reach all farmers. Therefore, the TEAs could not upset the village leaders, and under such circumstances, they did not really know the best course of actions, especially when they themselves did not think the government was acting in a legitimate way in collecting money from farmers. This was the case in the field. Most TEAs considered that farmers had legitimacy not to grow cotton, and yet at the same time they also realised that the government had more sanction power. They could not upset both township government and village leaders, and in such a case some TEAs opted

to wait and see. From their past experience, they were waiting for one of 3 options to occur. The first was that policy might change again. All TEAs had witnessed many changes in government policy, including cotton policies. As one TEA indicated during discussion: 'we do not have faith in the government policies in recent years, they changed too often and too fast. We suffered a lot in the past. This time it might change again. I can better wait for some time'. The second was to wait and see the farmers' response to the government orders. By seeing this they would have a better idea of how they could carry out their tasks. The third one was the wait and see how their colleagues were doing their jobs. If other TEAs could not finish their tasks well, then it would give them more room and more excuses not to perform the tasks well either.

Apart from the above three reasons, there had been a long history in China of people in dilemma positions waiting and not taking any initiative. This behaviour is largely influenced by Taoism. The philosophy of Taoism originated with Laozi (Laotse), who lived in the 6th century BC. One of the main principles of Taoism is the concept of 'wuwei' of doing nothing. A quotation attributed to Laozi: 'do nothing, and nothing will not be done', emphasises this principle (Chin@zone, 1997). Other important ideas of Laozi are: 'do not take the lead in planning affairs or you may be held responsible', and 'live and let live'. Non-intervention is the keystone of Tao. Harmony and patience are needed, and action is obtained through inaction. The above philosophy is still a popular belief in China especially when one is in a dilemma position.

However, the TEAs could not always wait and see, they had to find their way sooner or later. In such a case they would experiment with different behaviour to see what would be the best solution for them. Experiment could mean one of two things: to look for a better solution or simply to show the role senders that one was doing something. For example, in one circumstance they might conform to government expectations if there were no objections from farmers; in other time they might hand over the role conflict to the township leaders; or, in yet a third case, they might try to resolve the role conflict. Sometimes, however, they might not have found any acceptable behaviour but would just keep busy doing something in order not to be blamed by the township leaders. One principle was that they try to reduce as much as possible the negative effects of their coping behaviour, and in this case, they would choose the behaviour which would correspond as much as possible to their own goals and at the same time make the least trouble for them.

From the point of view of an incentive structure, their behaviour could also be understood. From the study it was learned that 70% of the TEAs' time was used for Central tasks (those duties considered importantly by the township leaders, such as helping the government to collect agricultural products from farmers; collecting tax from the villages; family planning; organising village elections, and so on). Only 30% of their time were used for extension work. Therefore, they were evaluated mainly by their bureaucratic duties and not by their extension duties. The rewards and punishments were also mainly based on their bureaucratic tasks instead of extension tasks. Dealing with cotton production was considered as a very important bureaucratic work by township leaders, and if the township government pushed hard on TEAs to follow orders, then they must obey.

To borrow a term from domain theory (Kouzes and Mico, 1979), the township organisation may also be considered as part of a management domain, operating by the governing principles of hierarchical control and co-ordination. Since the township extension station was indeed regarded as a part of the township government, the obeying and rules were frequently a norm of the organisation.

From this line of thinking, the conclusion might be drawn that the TEAs would mostly follow government orders in a role conflict situation. However in practice this was shown not to be true, since it was already learned that the TEAs did not always follow government orders nor conform to their expectations.

To understand this point, another angle needs to be considered, i.e. the relationship between the TEAs and village leaders. In general, the TEAs had very good relations with the village leaders. No matter whether they were doing extension work or bureaucratic work, for most of the working hours the TEAs stayed in the villages. They ate lunch in the villages free and were very familiar with each other to the extent that they could be regarded as friends. Further, most of the extension projects were conducted through the village leaders, without whom, the TEAs could not fulfil their tasks, since there are only three TEAs in each township. The village leaders themselves also had some power not to obey government orders. For example, they might postpone or avoid taking action in terms of forcing the farmers to grow cotton or collecting the money. The TEAs would then have no way to finish their tasks. The village leaders could also resign from their position, and then the TEAs and township leaders would have more problems in carrying out the tasks in the village. This kind of power might be regarded as passive, but it played a large role in the field. This point will be discussed in more detail in the next section, in relation to the village-level extension.

In such circumstances, the TEAs felt it very difficult to push village leaders to obey township orders, and at the same time the TEAs themselves did not have the power circuitment the leaders. Thus, when there was a conflict, the TEAs had to discuss with the village leaders to solve the problem. In most cases, both the TEAs and village leaders considered any conflict as being a joint problem, and they tried to cooperate over it.

All the above reasons determined the coping behaviour of the TEAs. When there was a role conflict, the TEAs would adopt the behaviour of experimentation to find an acceptable solution for both their role senders and for themselves.

7.2.5 Factors affecting the coping behaviour of the TEAs

From the above analysis of the coping behaviour, several main factors may be identified as crucial for the understanding of the response of the TEAs.

1 *The strength of the role conflict*

The strength of the role conflict was a key factor in understanding the coping behaviour of the TEAs. When the role conflict was weak, i.e. the difference in expectations between the government and farmers was not wide, then it was not a great problem for the TEAs to obey government orders or to conform to the farmer's wishes depending on TEA's own goals or on other factors, such as that there would be no strong objection from the farmer and the government. This was the case for the TEAs: to promote cotton production or to concentra-

te on their own professional work. When the role conflict became strong, then the TEAs found it difficult to commit themselves to certain behaviour, especially when both the role senders had sanction powers. In such cases, the TEAs were more likely to become ego-defensive and fall back on other coping techniques, such as 'wait and see'.

The strength of the role conflict might also influence the TEAs' perception of the role conflict situation. The case study demonstrated very clearly that the role conflict situation was under constant change in correlation with changing pressure from the township government. Thus, the perception of the role conflict by the TEAs was also under a constant change, and directly affected the evaluation of the outcome for the intended behaviour. When the role conflict was weak, the outcome for the TEA was not so important, whereas when the role conflict became stronger then the outcome of the behaviour might have a significant impact on the TEA. Thus the TEA had to make a calculation first, and then decide. In fact, not only the strength of the role conflict situation was under constant change but also other factors. These changes directly or indirectly influenced the TEAs' perception of the world around them, and they were constantly having to adapt to the new situation.

2 *Perceived legitimate and sanction powers of the role senders*

According to role conflict resolution theory (Gross et al., 1958), legitimate and sanction powers are the two important behaviour determinants. Through the case studies it was learned that TEAs did not simply perceive one side as legitimate and the other side as illegitimate: there was no such sharp distinction. As introduced in Chapter 7.2.2, they first separated the government's expectations into two different objectives: one was to promote cotton production, and the other was to collect the money from farmers. Further, different TEAs had different perceptions concerning the legitimacy of the government. Some TEAs believed that, if the farmers had land available, then the government was legitimate in asking the TEAs to promote cotton; however, if the farmers were not in the position to grow cotton, then the government was not legitimate to ask. For example, when farmers had already planted fruit trees then it was not appropriate to ask them to grow cotton, simply because there was no land left. Some TEAs believed that the government had the legitimacy to ask them to promote cotton production, because they were employed by the government and under its control, but at the same time they did not think it legitimate to ask farmers to pay fines, because it was against farmers' wishes and did not bring advantages to them.

All TEAs thought that the farmers had legitimacy not to grow cotton and to expect the TEAs to provide all kinds of technical service. Further, all TEAs also thought that the farmers had more legitimacy than the government.

One important point to be stressed here is that the legitimate power did not play a large role in the role conflict situation of cotton, especially at township level. Although most of the TEAs in the field perceived that the farmers did have more legitimate power, they did not often conform to the farmers' wishes, because they all perceived that the government had a much stronger sanction power than village leaders and farmers. If the township leaders really pushed hard, then they conformed to the township government. Therefore, it is suggested that sanction power might have had more influence than legitimate power for the TEAs. Here, the legitimate power did not play as important a role as the role conflict theory assumes.

These different phenomena may be understood through the difference in culture. Most socio-psychological theories have been developed on the basis of studies in western society, which can be quite different from those found in Chinese culture. For example, according to Hofstede (1991), power distance varies between different cultures. In China, because individuals depend more on a group for their welfare, they are bound in a dependent relationship to their leader. Because of this, the Chinese are more respectful of authority than westerners (Pye, 1985; Blackman, 1997). Research by Hofstede (1980) confirms the Chinese respect for authority. Using data collected in a major survey, countries were ranked on a 100-point scale according to the degree to which subordinates accepted authority. The US scored 40, Canada 39, Australia 36 and the UK 35. In a similar survey, a small sample of Chinese managers scored 56 on the same scale (Lai and Lam 1986). In China and other high 'power-distance' societies, leaders make their decisions autocratically or paternalistically. Employees fear to disagree with them. As they are used to taking orders. Therefore, when township leaders put strong pressure on the TEAs, the TEAs would mostly obey, even if the township leaders were perceived as less legitimate than the farmers.

Consequently, for the TEAs, power might have stronger roles to play than legitimacy in a role conflict situation. For the TEAs, conforming to more powerful role senders had more weight than conforming to more legitimate role senders.

3 *Powers of the TEAs*

The case studies at township level confirmed the main conclusions of the findings at county level as discussed in section 7.1 for the CEAs. The more professional powers the TEAs had the more freedom they had to concentrate on their own extension work. As introduced in section 7.2.2, the TEAs could play three different roles: (1) promote cotton production; (2) collect the fines from farmers; (3) provide technical advice to farmers. The more professional power the TEAs had, the more autonomy they had to choose which role they would like to play. There was a wide range of roles to choose from, and several excuses not to play certain roles. Thus, they could be less involved in the 'central tasks'. In particular, one TEA in Junqi (case study 2) had gained more professional power than other TEAs, and thus, he had more freedom to do his own work. In this way his coping behaviour was more similar to that of the CEAs. One other TEA also expressed the same idea during interviews, that if he had a good extension project, then he would have good reason not to follow the township government's orders for bureaucratic work.

Apart from the professional power, there might be some other types, such as the power to make an agreement with the village leaders or the power to look for another job (Pruitt and Carnevale, 1993). However, during this study, no other such type of power was found for the TEAs.

4 *Past experience*

During the research, the TEAs often mentioned past experience as a key factor to account for the behaviour they choose. At the beginning, the researcher did not pay much attention to it. But it came across several times, and was thought that the past experience might be an important factor for the behaviour the TEAs chosen. This is confirmed by another researcher (O'Keefe, 1990).

In a role conflict situation, the tension was high for the TEAs. As has been shown in the previous sections, the TEAs very often did not know how they should behave in a role conflict situation, and they tried to behave according to the current circumstances. If they had some past experience of a similar situation, then they would be aware of the effects of certain behaviour. If a past behaviour had brought rewards then they would act in the same way again; if the past behaviour had meant punishment, however, then they would not perform in the same way again. This was exactly the case in the field. Because TEAs had suffered a lot in the past for following too readily the government orders, they now preferred to wait and see until they were certain of the outcome. As the role conflict in cotton was a relatively new experience for the TEAs, they did not have much to go on as yet. This was why they were experimenting with their behaviour.

Therefore, past experience had a direct impact on the coping behaviour of the focal persons.

5 *Interpersonal relations between the TEAs and their role senders*

The term 'interpersonal relations' will be used to refer to more or less stable patterns of interaction between the focal person and the role senders, and to their orientations towards each other.

Affective bonds, such as respect, trust in the cooperativeness and benevolence of the other and attraction or liking, i.e. the bonds of friendship, have an impact on the coping behaviour of the focal persons (Kahn et al, 1966). Friendly and hostile relations would have very different impacts on the perception of expectations from role senders and would lead to different coping behaviour of the focal person. It could also influence the feedback of the role senders to a focal person. For example, the TEAs had a good relationship with the village leaders through many years of working together on various projects. They also very much depended on the village leaders to implement the tasks of the township government. Therefore, both TEAs and village leaders generally considered the conflict as a problem for both of them and they tried to cooperate over the cotton problem.

Based on the above analysis, some conclusions can be reached concerning the factors affecting the coping behaviour of the TEAs. The strength of the role conflict has a big influence on the coping behaviour of the TEAs, as does the sanction power. The legitimate power however does not play an important role for the TEAs. The powers of the TEAs themselves will determine the degree to which they can concentrate on their own work. Past experience will give the TEAs some insights about suitable behaviour and the likely results of certain behaviour. Interpersonal relations will influence their behaviour through the different pressures of the role senders and the solutions available to solve the role conflict.

7.3 Coping behaviour of the village leaders (VLs)

7.3.1 The extension agents involved in cotton production in the villages

In each of the two villages visited in the study, only one village technician was working part time for extension and he is a farmer himself. Most of the extension work was carried out by the village leaders, and often one particular leader took most responsibility. They were not entitled to the salary of the extension workers, but received a general subsidy from the village for their work as leaders. When there was an important program, such as the one for cotton, every village leader would join in. Thus in fact there was no real extension organisation at village level in the two villages visited. This was also the case in most villages in China (Yang, 1993; Delman, 1991).

The village leadership was, first and foremost, instrumental in planning production, and acting as a contractor by allocating the targets set by the township government on to farmers. In carrying out these tasks, the village leaders would automatically get involved in the extension of agricultural innovations.

Thus, the village leaders were actually doing the extension work. In the case of cotton, they were the ones who had to carry out all government orders in the village. In the case studies, the village leaders included the village party secretary, the village head and the deputy heads. These were the ones who felt a role conflict in the case of cotton production.

7.3.2 Role conflict as perceived by VLs

As village leaders, they were responsible for fulfilling the government's orders in the village. They had to persuade farmers to grow cotton and had to collect money personally from the farmers. Therefore, they were the ones feeling most pressure from the government and resistance from farmers. The following conversation with some village leaders is used to show their perception of the role conflict.

Q 'What do you think about the cotton problem?'

A 'A cotton problem is the problem of contradicting policies from higher levels in the hierarchy. They (the government) asked us to promote farmers to do whatever they like as long as they can get rich soon in these years. Now they want us to force farmers to grow cotton. From above they can say it very easily, but how can we, as grassroots level officers, tell farmers to do it? In recent years, farmers benefited a lot from growing fruit and from doing rural industry work. They want to continue in this way. They are now very active in learning all kinds of techniques for fruit and vegetable production and to obtain market information for their products. They actually hope that we can provide more information of such a kind to them. We all know that they do not like to grow cotton. But now the government orders us to force them to grow cotton. It is very difficult for us to perform this job.'

Q 'Why do you feel it as difficult to perform this job?'

A 'Because we face different requirements from the government and farmers. We are in the middle, on the one hand we are grassroots officers in the village, but on the other we are farmers as well. If we follow the government's wishes, the farmers do not like us; if we follow the

farmer's wishes then the government does not like us. Now, the government puts pressure on us and farmers scold us. We are suffering from both the government and the farmers.'

Q *'What do you consider as the roles you are playing in cotton?'*

A *'We are playing two conflicting roles in cotton production. One is as the government's officers to fulfil the government orders, the other one as village leaders to help farmers to reach their goals.'*

All village leaders expressed similar opinions concerning the cotton problem. They not only perceived a role conflict in the case of cotton, but also expressed their worries about the relationship between the government and the farmers. They said that the relationship between rural cadres and ordinary farmers was getting increasingly worse in recent years because of conflict of interests over many aspects, such as family planning, tax policy, inflation of the price of agricultural inputs, and now the cotton problem.

7.3.3 Coping behaviour of the VLS

In this section, the coping behaviour of the VLS will be described. Faced with the role conflict between the government pressures and farmers' wishes, VLS adopted several patterns of response to the role conflict.

1 *Take the farmers' side when possible*

Based on the interviews and participatory observations, it was strongly felt that the VLS tried to defend the farmers' interests whenever possible. The following are some examples of VLS comments:

'They (county and township government) can make policies quite easily above, but we cannot perform the tasks so easily. If we do according to their expectations, the relationship between village leaders and village farmers will be damaged.'

'They only ask for grain and cotton, but never consider farmers.'

'All inputs are at market price, only cotton is at government price. That is not fair for farmers. They wanted us to plant fruit trees before, they now want us to grow cotton, but there is no more land.'

'Farmers have not made any real profits from farming in recent years; there are too many taxes. Farmers have already complained a lot.'

When these comments were looked at carefully, strong similarities were seen with the farmers' comments that were often heard in the field. In fact, when the TEAs asked the VLS to promote cotton production and to collect the money from farmers, they tried to find reasons not to do so. The typical replies of the VLS to the TEAs were:

'You had better go to talk to farmers, they believe in you. You can do a better job than us.'

We cannot force farmers too much. Besides, farmers do not listen to us.'

To protect the farmers' interests, the VLs tried to get as small a quota as possible for the village.

As has been discussed in the Chapter 6, each village received an order from the township government concerning the cotton quota in terms of both area and output. At the time when the township government was setting up those quotas, the VLs tried to get as small an amount as possible. This included some bargaining. The following arguments were used by the VLs in their bargaining with the township leaders:

- 1 The land where cotton used to grow has been taken over by other activities, such as rural industry, roads, houses and orchards, so there is not much land left for cotton. For example, in JiuLeitou village, 150 Mu have been occupied by houses, roads and rural industry. In 1984 there were only 600 Mu of orchard, while by 1994 this had risen to 3000 Mu. Most of the cotton land had been taken over for orchard (for more detailed information see Chapter 5).
- 2 There is no more labour to work for cotton in the village. Most male workers are working outside farming (for detailed information see Chapter 5).
- 3 The land has been used for leeks; the township leaders promoted the growing of leeks. We did what they asked us to do. The farmers benefit a lot from growing leeks. Now it is difficult for us to tell the farmers to change (for detailed information see Chapter 5).

The above three points were real issues and the township leaders were very aware of them. The reality of the situation strengthened the VL's argument and the township leaders had to consider these facts. As will be seen in Chapter 8, the township leaders themselves used these facts when arguing with the county government.

When the VLs were ordered to measure each farmer's field, they did not follow the order very seriously and reported a lower available land area to the township government, hoping that their village would receive a lower cotton quota.

As a result of this strategy, the village received a small quota from the administration. For example, the cotton quota for Jiuleitou was reduced from 1550 Mu to 610 Mu.

2 *Wait and see*

The VLs were asked what they would do when ordered to collect money from farmers. According to the orders, the VLs should have already gone to the farmers to collect the money at that time. The departure point for farmers is not to be fined. They replied:

'We just tell farmers what the government asks us to do, especially we give farmers the 'clear paper' which we receive from the TEAs and tell them to grow cotton in order not to be fined.'

Q *'Would you go to collect the money from farmers?'*

A *'We would not do that now. We know that getting money from the farmers is difficult.'*

From the field study it was known that they had faced a problem with this last year.

Q *'How did you do this last year?'*

A *'Last year, we did not go to collect the fines until all other villages had collected fines from the farmers. When the township government continued to ask us to collect the money, then we had to do it. But in such a case, when we went to collect fines from our village farmers, it was less difficult for us, as farmers already knew that all other villages had done the same and farmers in other villages had even paid more money.'*

Q *'What will you do this year?'*

A *'We will do the same as last year, first wait and then see if we have to collect money or not, maybe the township government will change policy again, who knows?'*

From the study in the townships, it was realised that the VLs were behaving in the same way as the TEAs. To confirm this the VLs were asked: 'What are you waiting for?'

The VLs gave many reasons during the interviews. Three aspects can be concluded: firstly, they wait to see if government policy was going to change or not; secondly, they wanted to know what and how leaders in other villages would do; thirdly, they wanted to see how farmers were going to respond to it. These are similar strategies to those of the TEAs.

Apart from the above three aspects, there was another reason behind the strategy of 'wait and see'. A similar story had been heard several times from both the TEAs and VLs. The story was about cotton delivery:

In 1994, both TEAs and VLs were ordered by the township government to persuade farmers to deliver their cotton only to the state 'Cotton Station' collection company as soon as possible. At that time, from September to end December, the price for cotton was 2.5 Yuan per Jin. Both the TEAs and VLs tried very hard to do this job, and many farmers indeed sold their cotton to the Cotton Stations during that period of time. Some farmers, however, kept their cotton at home. After the Spring Festival in 1995 (middle of February), the Cotton Station increased the price from 2.5 Yuan per Jin to 3.5 Yuan per Jin. As a result those farmers who had already delivered their cotton lost a lot of money. Consequently, all those farmers complained to the TEAs and VLs who were put in a very bad position. The VLs learned a good lesson from it. As they said: 'now we shall not follow the government too soon'.

3 *Hand over the role conflict or resign*

The VLs could not always wait and see, because the TEAs, under pressure from the township government, often went to the village to urge them to collect the money. In such circumstances different VLs reacted in different ways.

The example of the case in Jiuleitou Village is given. As introduced in Chapter 5, Jiuleitou

village consists of four sections, each one being financially independent from the others and having one responsible leader (For more information see Chapter 5).

Under pressure from the township government, the section leaders adopted different behaviour. One immediately began to collect the money from each individual farmer. Two section leaders were planning to hand-in first the money owned by the section, and then to collect the money from farmers later. The fourth section leader was still waiting, as he wanted to first know how the other section leaders would do. He informed that his section was the poorest one of the four, and had no money to pay for the farmers. If all other section leaders collected the money from each individual farmer, then he would do the same; but if other section leaders would pay the money from their section's funds, then he would not go to collect the money from individual farmers. In fact, he had already asked to resign from his position. He considered that it was too difficult to work as a section leader. As he said:

'My section is the poorest one among those four sections, I have no money to pay the fines. I feel that I only ask money from farmers and I cannot help my village farmers. Too many pressures for me from both my boss (the villagers, who elected him, are not perceived as his boss) and my village farmers. I cannot stand it any longer.'

The above case was only about the collection of 30 Yuan. For the 200 Yuan collection, all villager leaders in Jiuleitou claimed that they could not follow government orders. The following dialogues may be used to demonstrate their response:

A *'For 30 Yuan, it is probably all right, farmers would pay if we make some efforts, but for 200 Yuan, we do not think we can do that.'*

Q *'What will you do in such a case?'*

A *'We will go to see the township leaders. We cannot finish this job. It is too much.'*

Q *'What will you do if they insist on that you have to collect the 200 Yuan from farmers?'*

A *'We can resign, they can find somebody else to do the job. Nowadays it is more difficult as village leaders, the higher leader put pressures on us, and the farmers do not like us. We are in the middle, no matter what we do we will upset one side. We cannot stand it any longer!'*

4 *Conform to the government expectations either as routine work, or under certain conditions*

After Jiuleitou village, Junqi village was visited. There it was a different story. The village head had already collected both the 30 Yuan and the 200 Yuan from the farmers. For 30 Yuan collection, he had just used the village wire radio to inform farmers to hand in their money to the village government. Most of the farmers did this without any real problem. To this head, he had just done one more a routine job as he was used to doing for many years.

For 200 Yuan it had not been so easy. It had taken him two weeks to collect the money from the farmers. Nevertheless, he had managed to collect it all. However, he had not yet handed it in to the township government, because he wanted to first make sure from the

township leaders that the village would not have to hand in the cotton, and also that no further fines would have to be paid in the autumn. (According to government orders if farmers could not deliver enough cotton based on their quotas in the autumn, they would be fined again no matter whether they had planted enough cotton or not). He considered that Junqi village had the right not to grow cotton, or at least not as much as the quota, because it had been encouraged by the county and township government to grow vegetables in recent years and in fact had done very well with this. He also thought that the general reduction of cotton quotas for Junqi township from the county government was due to Junqi village, since the county government knew that Junqi village did not traditionally grow cotton but instead grew leeks successfully. However, in practice, the cotton quota for Junqi Village was not reduced, as the township government distributed the reduced quota to every village according to the land area of the village. As Junqi village had not had a large quota in previous years, it did not get any quota reduction this time. In this situation, the village head of Junqi wanted to bargain with the township government. Only under the condition that the township government would agree with his request, that no more cotton and fines would be asked in autumn, would he hand in the money.

In the interview, as it was known that many village leaders had not yet begun to collect the money, he was asked how he had been able to collect 200 Yuan so quickly. He gave the following reasons:

'When I go to collect the money from farmers, I tell them that if they hand in the money now then they will not need to deliver the cotton and will not be fined again in the Autumn. Farmers in Junqi are relatively rich compared with farmers in other villages. By selling their vegetables and doing business, farmers can earn quite a lot of money. Farmers want to concentrate on their own business as long as they can get rid of the cotton production task (which took up a lot of time). Besides, we have a quota of only 280 Mu, and so each farmer got only a small quota. Therefore, it is not a big amount of money for them.'

From the above, a general conclusion can be made concerning the coping behaviour of the VLs in the role conflict situation concerning cotton.

- 1 When possible, the VLs would try to take the farmers' side, by getting as small a cotton quota as possible. They tried to find reasons not to obey the government's orders.
- 2 When there was no strong conflict between government expectations and farmers' wishes, they would follow what the government asked them to do as a kind of routine work.
- 3 When there was resistance from the farmers, they would begin to adjust their behaviour by adopting the wait and see behaviour.
- 4 If they could not stand the strong role conflict any longer they would hand over the role conflict to a higher level of government or resign from their positions.
- 5 Under certain conditions, some VLs would conform to the government's expectations even if they were involved in a strong role conflict. The key point was that the village

leaders would choose the behaviour which best fitted to their own goal and had the least negative impact on themselves.

7.3.4 Analysis of the coping behaviour of the VLs

It is understandable that the VLs want to protect farmers' interests, because they are farmers themselves and have been elected by village farmers. According to the law on Village Committees, village leaders are directly elected by the villagers for a term of three years. They know how farmers think and how they will react to government orders such as growing cotton and paying fines for not doing so. Being the village leaders, they perceive that farmers are legitimate not to grow cotton and that it is not legitimate for the government to force the planting of cotton and to fine. Therefore, the VLs try to protect both the farmers and their own interests by getting as small a cotton quota as possible.

The 'wait and see' strategy has more or less the same meaning for the VLs as for the TEAs. It implies the following considerations:

- 1 To hope that government policy will change later, so that fines do not have to be collected from farmers. This consideration comes mainly from past experience;
- 2 To gain time to decide what to do for the best in terms of paying the money to the township government. Whether to use village money, or to collect money from each individual farmer. A consensus is needed among village leaders before making a decision;
- 3 To soften the conflict between the farmers and themselves. Farmers know that the village leaders would come to collect money from them. If the village leaders postpone their actions, it indicates to farmers that at least they do not like doing this job, and do not take it as a priority. When the village leaders do finally come to collect the money, the farmers are then less angry with them, and the money can be collected more easily.

The other reason why VLs do not take the side of government is that government expectations do not quite fit with their own goals. VLs are increasingly preoccupied with rural industrialisation to both further personal gain and independence from higher authorities (Rozelle and Boisvert, 1994). In one village visited, some village leaders had together invested 300000 Yuan in fox-rearing to make money by selling-on the foxes or their skins. Each VLs had made much more money compared with village farmers. To persuade farmers to grow cotton and collect money from them does not fit with these personal goals, and so the unwillingness of the farmers to pay the fines is used as the main excuse, when in fact, the VLs do not like to do the job.

In the meantime the VLs are not only farmers, but are perceived by the higher bureaucracy and by themselves as the extended arm of the State. In general, the VLs are accountable for the implementation of the various tasks, including the extension projects assigned to the village by higher levels of government. To encourage the compliance of the VLs, an elaborate incentive system is in operation, funded by the township. Basically, a part of the income of the VLs is linked with performance of the village in reaching targets or other cri-

teria of success for each assignment, including those concerning agricultural extension interventions. On top of a basic subsidy, their incomes are, in principal, performance linked. The annual income as a VL may be slightly more than that of the average farmers. In the field, it was noticed that those VLs who want to remain in their jobs are those who are working for a rich village, whereas those who want to resign are working in a poor village. For many years, the VLs have had to carry out many tasks that conflicted with farmers' interests, such as the one child policy, extra tax collection, and so on. To order farmers to grow cotton is just adding another duty. In some circumstances they can perform this task very easily as just one of their routine jobs, as they are used to do such kinds of work and it is also what they are expected to do by the township government. This is, in fact, the case when the role conflict is weak, and can be seen from the behaviour of VLs concerning the collection of 30 Yuan from farmers. Some village leaders just go to collect 30 Yuan from each individual farmer when they are ordered to do so, as if they are just performing one of their routine jobs.

When the role conflict is weak, it is because the orders from above are weak and are not too far away from the farmers' interests. Therefore, it is not a moral dilemma for the village leaders to obey.

When the role conflict is strong, it is because the expectations of the township government and farmers are too far apart, and then the moral dilemma arises for the VLs. They feel it difficult to commit themselves to the government's orders (such as collecting 200 Yuan from each farmer) and therefore, a different behaviour is adopted such as handing over the conflict to the next higher government level or resigning from the post.

To resign from the post is not a common behaviour in the village, although one VL really did want to resign. However, the use of resigning as a way of bargaining is a real strategy for some VLs. 'I will resign if they push me too hard, I cannot handle the conflict any longer', one village head said loudly in the presence of township officers, even though he did not mean that he really would resign. During the field work, it was learned that it is very difficult to find a good village head nowadays, as many heads or leaders begin to work in other businesses outside the villages. There are many business opportunities, while it has become increasingly difficult to handle the conflicts between the government mandates on the one-hand and farmers' interests on the other, due to the mixed structure of the rural economy. To be a village leader is not as attractive as before. In this situation, if the village head really resigned then this would create more difficulties for the township leaders to fulfil their government tasks since nobody in the village would perform the orders if there were no village leader. To appoint a new village leader will also take time, as he/she needs to be accepted by the village committee and elected by all adult villagers. This is not what township leaders want to see, and so, in such a situation they have to persuade the VL to stay in position, and most probably they would have to make the necessary concessions, or both township and village would make some compromise. From this perspective, resigning is used for gaining some bargaining power and was seen to work in the field.

7.3.5 Factors affecting the coping behaviour of the VLs

All the factors which affect the coping behaviour of the CEAs and TEAs do in some way, directly or indirectly influence the coping behaviour of the VLs. These factors have already

been discussed in previous sections. Here some of the main factors will be discussed affecting the response of the VLs in the role conflict situation for cotton.

1 *The powers of the VLs*

VLs have gained some power from their position. As they are directly elected by the village farmers, so they feel responsible for their welfare. Although they are perceived by the higher bureaucracy as the extended arm of the State, they are not paid by the government budget and do not benefit from all the social welfare provisions provided to government officers. They only receive some subsidies and performance-linked incentives. As many VLs expressed: 'We are not paid by the government, we are not afraid of losing our positions. We still have our land, if we are not VLs we can still make our living'. This knowledge provides them with some freedom to decide what they want to do. Compared with the TEAs, they are less controlled by the township government and have some decision making power in the village affairs. This power gives them the opportunity to bargain with the township leaders concerning the cotton quota for the village and the fines for the farmers.

The current situation in rural China has given the VLs even more bargaining power than previously, as many capable farmers now prefer to do business in other sectors than in farming. A current saying captures the present situation in the rural areas: 'A capable farmer does not want to be a village leader, but a bad farmer cannot be a village leader'.

2 *Perceived legitimate and sanction power*

In the field, all VLs perceive that farmers have more legitimacy not to grow cotton, and that the government does not have legitimacy to force neither the growing nor the paying of fines.

Both the township leaders and farmers are perceived to have sanction powers towards VLs. The sanctions from the township government are: criticism, the bonus incentive for finishing the tasks, and fines for not finishing the tasks.

The sanctions from the farmers could be: having good or bad relations with the VLs, damaging the property of the VLs, or fighting with the VLs.

Both perceived legitimate and sanction power play a role in determining the coping behaviour of the VLs. The case studies at village level revealed that this is the case, while Gross et al. (1958) assume that there are three types of orientation (moral, expedient and moral-expedient) to expectations based on personal opinion towards legitimacy and sanctions (for more information see Chapter 3), the study shows that Van de Vliert (1979) may be correct in saying that the moral and expedient role orientation test lacks validity. It is perhaps not the personal orientation which contributes to the different kinds of coping behaviour of the focal person, but more the strength of the role conflict. As has been demonstrated in the previous sections, the VLs respond differently when faced with a different situation of role conflict. For example, when the role conflict is weak, the VLs try to protect the farmer's interests, and in this case, legitimacy may play a more important role than sanctions because the possibilities of being sanctioned are low. When the role conflict becomes strong, then sanctions may have a larger role to play; at least the VLs have to give more weight to the sanction power, because the possibility of getting sanctioned is higher.

7.4 Interpretation of the different coping behaviour between extension agents at different levels

In the previous sections of this chapter, some reasons for different coping behaviour at different levels of the extension system have been already discussed. In this section they will be explained in more detail.

1 *Differences in the power of the extension agent*

Although focal persons' own goals will influence their behaviour, the power they have will also make a contribution. This is because it will decide to what extent they can really follow their own goals or have to conform more to the expectations of role senders.

The CEAs have more professional power than the TEAs. Therefore, they can follow more of their own goals. Such as concentrating on professional duties and ignoring other government expectations. Most of the TEAs interviewed also expressed that they would like to concentrate more on extension work instead of on the bureaucratic work. However, TEAs do not have the same professional power to follow their own goals as the CEAs do, and therefore, they behaved differently.

At village level, the VLs have some bargaining power through their position as village leaders. Another power source comes from the possibility to resign the job and become farmers. As introduced previously, the village leaders, are farmers as well. Therefore, they have more of an alternative, than the TEAs. If they left their job, the township leaders and TEAs would have to look for other persons to fill their places. This gives the VLs some bargaining power, and is an important point in understanding the behaviour of the VLs. Many things can thus be bargained between the township leaders and VLs before and during the process of policy execution. In cotton production, the quotas for cotton, the deadline for handing in the money, and so on, could all be negotiated. This bargaining power may give the VLs more behavioural possibilities.

2 *Differences in the governing principles*

At county level, since the CATEC is perceived as the top of a hierarchical professional organisation, principles of autonomy and self-regulation are used by the CEAs. The lower level township extension station is, however, regarded as a part of the township government, and thus as a part of the management domain. At township levels, hierarchical control and co-ordination are governing principles, and the obedience of orders is considered an important requisite. Thus the TEAs are in a much more difficult position than the CEAs. As demonstrated in Chapter 7.2, the TEAs more often do not know how to deal with the role conflict, and this is one of the main reasons why they adopt experimental behaviour.

At the village level, the situation is different. The VLs have double identities. On the one side they are responsible for fulfilling the government's orders in the village, as an extended arm of the State; whilst on the other side, they themselves are farmers who are elected as VLs by the other villagers. Thus they cannot be viewed as the same as government officers, like the CEAs and TEAs. They are not in the professional organisation, but also are not fully controlled by the township government. At the village level, there is no fixed governing principle, and many things are instead negotiated among township leaders, VLs, TEAs, and farmers.

3 *Differences in uncertainty at varying levels*

There are fewer uncertainties at the county level than at the lower levels. Safety needs are also different. Safety needs include a person's desire for security and/or protection, and this translates into concerns for short-term and long-term job security, as well as physical safety on the job.

A CEA is a government employee, and in general, he/she is not worried about the stability of job and future, and thus has more freedom to do what he/she likes especially as CEAs have a higher education background. TEA's job is mostly on a contract basis, and thus, in principle, could be sacked if the township leaders are not satisfied with his/her work. Thus, the obedience of township leaders' order is very important for the TEA. A village leader is elected by his fellow village farmers, and therefore the VL cannot go against farmers' wishes too much, otherwise he/she would not be relocated after the three-year term. In addition, VL is in many ways under the control of the township government, and thus cannot disappoint them too much either. The VL has to try to serve both the interests of the government and farmers and is not certain which role is best. Thus, both TEAs and VLs face more uncertainty over their future.

4 *Differences in incentive structure at varying levels*

Extension agents are evaluated differently at each level. CEAs are evaluated mostly on their extension work and not on bureaucratic work. Therefore, to do a good professional job is more desirable and more rewarding for the CEAs. Their promotion and reputations are based on their extension work and thus also the opportunity to get more extension projects. This can lead to many benefits for them, such as receiving more money, more chance to advance to a better job, a higher status, and more opportunities from a long-term perspective.

TEAs and VLs are evaluated mostly by bureaucratic work. Extension work is only a small part of their jobs. To fulfil government orders is perceived as more important by TEAs, because nearly all the conditions regarding their work and future, such as promotion, and job safety are in the hands of the township leaders. From the understanding gained in the field, most TEAs would prefer to stay in their current kind of work than to be ordinary farmers (this was the case for many contracted TEAs, who, if they were not TEAs, might become farmers again). This encourages them to follow township leaders' order more, and to pay less attention to extension. VLs pay more attention to rural industry and to their own private business. Rural industry can bring more income for both village farmers and the VLs themselves and can also increase their power and status. From the interviews in the village, it was found that most of the VLs had their own business to manage, as they had better access to information and opportunities and were in a better position than ordinary farmers. They want to spend more energy on their own business, but they also have to perform government orders such as extension work, and are thus in a dilemma position. On one side they can benefit a lot by being the VLs, and on the other side a lot of time is taken with village activities. The VLs have to keep a good balance between the two, and this is not always easy.

5 *Differences in feasibility of monitoring field activities and in power (distance) at varying levels*

At county level, it is difficult to monitor the daily activities of the CEAs, as they have many

activities to carry out over a large range. In busy seasons, for example, they stay in the field for four days per week with only one day spend in CATEC.

At township level, although the TEAs also work in the field for most of their time, they mostly return to the township nearly every day. This is because more recently they need to receive new orders from the township leaders, and report about their daily work and new developments in the village. At village level, the VLs stay in the village most of the time, but as VLs they have many other activities apart from extension work, and in general, they are not controlled by others in the village.

It is of course understandable that the extension officers who cannot be monitored well will have more decision making power and autonomy to do what they wish, including following more of his/her goals. This study does not hold detailed data to show the amounts of freedom among the CEAs, TEAs and VLs. But the impression gained of freedom to do their own thing seems to be strongest for CEAs, then for VLs and finally for TEAs. It is interesting to note that the TEAs are here in the lowest position, whereas most in other aspects the TEAs are in the middle position. This phenomenon might be explained by the concept of power difference (distance). Throughout the research the impression was gained that the power difference is greater at township level than at the village and county level. The head of the CATEC does not have so much more power than the normal CEAs, whereas the township leaders do have much more power than the TEAs. The VLs are in the middle position, having more power than the TEAs and less power than the CEAs. In general, the more power difference, the less freedom there is for the subordinates to make their own decisions, and instead they have to follow more of their boss' wishes.

In this chapter, the coping behaviour of the extension agents at three levels is identified and analysis of those behaviour is given. Based on the analysis, reasons for different coping behaviour at different levels of the extension system are discussed. Insight has gained to develop a new theoretical framework for understanding the coping behaviour of extension agents in a role conflict situation. This will be the content of the next chapter.

8 A new theoretical framework for understanding the coping behaviour of extension agents in a role conflict situation

According to the role conflict resolution theories of Gross, Mason and McEachern (1958) and Van de Vliert (1981a; 1981b; 1984), when a focal person is in a role conflict situation, his/her coping behaviour will depend on two main determinants: the legitimate power and the sanction power of the role senders. This study has shown that these theories of role conflict resolution are too simple and too static. Based on the case studies presented, this study will now develop a comprehensive and dynamic conceptual framework for a better understanding of the role conflict resolution.

8.1 The theoretical model

This section will first present a theoretical model for understanding the coping behaviour of the extension agents in a role conflict situation in China, and will then discuss the model presented in Fig. 8.1.

FIGURE 8.1
Factors determining an extension agent's coping behaviour in a role conflict situation

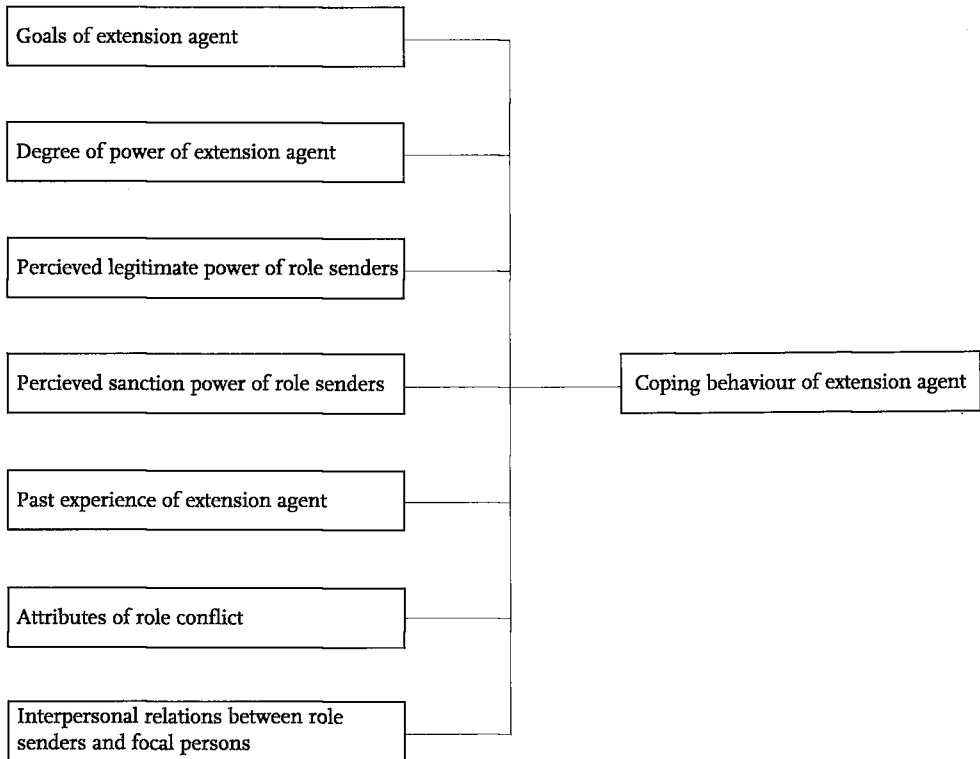


Figure 8.1 shows how an extension agent's coping behaviour can be explained by a number of factors. All these factors have already been discussed in the previous sections (see 7.1, 7.2 and 7.3) and are termed as internal factors in this study. The following gives a summary of the main points of the findings.

8.1.1 Internal factors

Goals of an extension agent

The goals of an extension agent are determinants for his/her coping behaviour. Different goals will lead him/her to put different weighting on different expectations. The goals may be divided into following: to be promoted through the bureaucratic ranks; to become an expert in the extension field; to make a financial profit in a short time; and to keep his/her current position. Of course these four goals do not necessarily have to be separated. However, from the fieldwork it is understood that there is indeed some different focus for the different extension agents. Those who put emphasis on promotion through the bureaucratic ranks tend to give more weight to following government orders, i.e. in a role conflict situation they will try to conform more to government expectations. Those who give more weight to the extension profession show a more professional attitude in a role conflict situation, i.e. to conform more to farmers' expectations or to concentrate more on the technical aspects of the problem. Those who want to pursue the goal of financial gain in the fast-changing society give very little attention to either government orders or farmers' interests, but instead attempt to undertake other better-paid work. Those who want to keep their current positions will first try to protect themselves and will generally tend experiment with their coping behaviour in a role conflict situation before they are sure which behaviour is the safest for them. Thus, the goals of an extension agent will influence his/her coping behaviour.

Degree of power of an extension agent

Although an extension agent may have many goals, the degree to which he/she can really pursue these goals will very much depend on the degree of power he/she has in a role conflict situation. For example, a township extension agent may intend to pursue his/her personal goal as an extension expert, but he probably cannot do so unless he/she has enough professional power to avoid having to follow the township government's orders to carry out other activities not relevant for extension. An extension agent at the county level may have more professional power to pursue more of his/her own goals in a role conflict situation, while the village leaders also gain some bargaining power through their special position as both village leaders and farmers. In this case, their bargaining power may increase greatly if they are also successful farmers, because they can then easily give up their positions to go back on farming as a profitable alternative.

One thing is clear that no matter what kind of power an extension agent has, the degree of power influences the coping behaviour.

Legitimate power and sanction power of the role senders

According to the role conflict resolution theory, legitimate power and sanction power are the two most important determinants for the focal person's coping behaviour. From the

field research, it is known that these two factors do play a role, but that they have a different role to play, at least in Xinji county.

With cotton production, extension agents do not simply perceive that one side is legitimate and the other side is illegitimate, there is no such sharp distinction. Instead, they perceive both sides, i.e. that government and farmers have legitimacy, but it is the degree that varies. One side may be perceived as being more legitimate than the other, and in particular, some extension agents feel that government tends to have more legitimate expectations than the farmers. It is also true that one side is considered more legitimate than the other at certain times and circumstances, but that these perceptions change completely at other times. In a complex situation, such as the one for cotton production in Xinji, the extension agents do not perceive only one fixed expectation but several from role senders, such as the government. Some expectations are considered legitimate, while others are not. In the meantime, they have more than one role to play in the field. It is not always a clear cut choice, but a process of adapting to the changes in circumstances.

Apart from this, extension agents perceive the role senders' expectations concerning the legitimate and sanction powers differently at different levels, and thus, impacts are different. At county level, the legitimate power does play a role in determining the coping behaviour of the CEAs, since there is no real sanction from either of the role senders for cotton production, and the CEAs mostly conformed to the legitimate role senders. However, the situation is much more complicated at the township and village levels. At the township level, the government has a much stronger sanction power than the farmers. Meanwhile, the research shows that the legitimate power does not play as large a role as the role conflict theory assumed. At the village level, both legitimate and sanction power play a role, but their importance is related to the strength and other attributes of the role conflict (see point 5)

Legitimate power may only influence people's intentions in that legitimacy may lead to the idea that 'we should' conform, but not necessarily to actual behaviour. Sanction power may lead to the idea that 'we have to' conform, but in the end an extension agent's actual behaviour will also depend on his/her own goals, degree of power, and other factors.

Past experience

Past experience is a key factor in accounting for the behaviour chosen. In a role conflict situation, tension is high for extension agents. As shown in previous sections, the TEAs very often do not know how they should behave in a role conflict situation, and they try to behave according to the circumstances. If they have some past experience of a similar situation, then they are able to predict the results of certain types of behaviour. This is the same for the CEAs and VLs who also may have some experience of dealing with the role conflict previously. If past behaviour brought reward then they would more likely perform the same behaviour again; if past behaviour brought punishment then it would not be repeated. This is exactly the case in the field. For example, in the role conflict situation of family planning, extension agents were for many years expected to follow government orders to promote the 'one child policy' in the villages. Although farmers did not like it, they gradually accepted such a policy. The extension agents still have many difficulties in performing this task, but they are now used to conforming to government expectations. They have significant expe-

rience of following the same steps that result in an appropriate outcome. For the role conflict of cotton production, however, because it is a new role conflict for the extension agents, there is no fixed or accepted coping behaviour.

Therefore, past experience has a direct impact on the coping behaviour of extension agents.

Attributes of a role conflict

This section looks at the background and the strength of the role conflict, and at the relations with other role conflicts.

The background to the role conflict needs to consider whether the conflict is of long-term or a new native? This factor may also relate to the perceptions of the focal person. For example, compared to 1994, more extension agents perceived that farmers had legitimate power over the government concerning the policy to grow more cotton. This was because the government had begun to ask farmers to grow cotton only in the last half year, which was considered too late for many people. For 1995, however, the government had already told farmers to grow cotton even at the end of 1994. Therefore, the majority of extension agents think that farmers should have enough time to prepare this year.

With regard to the strength of a role conflict, when the role conflict is weak, some extension agents conform to government expectations. The stronger the conflict becomes, the more difficult it becomes for extension agents to follow orders and they may change their behaviour to compromise to farmers' wishes. This point can be understood from the perspective of obedience. When a role conflict is weak, i.e. when the expectations or orders from the two sides are not strong, then there is no moral problem for extension agents in obeying orders. When expectations or orders become strong, then the moral problem appears, the extension agents may find it difficult to commit themselves to certain behaviour. This study has shown that as conflict and tension become more severe, the focal person is more likely to become ego-defensive and fall back on other coping techniques (see Chapter 7).

The strength of the conflict may also influence the attitude of the extension agent in that it directly affects the evaluations of the outcome of the intended behaviour. When the role conflict is weak, it does not matter to the extension agent about the outcome. When the role conflict becomes strong then the outcome of certain behaviour may have significant impact on the extension agent and thus he/she has to calculate this first before making a decision.

The relation with other role conflicts is also important. Generally speaking, there is seldom only one role conflict for a focal person. From the case studies, it is seen that there are many role conflicts existing in the field, and one fixed role conflict may be decreased or increased by other role conflicts. In cotton production in the county of Xinji, there were already many role conflicts for the extension agents, such as the collection of taxes from farmers, family planning, and so on, and many tensions between government and farmers. The task of cotton production brought additional role conflict, and it could be interpreted by the extension agents in two ways. One interpretation is that it is just another conflict, of no special interest and extension agents are used to it. The second one is that it is a new conflict on top of all the others, and this brings a much stronger reaction. The conflict brought by cotton production is interpreted in the second way by most extension agents, it being much

more intensively perceived by all parties involved. The role conflict for cotton felt by extension agents is very strong compared with other role conflicts, and deciding on their coping behaviour is much more difficult. If there were no other conflicts existing in the field then it would be easier for extension agents to decide on certain behaviour.

Interpersonal relations between role senders and focal persons

Friendly or hostile relations make a big difference to the perception of expectations from role senders, and will lead to different coping behaviour of the focal persons as well as influencing the feedback of the role senders to the focal person. For example, a strong bond of trust and respect may encourage a response of shared problem solving, and this is actually the case between some township extension agents and village leaders.

It has been discussed above how each factor influences the coping behaviour of an extension agent. Now will follow a summary of this. The legitimate power provides a focal person with direction to which role sender he/she should conform, and sanction power adds to the weight of which role sender is followed. The focal person's own goals are on the agenda, but his/her degree of power will decide to what extent he/she can follow these. Past experience provides insight on suitable behaviour and the results of certain behaviour. Attributes of a role conflict give further direction concerning which behaviour to take, in terms of fixed or new behaviour and the moral problems associated with these kinds of behaviour. Interpersonal relations will influence behaviour through the pressures of the role senders and the feedback between role senders and focal person.

This section presented a theoretical framework for understanding the coping behaviour of the extension agents. Several factors are used as the determinants for this behaviour. These determinants are considered as the major factors into explaining coping behaviour in a role conflict situation. They are internal factors. There are also some external socio-environmental factors which may also influence coping behaviour indirectly, and in the next section these factors will be discussed.

8.1.2 External factors

External factors do not have direct influence on the coping behaviour of a focal person in a role conflict situation, but can influence internal factors and finally can have an indirect influence. As such, external factors will affect behaviour only if they are related to one or more of the internal factors that specified in the theoretical model. In this section, these external factors are discussed.

Incentive structure

Different incentive structures will indirectly lead to different coping behaviour in a role conflict situation. The incentive structure may have an influence on the past experiences of the extension agents. Through this past experience, an extension agent evaluates which behaviour will be rewarded and which will be punished. This point can be seen very clearly from the different coping behaviour of the county extension agents and the township extension agents.

Organisational hierarchy

The particular organisational level at which an extension agent works has an impact on coping behaviour. Extension agents show different coping behaviour at different levels of their organisation, due to the differing amount of types of power allowed to the extension agent that thus influences coping behaviour.

Background of the extension agents

The background of the extension agents may influence their perceptions regarding the legitimacy of the role senders. This may include whether they are city or rural dwellers, or whether their spouse a farmer? If they have farmland themselves, then they can more easily understand why farmers do not like to grow cotton, and therefore, would perceive that the farmers have more legitimacy not to grow cotton. The family members' and other farmers' opinions would also influence the reasons for taking certain actions.

The educational background of the extension agents will also influence their coping behaviour. Higher education generally means more 'expert power' and will provide more opportunity to work at higher levels of the extension organisation. This in turn will give more power to follow their own goals.

Position of the extension agents

The extension agents' position, from a social point of view, will influence their decisions. In performing administrative tasks such as the head of the organisation or department, there is a tendency for them to conform more than normal extension agents to government wishes. In this position, there is more pressure than for ordinary staff members, as they will be punished more by the government if they do not fulfil government orders. Thus, they feel more sanction power from the government.

The position of an extension agent will also influence his/her goals. A manager who intends to pursue promotion up the bureaucratic hierarchy, may therefore follow more government orders in a role conflict situation. An extension agent may intend to be an expert in the field of extension science, and thus may consider more the farmers' wishes.

Specialisation of the extension agents

Those extensionists specialising in plant protection tend to follow the government in promoting cotton production, while others tend to favour farmers. This is because those plant protection specialists think that pests such as bollworms are not difficult to control, and that therefore growing cotton will provide farmers with cash income. (One of the major reasons why farmers do not like to grow cotton is that they cannot achieve a normal yield if they cannot control bollworms. When a high yield can be guaranteed, more farmers will grow cotton). Thus, specialisation has an influence on a focal person's perception of role senders' legitimacy.

Party membership of the extension agents

If an extension agent is a member of the communist party, then he/she will tend to take the side of the government. As a party member, they are subject to party discipline and the principle of democratic centralism in addition to their professional obligations. Even if they do not agree on the subject, they have to follow orders if coming from the party. Thus, government expectations play a more important role than those of farmers for these extension agents.

Membership of the party may also influence the interrelations between extension agents and government leaders. In China, most of government leaders are party members.

Age of the extension agents

If the extension agents are young then they tend to conform to their own goals. Some young extension agents do not like to work as extension agents for the rest of their lives, and are trying to find jobs in other sectors which can give them more income and comfort. There is more job opportunities for younger people than for older ones. Young people are also more willing to take risks, and some extension agents are already doing other business during their working hours. In a role conflict situation, they try to avoid the role conflict and concentrate on their own goals if possible. The age difference can influence their goal orientation; during the research it was found that young and old people have some different ideologies regarding personal goals and lives.

Peer behaviour

Peer behaviour is often used as a reference for many extension agents. The common attitude of the extension agents in a role conflict situation is 'if other extension agents do, I would do, otherwise I will wait and see'. The peer behaviour is used here as a reference for the evaluation of certain behaviour outcomes.

8.2 Dynamics of the role conflict and role conflict resolution

In the previous sections, the coping behaviour of extension agents at three levels have been discussed and a theoretical model to explain the important factors accounting for these kinds of behaviour has been presented. In one sense this then concludes the original plan of this study. However, during the process of this research, it has been gradually realised that the theoretical model may only be used to explain certain behaviour under stable conditions, whilst, in reality, role conflicts and their resolutions are occurring in a much more dynamic way than expected. Looking back over the development process of the research, it can be seen that the early stage was more influenced by the structural approach, and that this gradually changed into an interactionist approach at a later stage. The model presented in Chapter 8.1 is a more structural way of thinking, whilst the dynamics of role conflict, as presented in this section, is more interactionist (see Chapter 3).

Apart from this, Chapter 3 shows that most of the investigations of role conflict have not dealt directly with the role senders, but only indirectly by measuring the focal person's perception of the conflict in the role expectations sent by the role senders. Further, the reciprocal nature of the relationships between role senders and focal persons has not been investigated. There has been no systematic empirical research to show how the dynamic process proceeds, how the role senders and the focal person react to each other, and the effect of these interactions.

In fact, the dynamic process includes many aspects. This research focused on three of these: the dynamic of roles and role sending and receiving process; the dynamics of coping behaviour; and the dynamic relationship among parties involved. These aspects will now be discussed.

The first aspect is the dynamic of roles and role sending and receiving processes. As discussed in the previous chapters, the expectations from the government to the extension agents are not always completely fixed for certain roles, but are to a certain extent open for debate. They are sometimes negotiable, especially for those roles which the focal persons have difficulties to perform, and are negotiated at all three administration levels from county to village over the whole process of role conflict. All parties in the role negotiation are both sending and receiving, and a lot of bargaining is taking place in the negotiation process.

As introduced in Chapter 6, many new roles were assigned to the extension agents involved in the field of cotton production in Xinji, according to government policies formulated at higher levels. These roles were not predetermined and were changing along with the changing circumstances. This gives a lot of opportunity for negotiation by the people involved.

Taking cotton quotas as one example (see Chapter 6), the county government received quotas from the city of Shijiazhuang, then signed a contract with each township, and each township signed a contract with each village for a certain amount of cotton quota. The extension agents were then expected to carry out the task at all three levels, from county to village.

In this whole process, many negotiations took place. Each subsequently lower level of government tried to get as low a cotton quota as possible, and they used all kinds of reasons for this. Typical reasons have been discussed in Chapter 7.3. and the main ones are briefly given as follows:

- 1 The land where cotton used to grow has been occupied by other activities, such as rural industry, roads, houses and orchards, and so there is not much land left for cotton;
- 2 There is no more labour in the village to work on cotton. Most male workers are employed outside farming;
- 3 The land has been used for leeks as government leaders had promoted the growing of leeks, and the farmers did what they were asked to do. The farmers benefit a lot from growing leeks, and now it is difficult to tell the farmers to change their crops.

The above three points were highly justifiable, and each level of government leaders knew them well. It equipped the lower level leaders with a lot of power when arguing with the upper levels who had to balance this with what their boss was asking them to do. Bargaining took place during the whole process of interaction, at all three levels. Each level of government leaders tried to benefit, and because of the bargaining, the lower levels did receive smaller quotas from the upper levels (see Chapter 7).

Another good example of bargaining was also discussed in Chapter 7, where one village leader was bargaining with the township leaders over fines: he would only hand in the money if the township leaders agreed with his request, that there would be no more cotton quotas or fines in the autumn.

Another case also related to the issue of fines, but at a higher level of negotiation, where a township leader was negotiating with a county leader. The township leader had already collected fines from farmers but did not want to hand over the money until he was promised that his township would receive a reduced cotton quota not only for current year but also for future years.

The above examples demonstrate how the lower levels of government leaders negotiated with those of the upper levels. However, such kinds of negotiation could only occur within a certain situation, that the leaders of the upper levels were not receiving strong pressure from their boss, as was exactly the case in Xinji before the April of 1995 (see Chapter 6). If the leaders of the upper level government received strong pressure from their boss then they would use their power to control the lower level leaders. After April 1995, the county government, under pressure from the provincial and city governments, put pressure on the township government to carry out government orders regarding cotton production. The county leaders realised that it was not good to push farmers to grow cotton, and so they had to do something to guarantee obedience of the people concerned to carry out the task of enforcing cotton quotas. Thus, three measures of Working Groups, Field Inspections and Report Meeting, and TV Shows (see Chapter 6.1) were used to push lower levels' leaders and farmers to grow cotton. In such a case, there were fewer possibilities for negotiation and was less room for manoeuvre.

All government leaders, no matter whether county, township or village, tried to benefit from the bargaining process. It is important to note that the extension agents, as caught in the middle position were also involved in the bargaining process. They used reasons received from both sides to legitimize their behaviour. For example, when TEAs received orders from township leaders to ask farmers to grow cotton, they first went to the village to deliver that message to the village leaders and farmers, and when it was apparent that farmers did not like to grow cotton and refused to follow orders, they would go back to the township leaders with their information. The action of township leaders depended on the expectations of the county leaders at that moment. If the county leaders did not push hard, then the township leaders would in turn not pressurise the TEAs. This was the case before the April 1995 (see Chapter 6.1). However, they would put pressure on the TEAs if they themselves were receiving strong pressure from the county leaders. This was the case after April 1995 when there was stronger pressure coming from the county government.

This negotiation was an ongoing process during the whole period of cotton production. It was not only valid for the cotton quotas but also for many other aspects such as the amount of fines, the time for delivery of the fines, and so on. A Chinese saying captures the spirit of the negotiability of Chinese society: 'Above are the government policies, below are the people's counter-policies'.

Apart from this, the expectations of the role senders were not always clear to the extension agents. Two cases illustrate this point of ambiguity of expectation. As introduced in the previous chapters, the TEAs were expected by the township leaders to measure farmers' fields and to collect fines from the farmers. Two TEAs did not do the task, but they first wanted to know what was the real expectation of the township leaders. As one TEAs said during an interview: 'the township leaders want us to measure farmers' fields, but I want

to first measure their minds. I want to know what do they really want us to do. I do not know now if they really want us to push farmers to grow cotton or whether they are just doing what the county government wants them to do. Only after knowing their real idea will I do my work well.' The other TEA gave a similar story, as he had heard rumours that the township leaders were negotiating with the county leaders to pass their cotton quota to other townships.

Because of the negotiability and ambiguity in the process of role conflict, some extra time for role sending and receiving was needed in order to find a balance between the parties involved and to clear up the vagueness of the message. Therefore, all persons concerned in this process are both role senders and role receivers. For example, county government leaders are the role senders to the CEAs, but they can also be regarded as the role receivers from the CEAs, as they receive information from CEAs about the cotton situation in the field and then express new expectations based on this information. It is the same for the TEAs who receive orders from township leaders and also give feedback. It is always two-way communication. There is no such clear cut situation as one party only functioning as the role sender and another party only functioning as the role receiver. And the interaction between them is constantly changing based on the situational change. This gets even more complex if one considers that even with township leaders as the role sender to TEAs, the expectations are also dependent on the roles the township leaders receive from the county leaders. Therefore, there are no fixed role expectations from the role senders to the role receivers at all levels. For each single focal person, there is no fixed role expectation, and sometimes there are fewer roles to play and sometimes more.

The second aspect is the dynamics of coping behaviour. Because of the changes in the role expectations, the coping behaviour of extension agents also changed. Therefore, there is no fixed coping behaviour in the role conflict situation in cotton production, and shifting patterns of selective coping behaviour result alongside the situational change.

As discussed in Chapter 7, the extension agents take different coping behaviour according to the situation, such as to conform to one of the role senders, compromise, wait and see, experiment, resign, and so on. In any case the coping behaviour of the focal person would very much depend his/her perception of the environment, i.e. the context of his/her life. They would first make an assessment about the environment and then decide what action to take, whether to fight, to make a symbolic gesture to the role senders, to negotiate with them, or to be friendly with them, and so on.

The specific reactions of each focal person to a given situation are immediately determined by the nature of his/her experience in that situation. For example, the likelihood of attempting rational problem solving will depend on the opportunities perceived for creating acceptable changes either in that situation or in his/her own behaviour. On the other hand, as conflict and tension become more severe, he/she is more likely to become ego defensive and fall back on other coping techniques. For example, TEAs changed their coping behaviour from the 'wait and see' to 'confirm to the government expectations' as tensions increased (see Chapter 7.2).

The third aspect is the dynamic relationship among government, farmers and extension agents. The relationship among these three parties is in a dynamic process of change. One of the interesting coping behaviour of extension agents is experimentation (see Chapter 7.2). They experiment in response to the new situation where they do not know which behaviour is the most appropriate. In fact it is not only the extension agents who are experimenting, but also the government and farmers. The government also does not know how they should behave in a new situation. A county leader's expression demonstrates this point clearly: 'cotton, as a very special commodity, is a big problem for us now. It cannot be planned as before but it also cannot be left completely to market influences. We have to carry out the government task. However, there is no good way to do the job. We know we are using too much sanction power. This leads to a bad relationship between government officers and farmers. But we do not know how to do it better. We are also trying to use different ways to solve the problem, such as to promote the use of ground plastic and intercropping technology to farmers. We hope that will solve part of the problem'. Therefore, the county government is also experimenting in the new situation. The central government in Beijing is also experimenting for the reform. As the former paramount leader Deng Xiao Ping said: 'China's reform from planned economy to market economy is new for us, we do not know which way is better for us to go. We have to try different things to find the right way. It is just like crossing the river on stepping stones.' Thus, the government is also regularly changing its policies to fit the new situation, and has already changed national cotton policies over the last two years. This occurred because, through the central government has been importing cotton from abroad, it has also been developing a new cotton production base in Xinjiang Province where the farmers like to grow cotton and the area is suitable for this crop. Therefore, the situation of cotton production has been improving over these last two years in China, and in Xinji. Government intervention was less strong in 1996 as compared with the previous year when it enforced farmers to plant cotton with policies that all free land should be planted to cotton, and fines were high. In 1996, farmers had more flexibility for their own decision-making since they could grow less or even no cotton at all by paying only 100 Yuan per Mu fine (Qu, 1997). This change was because the county and higher government realised that farmers really had difficulties in planting cotton.

Farmers were also experimenting in the field with cotton production. During field work for this study, it was found that some farmers did not follow the government orders, but planted vegetables or wheat instead of cotton. They wanted to take the risk, because no one would know what they had planted at least until the vegetables and wheat shoots emerged and even if they were then found out they could still pull out the seedlings and plant cotton instead. (*In practise, some farmers were found out by the Working Groups and had to pull out the vegetables or wheat seedlings and planted cotton, whilst others were not found out*).

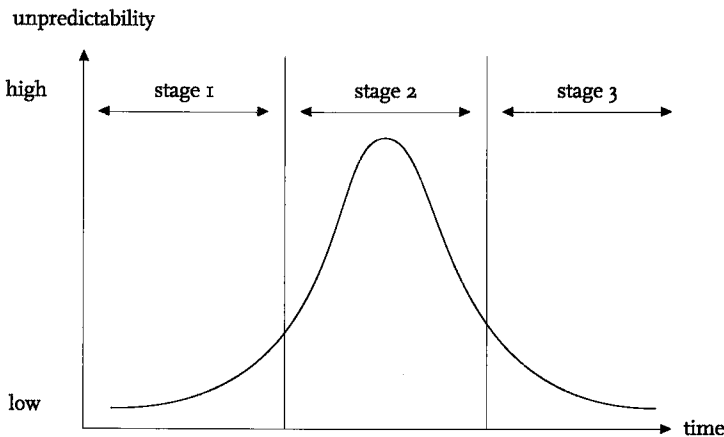
Thus, all three parties involved are experimenting during the whole process of cotton production, and this leads to a dynamic relationship where the role conflict and role conflict resolutions are also changing over time. As showed in Chapter 7, the strength of the conflict between government and farmers had a big influence on the response of the extension agents. Usually, when the conflict between government and farmers is not strong, then coping with the role conflict is easy for extension agents, but when the conflict becomes stronger then it is more difficult for the extension agents to respond.

This dynamic change of role conflicts and its' resolution over time can be divided into three stages, based on the case studies of this research:

- 1 When the situation is simple, the relationship is set (in practice it means that there is not much disagreement between focal person and role senders). At this stage the interaction is simple as the role conflict is not strong. All actors conformed or reinforced the existing relationship, and the coping behaviour are more predictable. And in such a situation it does not matter too much what the focal person is really doing, so there would be a various responses to the role conflict.
- 2 When the situation is complex, the relationship is not agreed on by the actors, and then the interaction is complex. The role conflict changes over time, and the coping behaviour are less predictable. The behaviour of experiment may play an important role at this stage.
- 3 When new decisions or actions take place, for example, when county or township leaders decide to give very strong orders to the extension agents. Although the role conflict is strong, it is fixed without constant changing. Then, new relationships are formed out of new decisions or actions. In such a case, there is less room for extension agents to negotiate or manoeuvre, and the role conflict resolutions are more predictable.

The above three stages can be demonstrated in the following Figure 8.2.

FIGURE 8.2
Unpredictability in three stages of the role conflict



Based on the above emergent understanding, one remark will be made about the theoretical model set up in Chapter 8.1. The model can be better used at stages 1 and 3, and has less explanatory power at stage 2. This is because at stages 1 and 3, the situation is more stable and less dynamic than at stage 2 where the role conflict is still in a changing process and the coping behaviour are less predictable. In fact, the situation at stage 2 can be termed as one of 'chaos' (Prigogine and Stengers, 1993). In such a situation, it is inherently impos-

sible to determine in advance which direction the change will take: whether the system will disintegrate into 'chaos' or leap to a new, more differentiated, higher level of 'order' of the system. Chance nudges what remains of the system down a new path of development. And once that path is chosen, determinism takes over again until the next bifurcation point is reached. Therefore, at certain moments chances do play a role which cannot be explained by any determinants. Sudden events or happenings can change the existing structure and system. Stage 2 is in just that a situation, it is impossible to predict what will happen and it is more difficult to predict what coping behaviour the focal persons will take.

9 Conclusions, discussion and recommendations

This case study of the coping behaviour of extension agents in cotton production focused on understanding how extension agents in Xinji county coped with the role conflict which was generated by the increasingly opposing demands of the policy mandate and market force.

Background information to the research subject was given in Chapter 1, and the research problem and research objectives were formulated in Chapter 2. After discussing the theoretical framework for the analysis (Chapter 3), the methodological set-up of the research aimed to identifying the research problem was presented (Chapter 4). The description of the study area and situation of cotton production were given in Chapter 5, in which the natural environment, social structure, basic facts and production with particular regard to the cotton production were described. The importance of cotton production in China was also given in order to make clear why government was intervening so strongly in cotton production. Conflicts in the expectations of the government and farmers for extension agents in cotton production were given in Chapter 6. The main research findings were given in Chapter 7 and Chapter 8, and discussed in the following sections through the conclusions, discussion and recommendations of this final chapter (Chapter 9).

In this Chapter, the response to the research questions as posed in Chapter 2.1.1 will be given. The research objectives in Chapter 2.2 will be reviewed in order to place the conclusions in the context of the whole study. Some discussion and suggestions will be followed, based on the research results. In the last part of this Chapter, some practical recommendations will be given.

9.1 Conclusions

The main research objective of this study was the identification and understanding of coping behaviour in the conflict situation of extension agents at various levels. This general objective was divided into six sub-objectives as follows.

- 1 The first sub-objective was to understand the degree which different extension agents perceive role conflict in the changing situation in Xinji. Chapter 7.1.2, 7.2.2 and 7.3.2 encompass the body of this work. At three levels, from county to village, all extension agents perceived a role conflict in cotton production, but the degree of conflict varied. The higher level of extension agents (CEAs) involved in the Working Group (Working Groups were formed in order to measure farmers' uncultivated land and to persuade or force them to grow more cotton) perceived a clear role conflict, but not as strong as the extension agents at lower levels, since they were not always dealing directly with the farmers over cotton production. All extension agents (TEAs) at the middle level felt a stronger role conflict. They were in a very difficult situation because the government and the farmers had very different expectations of their behaviour. As one extension agent expressed: 'we have two faces now, one is for the government and the other one is for farmers. We often do not know what to do'. At the lowest level, the actual extension work was, in fact, carried out by village

leaders (VLs). All of them not only perceived a strong role conflict but also expressed their worries about worsening relationships between the government and farmers because of the conflicting interests in many aspects including cotton production, family planning, tax policy, and so on. Overall, more role conflicts were felt at the lower levels.

- 2 The second sub-objective aimed at the identification of the ways in which different extension agents deal with the role conflict. Extension agents behaved differently at different levels as shown in the research results in Chapter 7.1.3, 7.2.3 and 7.3.3.

For the CEAs the coping behaviour were relatively easy identified because the situation was simple and stable. Several coping strategies were discussed in Chapter 7 and are summarised in Table 9.1

TABLE 9.1
Coping strategies adopted by CEAs

Coping strategy	How adopted	Why adopted	Adopting Conditions
Conform to farmers	Give lip service to the government and in fact conform to farmers' expectations	Perceive farmers have more legitimacy than government. No real sanctions from role senders	As long as there is no pressure from the government
Conform to government	Give strong commitment to the government and follow orders	Perceive government has more legitimacy than farmers	As long as the cotton bollworm can be controlled
Avoid role conflict	Concentrate only on technical problems of cotton production	Consider technical mission is the most important for own career	Need professional power and have other extension projects
Compromise	Promote intercropping techniques	Perceive both role senders are legitimate and try to satisfy both	Techniques available and willingness to work on them
Concentrate on own goals	Follow personal goals and overlook role demands	Give personal goal more weight than that of role senders	Have opportunities and freedom to do own business

For the TEAs, the situation was much more complicated and unstable. The strength of pressure from both government and farmers had an important role to play in determining their coping behaviour. When the government had strong expectations and farmers a weak response, then the TEAs conformed to the government orders; when the government had strong expectations and farmers strong objections, then TEAs would wait-and-see; when farmers had strong objections, and the government did not have strong pressures, then the TEAs would hand in the role conflict to the upper level. This was displayed in Table 7.2. In fact the main coping behaviour of the TEAs was to experiment and they acted according to circumstance in the role conflict situation.

For the VLs, several coping strategies emerged as shown in Table 9.2.

TABLE 9.2
Coping strategies of VLs

Coping strategy	How adopted	Why adopted	Adopting Conditions
Take farmers side	Try to get as small a quota as possible for the village	Protect their own interest. They are farmers themselves and are elected by village farmers	Have strong arguments for bargaining with higher officials
Wait-and-see	When possible, try to postpone taking actions	Evaluation of the situation lead them to take this behaviour in order to avoid risk	No strong pressures from the government and have possibilities to wait-and-see
Hand-in the role conflict or resign	Give role conflict back to role senders or ask to resign	Cannot cope with strong role conflict; use resign as a way of bargaining	Strong role conflict; have alternative options than rendering as VLs
Conform to officials' expectations as a routine work or under certain conditions	Just follow orders or follow orders after making a deal with officials	Used to do bureaucratic jobs or exchange benefits with higher officials	Role conflict is weak and possible to obtain some promise from higher officials

- 3 The third sub-objective aimed at understanding the factors influence the coping behaviour. These findings are presented in Chapter 7.1.4, 7.2.5 and 7.3.5. The factors are divided into internal and external ones. Internal factors are those which determine a focal person's coping behaviour and external factors are those social-environmental factors which do not have a direct influence on the coping behaviour, but which can influence internal factors and finally have an indirect influence. As such, external factors will affect behaviour only if they are related to one or more internal factors. They are displayed together in Table 9.3.

TABLE 9.3
Factors influencing a focal person's coping behaviour in a role conflict situation

Internal factors	External factors
Goals of a focal person	Incentive structure
Degree of power a focal person holds	Organisational hierarchy
Perceived legitimate power of role senders	Focal person's background
Perceived sanction power of role senders	Professional position of the focal person
Past experience	Specialisation of the focal person
Attributes of role conflict	Party membership of the focal person
Interpersonal relations	Age
	Peer behaviour

To address the internal factors, the legitimate power gives a focal person some direction as to which role sender he/she should conform, and sanction power adds to which role sender he has to follow. The focal person's own goals may put his/her own opinion on the agenda, but his/her degree of power will decide to what degree he can follow these goals. Past experience provides a focal person with insight on suitable behaviour and the possible result of certain behaviour. Attributes of a role conflict will provide a further direction on whether to take fixed behaviour or a new behaviour and the moral problems associated with these types. Interpersonal relations will influence behaviour through the different modes of pressures that the role senders may use and the feedback between the role senders and a focal person.

To address the external factors, the incentive structure may influence the past experience of the focal person. Through past experience, a focal person knows which behaviour will be rewarded and which one will be punished. Different organisations will give the focal person different power and thus influence coping behaviour. The background of a focal person may influence his/her perception of the legitimacy of the role senders. More education generally means more 'professional power' and this will give them more power to follow their own goals. Performing administrative work will have a tendency for them to conform more to the government's wishes. However, an extension agent may tend to show more expertise in the field of extension science, thus may consider more of the farmer's wishes. Specialisation of the focal person may influence the way they perceive the role conflict and the legitimacy of the role senders. If a focal person is a member of the communist party, then he/she will tend to side more with the government. Young focal persons tend to conform to their own goals and take more risks. Their goal orientation is not the same compare with older focal persons. Peer behaviour is used very often as a reference for the evaluation of certain behaviour outcome.

- 4 The fourth research sub-objective concentrated on the identification and understanding of the dynamic processes of the role conflict. Three aspects of the dynamic process have been discussed in Chapter 8.2: (a) many roles are negotiated at all levels, and all parties to the role negotiation are both sending and receiving roles. A lot of bargaining take place in the negotiation process. (b) there is no fixed coping behaviour in the role conflict situation, and shifting patterns of selective coping behaviour results in line with the situational change. (c) the relationship among all three parties is in a dynamic process of change. All parties are experimenting during the whole process of the role conflict in order to find a suitable way to deal with it.
- 5 The fifth research sub-objective was to identify and understand reasons for different coping behaviour at different levels. These research findings are presented in Chapter 7.4. The reasons to explain the differences are: (a) difference in the power of the focal person; (b) differences in the governing principles; (c) differences in uncertainty (d) differences in incentive structure; (e) differences in feasibility of monitoring field activities and in power distance which are different at varying levels.
- 6 The last sub-objective intended to contribute to the scientific body of knowledge through the development of an extended model of coping behaviour of extension agents and their dynamic process of interaction through empirical research in China. This was partly done

in Chapter 8. A theoretical model was presented in Chapter 8.1, in which all factors determining an extension agent's coping behaviour in a role conflict situation was summarised in Figure 8.1. The dynamic process was discussed in Chapter 8.2. Some further theoretical discussion follows hereafter.

9.2 Theoretical discussion

The theoretical framework in Chapter 3 initiated a theoretical analysis of actors' responses to role conflict using the role conflict theory that was developed by Gross, Mason and McEachern (1958). Some critiques of the role conflict theory were discussed and, from these, some modifications were made. Looking back to these critiques and modifications, additional theoretical remarks can now be made.

- 1 There are indeed more types of coping behaviour than the existing role conflict theory proposed. The existing theory proposed only four types of behaviour in a role conflict situation: take sides, compromise, avoid and resolve conflict. This study shows that, besides these four types, there are also behaviour such as: concentrate on one's own goal, wait and see, experiment, and resign. These new types of response extend understanding to a greater extent in terms of the coping strategies that a focal person may take.

The study shows that extension agents, at no matter which level, have some personal goals other than the expectations of the government and farmers. These personal goals will, in certain ways, influence their coping behaviour. This understanding is valid not only for the extension agents in China but also for focal persons in general. The only difference might be the degree of power the focal persons have in seeking their own goals in a role conflict situation. As this study showed, CEAs have more power to pursue their own goals than TEAs and VLS. This point has been neglected in the existing theory.

The coping strategies of wait-and-see and resign are very important in the understanding of the impact of role conflict on the focal person. This study shows that in a difficult role conflict situation, focal persons do not always take action: they may wait-and-see or even resign from the conflict situation. These two strategies are normally applied when both role senders put strong pressure on the focal persons and focal persons do not know how to perform their tasks. The other condition for the wait-and-see strategy is that there is actually the possibility for the focal person to wait-and-see. As this study shows, this is not always possible, and in these situations, when they cannot wait-and-see and the role conflict is too strong for them, then the resign strategy may apply. As also indicated in this study, focal persons also use the resign strategy as a way of bargaining in order to put them in a better position. Aside from this, the tendency to resign from posts makes sense as coping strategy only if it results in a reduction of stress or associated strains for the focal persons, both psychologically and practically. The last point on the resigning response is that the focal person should have an alternative income generating activity available, otherwise, it is difficult to take this strategy. This is probably the reason why the research only witnessed the resign strategy in the use of VLS, and not by TEAs and CEAs. The VLS have the alternative to continue as farmers, whilst TEAs and CEAs do not. Although in theory TEAs and CEAs can also resign from their position, in practice the cost is too high. Even

within VLs, the resign strategy is not a common behaviour. Therefore, this research assumes that only when wait-and-sees and other strategies cannot apply, then the resign strategy will be used. However, this assumption has not been tested in the field and still needs further research.

The experimental strategy is extremely important in extending the understanding of the focal person's coping behaviour. The study shows that focal persons would adopt this behaviour when they are under strong pressure from both of the role senders and they are not sure of the appropriateness of the behaviour that they have to choose from. Normally, focal persons experiment in responding to this new situation. As indicated in Chapter 8.2, it is not only the focal persons who are experimenting, but also the role senders, i.e. the government officials and farmers, because none of them know how they should behave in the new situation. Thus, all three parties involved are experimenting and this leads to a dynamic relationship between them all (see Chapter 8.2).

- 2 According to the role conflict resolution theories of Gross, Mason and McEachern (1958) and Van de Vliert (1981a; 1981b; 1984), when a focal person is in a role conflict situation, his/her coping behaviour will depend on two main determinants: the legitimate power of the role senders, and the sanction power of the role senders. This study shows that these theories are too simple and too static. There are many more factors that determine the coping behaviour of the focal persons. These determinants have already been discussed in Chapter 8.1, but one additional remark will be made here, concerning the strength of the role conflict, because this factor has not been studied in the existing role conflict theory.

This study shows that the strength of a role conflict is a very important determinant for understanding the coping behaviour of focal persons. When the role conflict is weak, i.e. when the difference in expectations between role senders is not big, then it is fairly straightforward for the focal persons to respond in certain ways. Decisions will be strongly related to the focal person's own goals or other factors, because no matter what they do, there will be no strong objections from either of the role senders. However, when the role conflict becomes strong, i.e. when the difference in expectations between the role senders is big, then the focal persons may find it difficult to commit themselves to certain behaviour, especially when both role senders have sanction powers. In such a case, the focal persons are more likely to become ego-defensive and fall back on other coping strategies.

The strength of role conflict may also influence the focal persons' perception of the role conflict situation. It may directly influence his/her evaluation of the outcome for the intended behaviour. When the role conflict is weak, the outcomes do not matter for focal person. When the role conflict becomes strong, however, then the outcome of certain behaviour may have a significant impact on him/her. Thus the focal person has to calculate first, and then decide.

This understanding leads to another related aspect of the role conflict theory, that of personality orientation. According to the role conflict theory of Gross et al., actors have three types of orientation towards expectations. These are moral, expedient and moral-expedient (see Chapter 3 for details). This study shows that rather than being a personality factor that determines coping behaviour, instead it is more the role conflict itself and the associated

sanction power. Focal persons demonstrated different coping behaviour according to the differing strengths of the role conflict. The personality factor may only play a role to a certain threshold, as there are limits to the strength of role conflict and sanctions that a focal person is able to ignore. Even if there is a 'moral' orientation of actors, when strong sanctions would result, the actors have to conform to the expectations at least to a certain degree or show that they are attempting to do this. This study shows this point clearly: the changing behaviour ranging from conforming to farmers to conforming to the government, whilst in between choosing some other suitable coping strategies such as wait-and-see, experiment, hand in the role conflict, and so on, along with the changing situations.

- 3 It is proposed in Chapter 3 that role conflict handling is a dynamic rather than a static process. The study confirms this point.

In fact these dynamic processes are just a reflection of the broader context in China in which the policy mandate and market force is in a dynamic process of change as the system becomes mixed. When market force plays more important roles in farming, then farmers can do more according to their own wishes, and when policy mandate plays a more important role in farming, then farmers have to do something which they may not like to do such as to grow cotton. The case study shows that this conflicting demand by policy mandate and market force is the main source of role conflict for the extension agents in cotton production.

A related topic is the kind of research approach appropriate to conduct role conflict research in China. As discussed in Chapter 3, there are two approaches in role theory, commonly known as the structural and interactionist approaches. This study shows that an ideal research methodology is the combination of the two approaches. By using the structural approach, the researcher may first focus the study on the broader context and structure in order to understand how policy and market play a role in shaping the internal conflict at county level. Without this approach, the researcher would be unable to work out the role of different factors in determining the coping behaviour of the focal persons and to set up the theoretical model in Chapter 8.1. By adopting the interactionist approach, the researcher could focus on each individual extension agent to see how he/she copes with the role conflict in a changing situation. Without this approach, the researcher would have difficulties in dealing with the dynamic aspects of the role conflict and would not gain such insights as the negotiated roles, the dynamic of coping behaviour, and the dynamic relationship between the parties involved.

Therefore, both approaches have their value in China. Before the rural reform there was a more hierarchical societal structure and a clearer power difference. Since the reform the situation has changed a lot, but in certain areas, such as cotton and grain production regions, have remained more or less the same. In these areas, there is still a policy-driven system with direct supervision as the main mechanism. In such situations, the structural approach to role theory can explain a lot, because each person's identity is more fixed and each has a relatively simple role to play, and thus coping behaviour is more predictable. Therefore, the way the theoretical model is built in Chapter 8.1. is more a reflection of the structural approach.

It is also noticed that, since the reform, China in general is changing to a mixed system. It is becoming more flexible with less clear roles for different actors. More interactions are taking place between role senders and focal persons and the coping behaviour are less predictable. Role conflict and its resolution are becoming more the result of the interaction among all actors concerned. Thus, the interactionist approach has an important role to play in explaining the situation. This understanding is reflected in Chapter 8.2, in which a dynamic process is identified and discussed. Along with the further reforms going on, the more interactionist approach should be used to understand actors' behaviour in China.

9.3 Some areas for further research

- 1 This research study proposed a new way of measuring personality traits in Chapter 3, but there was no time or opportunity to carry out such a study. Therefore, it is left for other social scientists to study this question.

It is important to explicitly investigate the nature of the influence of personal factors in the process of role conflict. That is, do personal factors influence the level of experienced role conflict or do they simply moderate the relationship between role conflict and the focal person's responses? Are there combinations of personal factors which significantly interact in these relationships? Based on the current research results, personal factors may only play a role as moderator, but this needs to be further studied through empirical research.

Another important and unresearched topic is the personal factors of the role senders, which may influence the type of conflict sent, the absolute levels, and the types of responses which might be effective. Again, the same questions apply as above, to find out exactly what the role senders personal factors play.

- 2 The insights into the process by which role conflict leads to experiment and resigning from a job can be gained only through such a longitudinal research design. Future research can profitably apply such design to the investigation of role conflict theory.
- 3 Field experimental studies might be used to investigate changes in relationships between role senders and the focal person over time. It is important not only to trace individuals as they go through role conflict process to detect changes in their response, but also to be able to control the sources (role senders) and types of role conflict emitted by the organisational environment of the individual. Also the relationship between role senders who have several focal persons to deal with. How the role senders compare focal persons' behaviour and adjust their expectations to them. Controlled field experiments should enable the researcher to examine these aspects of the role sender-focal personal relationship.
- 4 With few exceptions, research on role conflict has investigated or assumed the dysfunctional effects on individuals and on organisations. Little attention has focused on the possibility that conflicting roles may contribute to organisational effectiveness and may, in fact, be necessary if organisations are to adapt to changes in their environment.

- 5 Miles (1976) and others indicate that there are threshold effects at both ends of the continuum, i.e. certain minimal levels of role conflict provide stimulation for performance, whilst beyond a certain maximum level additional conflict is not necessarily more stressful. In this study, a somewhat similar impression came across, i.e. below a certain level, there was no real role conflict for a focal person; only after a certain level role conflict arose and became stressful; and beyond certain higher levels of role conflict, additional conflict was not more stressful. Again this type of research needs a longitudinal research design.

9.4 Practical recommendations

Based on the research of the coping behaviour of extension agents in a role conflict situation, some practical recommendations are formulated.

9.4.1 Change in the government agricultural extension service

It is necessary to shift agricultural extension from the mandatory approach to other approaches in China. As this study shows, the approach to agricultural extension is mandatory, i.e. a number of coercive means are used, which allow agricultural extension to be used by the government as a consciously designed policy instrument.

Extension agents in China have to perform both professional work and 'central tasks' (bureaucratic interventions) such as promoting cotton production or the one child policy, collecting fines, and so on. The approach allows little room for putting farmers' needs on the extension agenda, especially when the goals of the government and farmers are in conflict.

The goals of the government can include some or all of the following: increasing food and other main crop production, stimulating economic growth, increasing the welfare of farm families and rural people, promoting sustainable agriculture (Van den Ban and Hawkins, 1996). These goals may conflict with each other: as this research shows, sometimes the government stressed the goal of stimulating economic growth by promoting farmers to grow whatever they like such as fruit trees and vegetables, and at other times the government stressed the goal of cotton production by forcing farmers to grow a certain quantity of cotton. Extension was used to reach both goals. It is clear that extension is a suitable policy instrument for problems where the best interests of farmers and government coincide, as was often the case with the introduction of high yielding varieties, and also with other new technologies.

The problem is that the goals of farmers and government do not always coincide, and in fact they often conflict, as is the case of cotton production in this research. In such a case, there are important disadvantages in using extension as a government instrument to implement government policy: (1) it is almost impossible for the extension agents to gain the farmers' trust and therefore be effective when they also have a policing role such as collecting fines from farmers; (2) the 'central tasks' take time which thus cannot be spent on extension work. It is too often that the government gives more priority to 'central tasks' than to extension work, particularly at the lower levels of the extension system such as the

township and village levels, (3) these central tasks may require agents with different personalities and an organisation with a different structure from that of a conventional extension service (Van den Ban and Hawkins, 1996). When a central task is not in line with the farmers' interests then it will create a role conflict for the extension agents in the field. This role conflict, as was shown in this study, gives a lot of problems for the extension agents and a lot of their energy and time is wasted. As a result, both the 'central tasks' and extension work cannot be performed well.

Therefore, it is very important for the Chinese government to make a clear decision about how the extension system should be used in the present situation. Before the rural reform, it was not a big problem to use the system as a government instrument to perform bureaucratic tasks, because there was not much role conflict for the extension agents. There was only one important mission for agricultural extension at that time: to increase agricultural production and food security in the country.

Since the rural reform, it has become clear that the farmers' interests also have to be served by the extension system: farmers will not follow extension recommendations unless they are convinced that it is in their interest to do so. If a mandatory extension system cannot serve farmers interests' in the changed environment, then farmers would not wish to or would not be able to continue working in farming sector and would be forced out of farming.

This would not be a problem in a country where there is alternative employment for people leaving agriculture, but in China people leaving agriculture increase unemployment or underemployment in other sectors of the economy and this leads to serious social problems. In 1996, there were already 120 million surplus rural labours, and it is estimated to reach about 200 million of surplus rural labour in China by the year 2000 (Ma, 1996). This puts a lot of pressure on the Chinese government.

In order to keep farmers working in farming, and to ensure that both food and other agricultural products are produced, the farmers' interests have to be considered by the government. Otherwise, the eventual losers will be not only farmers but also the whole of Chinese society. It is good for farmers and also for the government to shift, in the long run, from using extension as a government policy instrument to using it as a professional organisation and to take farmers' interests into deeper consideration. Some fundamental changes are needed. It seems that policy makers still try to use agricultural extension to execute its traditional job. There is a need to change agricultural extension from a mandatory approach to other approaches such as informative extension, where the emphasis is on supporting the individual to make the optimal decision with respect to attaining perceived goals and the individual is seen as free to choose extension services, and formative extension where extension may also educate people or assist them through training to make decisions, to learn, to manage, to communicate, to analyse, to be a leader, to encounter suppression, to organise etc. (Röling, 1988).

The mandatory approach can only work for a short period of time. In the case study area, negative feelings arose for both the farmers and each level of government when they talked about cotton. Therefore, directive intervention by using extension as a government instru-

ment seems difficult for a long-term process. Further, it damages the relationship between farmers and officials, and farmers and government. It may be convenient in a short-term for administrators to give extension agents additional duties to their normal educational and advisory activities, including implementing all kinds of government policies in the field. However, it will, in the long-term, have a detrimental effect on the level of confidence and trust necessary for extension agents to carry out their extension activities (Van den Ban and Hawkins, 1996). Thus, extension has to function more as a professional organisation than a government bureaucracy. The new extension approach is needed in China. The question is as to what role agricultural extension can play in China. Two roles are recommended as follows.

- 1 The government uses too much sanction power in the process of implementing government policy. There is a real danger that unrest will occur in the rural areas if such sanction power is used over a long time period. Therefore, the government has to consider a shift to using more legitimate power. Legitimate power has to be built up, and extension can play an important role here, i.e. in the formulation of policy itself, that is, it can be used as a participatory tool for the interactive production of policy (Van Woerkum, 1990). Extension can be used to facilitate communication and mutual understanding between the government and farmers.
- 2 In a policy-driven system, there is less farmer decision-making because policy regulations and rules have already formed decisions for them. In a market-oriented system, farmers have more to decide for themselves, although they are influenced a lot by the market, and sometimes have little choice but to follow the market. Still, the market influence is not compulsory on farmers. As a result of the process of transition from a policy-driving economy to a market-oriented economy in China, farmers now have a very different role to play than when they were expected to follow orders. They have to learn how to make many decisions that others made for them in the past. Therefore, an important role of the extension service is to teach them how to make these decisions.

In order to do so, the extension system itself needs to be strengthened, especially at the lower levels of township and village. As this study shows, the degree of professionalism of the extension system is high at the top and low at the bottom. It has to rely on the village leaders for implementing extension activities at the farm level, but the village leaders cannot perform this work well because they are over-occupied with bureaucratic tasks and also do not have the qualifications necessary to carry out these extension activities. More qualified extension agents are needed at both township and village levels.

Not only more staff but also more training is needed for the extension service. In the new situation in China, it is not the task of extension agents to change the farming methods, but to educate the farmers, who as a result takes the decisions on which changes to make. The successful education of farmers requires a good understanding of their situation and of their ways of thinking, and this requires two types of knowledge. The first type is technical knowledge, as although the extension agents above county level are qualified, many extension agents at both township and village levels still need more training. However, it is not enough that extension agents have technical knowledge of agricultural research findings; it is also necessary that they find creative new ways of applying these findings in each speci-

fic situation and of integrating them with the experiences of the farmers. This requires the second type of knowledge: good knowledge of the market and of changes in the market and other related knowledge such as the knowledge about economics, planning, organisational aspects of farming and so on. Therefore, a good extension agent has to be trained not only in agricultural production technology, but also in economics, education and communication. This second type of knowledge is lacking for most extension agents in China.

However, these two types of knowledge may need different learning processes. In the present situation in China, both types of knowledge are needed, but with greater emphasis and training for the second type for extension agents. Or at least some kind of platform should be established to support extension agents in both types of knowledge.

9.4.2 Government policy

The consistency of government policy is very important. The case study shows that government policies in cotton production are not consistent. When there is enough cotton in China, then the government encourages farmers to produce other crops, but when there is shortage in cotton, the government tries to persuade and force farmers to plant cotton. This is not good for farmers, because they feel it difficult to follow the changing policy. It is also not good for the government itself, because it leads to many conflicts between farmers and government. Also, farmers have no confidence in the government in such cases. In order to overcome such conflicts, the government should have a long term planning approach and design a consistent policy.

The past experience of the Common Agricultural Policy (CAP) in European Community could be applied to help solve part of the problem in China. Security of food supply is a common concern around the world. This concern led the EC to create a single market in agriculture as early as 1962. The fundamental aims of the CAP are set out in the EC's founding Treaty of Rome. This required the Community to increase agricultural productivity, to raise farm living standards, to stabilise markets, to guarantee security of supply and to make products available to consumers at reasonable prices (Commission of the European Communities, 1993). At the heart of the CAP was the system of guaranteed prices for unlimited production. Farmers received a minimum price for their goods even if they sold them as surpluses to be stockpiled by the EC intervention authorities for later re-sales at subsidised prices on the world market. This price-driven support system helped the Community to meet its self-sufficiency targets. Although the CAP is now in the reform process, its success is still valid for the present situation in China, particularly for interventions such as the price policy.

In order to have a secure supply of food and cotton in China, it is necessary to establish a minimum price and maximum price for those products. The market price is allowed to change freely within this range. By doing this, the farmers may be motivated to invest more and may be less worried about selling their products than they are at present. The conflict between farmers and government may be decreased. The important point is that long-term government policy should ensure not only the availability of food and cotton for consumers at affordable prices, but also fairer returns to farmers for their efforts. Only when this farmers' interest has been taken into account in government policy, will there be a secure supply of food and cotton in China.

However, the CAP has also its shortcomings. By introducing the price policy the Chinese government have to consider about other mechanisms to overcome the side effect of the price policy such as overproduction, environment problems and so on. But they are beyond the scope of this study.

9.4.3 Farmers' organisations

Farmers' organisations need to be developed in China. A small piece of land is not feasible for cotton production. Large sizes are needed for various reasons such as ease of management work, control of pests, mechanisation, higher yields etc. This is also the constraint that Chinese agriculture in general is facing, and collective farming may be one of the ways to overcome the current problem of fragmentation.

As explained previously, after the rural reform, land was allotted to each individual household. Through 1978 to 1985, productivity increased at a high speed and the yield and unit output reached their highest levels. In recent years, however, the difficulties of working small parcels of land have emerged, each farm household in average only has 0.55 ha of land and are divided into 9 pieces (Ma, 1996), and it has become one of the important constraints for agricultural development in China. Farmers' co-operatives could be a solution to help to solve the problem. The co-operatives organise farmers to work together, in activities such as spraying pesticides, and a better result can be reached. Co-operatives may also improve management better than for individual farmers, such as the case study given in Zhao Gu Ying Village (Qu, 1997). It is important to mention here that this study is not promoting collective farming in the way it was practised in China before the rural reform.

Co-operation between farmers in terms of farming, management, and marketing etc. can increase productivity, decrease production costs and also strengthen the capability of competition of the market.

In many countries, such as in The Netherlands, farmers' organisations play an important role in agricultural development. A number of roles (educational, commercial and organisational, management common property, defence of collective interests of members, religious, cultural and recreational roles) in the development process can be performed more effectively by farmers themselves through their own organisations than by government agencies (Huang, 1992; Van den Ban, 1998). These farmers' organisations can also influence government policies, such as of pricing, tax, influencing government agencies to provide appropriate services, e.g. by participating in the planning of research and extension programmes. It might not be necessary in China to develop such strong farmers' organisations as in The Netherlands, but farmers' organisations in China are currently far too weak. The present situation of farmers' organisations does not correspond with the large farming population who need more power in society. Again, this is not only in the interest of farmers, but also of the Chinese government if the country wants to realise two important transformation goals of its rural reform: (a) of traditional into modern farming, and (b) of self-sufficient farming into commercial agriculture.

On a positive note, the awareness by government officials at all levels of the need to promote farmer co-operation is increasing in recent years in China. Now the question is more about how to develop farmers' organisations. Based on the Dutch experience, one point

needs special attention in this development that farmers' organisation should be developed on a voluntary basis and should be managed by the farmers themselves. Although they may need the help of all kinds of specialists, the decision making power of the organisation should remain with the farmers themselves (Huang, 1990). Government can play a role to facilitate this development process but should not force farmers to organise in a certain way. Here extension agents can also play a role (Huang, 1996).

The development of farmers' organisations also requires a certain educational level of the farmers. The success of Dutch agriculture in the world market is, to a large extent, a result of their system of vocational agricultural education. The vast majority of their farmers have attended an agricultural school (Van den Ban, 1998). It is not realistic to give all farmers formal education in China at present. However, it is possible to develop more vocational agricultural education. Scoullar (1978) indicates that farmers who have secondary level education will consult more to extension agents than those farmers who do not have secondary level education will. When the farmers' educational level increases then their ability to take and utilise knowledge also increases and also their social status. Finally, their competence to make better decisions would also increase, and this is what farmers really need in China.

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Summary

This book is about the coping behaviour of extension agents in role conflict situations in a changing environment in China. The study presents the case of cotton production in Xinji county, China.

Chapter 1 gives background information on Chinese agricultural and rural reform since 1978 and its impact for extension system and extension agents. Before the rural reform, Chinese agriculture was collectively managed. The extension system dealt with collective groups of farmers and was used as a policy instrument to implement government policy. Since the rural reform, the rural economy and social environment have been changed considerably, the main transformations being that the managerial unit changed from commune and brigade to individual household, and traditional agriculture switched to industrialised and commercialised agriculture. After the rural reform, the extension system had to deal with individual farmers and to take their wishes into consideration.

The second Chapter formulates the research problem and research objectives. Since the reform, it has become clear that farmers' interests also have to be served by the extension system. Farmers will not follow extension recommendations unless they are convinced that it is in their interests to do so. Thus the client market has emerged alongside policy as a second important driving force for the extension system. Now the extension system has to serve both the interests of policy makers and farmers. In China there is a clear conflict between the goals of the government and of farmers in the field of cotton production. The government wants farmers to produce a certain amount of cotton while farmers want to make more profits from non-farming sectors or in growing fruit trees and vegetables. Therefore, two driving forces - policy and client market - create a conflict situation for the extension agents. The extension agents find themselves exposed to conflicting expectations. From this, the main research question emerges as: how do extension agents in Xinji county experience and cope with the role conflict generated by the increasingly opposing demands of the policy mandate and client market force? Research objectives and relevance of the study are also discussed in this Chapter.

Chapter 3 provides a theoretical framework relevant to this study. Role conflict theories have been reviewed. As a result, four types of behaviour and three behaviour determinants are put forward. The four types of behaviour are: take sides, compromise, avoid and resolve conflict. The three behaviour determinants are: legitimate power and positive and negative sanctions power of the role senders. Some critiques on the existing role conflict theories are discussed and modifications are made, for example, a focal person's own goal is added as one behaviour determinant. Some cultural differences are also discussed in relation to the validation of the role conflict theory.

Chapter 4 presents the research approach and methodology used in this work. A grounded theory was used to guide the study process, and case studies were used to conduct the research. Data collection methods and techniques are discussed and, the Chapter concludes with some experiences of undertaking social research in China.

In Chapter 5, a description of the study area and the situation of cotton production are provided, in which the natural environment, social structure, basic facts and production with particular regard to the cotton production are elaborated. The importance of cotton production in China is also given in order to clarify why the government is intervening so strongly in this sector.

In Chapter 6, both government policy and farmers' attitudes towards cotton production are presented. Conflicts between the expectations of the government and farmers for extension agents are discussed.

The main research findings are presented in Chapters 7 and 8. All extension agents perceive a role conflict in cotton production, but the degree of role conflict varies. The higher level of extension agents (CEAs) perceive a clear role conflict, but not as strong as the extension agents at lower levels (TEAs and VLS). This study shows that the existing role conflict resolution theories are too simple and too static. It finds that there are more types of coping behaviour and more factors which determine coping behaviour. In Tables 7.2, 9.1 and 9.2, the various types of coping behaviour adopted by the different levels of extension agents are given. The reasons and conditions for adoption are also provided in these tables. A new theoretical model for understanding the coping behaviour of extension agents is introduced in Chapter 8, in which a division is made between internal and external factors. The internal factors are considered to be the major determinants for explaining coping behaviour in a role conflict situation. They are as follows: goals of a focal person; degree of power held by a focal person; perceived legitimate power and perceived sanction power of role senders; past experience; attributes of role conflict and; interpersonal relations. The external factors do not have a direct influence on the coping behaviour of a focal person, but can influence internal factors and finally can have an indirect influence. They are: incentive structure; organisational hierarchy; focal person's background; professional position and specialisation of the focal person; whether party member; age of the focal person and; peer behaviour. The reasons behind the different types of coping behaviour of extension agents at different levels are also presented in Chapter 7. These reasons are discussed along the following lines of differentiation: the power of the focal person; the governing principles; uncertainty at varying levels; incentive structure and; feasibility of monitoring field activities and in power distance.

The handling of role conflict is a dynamic rather than a static process. Three aspects of the dynamic process are discussed in Chapter 8: (a) many roles are negotiated at all levels, and all parties within the role negotiation are both sending and receiving roles. A lot of bargaining take place in the negotiation process. (b) there is no fixed coping behaviour in the role conflict situation, and shifting patterns of selective coping behaviour result, in line with situational changes. (c) the relationship between all three parties (government officials, extension agents and farmers) is in a dynamic process of change. All parties experiment during the whole process of the role conflict in order to find a suitable way to deal with it.

In the final Chapter, conclusions, discussion and recommendations are outlined based on the study. It is concluded that there are indeed more types of coping behaviour than the existing role conflict theory proposes. Besides taking sides, compromising, avoiding and

resolving conflict, there are also other types of behaviour such as: to concentrate on one's own goal, to wait-and-see, to experiment and resign. These new types of coping greatly extend our understanding on the coping strategies that a focal person may take. This study shows that focal persons such as extension agents at any level also have some personal goals other than the expectations of the government and farmers. These personal goals influence their coping behaviour to a certain extent. The only point of differentiation might be the degree of power that the focal persons have in seeking their own goals in a role conflict situation. As this study shows, CEAs have more power to pursue their own goals than TEAs and VLs. When faced with a role conflict situation, extension agents demonstrate a more professional attitude at county level, but act more as government officials at township level. In a difficult role conflict situation, focal persons do not always take action. They may wait-and-see or even resign from the conflict situation. These two strategies are normally applied when role senders from different sides put strong pressure on the focal persons, leading to them not knowing how to perform their tasks. The identification of the strategy of experimentation is extremely important in extending our understanding of the focal person's coping behaviour. This study shows that a focal person would adopt this behaviour in a new and difficult situation.

This research indicates that the strength of a role conflict is a very important determinant for understanding the coping behaviour of focal persons. When the role conflict is weak, i.e. when the difference in expectations between role senders is not big, then it is fairly straightforward for a focal person to respond in certain ways. In this case decisions will be strongly related to the focal person's own goals or other factors, because no matter what he/she does, there will be no strong objections from either of the role senders. However, when the role conflict becomes strong, i.e. when the difference in expectations between role senders is big, then a focal person may find it difficult to commit him/herself to certain behaviour, especially when both role senders have sanction powers. In such cases, the focal persons are more likely to become ego defensive and fall back onto other coping strategies, such as wait-and-see or experimentation. This factor has received little attention in the existing role conflict theory. In the final section of Chapter 9, some areas for further research and practical recommendations are suggested, based on the research results.

Samenvatting

Dit proefschrift onderzoekt de wijze waarop voorlichters omgaan met rolconflicten in een veranderende omgeving in China. Het onderzoek is gebaseerd op ervaringen in de katoenproductie in Xinji County, China.

Hoofdstuk 1 geeft een overzicht van de Chinese landbouw- en plattelandshervormingen sinds 1978, en de gevolgen van deze hervormingen voor het voorlichtingssysteem en de betrokken voorlichters. Voor de hervormingen werd de Chinese landbouw collectief beoefend en beheerd. Het voorlichtingssysteem ondersteunde collectieve groepen boeren. Voorlichting werd gebruikt als een instrument om overheidsbeleid te implementeren. Sinds de hervormingen zijn de landbouweconomie en de sociale omgeving aanzienlijk veranderd. De grootste veranderingen betreffen de vervanging van communes en brigades als managementeenheden door individuele huishoudens en de verschuiving van traditionele landbouw naar industriële en commerciële landbouw. Sinds deze verschuivingen hebben plaatsgevonden moet het voorlichtingssysteem ook individuele boeren ondersteunen en rekening houden met hun wensen.

In het tweede hoofdstuk worden het onderzoeksprobleem en de onderzoeksdoelen geformuleerd. Sinds de hervormingen is het duidelijk geworden dat het voorlichtingssysteem ook boerenbelangen dient te behartigen. Boeren zullen de aanbevelingen van voorlichters alleen opvolgen wanneer zij overtuigd zijn dat het in hun belang is om dit te doen. Als gevolg is naast beleid, de vraag van de cliënt, oftewel een markt vraag, verschenen als tweede stuwende kracht in het voorlichtingssysteem. Het voorlichtingsapparaat moet nu zowel de belangen van het beleid als die van de boeren dienen. In China bestaat er op het gebied van de katoenproductie een duidelijk conflict tussen de belangen van beleidsmakers en boeren. De overheid wil dat boeren een bepaalde hoeveelheid katoen produceren, terwijl de boeren meer winst zien in fruit- en groenteteelt en in andere sectoren dan de landbouw. Door de voorlichters bloot te stellen aan met elkaar conflicterende verwachtingen creëren de twee drijvende krachten, het beleid en de markt vraag, een rolconflictsituatie voor de voorlichters. Dit rolconflict vormt de aanleiding voor de centrale onderzoeksvraag: Hoe gaan voorlichters in Xinji County om met het rolconflict dat wordt veroorzaakt door de steeds meer uiteenlopende eisen van het beleidsmandaat en de vraag van de cliënten. De onderzoeksdoelen en relevantie van de studie worden eveneens in dit hoofdstuk besproken.

Hoofdstuk 3 wordt het theoretische kader dat in deze studie is gehanteerd beschreven. De bestaande rolconflictheorieën worden geanalyseerd. Aan de hand van deze analyse worden vier typen gedrag en drie gedragsdeterminanten onderscheiden. De vier typen gedrag zijn: partij kiezen, compromis zoeken, conflict vermijden en conflict oplossen. De drie onderscheiden determinanten van gedrag zijn: legitieme macht, positieve sanctiemacht van de rolzenders ('role senders') en negatieve sanctiemacht van de rolzenders. Kritiek op de bestaande rolconflictheorieën wordt eveneens geanalyseerd. Op basis van deze kritiek wordt een aantal wijzigingen in het theoretische kader aangebracht. Zo wordt het doel van de hoofdpersoon (de persoon op wie rolverwachtingen zijn gericht) toegevoegd als een determinant van gedrag. Met betrekking tot het valideren van de rolconflictheorie worden culturele verschillen besproken.

Hoofdstuk 4 geeft de onderzoeksaanpak en methodologie weer. De case studies zijn uitgevoerd aan de hand van de gefundeerde theoriebenadering ('grounded theory'). De methoden en technieken van dataverzameling worden eveneens in dit hoofdstuk omschreven. Het hoofdstuk besluit met een reflectie op het doen van sociaal wetenschappelijk onderzoek in China.

In Hoofdstuk 5 worden het onderzoeksgebied en de katoenproductie beschreven. Aandacht wordt besteed aan het milieu, de sociale structuur, een aantal basisfeiten en productieprocessen ten aanzien van de katoenproductie. Het belang van de katoenproductie in China wordt geschetst om duidelijk te maken waarom de overheid zo sterk intervenueert in deze sector.

In hoofdstuk 6 worden het overheidsbeleid en de attitudes van boeren ten aanzien van de katoenproductie gepresenteerd. Conflicten tussen de verwachtingen van de overheid en de boeren ten opzichte van voorlichters worden verder belicht.

De belangrijkste onderzoeksresultaten worden in Hoofdstuk 7 en Hoofdstuk 8 gepresenteerd. Alle voorlichters ervaren een rolconflict in de katoenproductiesector. Echter, de mate waarin het rolconflict wordt ervaren verschilt. Hoger geplaatste voorlichters (CEAs) onderkennen een duidelijk rolconflict, maar dit is minder sterk dan het rolconflict dat wordt ervaren door voorlichters op lagere niveaus (TEAs en VIs). Het onderzoek toont aan dat bestaande rolconflicttheorieën een veel te eenvoudige en statische weergave geven van de praktijk. Er zijn veel meer typen gedrag en factoren die de wijze van omgang met rolconflicten bepalen dan de bestaande rolconflicttheorieën aangeven. De tabellen 7.2, 9.1 en 9.2 geven een overzicht van de verschillende soorten gedrag dat door de voorlichters op de diverse niveaus wordt vertoond. De aanleidingen en voorwaarden voor het vertonen van deze gedragingen worden eveneens in deze tabellen gepresenteerd. Om het rolconflictgedrag van voorlichters beter te begrijpen wordt in Hoofdstuk 8 een nieuw theoretisch model geïntroduceerd. In dit model wordt een onderverdeling gemaakt tussen interne en externe factoren. Interne factoren worden gezien als de meest belangrijke determinanten voor het verklaren van de wijze waarop voorlichters omgaan met rolconflictsituaties. Deze interne factoren zijn: de doelen van de hoofdpersoon, macht van de hoofdpersoon, legitieme macht ervaren door rolzenders en sanctiemacht ervaren door rolzenders, ervaringen in het verleden, karakteristieken van het rolconflict en interpersoonlijke relaties. De externe factoren hebben geen directe invloed op het rolconflictgedrag van de persoon op wie rolverwachtingen zijn gericht, maar kunnen wel de interne factoren beïnvloeden. Hierdoor kunnen zij een indirecte invloed hebben. De externe factoren zijn: beloningstructuur, organisatie hiërarchie, achtergrond van de hoofdpersoon, professionele positie van de hoofdpersoon, specialisatie van de hoofdpersoon, partijtjidmaatschap, leeftijd en gedrag van collega's. Oorzaken voor het verschillende rolconflictgedrag van voorlichters op de diverse niveaus worden ook in Hoofdstuk 7 geanalyseerd. Deze oorzaken worden besproken aan de hand van de volgende verschillen: macht van de persoon op wie rolverwachtingen zijn gericht, managementprincipes, onzekerheid op de diverse niveaus, beloningstructuur, de uitvoerbaarheid van monitoringsactiviteiten in het veld en machtsafstand.

De omgang met rolconflicten is eerder een dynamisch dan een statisch proces. Drie aspecten van het dynamische proces worden belicht in Hoofdstuk 8: (a) Over veel rollen wordt

op alle niveaus onderhandeld en alle partijen in het onderhandelingsproces hebben zowel een zender- als een ontvangerrol; (b) Er is geen vaststaand rolconflictgedrag. Veranderende patronen in selectief rolconflictgedrag treden op in overeenstemming met veranderingen in de rolconflictsituatie; (c) De relatie tussen de drie betrokken partijen (overheidsambtenaren, voorlichters en boeren) zijn voortdurend in verandering. Alle partijen zijn continue aan het experimenteren om een aanvaardbare manier te vinden om met het rolconflict om te gaan.

In het laatste hoofdstuk worden de conclusies, discussie en aanbevelingen gepresenteerd. Op basis van het onderzoek kan worden geconcludeerd dat er inderdaad meer typen gedrag kunnen worden onderscheiden om rolconflicten het hoofd te bieden dan de bestaande rolconflicttheorieën aangeven. Naast de in Hoofdstuk 3 genoemde gedragstypen (partij kiezen, compromis zoeken, conflict vermijden en conflict oplossen) bestaan gedragspatronen zoals: het realiseren van persoonlijke doelen, afwachten, experimenteren en berusten. Deze nieuwe typen rolconflictgedrag vergroten ons begrip van mogelijke strategieën die een persoon op wie rolverwachtingen zijn gericht kan hanteren. Het onderzoek toont aan dat deze hoofdpersonen zoals voorlichters, ongeacht niveau, naast de verwachtingen van de overheid en boeren, persoonlijke doelen stellen. Deze persoonlijke doelen beïnvloeden het rolconflictgedrag. Personen op wie rolverwachtingen zijn gericht kunnen echter wel verschillen in de macht die zij hebben om hun persoonlijke doelen te verwezenlijken in een rolconflictsituatie. Dit onderzoek maakt duidelijk dat CEAs meer macht hebben om hun persoonlijke doelen na te streven dan TEAs en VLs. Wanneer voorlichters een rolconflictsituatie ondervinden op County niveau, vertonen voorlichters een professionele houding. Op gemeentelijk niveau handelen ze meer als overheidsambtenaren. In moeilijke rolconflictsituaties ondernemen hoofdpersonen niet altijd actie. In deze situaties vertoont men vaak afwachtend of berustend gedrag. Deze strategieën worden meestal toegepast wanneer beide rolzende partijen grote druk op de hoofdpersonen uitoefenen zodat deze niet weten hoe hun taak uit te voeren. Met name de identificatie van het gedragstype 'experimenteren' draagt bij aan ons inzicht in rolconflictgedrag. Het onderzoek toont aan dat een persoon op wie rolverwachtingen zijn gericht dit type gedrag toepast in nieuwe en moeilijke situaties.

De intensiteit van een rolconflict blijkt een belangrijke factor om het rolconflictgedrag van hoofdpersoon te begrijpen. Wanneer een rolconflict zwak is, met andere woorden wanneer het verschil in verwachtingen tussen rolzenders niet te groot is, dan is het vrij gemakkelijk voor een hoofdpersoon om te bepalen hoe gereageerd moet worden. Besluiten zullen sterk gerelateerd zijn aan persoonlijk doelen van de persoon op wie rolverwachtingen zijn gericht, of aan andere factoren, omdat wat voorlichters ook doen, rolzenders geen grote bezwaren zullen hebben. Echter, wordt het rolconflict zeer groot, dan kunnen hoofdpersonen het moeilijk vinden om zich op een bepaald gedrag vast te leggen. Dit is zeker het geval wanneer verschillende rolzenders sanctiemacht hebben. In deze gevallen zullen hoofdpersonen waarschijnlijk ego-defensief worden en terugvallen op andere rolconflictstrategieën zoals afwachten of experimenteren. Deze factor heeft nog maar weinig aandacht gekregen in de bestaande rolconflicttheorieën. In het laatste deel van Hoofdstuk 9 worden, gebaseerd op de onderzoeksresultaten, suggesties gedaan voor verder onderzoek en worden een aantal praktische aanbevelingen geformuleerd.

Curriculum Vitae

Rui Qing Huang (黄瑞清) was born in Beijing, China, on January 10, 1960. He completed his undergraduate degree in Horticultural Science at Beijing Agricultural University in 1984. He obtained a M.Sc. in the Management of Agricultural Knowledge Systems at Wageningen Agricultural University in The Netherlands, in 1990. His thesis was entitled: 'The Level of Co-operation among Agricultural Extension Organisations in the Greenhouse Vegetable Sector in the Westland Area of The Netherlands'.

In September 1984, he commenced his professional career working for the Beijing Agricultural Bureau. In August 1985, he was transferred to the Beijing Agricultural Technology Extension Station to work for the China - EEC project Beijing Vegetable Seedling Production. From 1985 to 1988, he worked as Project Officer and Extension agent. At that time he was the team leader of the training program for the China - EEC project and participated in a six-month advanced study and training section in the field of greenhouse vegetable production in The Netherlands. He was also the co-organiser for the first Dutch Flower Exhibition in Beijing in 1986.

From 1991, he began his Ph.D. research program at the Department of Communication and Innovation Studies, Wageningen Agricultural University. In addition to his scientific activities, he has been involved in many development activities and consultancies. He was the primary organiser and program chair for the First Symposium on Dutch Experience of Agricultural Development and Its Implications for China. He is a member of the Rural Sociological Society and a committee member of the Asian Rural Sociological Society.