A CRITICAL COMPARISON OF THE HISTORY, BACKGROUND, ORGANIZATION AND POLICY OF THE COOPERATIVE EXTENSION SERVICE OF THE UNITED STATES OF AMERICA AND THE NATIONAL AGRICULTURAL ADVISORY SERVICE OF ENGLAND AND WALES

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By

OBED MARTIN HOSEGOOD

A THESIS

Submitted to the College of Agriculture
Michigan State University of Agriculture and Applied Science in
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in
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AN ABSTRACT.

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THESIS ABSTRACT.

O.N. HOSKOOD.

A study of the historical developments which led up to the formation of the Cooperative Extension service of the United States and the National Agricultural Advisory Service of England and Wales. The organization of the two services is described as a basis for a discussion of the modes of operation in their relationships with the public and internally.

In the United States, particularly in the South, there developed a limited system of agricultural patronage with large landowners taking the lead in farming technology and promoting it's adoption among their tenants. Similar educational programs were promoted by land settlement companies. For every honest promotion there were many less scrupulous which tended to create a general distrust of educators who were privately sponsored. The land grant colleges were nationally instituted but the early development was slow because of a lack of suitable information to teach. This was remedied by the Experiment Station Act. As the consequences of soil exploitation became felt, a pool of information to combat it stagnated in the colleges. The Extension Service emerged from this situation. The form which the Smith-Lever Act eventually took owes much to the personalities of Seaman A. Knapp, W.J. Spillman, Kenyon L, Butterfield and Liberty Hyde Bailey. The flexibility of the organization is illustrated by the swing from local domination by the farm bureaus towards national control during the 'New Deal' and back to a compromise today.

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In England farming developed more slowly. From the earliest it was dominated by a powerful social structure which hindered progress but at least ensured the maintenance of soil fertility. As the manorial system began it's painful decline it was accelerated by a host of agricultural writers and progressive land-owners who could see that no farming improvements were possible until the land was enclosed. Agricultural progress was almost entirely by patronage to the extent that the majority of early colleges were privately sponsored. As the industrial revolution progressed, and foreign food started to come into the country, British Farming (the Corn Laws having been repealed) suffered a severe depression and finally relinquished first place in the national economy to industry.

State technical education in Britain (including agriculture) developed soon after compulsory education and later research, teaching and extension in agriculture centered around research institutes, agricultural colleges and county farm institutes. There were many reasons why this did not work, but most of them derive from small influence which farming interests held politically. It was difficult to devise a coherent and continuous agricultural policy.

In 1946 the National Agricultural Advisory Service of England and Wales was formed as a part of the Ministry of Agriculture and Fish-

eries. The new advisory officers remained attached to the remodeled post-war county agricultural executive committees. The specialist staff was released from colleges where it had become somewhat of an unwanted orphan.

Local operation of the two services is reviewed against a background of size of counties and districts, types of farming and rural social organization. Objectives are compared and though they overlap in the dissemination of technical agricultural information, the Extension Service performs many other functions characterized as "rural social welfare" whereas the Advisory Service is concerned with some regulative work.

The author discusses staff training, evaluation of staff competance and the position of the specialist in the extension program and their relationship to the Advisory Service.

The thesis discusses historical political attitudes towards rural life and their effects on educational policy. An attempt is made to account for the great political influence which rural interests hold in the United States and future trends are discussed.

The fortunes of the farmers in England are closely linked with agricultural policy and the world economic situation and it is suggested that greater emphasis be put upon policy extension as it is being developed in Michigan.

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East Lansing

July 1956

CHAPTER I

INTRODUCTION

The author is employed as District Advisory Officer in the National Agricultural Advisory Service of England and Wales, stationed in the St. Columb District of the County of Cornwall. He is fortunate to have obtained a fellowship from the W. K. Kellogg Foundation which has enabled him to spend a year at Michigan State University to study for an M. S. degree in Agricultural Extension. He has taken every opportunity to meet Extension personnel in Michigan. By so doing, he has attempted to put himself in a position to make this study.

It is appreciated that such a study is somewhat ambitious, considering the time, experience and other facilities available to him. The field is so wide that it has been necessary to be extremely selective in the matters discussed. An attempt has been made to highlight what the author considers to be the more important points of difference and to discuss their implications.

It may be that the reader will feel that certain facets of the problem have been dismissed after too superficial a treatment. This may be true. In his defense, the author would plead that the selection of a few significant factors, however lightly sketched from a vast field of avail-

able data, is a more difficult and challenging task than the exhaustive treatment of a narrow field. He would quote from the report of the Joint Committee on Extension Programs, Policies and Goals (Hannah 1948) when it discusses what the farm family needs from extension: "They need a competent interpreter and integrator of usable facts" and "There is a need for greater emphasis . . . . on informed 'generalists.'" The present author responds to this appeal and has attempted - albeit very inadequately, no doubt - to write what he considers to be a "generalist's" thesis.

He appreciates that his knowledge and experience are very limited and that many of his "facts" are not authenticated, perhaps cannot be authenticated. Nevertheless life must go on and one must learn to make the best use of the resources that are available. If action could be taken and opinions stated only from the basis of authoritative and irrefutable fact, nothing would be done and few opinions would be held, except after the event. It has not been possible to ignore the home economics and 4-H club activities of extension, because here lies a major difference. As far as possible, however, the author has attempted to confine the discussion to agricultural extension activities.

CHAPTER II

METHOD OF APPROACH

While this paper deals at some length with the past, the author feels that some explanation of his attitude is appropriate. He is British. The British are a people who have been popularly caricatured in the United States as having an obsession for tradition and history, blinding them to the realities of the present; and who regard the New World with a supercilious air of patronizing forbearance.

Equally, Europe has caricatured Americans as materialistic, ingenuous, "go-getters", lacking in appreciation of the more subtle and sophisticated satisfactions which grow from an awareness of one's place on the stepladder of time - satisfactions which are the fruits of discipline - the discipline of the past and the discipline of a deep sense of responsibility for the future.

Like most caricatures, neither of these is very accurate, but they probably have had some justification. Today, the remaining few who accept them as fair representations will often, themselves, also fit the descriptions of their counterparts. The author believes that between the two extreme attitudes there is an acceptable compromise. History is the study of human behavior in a changing environment. Traditionalism is a refusal to accept the fact that environment does

change. Materialistic preoccupation with the present is equally erroneous. If it asserts that the past has no influence on the present, then logically the present can have no influence on the future. Thus there can be no relationship between cause and effect, which is absurd.

The environment for any institution is continually changing, but it is not wholly capricious. A study of the past, though not wholly predictive, has a predictive value. This is the attitude held by the author, and it is his justification for his approach to the problem.

It is true that a special kind of "slanted" history is used as propaganda or is symbolized in traditional pageantry to raise morale and create unity, in all societies. Insofar as it is effective, even this influences contemporary attitudes which in turn influence social behavior; both are units of social and political environment. Not only, therefore, is history of importance in itself, so also is the attitude of people to it.

Chapters III and IV of this thesis are an historical review of some of the movements, philosophies and personalities which have an influence upon the contemporary structure and environment of the Cooperative Extension Service and the National Agricultural Advisory Service.

In Chapter V the influence which history has had upon

the present day operation of the two services is compared and contrasted at some length.

Chapters VI and VII describe the present day organization as a background for Chapters VIII and IX, which discuss some of the aspects of extension in its relationship with its public and within itself.

Chapter X discusses the implications of using extension as an instrument of national policy as a government relations agency. Finally, looking into the future, some present trends are examined in the light of future policy.

CHAPTER III

SOME HISTORICAL DEVELOPMENTS LEADING TO THE CONTEMPORARY ORGANIZATION OF THE COOPERATIVE EXTENSION SERVICE

I. The Early Colonial Era.

The earliest records of the white North American settlers reveal the importance which such practical education as is characterized by "extension" had in the establishment and development of the colonies.

A. Virginia.

The Virginia settlement is not generally classified as the first in North America, because it was founded as a trading post and was not originally intended to be a settlement at all. From 1607 the post was staffed with men only and was financed by the London Company. Although these men had every desire to make their fortune, it was not through agriculture. They looked to the company to furnish them with food and other necessities from England (Carrier 1923). This food was not forthcoming, however, and had it not been for the cooperation of the Indians in those first two years, they would certainly have starved. By 1609 their conceit was sufficiently humbled by their farming failures to allow them to take instruction

from two Indian prisoners referred to as "Kemps" and "Tassore". The following is quoted by Carrier from the early records: "Kemps and Tassore were fettered prisoners and did double tasks and taught us how to order and plant our fields." For their services, the prisoners were released but they did not wish to leave the settlement. Gradually the agriculture developed with emphasis on the tobacco crop which was so highly prized in Europe.

Under the administration of a somewhat benevolent governor, Sir George Yardley ". . . ninety young maidens of good character were brought to Virginia in 1619 and distributed as wives to the settlers on the payment of 120 pounds of tobacco to cover the charge of transportation." The settlement was complete.

B. New England.

In New England the pilgrims, delayed in their voyage, arrived on the Mayflower at the beginning of the bitter winter of 1620. They were under no illusion about the country in which they were to make their home.

In that first winter they had hoped to have traded with the Indians. It was unfortunate that the Indians along the coast in the immediate vicinity had

been exterminated the previous year by an epidemic; very fortunately though, the settlers discovered a quantity of corn and beans which had been cached by the Indians on Cape Cod (Carrier p. 139).

When that first long winter had passed, the pilgrims settled down to start farming for themselves in the spring of 1621. They did not make the mistakes of the colonists at Jamestown; they welcomed the advice of an educated Indian called Squanto. Squanto was a native of that area who had been sold as a slave to Spain, from whence he had escaped to England where he became interpreter to an English sea captain who allowed him to go ashore on the New England coast the previous year.

Not only did Squanto teach the methods of Indian agriculture, but he also acted as an ambassador with a neighboring tribe and was largely responsible for the friendly attitude of their chieftain towards the settlers. Bradford (1621) refers to Squanto as " . . . a spetiall instrument sent of God for their good beyond their expectation."

C. The Dutch Settlement.

When the Dutch settled on the Hudson in 1625, having purchased Manhattan Island from the natives for a handful of beads, it became clear that they were from

better farming stock than the English, to whom they submitted control in 1666. Thereafter the Dutch communities continued to thrive in the area and in time spread inland to what is now Pennsylvania. They left their mark on American agriculture to this day, where in Lancaster County, Pennsylvania, they still maintain closed puritan communities, managing their farms with a fine husbandry. It is probably no accident that these shrewd, thrifty farmer settlers should have chosen some of the best land in eastern America, while many other pioneers passed it over in their rush to see what was on the other side of the mountains.

II. The Late Colonial Era.

L. H. Bailey (1909), writing in his Cyclopedia of American Agriculture, quotes Elmer Ellsworth Brown's "The Making of our Middle Schools" to describe the social structure that grew up in that first 150 years of American society. The education was still largely classical, and great emphasis was placed upon social status. This, no doubt, was due to influence from the England of that day. It had the effect of hampering agricultural education and of confining much of what was available to the "upper" classes, who had the time to think about the problems and the means to obtain such information as was available from England.

It was during this period that George Washington and Thomas Jefferson took just such an interest in the affairs of their estates at Mount Vernon and Monticello respectively (Dies,1949). Washington did much to promote a discontinuance of the one-crop tobacco system in Virginia, among the tenants of his 70,000 acre estate.[1]

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[1]"I am led to reflect how much more delightful to an undebauched mind is the task of making improvements to the earth, than all the vainglory which can be acquired from ravaging it, by the most uninterrupted career of conquests." Washington 1788 (Quoted by Dies, p. 13).

He also took an interest in mule breeding, having received a gift of some superior asses from the king of Spain. In 1796 he urged Congress, in his state of the Union message, to create a Board of Agriculture. Little interest was shown.

Jefferson also abhorred the single crop tobacco growing practices and he himself took sufficient interest in the practical problems of the land to design a plow with a mould board cast entirely of iron.

There are reliable records of quite lengthy correspondence between Washington and Arthur Young, an English agricultural writer of great influence at that time.

The ubiquitous Benjamin Franklin also took an interest in the problem. He is quoted by his biographer (Van Doren, 1936) from a letter to the parson, Jared

Eliot (the author of the first recorded book on American farming).

"If the farmers in your area" he wrote to Eliot, "are as unwilling to leave the beaten road of their ancestors as they are near me, it will be difficult to persuade them to attempt any improvement."

This is the period in which the type of information available is as characterized by the writings of Hartlib, Tull, Young and Fitzherbert (Donaldson, 1854) in England and Jared Eliot (1757) and Samuel Deane (1790) in America. It was a period of careful observation and imaginative evaluation. Many of the observations are still of great pertinence today although the explanations attributed thereto seem rather incongruous in the light of later research findings. The latter part of the Eighteenth Century saw the foundation of the early agricultural societies, mostly for membership by "gentlemen". The Philadelphia Society for Promoting Agriculture was founded by Benjamin Franklin in 1785. Others followed in South Carolina 1785, Maine 1787, New Jersey 1790, New York 1791, Massachusetts 1792,and many others (True, 1929).

III. The Post Revolutionary Period.

The year 1783 is of course marked for a change in American agriculture. There were two trends contributing to this.

In the first place there was quite an understandable swing away from British influence in many fields of thought. In agriculture and education this was particularly so. The adaptation of British methods and research to American conditions was not necessarily a sound policy any more than the reverse would be today. Unfortunately, however, there seems to have been rather a vacuum for half a century before the new concept of pragmatic technical education really became established and put into practice.

A second trend was connected with a tremendous expansion westward over the Appalachians. British policy had forbidden any settlement on the western side of the mountains for fear of antagonizing the French colonies in the Mississippi valley and the Indian forces between. This policy could not be enforced, however, except insofar as any settlement which did occur was not given legal status. Consequently, as with many unenforceable laws, the frontier became outside the law and the people there responded accordingly, with a rugged tradition of lawlessness. When the legal restriction was lifted, the flood gates were opened, and these rugged characters began to pour over the mountains.

This is the start of the dark ages of American

agriculture. A period of almost unrestricted land grabbing and restless pioneering into the virgin lands ensued. During this time, Russell Lord (1939) identifies a trend in extension work which some might not include as such. He maintains that much of the advice handed down by the early settlers to the later comers was a branch of extension education. Much of it was just genuine neighborliness which might be expected in the face of insecurity from nature and the Indians. The remainder was just exploitation and high pressure salesmanship of the worst kind. The early pioneers seem to have had an insatiable appetite for pressing forward. As soon as they had cleared their plot of land and had skimmed off the cream of the fertility, they wanted to press on. In order to do this, they went to great lengths to sell their holdings to the less adventurous spirits who followed in their wake. The disillusionment of these people must have done much to emphasize to them how little they knew about the techniques of continuous agriculture.

During the first surge westward, the problems were more physical than agricultural. The land was fertile, and once it had been cleared would yield adequate crops almost irrespective of the farming

techniques employed. The real farming problems began to appear later - often when it was too late to prevent them. Even the "square" surveying method used in the public land policy served to aggravate the erosion problem by ignoring natural boundaries.

Until about 1830 agriculture was largely self-sufficient (Carver, 1909), but gradually farming became more commercial. The development of the railways enabled more trading in farm produce, while the development of machinery (the reaper was invented in 1833) accelerated the demand for still more land for single crop exploitation.

In the South, cotton was the major crop. It also was grown on a one crop "rotation" by the large slave owning plantations.

IV. Agricultural Tuition in Colleges.

Far-sighted thinkers - particularly in the east - were beginning to forsee the problems which were being accumulated by exploitative agriculture. There was a movement in several states (led by the agricultural societies) to found agricultural and technical colleges which would break away from the cultural nicities of classical education and tackle some of the more earthy problems which were so real and pressing.

At first, colleges were founded privately in

New York (1824), Connecticut (1824), Massachusetts and Ohio; later, state financed colleges were founded after long struggles with various legislatures - sometimes extending over periods of some twenty years. Michigan Agricultural College was founded in 1855 and in the same year there were colleges in Pennsylvania and New York receiving state aid. Others followed. (True 1929, p. 45-88).

In 1858 Justin Norrill of Vermont introduced his first Land Grant College Act which was vetoed by President Buchanan under pressure from the South. In 1861 he introduced it again, and it was signed by Abraham Lincoln during the Civil War in 1862 when the Southern interests were not represented in Congress. In the same year were passed the first Homestead Act and an act setting up the Federal Department of Agriculture.

The financing of state colleges by federal land grants and the formation of the Department of Agriculture gave rise to fears lest the freedom from colonial domination which had been only recently won, might be replaced by a domination of State interests by Federal government.

V. Agricultural Journalism.

The earliest agricultural journalism in the United States is attributed to John Stuart Skinner who

founded "The American Farmer" in 1819. It became the model for many subsequent journals (True, p. 28). It was Skinner's ambition to conduct his journalism "... to combine theory and practice in farming, correct-in the notions of the one by the sober experience of the other" (Ogilvie, 1927, p. 5).

In 1834 Judge Jesse Buel started "The Cultivator" with the motto:

"To improve the soil and the mind".

This is a motto which might well be adopted by the Cooperative Extension service today.

In 1831 "The Gennesee Farmer", a weekly paper devoted to "Agriculture, Horticulture and Rural Economy", was first published by Luther Tucker. In 1853 it was merged with "The Cultivator" to become "The Country Gentleman". It is the oldest farming newspaper still published.

In 1864 a young Missouri lawyer, Norman J. Colman, took over a paper called "The St. Louis Valley Farmer" and renamed it "Colman's Rural World" as a general paper for southern and western farmers. Colman became intensely interested in developing the sorghum industry. In order to promote it, he conducted a campaign with his contemporary, Orange Judd, with his "Orange Judd Farmer". This campaign was largely res-

ponsible for the introduction of the sorghum sugar industry into the United States.

In 1885 Colman went to Washington as Commissioner for Agriculture, and he built the department to such significance that it was raised to executive status with himself as Secretary of Agriculture with a seat in the cabinet. While in this position he was a great influence in establishing government experimental stations. He gathered a force of all the leading figures at the agricultural colleges (including Seaman A. Knapp from Iowa), and the Hatch Bill was formulated (Ogilvie, 1927, p. 42).

"He was one of the staunchest personalities to bridge and build the agriculture of the nation from the economy of the pioneer. . . to that of the scientific husbandman. . ." (Ogilvie, 1929, p. 42-43.)

VI. The Experiment Stations.

The land grant colleges experienced a slow start. It was partly due to a lack of interest among young men with sufficient education to gain an entry; partly due to a distrust by farmers of book learning;[2]

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[2]Kuhn (1955) reports a popular song from a book called The Wandering Singer and His Songs by Frank Hodgman in 1862. At this time the road from Lansing to East Lansing was made of baulks of timber, and it ran alongside the newly founded college. It was travelled frequently by local farmers. The song refers to a crop of turnips on the college farm which was not

conspicuous for its successful management:

"And as it grew each mother's son who went along the plank
Declared the college must be run by some half-witted crank."

Nearly all the agricultural research had been done in Europe. The results of this work constituted the larger part of the farming curriculum, but the information was not always applicable to American conditions.[3] The remainder of the early curriculum at

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[3]Henry L. Colman (1846), writing of his experiences in England, stated: "It may be said that the style of farming in the United States is so wholly different from that in Great Britain, that, from the necessities of the one, we can make no inference as to the wants of the other."

Michigan Agricultural College was still devoted to pure science with a good sprinkling of the liberal arts, a legacy from the classical education tradition.

The agitation for a program of agricultural research dates back at least to 1871 when the convention of "Friends of Agricultural Education" met at Chicago. It was a meeting organized by the land grant colleges "for the purpose of organizing, consulting and cooperating in the great work of advancing the cause of agricultural knowledge and education, especially by experimentation with similar crops under similar conditions

at all agricultural colleges" (Illinois 1871).

After many other conventions and two defeated bills, the Hatch Experiment Station Act was passed in 1887. The Act gave grants-in-aid to state agricultural colleges for carrying on research in scientific agriculture. The colleges at last had obtained the means of collecting information with which to build their curricula. Within twenty years, so great an accumulation of useful knowledge had taken place that the nature of the problem changed. The teaching facilities at the colleges were not reaching sufficient farmers. The initial flood of prosperity from the exploitation of the virgin lands had reached its zenith and the problems of husbandry were becoming more acute. Never had the need for information been greater.

In the South, the abolition of slavery had contributed to the dissolution of the plantations and the growth of the sharecropping system to take their place. The new system was almost as bad as the old for the emphasis it placed on continuous land hungry cash cropping.

It was from this situation, North and South, that a political climate favorable to the formation of the extension service began to emerge.

VII. Events Leading to the Smith-Lever Act.

A. Introduction.

The development of the cooperative extension service in the United States is often popularly linked with the biography of Seaman A. Knapp, to whom is attributed the conception of the service in its present form. This opinion is not unanimous, however. W. A. Lloyd (Bliss, 1952) casts doubt as to what extent Knapp actually contributed to the sponsorship of the Smith-Lever Act, which was to establish the service in 1914, three years after Knapp's death. Lloyd maintains that much of the credit should go to Kenyon L. Butterfield who, as chairman of the Land Grant College Association, did much of the less glamorous spade work. He points out that Knapp never had anything to do with the Association at all.

One of Knapp's biographers (Bailey, 1945) does not deny this, but maintains that indirectly, by mobilizing political support behind the scenes, his philosophy and personality had the greatest influence on the final form of the Act. He shows how the Association of Land Grant Colleges was distrustful of the cooperative nature of the organization envisaged, because it was felt it

would encroach upon the autonomy of the colleges. Powerful support for cooperation was mobilized around the General Education Board, much of whose thinking was inspired by Knapp. This body proved too strong for the Association.

There was little disagreement as to whether there should be some form of education extended by the land grant colleges to farmers (some had already started independently). The points at issue were:

1. Should the enterprise leave any measure of control with the United States Department of Agriculture?
2. Was the system of practical demonstration, as developed by Knapp in the South, superior to the more formal type of rural classroom instruction which was favored in the North?

Let us examine the two trends from the South and the North.

B. The Movement from the South.

There can be no doubt that Knapp was an important factor in the development of extension work in the South. He was a remarkable man; probably one of the most remarkable the country has produced. Born in New

York, he started his career as a teacher, first in the Collegiate Institute at Fort Edmund and later at the Female College at Poultney. When he was crippled by a fall in 1866, he moved to Iowa and took up farming. After he had gone bankrupt through lack of experience and ill health, he obtained a job as superintendent of the state college for the blind, in which he was very successful. While there, he knocked his knee again and regained its full use. Having learned his lesson in farming the hard way, he started again; but this time he was determined to learn from his previous mistakes. Seeing the need for improved livestock, more diversification and better credit facilities, he founded and led the Iowa Fine Stock Breeders Association, established a farming newspaper, and became founder president of the Farmers Loan and Trust Company, all of which flourished under an indefatigable leadership born of his enthusiasm for weekly local preaching.

In 1879 he became Professor of Agriculture at Iowa State College, which he completely reorganized once he attained the presidency. Under his leadership the college turned out many students who were to become prominent in the field of agricultural

education. He did much of the promotional work for the Hatch Act, and himself drafted one of the earlier bills that failed to pass. He was of great influence in the passage of the final act.

In 1886, at the age of fifty-three, Knapp started a third career of even more significance than the first two. He resigned from the college to work for a land development company promoting the settlement of a million acres of marshland and one-half million acres of adjacent prairie land in Louisiana. It was here that the techniques he had been developing in the North began to mature.

With the help of a high-pressure advertising campaign and a series of demonstration settlements by midwestern farmers who were given land at special rates if they would follow Knapp's advice, Knapp too five years to transform the prairie land ". . . from a vast cattle range to a thickly populated region dotted with the best aspects of a well-settled prairie state" (Bailey, 1945, p. 122). This was the birth of the demonstration system. It was fortunate for Knapp that it coincided with the fortuitous discovery of a method of dry land rice culture so that the crop could be

handled with wheat machinery, and the discovery of a huge underground reservoir to supply water for the project. Knapp became president of the Rice Growers Association of America and editor of "The Rice Journal". He kept up a never slackening flood of press articles and, in 1898, was sent by the Department of Agriculture on two tours of the Orient to investigate and improve rice varieties.

True (1929, p. 59) reports:

"About this time Professor Knapp, working with B. T. Galloway, Chief of the Bureau of Plant Industry, established a number of demonstration farms in the Gulf States in an attempt to show how his favorite theory of the advantages of diversified agriculture could be carried out practically in that region by adding other crops to the growing of cotton. Experience in this undertaking confirmed his beliefs that farmers generally would not change their practice by observing what could be done on farms operated at public expense. There must, therefore, be demonstrations carried on by the farmers themselves on their own farms and under ordinary farm conditions."

In 1903, when the fame of the Louisiana project had spread, a group of Texas potato growers

elicited the help of Colonel Green, a colorful railway magnate, to get Knapp to organize demonstration work in Terrell, Texas. Knapp had no finances for this work from the United States Department of Agriculture, but he agreed to supervise the operations of a Mr. Porter in the township. Mr. Porter agreed to the arrangements providing the local business men would indemnify him against any loss.

This first cooperative educational project was an immediate success. It was a technique which was used to great effect when the scourge of the boll weevil hit the impoverished cotton lands in the succeeding years. Knapp was placed in charge of the work to re-educate the Southern farmer against the weevil. In 1906 he set up his headquarters at Houston and delegated some twenty-four agents to help him. In that year over 1,000 meetings were held and 7,000 farmers agreed to demonstrate.

When the General Education Board, which was established by Rockefeller in 1902, took an interest in the work, it provided funds for the extension of it beyond the limits authorized by Congress (confining it to boll weevil control). The extended

program started in 1906 when the first county agent (Knapp's previous agents had served several counties), W. C. Stallings, was appointed in Smith County, Texas, with local people paying half his salary. By 1908 there were county agents in eleven southern states.

There is little doubt, from reading Bailey (1945), that the General Education Board, inspired by Knapp's philosophy, had an influence on the form in which the Cooperative Extension Act was finally passed.

C. The Movement from the North and West.

1. Farmers' Institutes.

In the north and west farming was more prosperous, largely because it had not suffered the ravages of the Civil War nor the disorganization arising from the abolishment of slavery. The agricultural societies had become influential from an early period and did much to encourage the colleges to extend their facilities beyond the campus.

Farmers' Institutes were organized, and short courses for farmers were conducted by traveling lecturers and later by college staff. Agricultural trains traveled the countryside

with educational exhibits and the colleges organized "Farmers' Weeks" in which the local farm people were invited to the college to see and hear a series of lectures, exhibits and demonstrations for their interest and edification. The latter are still held by most colleges today.

At first this work was (True, 1929 and Bailey, 1909) arranged between the agricultural societies and the State Board of Agriculture but later it was adopted by the colleges. In 1903 it was coordinated by a Farmers' Institute specialist in the federal office of the experiment stations (Ture, p. 27).

2. W. J. Spillman.

A prominent figure in northern extension development at this time was W. J. Spillman, who first made his name at Washington State College. Having done some wheat breeding there, he was appointed "Agrostologist" to the Department of Agriculture. His principle contribution, however, was in the field of farm management. He maintained that education in agriculture should not be confined to increasing technical efficiency with its consequent increase in output. His farm management

surveys showed the effect of surplus accumulation on price in the changed condition of the closed frontiers.

Inside the Department there was personal antagonism between the followers of Spillman and Knapp which eventually came to a head in 1914 when Spillman drafted a resolution condemning the use of Rockefeller money by the Department for southern extension work. He achieved his purpose but eventually lost his job (Lord, 1939, p. 83).

Spillman's technique was not so much with demonstration farms but was based on the principle that there is something to be learned from all farms, however bad. In 1905, though, he met A. B. Ross, a retired lawyer in Pennsylvania who had been trying to promote better farm management methods by rewriting the Department's bulletins in popular language. Spillman hired Ross as a field agent and by 1911 there were 900 farm demonstrations in Pennsylvania. In that year Spillman, cooperating with a local railway company and the Chamber of Commerce at Binghampton, New York, helped to establish the first farm bureau. A farm agent,

John Barron, was appointed (True, pp. 78-79) and the project was jointly pioneered by the Chamber of Commerce, the railroad and the Department of Agriculture. The college helped with advice and encouragement. The general structure soon became very popular, and colleges in many states established similar sponsoring organization for county extension work.

3. Country Life Commission.

In 1908 President Roosevelt appointed the Country Life Commission to study the rural problem in its widest aspects. As chairman he appointed Liberty Hyde Bailey, an accomplished botanist and horticulturist. The subject was very close to Bailey's heart. Kenyon L. Butterfield, later to be president of Michigan State College, was also a member of this Commission which collected evidence throughout the nation. One of the three major recommendations was that there should be a thorough organization and nationalization of extension work through the colleges of agriculture (Country Life Commission, 1909).

4. The Land Grant Colleges Extension Committee.

Butterfield, who had sat on the Country

Life Commission, was also the chairman of the Land Grant Colleges Extension Committee. The Committee reported annually to the Land Grant College Association for five years from 1906. It envisaged a rather more formal type of extension pattern. An extension of the college teaching facilities beyond the campus was planned. Much of the spade work leading up to the Smith-Lever Act was done by this Committee. Eventually, as a result of a truly cooperative effort, the Act was finally passed in 1914. It is loosely worded to allow of flexibility, but it provides for cooperative administration by the land grant colleges and the United States Department of Agriculture in such a way that the states shall match any money put up by the federal government. The federal government maintains only a limited control over the states.

VIII. Local Organization.

It is certain that this type of cooperation was not that envisaged by Spillman and Knapp. To them the important feature was the cooperation of the farmers and the ex-sion agent in the field. Although this is not specifically provided for in the Act, the pressure of the First

World War on production and the development of the Farm Bureau ensured that effective cooperation was obtained at the local level notwithstanding. Barton Mortan (1934) quotes from an unpublished report of supervisory work in 1928 (p. 39):

"A county agent without an organization to back him is like a lone jack rabbit in front of a pack of hungry hounds - just a question of which one gets him first."

A. The Influence of Farm Bureaus.

In their first year of operation the farm bureaus attained a paid-up membership of over one million families (Howard 1921). The growth of extension and the farm bureau movement in the North was truly symbiotic. Each owes much to the other. Unfortunately, the bureau movement, like a cuckoo in the nest, outgrew the original conception of its purpose and became a source of embarrassment to extension, the colleges and the Department of Agriculture, each having had much to do with its foundation (Kile, 1921, p. 213).

Farm Bureaus quickly organized themselves into state federations, and in 1919 the National Farm Bureau was formed in Chicago (Kile, p. 113). This meeting saw the clash of midwestern states who wished the movement to be largely commercial

and political in function, and the other states, led by the land grant colleges, who envisaged the movement as largely educational. A compromise was struck.

After the war a tremendous enrollment drive was organized, in which county agents were inevitably involved. Furthermore there was a tendency for the local bureaus to organize buying and selling cooperatives into which many unsuspecting agents became too deeply involved for the good of the service.[4]

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[4]There is no implication of dishonesty intended here.

The development of this work in which government employees were spending an increasing amount of their time furthering sectional, political and commercial interests created such an anomaly that something had to be done. In 1921 the Department of Agriculture and the American Farm Bureau Federation entered into an agreement enumerating the policies to govern the relationship between extension and the Farm Bureau, and defining the proper field of activity for county agricultural agents. This is known as the True-Howard Agreement. It stated, briefly, that the

relationship should be purely educational and that

> "County agents should not themselves organize farm bureaus or similar organizations, conduct membership campaigns, solicit memberships, receive dues, handle bureau funds, edit and manage farm bureau publications, manage or take part in other farm bureau activities which are outside their duties as extension agents."

It would not be true to say that this came into effect immediately because so many county agents were receiving salaries supplemented from farm bureau funds. It was easy for subtle but irresistible pressure to be brought to bear at the local level. Only recently both New York and Iowa conducted a reorganization. In Illinois extension still operates at the local level under the sponsorship of the bureaus.

B. The Post-War Period.

During the war, production drives for food had stimulated a rapid development of the service. The results were quite impressive because, on the whole, farming techniques were backward.

In the twenties and thirties, during the depression, extension suffered many attacks at both the county and state level. There was a great deal of agitation for reduced taxation and some understandable jealousy of government servants with secure income. Baker (1939, p. 57) mentions sev-

eral ugly incidents in the counties. Salaries were cut, and many agents lost what savings they had accumulated in local bank failures. The work became very frustrating because the war-time food production programs turned very sour as food surpluses began to accumulate. The service was largely held together for a time by the home demonstration agents who worked with women, teaching them ways of cheaper living, including how to make do and mend. It has been held to the credit of the service (Lord, 1939) that there was a negligible decline in numbers of personnel, in spite of so large a cut in appropriations.

IX. The New Deal.

The "New Deal" gave new life to the service. Extension once again had a usefulness in the eyes of local people. The work tended to become more administrative as it became involved in explaining legislation to farmers and helping them to fill in their forms correctly. Between 1930 and 1934 the number of telephone calls per county agricultural agent rose from eight hundred to eighteen hundred per year (Wilson and Gallup, 1955, pp. 34, 37 & 39); office calls rose from twelve hundred to sixty-five hundred, and numbers of farm and home visits dropped from six hundred fifty

to four hundred.

In the technical programs, such as they were, emphasis was put on soil conservation and soil management practices (Baker, p. 69). The program was pursued with the same promotional enthusiasm and vigor that had been characteristic of the boll weevil crisis, the wartime production programs and the farm bureau enrollment drives.

X. The Second World War.

With the outbreak of the Second World War and the stimulation of demand consequent upon it, things improved for the farmer, indeed, for the national economy. Once again the county agent found himself caught up in the glorious whirligig of another food production drive.

Agricultural policy determined that this campaign be continued after the war because of the desolation of much of Europe and later, the onset of the Korea affair. Policy makers were also alarmed by the increase in domestic population and were perhaps not uninfluenced by the writing of the Food and Agriculture Organization under the chairmanship of Sir John Boyd Orr with his Malthusian philosophy. In any event, in the early fifties the "Fifth Plate Campaign" was being waged from extension offices throughout the nation.

The present farm crisis has interesting implications for extension. Overproduction creates an environment in which it has never thrived. Recently movements have been instigated to shift the emphasis from production to farm management and great strides have been made with extension teaching in marketing, policy and consumer education.

CHAPTER IV

SOME HISTORICAL DEVELOPMENTS LEADING TO THE CONTEMPORARY ORGANIZATION OF THE NATIONAL AGRICULTURAL ADVISORY SERVICE OF ENGLAND AND WALES

The development of agriculture in England has been slower than in America, because it is spread over a longer period. A study of its development will reveal some of the educational influences that helped to bring about the changes. Where change is slow, the pressure required to accelerate it is likely to be larger in proportion.

I. The Pre-Manorial Era (Ernle, 1932).

The earliest farming in England was probably nomadic. When the first primitive people began to tire of the uncertainties of being dependent upon hunting as a source of food, a patch of land was tilled on some upland site where the soil was easily worked and where the community could best protect itself from marauding animals and neighboring tribes. When one patch of land had become exhausted the community would move on, leaving the original site to revert to natural vegetation. Gradually the more easily accessible virgin land became harder to obtain as the population rose, and it is thought probable that small settled communities appeared in which the arable land became permanently

divided from the meadows and woodland. This system, which became known as the manorial system, was the first in which an attempt at fertility maintenance became an important consideration. Preoccupation with maintaining fertility has lasted right down to the present day and is still an important consideration if a farmer is to be accepted socially by his neighbors.

II. The Manorial System.

The strength of the manorial system was its rigid social structure with the interdependence of its people. A prerequisite of any change in farming inevitably involved some description of the social system, so it is important that the basis of this should be clearly set down.

When groups of people eventually settled, law grew up by established custom and was administered locally. At that time communications were so bad that no other method could have worked. Each community had to be self sufficient. There was division of function and each function carried its own "credit rating" which was, in large measure, hereditary. The people got security from their lord who, in return for the responsibility, was entitled to require labor of the villagers on his farm land and militia for his private army. At first the army would have been largely protective but later

it became a source of power. The more prosperous the village, the more powerful would be the Lord of the Manor.

Much of the farming operation was communal to the extent that the work was done communally and the produce shared. It was not shared equally, however. Each man had certain rights by custom - from the lord at the top who owned the land and administered it through his reeve, to the serfs at the bottom who had few rights and were virtually slaves, tied to the village for life and subject to every whim of their master. In between were social strata of "freemen" or villeins who owned no land but often held some on lease. Their most important perquisite was the right to graze cattle and sheep over the communal pastures (commons) and to keep hogs in the surrounding forest. The higher the status of the villager, the larger was his "stint" on the commons and in the communal arable fields. He might earn such by distinguished service (perhaps supplying extra oxen for the lord's plow) by military service, or through some special craftsmanship.

The land in the thirteenth century village was usually divided into four portions (Ernle, p. 6). The demesne, reserved for the lord's personal use, was smallest, but usually the best; then there was the

freehold lands occupied by freemen, holding by service or some kind of rent; the unfree land, occupied by the bondmen holding by produce or labor rent; and the commons and woodlands.

The structure varied between villages but whether the demesne was separate or intermingled, the lord had his work done for him by the villagers. In some cases surplus demesne might be rented to the freemen for rent or extra service.

Most of the arable land was cropped on a rigid three course rotation to help control weeds and maintain fertility. The fields (one for each course) were divided into strips by turf banks. The strips were allocated among the villagers by lot so that the good and bad lands were fairly distributed.

The system had an immense stability, as is illustrated by its persistence from the departure of the Romans to, in many cases, the nineteenth century. A tremendous build-up of social and economic forces was necessary to bring about its abandonment. While it persisted technical progress in farming was practically impossible because no one had the power to force a change except the lord who derived many advantages from its continuance.

III. The Break-up of the Manor.

The break-up of the manorial system was a long and

painful process. Its start is usually attributed to the Black Death in 1348 which led to a scarcity of labor and inflated wage rates and encouraged the villagers to escape to become wage earners. Other social and economic forces kept it going at various periods but the most fundamental was the growth of commercialism and industry, with its demands for more food from a smaller farm labor force. The enclosure movement, with all its social hardship and misery, marked the end of subsistence farming and the beginning of commercial agriculture. Nevertheless it was a gradual process spread out over a period of some five hundred years. This is some measure of the strength of deep-seated social tradition even in the face of economic pressure. At the same time the same traditional methods have protected the nation's soil resources from exploitation until today the soil of the British Isles has been continuously farmed at a high level of productivity longer than any in the world.

IV. The Early Farming Writers.

Before the invention of printing, the church, which owned considerable land, did what little it could to translate such Roman writers as Cato, Varro, Columella and Palladius into English. Such translations form the basis of a manuscript "Husbandry" by Walter of Henley in

the thirteenth century. Little was added, of course, after the dissolution of the monasteries.

The earliest printed book is dated 1523. It is Fitzherbert's "Boke of Husbandrye".[5] It is a

[5]"Compyled sometyme by Mayster Fitzherbarde, of charytie and good zele that he bare to the weale of this most noble realme, which he did not in his youth, but after he had exercysed husbandry with great experience XL years."

minutely practical work written by a man who has obviously had first hand experience of the practical problems. The book became, and remained for fifty years, the standard textbook of English farming. It was strongly in favor of enclosures as a prerequisite to the adoption of improved methods.

In 1557 Thomas Tusser wrote his "Hundred Good Points of Husbandry" which in 1573 he republished "United to as Many Good Points of Huswifery". He also was in favor of enclosures but his book has not the same fundamental soundness of Fitzherbert's although his doggerel rhymes did much to promote an interest and are frequently quoted by later authors.

Both these writers were important for the interest they promoted but "it is difficult to trace any important change from the most progressive thirteenth century methods." (Ernle, 1932, p. 92.) Technical

improvements promote labor saving or increases in production, but these were not important incentives. The early writers had to stimulate an interest in farming as an art; as a pursuit fit for "gentlemen".

Toward the end of the sixteenth century economic forces began to build up and agriculture was called upon to feed an increasing non-farm population. The most important work was "Foure Bookes of Husbandry" collected by M. Conradus Heresbachius - - "Newely Englished and increased by Barnabe Googe Esquire, London 1577." It is important because it imported German ideas; in particular it recommends the growing of turnips as a field crop to enable stock to be kept over winter instead of being slaughtered and salted in the fall.

Interest was steadily growing as is witnessed by the number of patents taken out on mowers, plows and mechanical methods of sowing. The Civil War caused a check, however; between 1640 and 1670 only six patents were applied for in this field.

Sir Richard Weston, who had fled the country after the war, left a manuscript entitled "A Discourse of Husbandry Used in Brabant and Flanders". It was piratically printed by Samuel Hartlib in 1650 as "Samuel

Hartlib, his legacy of husbandry, etc., etc.". In a 1655 edition he acknowledged its source.[5]

[5]The last entry of the table of contents reads "The conclusion of the legacy of husbandry, taken out of Sir Richard Weston, late of Sutton in the County of Surrey, his legacie to his sons, with a little alteration to his words."

In any event, the introduction of clover and the use of fertility building rotations are both attributed to Weston though publicized by Hartlib.

It is perhaps little wonder that book learning did not always command the highest respect from practical farmers. A letter in the book (p. 82) advocates the growing of silk worms and vines and seriously considers the introduction of black foxes, muske cats, sables, martines, camels and dromedaries. Also, "the elephant, the greatest and wisest and longest lived of all beasts - - very serviceable for carriage (fifteen men usually riding on his back together) they are not chargeable to keep."

Nevertheless, it was such, albeit ridiculous, suggestions that stimulated the imagination and attracted general interest which eventually led to more useful discoveries.

It was Walter Blith in 1647, "The English Improver." who first mentioned tenancy as a factor hindering improvement. Tenants had no security so that if,

by their own efforts, they improved their farming, they would often be unable to reap the benefit of the improvement except at the price of a rise in rent. There are many country sayings of this period which reflect the feeling:

> "He that havocs may sit,
> He that improves must flit." (Ernle, p. 113).

V. The Eighteenth Century - Jethro Tull and "Turnip" Townsend.

The enclosure movement, technology and tenancy reform continued into the eighteenth century. Jethro Tull's "Horse Hoeing Husbandry" in 1733 was probably the book which has had the greatest influence on English farming either before or since. It was written in isolation under the handicap of painful ill health and was at first pilloried by his contemporaries. Later it was shamelessly plagiarized notwithstanding.

A walkout of his laborers as a protest at his newfangled ideas prompted Tull to invent the first workable grain drill. In addition, he brought originality and scientific method to the field. "His implements were speedily superseded, his principles of agriculture remain." (Ernle 1923).

Tull's book triggered a great interest among landowners in the challenge of improving husbandry. Some of the more progressive men took an active interest

and by so doing promoted the adoption of improved practices among their tenants, to their mutual benefit. These landlords also became aware of the influence of bad tenancy agreements on progressive farming and gradually these were reformed to give the tenant more security while protecting the landlord against exploitive practices by the tenant.[6]

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6 "An English farmer, with a lease, is as independent of his landlord as the landlord is of the farmer and if he has no lease we may be sure he is favored in the rent proportionately to such circumstance." Arthur Young, Political Arithmetic, 1774.

Lord "Turnip" Townsend was one such landlord. He retired from a successful political career to manage his estate in Norfolk, where he devised the Norfolk four-course rotation which was an adaptation of the old manorial rotation. This rotation was ideally suited to the economic requirements of that time, and at the same time it prevented exploitation of the soil. His tenants, under pressure from their landlord, adopted his innovations and grew fabulously rich by comparison with their neighbors, but the ideas spread extrordinarily slowly. Many landlords and farmers grouped turnips with rats as "Hanoverian Innovations" (Ernle, p. 175). At first it seemed as if his work received more attention in America than in England; the last section of

Jared Elliot's "Book of American Husbandry" consists of a letter from Townsend.

Eventually interest did build up, under no less a patron than George III who rejoiced in the title of "Farmer George" and contributed to the literature under the pen name of his shepherd at Windsor. He carried out stock breeding experiments and often insisted upon discussing the technicalities at court. Other landlords, including Coke at Holkam, the Duke of Bedford at Woburn and Lord Egremont at Petworth also took an interest and ran experiments on their own estates. Periodically they would hold open days in order to discuss their work and to spread the information.

Coke of Holkam, in spite of his outstanding success with sheep breeding, estimated that his improvements traveled one mile per year. (His prize Southdowns suffered local denunciation as "Whiggish sheep" after his polical party.)

VI. Agricultural Societies.

As might have been expected from all this fashionable interest, a series of agricultural societies sprang up for the showing of new crops and machines (the threshing machine was invented in 1784) and the organizing of cattle shows, wool fairs and plowing matches throughout the countryside. The earliest

Societies to remain extant are the Bath and West of England Society (1777), the Highland Society of Scotland (1784) and the Smithfield Club (1798). The period was one of great prosperity and high prices because of the Napoleonic Wars. In 1800 the "Farmers Magazine" appeared and rapidly passed through five editions.

VII. Arthur Young - Agricultural Journalist.

An important figure in the history of agricultural education was Arthur Young. He had a great influence on the spread of technical education on both sides of the Atlantic (see p. 10 in ms).

Young was born in 1741, the son of a parson who owned a small estate in Suffolk. He was not a good business man (he took three farms in succession and failed on each), but he made his contribution to the literature. His output was prolific. In 1767 he made a number of farming tours in England and France, carefully recording and publishing his impressions. He was a severe critic of much of what he found in general, but of the open field system in particular, for he could see how it was hampering progress. His style of writing was that of the present day columnist; easy to read and forcefully presented in a racy prose which scarcely covered his personal prejudices. He had a wide readership, however, and was important principally as a pro-

moter.

In 1784 he began his "Annals of Agriculture" to which many prominent land owners contributed, including George III. He produced forty-six volumes before his failing eyesight forced him to discontinue its publication in 1809.

With the foundation of the Board of Agriculture by Pitt in 1793, Young was appointed secretary. The primary objective of the Board was to conduct a survey of agricultural conditions in each county, using specially appointed commissioners. Six of the surveys were done by Young himself.

His enthusiasm was infectious and he made a great contribution to the diffusion of information which was being demanded by the agricultural societies, many of which he helped to form. It is interesting to read today the following excerpts from his "A Six Weeks Tour Through the Southern Counties of England and Wales", 1769:

> "It has been more than once remarked, that there is no county that possesses so bad an agriculture, but something useful may be learnt from it, the truth of this observation is apparent in every one of our counties; perhaps in every hundred.
>
> "Practices which are found highly advantageous in one district are totally unknown in another; although the soil, exposure, climate, etc., etc., be exactly the same. The farmers

> in one place grow rich by methods which would enrich their brethern in another; but remain quite unknown. Can it be thought useless to render all such knowledge general? To let every cultivator see all the different methods that are practiced upon such land as his own; that he may know from them his own deficiencies, and learn at the same time to remedy them; and this not from the ipse dixit of an author or the opinion of an individual, but from the genuine practice of his brother farmer in another place.
>
> "I would not however be understood to expect too much from the common farmers' reading this, or indeed any book. I am sensible that not one farmer in five thousand reads at all, but the country abounds in gentlemen farmers, whose ideas are more enlarged and whose practice is founded less on prejudice. Such cultivators may be supposed to read and act accordingly; it is by their means that the farmers vary, by slow degrees, the common line of management, and come into improvements unknown to their forefathers."

VIII. The Post-War Depression 1813-37.

Much of the progress which had been achieved in agricultural reform so far was destroyed or at least halted by the depression which followed the Napoleonic Wars. In 1822 the youthful Board of Agriculture was dissolved as an economy measure. With the lifting of the continental blockade the demand for food dropped and excess labor was thrown onto the market. It is a period of shameful social suffering and misery. The new class of landless laborers found themselves to be a surplus commodity, without land to grow essential foods or work to earn money to buy it.

IX. The Golden Age of English Farming.

With the succession of Queen Victoria in 1837 things gradually began to improve. All the technical developments about which so much had been written began to be put into more general practice as the British farmer struggled to supply the food demands of the rapidly accelerating industrial revolution. The period to 1874 with a peak in 1862 was one in which the prosperity was never exceeded before nor since. Nor has there ever been a greater area of land under cultivation. Educationally and commercially the farmer benefited by improved internal communications and a tremendous price incentive. Capital poured into the countryside and, although much of it was extravagantly employed, great advances were made with machinery, pedigree livestock breeding and improved land drainage techniques.

A. The Royal Agricultural Society.

The non-political Royal Agricultural Society was founded in 1840 by the leading agriculturalists, landowners and scientists of the day. It adopted as its motto: "Practice with Science". It was important as a clearing house for ideas and gave prestige and public recognition to progressive landowners and

and farmers at the same time as it linked the farmer with the scientists. Its annual Journal reviews the latest scientific advances in laymen's language and describes the practical problems of the farm so that scientists can take them into account. Its show is held annually to recognize superior livestock, machines and new techniques which are all put upon public display. Today it still travels the country and covers some two hundred acres.

The Society has done much to promote local interest and has furthered the formation of a network of county shows throughout the nation.

B. The Development of Research.

The first time a pure scientists had turned his attention toward agriculture was in 1803 when Sir Humphrey Davey, then aged twenty-three, gave a series of lectures under the sponsorship of Arthur Young's Board of Agriculture, entitled "The Connection of Chemistry with Vegetable Physiology". They were later published in his "Elements of Agriculture Chemistry."

In 1840 the German chemist Liebig wrote his "Chemistry in its Application to Agriculture and Physiology" which clearly traced a relationship be-

tween the nutrition of plants and the composition of the soil. English country gentlemen became so enthusiastic about his work as it was popularized by Johnston and Voelcker that the Royal Chemical Society was founded in 1845 largely by their efforts.

At this time Sir John Lawes with his colleague, Sir Henry Gilbert (who had been a pupil of Liebig) commenced experiments on his private estate at Rothampstead. Eventually the estate was bequeathed to the nation and is, of course, still an important center of fundamental research.

X. The Great Farming Depression.

It is unfortunate for the English farmer that the same forces which led to the golden age of farming also destroyed it. The Industrial Revolution, which had created such a demand for food at first, was the eventual cause of a veritable flood of cheap food traveling to the British Isles from underdeveloped countries in all parts of the world in payment for manufactured goods. Improved communications at home had facilitated the spread of knowledge and the movement of food to the market; similar improvements in North American railroads and shipping refrigeration made it possible to carry food to Great Britain for

which, hitherto, the British farmer had held a monopoly.

Gradually, painfully, domestic agriculture reorganized itself for the production of perishables such as milk and truck crops and top quality beef from imported grain which could not be matched by the imported article. Millions of acres went out of production, field drains and buildings were neglected, and the farmer drew in his horns and cut costs to a minimum. By the end of the period in 1914, it is probable that the industry had found its place in the world economy and was producing the quantity and type of product which best exploited its natural advantages.

XI. Formal Agricultural Education and the State.

A. The Early Legislation.

In a review of the development of agricultural education in England and Wales, the Luxmore Committee (Luxmoore, 1943) outlines its progress from the Technical Instruction Act, 1889, which empowered County Councils to give technical instruction in many subjects, including agriculture. It followed closely on the heels of compulsory elementary education.

At that time there were privately endowed colleges giving agricultural instruction at

Cirencester, Downton, Aspatria and Hollesly Bay. None of them received government funds. In 1889 also, a grant of five thousand pounds which had been made the previous year to the Agricultural Committee of the Privy Council was transferred to a newly reconstituted Board of Agriculture.

B. "Whiskey Money".

In the following year, a special fund known as "whiskey money" was made available to local education authorities (County Councils), of which ten per cent was earmarked for agricultural education. This money, together with the Board of Agriculture fund, was also made available to universities and agricultural colleges at Bangor, Leeds, Aberystwyth, Newcastle-on-the-Tyne, Cambridge, Nottingham, Reading, Wye and Shropshire, who were expected to use it to develop programs of research, teaching, extension teaching and advice for the benefit of the farm community in their areas.

C. Early County Organization.

As trained men became available from the colleges, some County Councils employed their own technical staff so as to become less dependent on the college facilities. By 1899, four counties had already established "Farm Institutes" for giving

residential training to local farm boys and girls in practical farming and elementary science. The institutes had farms attached and they became a natural center for a county advisory service. The principle of the institute was usually the head of the advisory services for that county.

Other counties did not build institutes, but employed a staff of lecturers and advisory officers with offices in the county town. The remaining counties did nothing.

In 1908 the Reay Committee investigated the whole field and recommended that the appointment of a county agricultural organizer should be required in all counties. This proposal was not adopted. So far all the enabling legislation had been permissive for the county councils and thus it remained. Nevertheless, already there were one hundred twenty-four full time and sixty-seven part-time instructors employed in the counties.

D. The Development Commission.

The Development Commission was appointed in 1909 to administer substantial funds provided by the Development and Road Improvement Funds Act, 1909. The money was to be used to found a series of specialist agricultural research institutes, and

to subsidize and reorganize some that were already in existence. It is the first time in the history of agricultural research that institutes had been set up to serve the whole country in a special field rather than a local area in a general field. Only one of the institutes (Animal Health Laboratories) is under state supervision directly, and the others are controlled by universities or other public bodies.

E. The National Administration of Agricultural Education and Advisory Work.

Within the civil service there has been considerable antagonism between the Board of Education and the more recently established Board of Agriculture over the question of which body should administer the funds intended for agricultural education (Ernle, 1923, p. 442). Until 1909, all funds paid to county councils had been administered by the Board of Education. In that year an arrangement was made between the two boards, such that

> "Agricultural education in the case of institutions giving instruction to students taking advanced courses in agriculture or in some special branch, was given financial assistance by the Board of Agriculture" (Luxmoore, p. 12).

The remainder, including farm institutes, were still to receive their state moneys through the

Board of Education, except that the farms of the farm institutes were to be administered by the Board of Agriculture. This was most unsatisfactory.

A further joint memorandum issued by the Boards of Agriculture and Education in 1912 provided that the whole of the state funds available, including those made available by the Development Commission in 1911 for advanced agricultural education, should be administered by the Board of Agriculture. All that remained with the Board of Education was the administration of in-school and school leaving technical education in agriculture on the same basis other technical subjects were.

Now that this administrative tangle was partially unravelled, the Board of Agriculture was able to develop its policy for an advisory service in two parts: specialist and general. The legislation still remained permissive, however.

1. The Specialists.

The country was divided into thirteen provinces, each containing an agricultural college or department of a university receiving "development funds" granted for that purpose. Further funds

were made available to employ scientific officers to deal with specialist inquiries which the general county officer was not trained to answer. These officers were paid from "Development Funds" but were administered and housed by the colleges.

2. The County Staff.

Each county was encouraged to employ a staff of general advisors for routine matters, and a staff of husbandry officers to be housed at the county farm institute or at the county council offices (where no farm institute existed.) The Board then offered development grants to county councils to cover seventy-five per cent of the capital cost of farm institutes, eighty per cent of the salaries of county organizers, and sixty per cent of all other approved expenditure. The work of the county staff included the answering of farmers' queries, the organization of instructional classes, correspondence courses, lectures, demonstrations, meetings, discussion groups, and instructional work with Women's Institutes and Young Farmers' Clubs (after their foundation in 1924.)

Much of the capital expenditure envisaged was held in abeyance during the 1920's when

a freeze was put on government spending. In 1932 the grants were restored again but at a flat rate of sixty per cent for all types of expenditures.

The development of this service was disappointing, largely because of the disruptions caused by the war and the post-war depression, but also for other reasons which will be discussed later.

F. The 1914-1918 War.

During the latter part of the First World War, agriculture in Britain took on a significance it had not known since the middle of the nineteenth century. It had been thought that never again would the farmers be required to attempt to feed the nation with anything except high quality perishable products, for it suited the overall economy to import the major part of the bulk food requirements.

When it became apparent in the latter stages of the war that the population was in danger of starvation because of the activities of submarines, home food production became of superlative importance.

With depleted farm labor, inadequate

machinery and fertilizers, the farmers were mobilized early in 1917. Drastic powers were given to a special department (The Food Production Department) of the Board of Agriculture which delegated them locally to "County War Agricultural Executive Committees" whose activities it coordinated. The committees comprised unpaid local farmers and landowners, and they worked through a series of sub-committees, with the assistance of such county agricultural technical staff that then existed. It was the first time that a production campaign, with all its educational implications, had been attempted as national government policy.

After the war when the farm economy was unnaturally confused and artificially boosted, the policy was peremptorily stopped short by a piece of panic legislation in 1921. The farmers have never forgotten, but by 1939 they had again achieved an equilibrium tolerably in line with natural economic laws.

G. The Second World War.

When war broke out in 1939, the advisory service was again mobilized, but much more promptly and systematically than before. The advisers

either became executive officers of the War Agricultural Executive Committees that had been reappointed, or else were seconded to the committees for the emergency. The new edition of the W. A. E. C.'s had the same irrevocable and drastic powers of compulsion to coerce or cajole their neighbors to increase arable production. As the emergency passed, so the emphasis shifted away from compulsion toward the education approach. The county organizer was, of course, more at home in this type of work and was able to call upon the provincial service for help when it was needed.

H. The Luxmoore Committee.

In July 1941, when the war situation was at its most critical, the Minister of Agriculture, Mr. R. S. Hudson, appointed a committee under the chairmanship of Lord Justice Luxmoore " . . . to examine the present system of agriculture education in England and Wales and to make recommendations for improving and developing it after the war" (Luxmoore, 1943). The committee reported in 1943. It criticized the pre-war advisory service on the following grounds: (p. 54).

1. There was a lack of cooperation between the

general and the specialist advisory services because of the divided administration between the colleges and the county councils.

2. There was a lack of uniformity among the counties in the facilities provided, due to the permissive nature of the Development Fund grant. The rural counties with the greatest need could not afford the tax burden. (Farmers had been exempted from payment of a county rate on their farm land and buildings during the depression.) The urban counties which could have afforded the expenditure showed an understandable lack of interest.

The report pointed out that the size of the "counties" varied from 1,661,000 acres (Devonshire) to 52,000 acres (Soke of Peterborough), whereas the population varied from 1,780,000 (Lancashire) to 17,000 (Rutland) and rateable values from 18,431,000 pounds (Middlesex) to 165,000 pounds (Merioneth). The salaries of the county organizers varied from 1,200 to 400 pounds per annum.

3. There was a marked lack of promotional incentive for the staff.

4. There was a marked lack of supervision of county programs by the Ministry of Agriculture. Many counties misused their organizer in functions for which he was not intended.
5. The provincial specialists tended to usurp the functions of the provincial specialists.
6. There was a lack of cooperation by the colleges and universities in providing adequate accomodation for the specialist staff. They also tended to use the specialist to ease their teaching burdens in the regular lectures.
7. There was a lack of continuity in Ministry of Agriculture policy toward education.
8. In some cases there was extravagant expenditure upon the equipment of farm institutes, particularly on the farms.

Recommendations.

The Committee recommended the setting up of a central body which it called the National Council for Agriculture Education, to be in charge of all government funds for agricultural education except those for universities, which would be required to relinquish their control of the advisory specialist.

The advisory service would be a national

one with the specialists in six provinces in close contact with the research institutes. The county staff would maintain contact with the farmers through an advisory committee with some representation from the county councils.

The county organizer would have the responsibility of maintaining a series of local instruction classes for school learning in addition to an efficient advisory service for farmers. District advisory officers would be used for this latter function such that each district should contain about one hundred thousand acres or one thousand farmers, whichever was the larger.

The eventual organization of the National Agricultural Advisory Service, which was set up in 1946, was obviously influenced by this report, but it differs in the following respects:

a) As was recommended in a minority report by Hon. Mrs. R. J. Youard, the national organization did not include vocational agriculture which was left with the county councils under the control of the Ministry of Education. Local education authorities maintained control of regular courses of instruction

(Education Act 1944) and for the giving of advice to domestic producers. The N.A.A.S. was left a clear field for the advising of commercial producers.

b) The new service is a part of the Ministry of Agriculture and not an intermediate body which might have given it a little more autonomy in the eyes of the public.

c) It was decided, for economy reasons, that the organization in the counties should remain attached to the W.A.E. Committees which had become the County Agricultural Executive Committees with largely the same personnel. The purpose of the new committees was to administer government schemes and orders and to apply such supervision to agriculture as was required by the Agriculture Act. The county agricultural officer of the National Agricultural Advisory Service became the chief officer of the County Agricultural Executive Committee.

d) Because of scarcity of technical staff, it was also decided to include regulatory duties in connection with livestock, poultry and horticulture within the purview of the service. In these fields the advisory and statutory duties

were combined in the one organization.

e) The agricultural economists that had been doing advisory work with farmers were excluded from the national service and remained under the control of the universities and colleges. The reason for this was that the Agricultural Act of 1947 provided for an annual review of farm prices between farmers and the government. The basis of these negotiations was to be the cost figures determined from surveys made by the agricultural economists whom, it was thought, should be completely independent of either of the negotiating parties.

CHAPTER V

THE INFLUENCE AND SIGNIFICANCE OF CERTAIN HISTORICAL TRENDS UPON CONTEMPORARY ORGANIZATION

I. Early Historical Developments.

The dissemination of agricultural technology in the earliest North American history was closely linked with the cooperation of the Indians. The Virginia settlers (arrogant colonialists) did not intend to produce their own food. When they had to, they discovered that they could not do it without the help of the Indians whose "backwardness" they despised. The same factor was more humbly acknowledged by the Pilgrim Fathers.

This is surely one of the fundamental lessons for advisory work (extension). If the information available for a given environment has not been tested there, it is wise to heed local tradition until it can be <u>shown</u> to be outdated. Under Virginian conditions, European methods, though much more advanced technically, were ineffective in comparison with the primitive farming which the Indians had developed traditionally for that environment. This illustrates rather vividly what every extension worker knows to be true: Modern methods may not always be the most immediately effective in any given

set of local circumstances. Often it is the climate and soil conditions that make this so, but quite as often it is sociological or even psychological factors which operate among the farming community. It soon becomes apparent that every farm and every farmer are to some extent unique. Generalization is a useful attention getter, but ultimately each operator must make his own decision in the light of his own analysis of his own situation.

In England this fact has tended to be emphasized, sometimes to the extent that it has become a fetish of traditionalism[7] in which the farmers refuse to accept the fact that circumstances change until the very last minute. On the other hand, the same attitude held moderately generates healthy circumspection by which new practices are approved before they are adopted, not because they are new but because they have value.

[7]It is true that types of farming vary more in a given area than they do in the United States. This tends to make farmers' problems less uniform.

The persistence of the manorial system for some five thousand years must surely have a bearing on this attitude. It might be an interesting (but rather fruitless) conjecture to determine whether it grew from the inertia (or stability) of the social system or whether the system perpetuated the attitude. In any event, the fact remains that as long as farming methods remained

unchanged, social change was practically impossible. Equally, as long as the feudal society persisted, agricultural improvement was impossible.

If English farming and rural society has shown some of the symptoms of pathological inertia, American farming has exhibited many of the evils of over-indulgence. Nevertheless, although it is fashionable to condemn the system which undoubtedly contributed to much soil erosion, it might have been allowed to get much worse. It could even be argued that it was through cashing its natural soil and timber resources (using relatively little capital) that the nation was eventually able to muster enough capital to develop its other, more important, mineral resources.

II. Agricultural Patronage.

A. In England.

With the gradual break-up of the manor in England came a change in social values. The lord of the manor, whose power was based largely on his military strength, found that this became of less significance as communication improved and the central government became more effective in local administration. Gradually social prestige came to be measured more on the basis of land ownership and wealth derived from it and less on the number

of men who could be mobilized into a private army. The population of the village became unimportant, and land owners tended to divide their land up into units that could be farmed most economically so that his tenants would be able to pay him remunerative rents. The landlord then began to see that it was in his own interests (as well as that of his tenants) to encourage new methods as long as they did not deteriorate his property.[8] He also became aware that to achieve his ends it was necessary to give his tenants greater security of tenure. It would almost seem as if a conspiracy developed between the landlord and the tenant against the farm worker who, having no property and little wealth, was hardly able to exert his interests. On the whole, however, having accepted this position, the worker undoubtedly derived considerable contentment from life notwithstanding.

[8]Probably the nearest equivalent to education by private patronage in England today is to be found in the small but efficient commercial advisory services organized by the more reputable fertilizer and feeding stuff manufacturers to encourage the more efficient use of their products to the mutual benefit of the farmers and themselves.

The relevance of this process to extension, it seems to the author, is that the lord (or the squire as he came to be called) was undoubtedly a social leader in rural affairs; albeit not always

a popular leader, but a leader nevertheless. The early farm writers recognized this fact. With an attitude that is characterized in the quotation from Arthur Young (p. 51), they could see that if changes had to be made they had to be led by the landowners themselves and the tenants would eventually follow in due course.

The author suggests that a modification of this philosophy had its influence on the conception of the pre-war county advisory service. Little emphasis was placed upon educating the masses directly; it was tacitly assumed that those progressive farmers who came forth for advice were the community leaders. If the advisory service was available to them, they themselves would lead their communities along progressive lines in due course.

B. In the United States.

In the history of American farming, patronage as such was of lesser significance and rural society became more fluid with less coordination. In the colonial era, however (even up to the Civil War) there was a trend toward the estate system in parts of the South. Both Washington and Jefferson showed concern for their estates in much the same way as did Coke and Townsend. This system was not allowed to develop, however, because it perpetuated

the very social situation which had prompted many of the immigrants to leave their homeland. Distribution of land among the people became one of the fundamental concepts of the "American Dream" for at that time land ownership represented power and independence.

In modern times the importance of land ownership is not so fundamental in the social structure; Nevertheless by tradition it is still a most powerful emotional factor in popular political thinking. Land is no longer a social necessity but an economic resource.

The nearest that the United States has come to education by patronage is illustrated by the work of Knapp in Louisiana which was to the mutual benefit of both the land company and the settlers. Unfortunately, for every honest case of this sort there were many fraudulent schemes which did not educate but exploited ignorance.

C. Summary.

To summarize so far, this period of history seems to exhibit the following three lessons:

1. Education is effective only when it is linked with a clearly apparent incentive. This is not necessarily an economic incentive, for economic

values are not always the most important in a value system. Unless education is keyed to the value systems of the people towards whom it is directed, it is unrealistic and ineffective.

2. Changes in behavior can best be achieved through accepted community leaders, but the interests of the leaders must be the same as those of the people. The early English farm writers wrote for landlords, the only section of the community through whom desirable changes could be made. Little was achieved until it became in the landlord's interests to make a move.

3. Promotion is a necessary part of any effective educational program insofar as it emphasizes the incentives which must be stirred up to overcome the inertia of ignorance. Promotion is, however, a potent weapon, for it appeals to the heart rather than the head and can be misused for exploitation if it is not firmly anchored in fact and good faith. The works of Knapp and Arthur Young are examples of promotion honestly used. The early settlers in the west came across more instances where it was prostituted to graft and dishonesty.

One hollow promotion by an educational

body, whether through ignorance or dishonesty, can destroy confidence in its other programs, however genuine they may be.

III. Agricultural Education and Research.

The increasing demand for technical education in agriculture saw the growth of agricultural colleges and research stations to supply people trained in scientific agriculture together with the information they would require. There is a difference in the way that this took place in the two countries.

In England, where the patronage system proved effective, it developed through private enterprise. This was largely due to the huge accumulation of capital which many English land owners had available.

In the United States the "state" came into the picture at a much earlier date because there were virtually no private interests able and willing to finance it themselves.[9] Furthermore, American agriculture was less material, to the extent that there grew up a powerful public concern for the way in which land resources were being destroyed by exploitation. In addition, agriculture was the dominant national industry and had considerably more political power.

[9]The Rockefeller-financed General Education Board is a possible exception.

The state was slow to enter the field in England because agriculture (although the largest single industry)

did not have the same relative importance in the economy nor in the political system. The cheap food era which destroyed the farming prosperity of the "Golden Age" in the 1870's was of great benefit to the manufacturing industries whose economic and political power increased with their participation in world trade.

Much of the success of the land grant college system must be attributed to the foresight of Abraham Lincoln who pushed the bill through Congress during the Civil War when most of the opposition was absent. The opposition from the South was partly a political maneuver, but their attitude is typical of an important trend that from time to time is highly significant in the United States politics. It is an extreme distrust of the power of central government in what are regarded as local affairs, particularly in the realm of education. It is shown to good effect in the way in which the Smith-Lever Act leaves the lion's share of the control of the Cooperative Extension Service in state and county hands although about forty per cent of the funds originate at the federal level.

IV. State Participation in the Growth of Extension in the United States.

That the federal government took even so great a part in the administration of agriculture extension

is in itself symbolic of a change in values. After the scourge of the boll weevil in the South, people began to accept the fact that the government had a responsibility toward improving rural living conditions through improved technology. This attitude is shown in the report of the Country Life Commission. College experiment stations had accumulated information and an organization was needed to disseminate this information where it would do the most good. The social value attached to family farm units was still important and it was freely acknowledged that while farmers operated this size of unit, agriculture could not be expected to do its own research, nor could it reasonably be expected to take proper advantage of research done by other bodies.

That there was a difference of opinion between southern interests represented by Knapp and northern interests represented by the land grant colleges would seem to be partly due to habit. It was strange that the South, which hitherto had been loath to accept federal supervision in state affairs, should object less to such federal intervention in extension. This would seem to be largely due to the personality of Knapp who (though financed by the United States Department of Agriculture) had shown such a penetrating understanding

of extension methods at the local level. In addition, the great social and economic disorganization which followed the Civil War made the need in the South proportionately so much greater.

That the organization adopted for the Cooperative Extension Service has been such a success in spite of forebodings at its inception, is surely a great tribute to the foresight of its founders, the tact of the federal administration and the cooperative spirit of the land grant colleges.

V. State Participation in Agricultural Advisory Work in England.

It is interesting to conjecture the reason that a similar success was not met with in England. In 1912, when the administration of all educational funds pertaining to agricultural advisory work was passed to the Board of Agriculture, the position was parallel with that in America after the passing of the Smith-Lever Act. In fact, it would seem that conditions were even more favorable for the building of an effective service, because the Board offered greater assistance to the county councils than ever did the federal government to the state. The Board had envisioned a network of some fifty or sixty farm institutes throughout the country as the basis for a sound extension or-

ganization.

Some of the reasons that the service failed to materialize successfully have already been listed (p. 63) as given in the Luxmoore Committee report. Fundamentally, however, the author is of the opinion that it would have had more chance of success if it could have become more localized in nature with some support from, say, the rural district councils (which are roughly equivalent to the county boards of supervisors in the United States).

The lack of local interest in the service was greatly aggravated by the wartime mobilization of the advisory personnel for duties invoking considerable arbitrary authority. If the advisory service had trouble through becoming too closely identified with the government and divorced from local support, however, the other extreme has been equally problematical in the United States.

VI. The Trend Toward Local Control in the Cooperative Extension Service.

The early days of the Cooperative Extension Service were not without their difficulties and embarrassments. That the farm bureau movement was cleverly conceived for promoting local interest and discussion as an educational incentive is unquestionable. The same organization has worked extremely well with the

4-H clubs and the home demonstration clubs. It should perhaps have been forseen that there was a danger of the bureaus being transformed into a political forum and lobby group, but no one could have predicted the tremendous speed with which the movement swept the country. No sooner had it been proudly conceived by the young service than it dominated the midwestern scene with its potential local stranglehold over county agents' salary and local cooperation.

The separation of the political and commercial functions of the farm bureaus from the Cooperative Extension Service has been a delicate operation, especially in the midwest. The bureaus became important sponsors of extension politically but yet, as a partially civil service organization, extension could not hope to keep its independent status if it became the pawn of a powerful pressure group. In spite of the True-Howard Agreement (issued jointly by the Department of Agriculture and the National Farm Bureau Federation in 1921) the complete break has only recently been achieved in New York and Iowa and has yet to be attained in Illinois.

VII. The Trend Toward Nationalization in the Cooperative Extension Service.

The Cooperative Extension Service has also had problems in another direction during the great farm

depression. Impoverished rural counties grasped at any opportunity to relieve their tax burdens, and the county agent's office was a vulnerable target. During the war the service had done its part to encourage an increase in production through improved technology. Farmers were only too well aware that one of their biggest problems was that of surplus production depressing price. Some ugly incidents have been recorded but it is a great credit to the workers that the reduction in staff was negligible in spite of widespread salary cuts and local bank failures. It is perhaps realistic not to get too emotional over this loyalty, however, because undoubtedly in spite of salary cuts at the local level, the state and federal contributions toward their salaries gave extension workers a security that was rare in such troubled times; and then there were few other jobs for the agents to transfer into in any case.

During this period the home demonstration program was the most realistic and probably did most to keep together what little local support was maintained. If the agricultural agents could not help the menfolk make any money, at least the home demonstration agents could show their wives how best to make do with what

they had.

The situation was relieved considerably for the agricultural agents with the start of the New Deal and its Agricultural Adjustment program. Requests for assistance in form filling flooded in. If he did not actually help to administer the schemes, the agent had an important function explaining them to the people, which at least justified his existence in their eyes.

This was a period in which extension could perhaps have become an instrument of national farm policy had it not been that its constitution at the local level was sufficient to keep it in equilibrium.

VIII. The Effect of Cooperative Organization on Flexibility.

Thus we have seen a trend toward local domination counteracted by federal control and a trend toward nationalization counteracted by local ties. It well illustrates the soundness of the organization for its environment.

By contrast, the advisory service in England and Wales, confined as it is to technical agriculture, is much less flexible because its functions would seem to the farmers to be more closely linked to national economic policy which they realize does not always coincide with their own best interests. Although the more enlightened farmers take a less parochial view than this, the others tend to regard the advisory

officer as a "government man" rather than "our county agent".

The farmer tends to feel that he is made very conscious of his national responsibilities when his services are required in an emergency, but when the emergency has passed, he is left to readjust back again without help, either technical or financial. This attitude has grown from his experience after the First World War when it was undoubtedly justified, although in fact the government was subject to world trends outside its control.

On this basis, therefore, it might have been expected that the grafting of the National Agricultural Advisory Service onto the Agricultural Executive Committees was not the shrewdest psychological move for creating a favorable atmosphere for cooperation between the service and the farmer. That it has not been serious is a credit to the broadmindedness of the farmers and the fairness with which the committees performed their unpopular duties. It is also surely a compliment to the advisory officers that they have overcome such a potentially unfavorable attitude in spite of the fact that they still have to administer certain government schemes.

CHAPTER VI

THE ORGANIZATION OF THE COOPERATIVE EXTENSION SERVICE IN MICHIGAN

Because there is considerable variation in the organization of the Cooperative Extension Service between states, it is proposed to describe the organization in Michigan and to comment on variations which may be found in other states in passing.

I. General Background.

The essence of extension organization is its cooperative nature. This means that as far as possible the administration is decentralized so that at each level the cooperating authorities feel (at least) that they have a great deal of autonomy and can direct their own policy at that level. This in itself has an invigorating effect both within the service and on the impact which the programs have on the public. The system is closely related to that of "checks and balances" which can be found permeating throughout the United States government. Each level of government has its own rights which it jealously guards against intrusion both from above and from below. In particular, the rights of the federal government are severely restricted in state domestic affairs.

The Smith-Lever Act is of great interest histor-

ically because it developed a formula whereby the federal government, through grants in aid, can exercise general control over state functions and yet can avoid the dangers of remote control and remain within the Constitution.

The Smith-Lever Act provided funds of two types. First, a sum to be equally divided among the states and a second sum to be divided in the proportion that the rural population of each state holds to the total rural population. (In a later act this was amended to farm population.) The latter sum is not payable until the state government has appropriated a similar sum to put with it.

"Plans for the work to be carried out under the Act shall be submitted by the proper official of each college and approved by the Secretary of Agriculture."

Later acts extending the payments made available were constructed on very similar lines. The Capper-Ketchum Act of 1928 as generally interpreted provided for further development of 4-H club work and home demonstration work. The Bankhead-Jones Act of 1935 did not require offset. It was brought in with an increase in demand on extension agents for assistance with government programs in the thirties.

The Bankhead-Flannagan Amendment (1945) of the

Bankhead-Jones Act provides a reserve fund to be allocated for special problems due to population characteristics. It emphasized better marketing and distribution, work with 4-H clubs and farm and home planning. In 1953 all these Acts were consolidated by Public Law 83. The amount appropriated is voted annually. By 1956 the funds available had risen by twelve million dollars to increase the personal service to American farmers, mostly through farm and home planning on a farm unit basis, to expand work in consumer education and in public policy. Eighty-five per cent of the increase is to be used for additional personnel in the counties.

II. County Organization in Michigan.

There are seventy-five county extension offices in Michigan, all housing an agricultural agent, usually a home economics agent, and sometimes one or more special agents. The latter may deal with farm and home development, marketing and consumer information, urban extension work or township extension development under the W. K. Kellogg experimental township extension program. One member of the county staff (usually the agricultural agent) is designated "county chairman" and is administratively responsible to a district extension supervisor in one each of four districts in the state.

In Michigan the cost of running the county office, including county travel, is borne by the county government or Board of Supervisors. and is administered through an Agricultural Committee. In some states this body also contributes toward the salary of the agents. This enables the counties to compete with each other for the better agents. In Michigan, salaries are wholly controlled at the state level with federal and state funds. The county government may choose their agent from a selection submitted by the college, but may not make an independent selection.

In their educational activities agents work in cooperation with advisory councils in agriculture, 4-H club activities and home economics. Representation on these councils varies between counties but is usually a combination of appointments by the agent and elections by various commodity and other special interest groups in the community.

Each advisory council selects representatives to sit on a County Advisory Board whose function is to coordinate the work of the Advisory Councils into a balanced, coherent program. The organization of Advisory Councils is repeated at the district and state level.

Home economics and 4-H activities in the county

utilize the "club" structure of operation. Boys and girls (8-14) and womenfolk are organized into 4-H and home demonstration clubs, each with a club leader. Much of the educational work is done by the agent through the club leaders. Clubs are offered a selection of "projects" from which to choose in building their program. The agent then arranges that the club leaders shall have the proper instruction for carrying out the project from either the county or the state specialist staff. The leaders return to their clubs and demonstrate what they have been taught to the club members, who then do it themselves. The size of clubs is usually less than twenty so that they are able to meet informally in members' homes. With good leaders, the system is an excellent one because the instruction can always be practical and intimate; but the maintenance of vigorous leadership throughout the county is a perennial headache for all 4-H and home demonstration agents.

Although most agricultural agents recognize the importance of working with and through the natural social leaders of a community if and when they can be found, there is no formal organization of clubs and leadership in this branch of extension.

III. District Organization.

The state is divided into four districts for

the purposes of extension administration. The district supervisor is in charge, and he is housed with his staff at the state office at the land grant college (Michigan State University). The supervisor is in line of authority between the director of extension and the county staff, and is responsible for all staffing and personnel administration as well as for overall program coordination in his district. To assist him in the latter part of his job he has three associate district supervisors (in Agriculture, 4-H club work and Home Economics).

The district supervisory staff are guided in their program planning activities by three District Advisory Councils and a District Advisory Board with representation from the county organizations.

IV. State Organization.

At the state level, extension is in the charge of a director of extension who is advised by a State Advisory Board elected by the District Advisory Boards.

A. Organization from the Director upward.

The director is himself under the direction of the Dean of the College of Agriculture in Michigan State University. The college is divided into three units: research, teaching and extension,

each with a director, but the staff in these units are housed in subject matter departments so that each can influence and benefit from the other.

The Dean works under the President of Michigan State University who is advised in extension matters by a Vice-President in charge of off-campus activities.

The President is ex-officio chairman of an elected body, the Michigan State Board of Agriculture, which negotiates with the federal office of extension in the United States Department of Agriculture. All appointments, although in practice made at lower levels, have to be formally approved at all levels up to the Secretary of Agriculture.

B. Organization from the Director Downward.

The director of extension has four assistants, one in charge of administration and finance, and one each in charge of Agriculture, Home Economics and 4-H club work programs for the state. The administrative assistant is direct in line of authority with the district supervisors; the other assistants have a largely "staff" function, coordinating the technical specialist staff housed at the college with the advice of the State Advisory Councils in their field. A small group of special-

ists is housed at a substation in the Upper Peninsula north of Lake Michigan.

The specialist staff give a comprehensive coverage of all subject matter fields involved in extension, including all aspects of agricultural economics, sociology, tourist and resort development, forestry and urban extension work. It is often the case that staff members divide their time between extension, research or college teaching, or among all three. The specialists in each teaching department are coordinated by a project leader.

C. Staff Associations.

There are state and national associations for most staff groups in extension. These are semi-fraternal organizations, but considerable time is spent in devising means of improving the service. They have considerable influence in building a team spirit among extension workers which contributes to the infectious enthusiasm which is found throughout the service. They are not trade unions for consolidating grievances and negotiating staff complaints. Staff relationships are sufficiently informal to make this unnecessary.

CHAPTER VII

THE ORGANIZATION OF THE NATIONAL AGRICULTURAL ADVISORY SERVICE IN ENGLAND AND WALES

The National Agricultural Advisory Service is organized at four levels from the district through the county and province up to National Headquarters in London. Although the organization is a direct line of authority and competence, there are somewhat complex relationships at each level with other organizations, both governmental and private.

I. The District.

In most cases the district is built upon the County Agricultural Committee district. The Luxmoore Committee recommended that it should contain one hundred thousand acres of farm land or one thousand farms, whichever was the greater. In general it has been possible to keep between these limits except when the farms are very large or very small.

The district is staffed by a district advisory officer who is responsible for the conduct of advisory work there. He is also seconded to the District Sub-Committee of the County Agricultural Executive Committee (whose function includes the promotion of the government's agricultural policy in the district) and the giving of advice to the county committee in the

performance of the latter's statutory duties of supervision under the Agricultural Act of 1947. The District Committee has recently[10] been reoriented with less emphasis on regulation and administration and more on the educational and advisory approach through its district advisory officer. It is envisioned that it shall perform much the same function as is fulfilled by the Agricultural Advisory Board in a Michigan county.

[10]This reorientation was in the process of being executed when the author left England. It was not therefore possible to assess the result.

An opportunity is being given the district advisory officer to release himself from much of his government administrative work and devote more of his time to advisory work with the emphasis on farm management. He should benefit by deriving and working his program through the advice of local leaders on his committee.

The operation of the service at the district level is undoubtedly influenced by the fact that the committee which now exercises this benevolent oversight of the district for the Minister of Agriculture often contains the same personnel and meets at the same time in the same office as the war time and immediately post-war committee which had a somewhat arbitrary

authority over those who were not considered to be carrying a fair burden in the emergency production drive. This fact does not affect the progressive farmers, but the more backward men, who are difficult to reach in any case, are still a little suspicious. They have seen their advisory officer appointed to follow a technically untrained executive officer who had executed considerable power over them. The shortage of manpower at the time when the first district officers were appointed sometimes meant that it was necessary to employ a man who had previously attempted to farm in the area and had failed. Although these men generally carried out their duties conscientiously and efficiently, the shadow of their past hung, not only over them, but also over the title they carried even after they had vacated it.

A further recent change in organization has been that, whereas the district advisory officer was maintained in his office in the district with a small staff under him to attend to the needs of both the committee and the advisory service, he now operates from his home in the district, using an area office set up to serve several districts with a senior district advisory officer in charge. Under the old system, the district maintained a certain autonomy and was able to

coordinate the two types of work. This is not altogether lost because the office is still a separate unit within the area office, but is now outside the district.

The purpose of the reorganization was twofold:

1. To make for more economic use of office and field inspection staff. (The small offices tended to create a duplication of staff.)
2. To sever as far as is possible the purely administrative functions of the committee from the educational functions of the advisory officer so that he has more time for advisory work. He usually resides in his district where his committee meets, but has to travel to his own office for office facilities. He is still nominally responsible for all the work done through his committee and has the responsibility of advising the committee and the non-technical field staff in the branches of their work, needing technical guidance.

Although the closing of the district office leads to an economy of administrative costs, there is no doubt that something is lost by closing the office where local farmers can visit to obtain help and advice. In all cases, however, arrangements are made whereby farmers can make telephone

contact with their advisory officer, either through his home or through some local government office.

II. The County.

The "county" is, in nearly all cases, the administrative county within the boundaries administered by the local government County Council.[11] It contains a variable number of districts.

[11] Sometimes this is smaller than the geographic county.

The head of the advisory service at the county level is the county agricultural officer who is also the chief executive officer for the County Agricultural Executive Committee in which the Minister of Agriculture has vested statutory powers. The county agricultural officer is in control of all the staff working for and with the Executive Committee and its various special purpose sub-committees.

The advisory staff under him varies a little, depending on the emphasis of local farming types. In every case, however, there is an assistant county agricultural officer (advisory) who deals almost entirely with advisory matters and is the officer of the Technical Development Sub-Committee of the Executive Committee.

This committee, in common with the Executive

Committee, appoints one of its members to attend each meeting of the district committees to effect a liaison. To achieve a similar coordination, the district advisory officers work with the A.C.A.O. (Advisory), who exercises a general coordination of the advisory activities in the county and supervises the conduct of field experiments and demonstrations by district advisory officers on private farms.

County Specialists:

Also stationed at the county headquarters are a number of county specialists which may include any or all of the following,depending on local farming: livestock husbandry officers, machinery officers, milk production officers, poultry officers, horticultural officers and bee-keeping officers. All of these officers, except the machinery officer, devote some of their time to statutory duties, many of which require a balanced technical knowledge if they are to be performed effectively. Much of the county staff was in the first instance drafted into the service from the ministry inspectorates concerned.

Livestock officers work with the licensing of male breeding stock, the selection of artificial insemination stock and other schemes for the production and encouragement of better livestock types. Milk

production officers not only advise farmers in better methods of clean milk production, but also administer the licensing of producers and of designated tuberculin tested milk which involves the inspection of methods and premises. Poultry officers administer the Poultry Stock Improvement Plan in addition to their advisory work. Horticultural officers work with plant certification schemes and do inspection under the Destructive Insects and Pests Act, the Sale of Diseased Plants Orders and the Importation of Plants Orders.

All these specialists are available to help the district advisory officer in the field. They also make their own contacts through their statutory work.

III. The Province.

There are eight provinces in England and Wales, containing from four to thirteen counties. Provincial Headquarters is housed within easy reach of an agricultural college or university but is not attached thereto. In those provinces where communication is difficult for geographical reasons, sub-provincial centers have been established.

The provincial advisory staff is under the control of a provincial director who is helped by a deputy. Where there is a sub-station, the deputy is in charge

of it. The director is the public exponent of agricultural policy in his province as well as being responsible for the advisory service. He maintains contact with national headquarters and interprets programs for local conditions. He serves on recruiting and promotion boards and is the vice-chairman of the advisory committee for the experimental husbandry farms in the province. It is in the provincial office that the majority of specialists are housed. In addition to the senior officers in each of the specialist fields represented in the county, there are other husbandry specialists in crops, grassland, who are responsible for no statutory work.

There are also "scientific" specialists in soil chemistry, nutrition chemistry, plant pathology, entomology, and bacteriology, each with sufficient laboratory facilities for soil testing, feed analysis and the like. The whole of this staff is available to the district officer for help with special problems. They maintain close contact with the agricultural colleges, universities and research institutes.

A. Experimental Work.

Although much of the fundamental scientific research in the country is done by the research institutes, the scientific specialists are given

both the encouragement and the facilities to do work on their own at the provincial center to ensure that they maintain a vigorous interest in their field.

Husbandry research is a somewhat different proposition. It is necessarily more local in its application and requires relatively larger quantities of land and equipment. Experiments and observation studies are carried out throughout the county on the land of cooperating farmers. The work is often done at several centers simultaneously. It is done cooperatively by the county and provincial staff and is directed and coordinated by a provincial experiments committee with representation from each county in the province and each group of specialists. The work is at three levels: the "experiment" which is capable of reliable statistical treatment; the "observation study" (a single-plot comparison to give leads for a possible experiment or for the treatment of such problems as do not lend themselves to statistical treatment, e.g. grazing studies); and "the demonstration" which is strictly educational, being directed toward the promotion of a piece of information previously determined by careful

experiments. Suggestions for work to be done originate both within the service at all levels and in other bodies (both public and private) which request cooperation.

B. Experimental Husbandry Farms.

There are many husbandry problems which for reasons of duration, expense or even risk, do not lend themselves for experimentation on private farms. It is to study these that a chain of experimental husbandry farms has been established throughout the country. These are not to be confused with the pilot farms which are run by private farmers and are "adopted" for demonstration purposes by district advisory officers as a means of propagating improved techniques in a backward area.

The primary purpose of the experimental husbandry farm is to conduct experiments, but it is considered essential that in their overall management they should be respected by neighboring farmers. Ten of them have so far been established in agriculture on widely different soil types and rainfall zones. There are also six experimental horticultural stations fulfilling the same purpose in horticulture. They serve as a link between the Research Institute and application on the farm.

C. Advisory Aids.

There is an advisory aids officer at each provincial headquarters whose job it is to service all of the workers in the province with equipment and advice for effective communication with farmers. A collection of visual materials is maintained for the use of all officers. Cameras are made available to all staff who are encouraged to take colored photographs for use in lectures and discussion groups. A film library is maintained and help is given with show exhibits, press writing and radio work.

D. Farm Management.

Farm management and agricultural economics are not included in the advisory service.[12] Workers in this field have remained with the universities and agricultural colleges.

[12] See p. 99.

When the emergency conditions of the war came to an end and farming once more had to settle back into the economy to some extent, problems of farm management began to occur with increasing frequency. Previously, farm prices had been fixed at such a level that, provided the farmer hit his production target, he was assured a reasonable

living.

The National Agricultural Advisory Service has solved its problem by appointing, in each province, a liaison officer to link the university economists with the advisory officers. His main job was to train the advisory officers in their new work and make available to them the local information they would need.

At first the problem was approached with great circumspection, emphasis being placed on the quality of the advice rather than the number of cases tackled. As more data is collected locally, and the district officers gain in confidence, it is now becoming possible to educate farmers in some of the basic principles by means of pilot farms and evening discussion meetings. The consultant approach is not being abandoned, because it is an excellent method of keeping the officers in the most intimate contact with the daily problems the farmers have to face. Without this contact, the advice offered in all fields could soon become remote from practical expediency and the effectiveness of the service would suffer.

IV. Headquarters.

The fourth level of the Advisory Service is at national headquarters in London. It consists of the director, three senior advisory and education officers (responsible for the science, husbandry and horticulture sections respectively) and other technical officers including a chief livestock husbandry officer, chief poultry advisory officer, chief milk production officer, and a chief farm management adviser. A chief machinery officer is stationed at the National Institute of Agricultural Engineering.

Publications:

Also at headquarters is stationed a chief advisory aids officer who works with the Ministry of Agriculture Information Division to produce advisory leaflets, bulletins, reports and other publications. This material is prepared by the specialist staff, is edited by the advisory aids staff and is published by the Information Division.

CHAPTER VIII

RELATIONSHIP WITH THE PUBLIC

I. The Rural Background.

It is difficult to draw comparisons between the types of farming and the rural social organization in the two countries insofar as they affect the operation of extension work. In spite of this, the author has nevertheless formed some impressions from his limited knowledge of the two countries, which are stated below.

A. Size of United States County Compared with English District.

It would seem that the county agent has a larger number of farms (average 2,100) in his county than has the district advisory officer (average 1,500). Road communications are generally easier in Michigan, in spite of the high proportion of earth and gravel roads. The roads are straighter, and it would be more feasible to cover a wider territory in the United States than it would be in England.

B. Type of Farming.

Although it is less true in Michigan than most other states, the types of farming areas tend to be larger in the United States than in England. Even outside the belts of production it is more usual for a county agent to have more homogeneity among the farms in his county than has the advisory officer. The farms also tend to be organized on less complex patterns with a smaller number of interlocking enterprises. This again simplifies the problem of extension somewhat because the situation lends itself to a more generalized approach with an emphasis on mass communication.

A further major difference in farming is a difference in attitude toward farming by the farmers themselves. In America where land has been plentiful and labor scarce, the emphasis has (rightly) been placed on production per man, even if sometimes this has tended toward soil exploitation. In Britain the emphasis has been on production per acre, because land has been the limiting factor. This attitude has generated an inborn, deep-seated

mystic "respect for the land" among farmers which often hinders the adoption of improved practices which though demonstrably more economical do not always conform to the strict tenets of husbandry laid down for them by their forefathers. In some areas a farmer can definitely lose social prestige if his farming methods are considered to be exploitive.

B. Social Organization.

Disregarding the earliest settled areas, American rural society is scattered and does not fall into the village groupings that are found in Europe. For one thing, the population is more fluid and for another the land was originally settled in farm units with the house and buildings conveniently situated in the middle. This has tended to make country life rather isolated. If it has caused farmers to be excellent improvisors, they have lacked the social amenities of the urban dwellers. This is one reason why it has been necessary for the extension service to concern itself with social factors which, though not having a direct influence on technical agriculture, have a most significant indirect influence through the general welfare of rural

societies. Perhaps because they are without an accumulation of traditional experience, American farmers seem keener for the latest technical advice. Newness is often held in high esteem for its own sake, whereas in Britain the tendency has been to distrust what is new until it can be demonstrated to be better than what is currently in use. Both these extremes are found to some extent in both countries, but the tendency is for the British farmer to be more cautious, while his American counterpart tends to be a little brash.

Finally, there is a problem in America which is not encountered in Britain. The rural people have been the slowest to intermingle nationality groups, and today there are a series of national groups scattered throughout the countryside, each tending to isolate itself from its neighbors to some extent. The county agent must take this into account when planning his program, because each group tends to adhere to its own set of social values with the result that a method of approach which might appeal to one group might even be offensive to another.

II. The Objectives of the Two Organizations.

One of the most difficult problems in any study involving the Cooperative Extension Service is to attempt to define its purpose. Upon inquiry and investigation there appear to be so many variations on a common theme that one is tempted to arrive at the conclusion that there are as many general objectives as there are people defining them.

The Smith-Lever Act sets out the basic objectives of extension as follows; later acts have emphasized different feature:

> "Cooperative Agricultural Extension work shall consist of the giving of instructions and practical demonstrations in agriculture and home economics and subjects relating thereto to persons not attending or resident in the said colleges in the several communities and imparting information on said subjects through demonstrations, publocations and otherwise."

That this definition is vague is probably intentional so that the development of the service could respond to local needs and thus create local interest. It also accounts for the many interpretations to be found throughout the literature.

Some indication of what has developed can be obtained from the following list of twelve contributions which extension makes toward the improvement

of the farm, the home and farm living. They are listed by a joint committee of the Department of Agriculture and land grant college personnel under the chairmanship of Dr. John Hannah, President of Michigan State University (Hannah, 1948):

"1. Applying the findings of research.
2. Solving problems through group action.
3. Understanding economic and social factors.
4. Improving family diets.
5. Improving other functions of the home maker.
6. Working with rural youth.
7. Counselling on farm problems.
8. Mobilizing farm people to meet emergencies.
9. Contributing to the science of government and education.
10. Aiding the aesthetic and cultural growth of farm people.
11. Contributing to urban life.
12. Developing rural leadership."

It is interesting to contrast this list of objectives with the duties of the National Agricultural Advisory Service as described in a report "The First Eight Years - 1946-54" (M.A.F. & F. 1955):

"1. To disseminate among food producers scientific and technical knowledge, including such new knowledge as can usefully be

applied in the field.

2. To provide advice to individual farmers on technical matters related to food production.

3. To carry out such experiments and investigations as may be required to solve problems and to determine the local applicability of new discoveries and inventions, and to be the means of bringing to the attention of research workers problems that seem to call for fundamental investigation.

4. To provide technical guidance to County Agricultural Executive Committees who act as agents of the Minister in promoting agricultural development and efficiency.

5. To operate various statutory and departmental schemes for the improvement of the standards of agricultural production, the most important being:

   a. The inspection and licensing of bulls, boars and stallions with the object of preventing the use, for breeding, of inferior animals.

   b. The inspection of dairy farms in connection with the administration of milk regulations.

   c. The inspection and accreditation of breeding flocks of poultry.

   d. The inspection and certification of growing crops of potatoes, herbage plants and vegetables from which seed is to be harvested, and of fruit bushes and root stocks which are to be sold for planting.

   e. The inspection of crops and plants under plant health regulations."

From these two definitions and from his experi-

ence it seems clear to the author that although the two services have a substantial area of overlapping function, they each extend out of that field in different directions. The field common to both is the dissemination of information and the promotion of technology in agriculture. The National Agricultural Advisory Service extends into the field of government administration and regulation, while the Cooperative Extension Service is at great pains to keep clear of compulsion, inspection, regulation and financial inducements. It extends into the field of what shall be called "social welfare" which in England is largely done independently, albeit less comprehensively, by such organizations as the Womens' Institutes, Young Farmers' Clubs, Boy Scouts, Girl Guides, the Boys' Brigade and a multitude of semi-social farmers' organizations.[13]

[13]In the village (pop. 3,000) where the author operates, there are the following organizations, all completely independent of, though serviced by, the advisory service as requested: "The St. Columb Fat Stock Society", "The St. Columb Farmers Club", "The St. Columb Young Farmers Club", "The St. Columb Horse Society" and "The St. Columb Womens Institute", in addition to the usual religious and political societies and the British Legion, all self-governing at the local level.

The difference is unfortunately by no means as straightforward as this would make it seem, but it

is hoped that the discussion in the remainder of this paper will qualify the distinction and bring out some of the subtleties which are not at first apparent. It is proposed to discuss first the relationship with the public at the local level and then at the higher political levels.

III. Relationships at the Local Level.

The county agent is undoubtedly much more closely linked with the community in which he operates than is the advisory officer, for he carries no authority except that which he commands from personal respect. He is freer to participate in the life of the community than is the advisory officer and is not even prevented from operating his own farm in the county.

One reason for this is that the extension program is more comprehensive in educational scope, and it requires that he shall be thoroughly acquainted with the social values of the community. Secondly, he is dependent upon the good will and cooperation of the local government for his local facilities and <u>expenses</u> and must always keep his eye on local politics if he is to remain in a position to be effective.

This is a challenging situation for any man, and its supporters will claim for it that it results in a program which is keyed to the needs of the people for whom it is intended.

The big disadvantage is that it is easy for the agent to become the general factotum for a host of societies and interest groups if he believes he needs their political support. Most of the agents the author has met have quickly acknowledged that this danger is very real and have expressed the opinion that they can soon become promoters, coordinators and local organizers rather than educators and technical consultants.[14]

[14]A survey conducted by Stone (1954) among the county agents in Michigan shows that they estimate only ten per cent of their time was spent actually in personal face to face contact with individuals at their farms but there will be a proportion of local business men as well. The visits will include the conduct of other business than the giving of technical advice. Yet in 1954-55 the eighty-three county agents reported 49,494 farm and home visits which is an average of 596 per agent with an average duration of under thirty minutes per visit.

In 1952 an experiment was launched with support from the W. K. Kellogg Foundation to test the effectiveness of the orthodox system against a more intensive one in which the agent works within a smaller (township) area so that he can give more personal attention to his clients. In 1953 Congress

anticipated the outcome of the experiment by passing Public Law 83 which made additional funds available for the appointment of agents to conduct farm and home planning on a farm unit basis to increase the personal service to American farmers.

It seems to the present author that the vital factor to be recognized is that the long and short term interests of the farm people are not always compatible. Political considerations more usually emphasize short term consequences. Important though it is for the agent to serve the people with what they want, he can become ineffective if he responds to every pressure that is exerted on him. By trying to please everyone he eventually finds he has pleased no one.

He must exercise considerable judgment, integrity and strength of character if he is to avoid becoming a will-o'-the-wisp at the one extreme or an autocrat at the other.

In the advisory service the same forces operate. Although the district advisory officer soon realizes that he must obtain the support and respect of his people if he is to be effective, it is easier for him to become out of touch with local needs and yet still keep his job. The policy of the service

is to avoid keeping an officer in one place for long enough for his outlook to become narrowed into a parochial rut, but he is not dependent upon local support for any of his funds. Having responsibilities in the administration of national policy and the payment of subsidies, etc., he has to maintain a certain authority independent of his people which will enable him to act fairly in such a way that the schemes are administered uniformly throughout the nation.

. It would seem, therefore, that the county agent is more likely to become a pawn in local politics currying to popular favor; the district officer to become an arbiter of public tastes, giving the people what is "good" for them whether they want it or not.

The methods used by county agents reflect this situation. There is much more emphasis on mass communication (which could be used to greater advantage by the advisory service) and the project system in which extension programs are divided into uncoordinated projects, each having little relationship with the next.

The farm and home development approach is

an effort to counteract this tendency, but the majority of the work tends to be organized in projects yet. The agent finds he is in the grip of something stronger than himself, however much he may try to change. He will find that the local people look to him to continue as has always been done, and he will also find that the college subject specialists will continue to think in terms of projects to the extent that he will take the easy way out, accept the meetings offered him by the specialists, keep the local people content, and submit an impressive statistical report at the end of the year.

IV. Relationship with the State and Federal Governments' Functions.

The cooperative administration of the extension service is probably the most significant factor accounting for its success. It is difficult to conceive a better method of organizing a purely educational service once the function of each level of administration is clearly defined and accepted. If the impact of government upon agriculture were confined to education, there would be little doubt that the organization would be ideal.

Unfortunately, however, there are other functions which the government is increasingly called upon to perform which are not so popular because they require the exercise of authority which cannot always take local conditions into account.

In the United States the two functions are separated; in England they are, to some extent, combined. It has been shown (p. 56) that in England a system similar to that in America has failed. It is the opinion of the author that one of the reasons for this lies in the different status which agriculture holds in the national economy, and the public sentiment and the influence which rural interest has in the political system.

The conception of the extension service grew up in America at a time when agricultural interests were a potent political force. This is partly due to the relative size of the rural electorate (which has since dwindled)but is also due to the constitution of federal and state senates where sparesely populated rural states and counties are represented equally with those having a dense urban population. The consequence was that the land grant

colleges and extension grew out of a demand by rural interests for educational facilities both in agriculture and rural living generally. At that time rural enlightenment was more synonymous with national enlightenment; there is little doubt that it contributed to national development to the extent that it was a basis of a new educational philosophy placing a high value on technology. That it was at first mainly confined to agriculture was not important; it showed what could be done in a limited field and thus led people to respect technology as a means to progress in all fields. To the extent that this agreement is valid, therefore, the sectional interests of the rural people ultimately became of benefit to the whole nation.

In Britain it is probable that until recently[14] the farmer never had the national political power of his American counterpart. Farm programs have not been conceived by farmers operating as a pressure group, but rather to achieve economic balance desirable for the national economy (largely industrial). The net result has been that, whereas in America the farmer has been a political power to be reckoned with, in England

[14]The author suspects that the National Farmers Union is becoming a political force.

he has tended to become a pawn of the more powerful political groups. Today there are signs that this situation is becoming reversed.

In the United States the trend since the "New Deal" has been toward increasing government intervention in agriculture in the interests of the national economy and defense. The extension service with its local control is neither able nor willing to administer government schemes, and the consequence is that there is a host of local officers who have been appointed to do the work. If this work were unrelated to extension, this might not matter, but most of the work requires a good working knowledge of farming, and two schemes in particular require the giving of technical advice (viz., the Farm and Home Administration and the Soil Conservation Service). As the Hoover Commission revealed, it can be very bewildering for a farmer when there are so many different agencies all working independently in a locality.

At the foundation of the National Agricultural Advisory Service, it was considered that a separate educational service for farmers (although desirable) could not be justified in view of the staff already necessary to administer government

schemes. Since the latter were considered essential, it was felt that it would be better to have an advisory service with some administrative duties than no advisory service at all. The county office became the single agency to whom the farmer could turn, either for government help or for advice. In many cases it has been possible to back up advice to the farmer with financial help toward the capital expenditure necessary to carry it out.

Now that a move has been made to turn the district committee into an advisory committee, the district advisory officer will be released to spend the greater part of his time on advisory activities. As far as possible the regulatory work will (it is hoped) be confined to the county committee and county staff.

CHAPTER IX

RELATIONSHIPS WITHIN THE SERVICE

I. Training.

It is pointless to discuss at length the relative standard of technical education required of the county agent and district advisory officer upon entry into the service. It is the author's opinion that the B. S. standard in Agriculture at Michigan State University does not require so much competence as the B. Sc. standard at British universities. It does seem, however, that the Michigan training system for extension agents puts a greater emphasis on educational techniques; more attention is given to the basic problem of communicating ideas among the people, largely because more research is done in this field. It would be dangerous to assume, however, that the methods that work well in America would also work in England. Research to find the most effective combination of methods should be done there.

Most of the recruiting for the extension service is done without public competition or advertising. It is often the case that the graduating students are first employed as 4-H club agents

and later are transferred to agriculture. There is also a considerable entry from the ranks of the vocational agriculture teachers in the public schools.

At first sight the training programs in the extension service do not seem to differ greatly from the Advisory Service. There are orientation courses for beginners and periodic refresher courses and conferences for the whole staff at the state, district and county level. One major difference lies in the opportunity afforded to county agents to take regular university courses off campus in the evenings, thereby accumulating "credits" for an advanced degree, which may soon be obligatory for all agents if they are to maintain their status. Before the degree can be granted, the applicant must reside at the college for at least one term. After six years' seniority, applicants are not usually denied the privilege of taking sabbatical leave with either half pay or even full pay. Agents are also eligible to attend either a six week or a three week regional summer school not oftener than every three years.

There is no program equivalent to this generally available in the National Agricultural Advis-

ory Service, and it may well be that the Service would benefit more from this type of training than it does from the one to four day courses which are now used.

There is one quality found throughout the extension service which is hard to define and even harder to account for. Whether it be a product of the organization or of the in-service training programs, it is a tremendous asset to any organization. Briefly it is the team spirit; the spirit of extension; the infectious enthusiasm for the work and all it stands for; that is the most impressive thing of all about the service, and it is to be found throughout. All the members of the staff whom the author has met have been able and willing to talk freely and critically about their service without ill-will and without rancor. It is a constructive criticism, a striving to improve that perhaps is characteristic of America.

It must be agreed that one characteristic of the American national character (if there be such a thing) is a tremendous capacity for enthusiasm. Occasionally it would perhaps seem that this can be perverted into brashness but when it can be harnessed, as it is in the extension service,

the result is impressive.

II. Evaluation.

The design of a good training program requires a sound system of evaluation ipso facto. In spite of the many difficulties involved in this work, it seems that more attention has been given to research into the problem in the United States than in England and Wales. There is a special department of the federal extension service charged with conducting evaluation and training studies, and many states in addition run their own studies.

The social sciences in general have a great deal of difficulty establishing two sine qua nons in their experiments: validity and reliability. In extension studies, validity is harder to determine than reliability.

The reliability of a study is not difficult to establish. In spite of many superficial differences in the personalities and capabilities of county agents and their clientele, it is acceptable that there is a high degree of uniformity in the occurrence of basic problems met with by agents throughout the nation. Indeed it is remarkable how little some of the problems found by

county agents differ from those faced by the author and his colleagues working in a completely different environment.

Validity seems almost impossible to establish in work of this nature, however. It is relatively easy to design an experiment and collect information which might seem to prove an hypothesis, but in nearly every case the logic in the drawing of the hypothesis, if not faulty, is open to question and the whole of the work hinges on the validity of the method. Validity is still largely a value judgment and thus, having conceived an experiment and carried it out carefully, the conclusion is just as much a matter of opinion as would have been a carefully considered judgment in the first place. The frank recognition of this situation and a vigorous determination to solve it can go a long way toward finding a solution.

A second facet of evaluation is that of personnel for purposes of promotion or disciplinary action. All extension personnel are required to submit monthly reports on their work and a most comprehensive annual report in much greater detail than is required of district advisory officers.

The annual report is in two parts: statistical and narrative. The statistical report form contains some thirty-two pages and covers the activities in the minutest detail. Until this year (report submitted 1954-55) the narrative report has been exhaustive, containing photographs, etc., and often extending to one hundred and fifty pages of single-spaced typing. Recently instructions have been issued to limit the scope of the narrative.

In favor of the reports it has been argued that the statistics are required by law, for no state can continue to receive federal funds unless reports are properly kept. Secondly, it is argued that there is a responsibility to the taxpayer which should not be treated lightly. Thirdly, it is said that the reports provide some sort of objective basis for evaluating the performance of staff. Finally, it is argued (with some truth) that the writing of the narrative is a good mental discipline for the agent and that it keeps his program realistic by helping him to plan for the future.

The danger of the reports is that the agents have felt that their capabilities are measured more by the size and impressiveness of their report than

their effectiveness in the job. Time and again the author has heard it said by county agents that they tend to become a slave to their own statistics and must give a good showing on paper if they are to be recognized.

The author does not believe that there is any truth in this contention, but that is not important. If the agent believes it to be true, the damage will have been done, and he will strive for more meetings with larger audiences, more visits and telephone calls, paying scant regard to the educational effectiveness of the way he conducts them. His time becomes absorbed with "busy work" and there is little left over for the creative thinking and planning essential to a sound educational program, of the kind required in the farm and home development approach, which is being sought after so assiduously by the policy makers.

The rebuttal to this argument is (not without foundation) that time left for creative thinking is not always used for this purpose and can be an effective cover for inefficiency.

It seems to the author that reports are required for two distinct purposes: to show what the workers are trying to do, and to show to what extent

they are achieving their objectives. It does not seem possible to measure both with the same instrument; in fact, if this is attempted the measurement becomes invalid for either purpose. The reporter will tend to sell himself by representing what he has done as what he intended to do and he will arrive at a common status quo with all the workers attempting to fit themselves into a common mould.

It seems to the author that reporting, as a system of evaluation, is significant only if it is used in conjunction with an advanced plan which can be used as a yardstick. Though much is made of program planning in the extension text books, it does not appear to be carried on to any great extent among the agents in Michigan. At any rate, no formal plans are submitted. If they were to be required (and there is a move in this direction) it will seem to encourage the county agents to emerge from the common mould confident in the knowledge that what they are attempting has the approval of their seniors and will be judged on that basis.

In the advisory service reporting is kept to a minimum by comparison. In the author's opinion this has many advantages, but he feels that

perhaps more attention should be paid to planning a program to encourage the officers to think things through for themselves and to give them some long and short term objectives toward which they can direct their efforts conscientiously and systematically. In his experience, many district officers are somewhat frustrated because it is not altogether clear to them what exactly they are trying to do.

III. The Position of the Specialist.

The Joint Committee on Extension Programs, Policies and Goals (Hannah, 1948) in discussing the methods used by extension has this to say:

> "This committee would point out that farm life itself is not lived in segments and projects. It is lived as a whole. The operator faces a multitude of problems of which production is one, machinery another, conservation of soil resources another, and so on. The end objective of solving all these problems is a better life for the farm family and the insurance of an adequate supply of agricultural products for the general public."

Then in dark italics it states:

> "This committee believes that with the varied expansion of scientific knowledge and the desirability in many areas of some diversification, the average farm family needs the help of more generalists rather than more specialists. They need a competent interpreter and integrator of usable facts."

In the view of the present author, the specialist should be to the county agent what the county agent is expected to be to the farmer. Specialization should be confined to the research workers and there should be senior agents with a scientific background who can be freed from routine in order to be able to report on and interpret the work carried out in research to communicate it to the local staff in an acceptable and usable form. They might perhaps spend a week at a time in the county getting acquainted with the agent's problems.

At present, allowing for the fact that many of the specialists in the National Agricultural Advisory Service have considerable regulative duties in addition to their advisory functions (more than is envisaged for the district officers), the problem of the specialists is prominent in both services.

There seem to be three concepts of their function held by the specialists themselves:

1. Firstly, there is the "research worker" type; wholly occupied with his subject matter field, he pays little attention to the dissemination of the material he accumulates.
2. Secondly, there is the "academic" type, also

preoccupied with his field, he attempts to instruct county staff and farmers much as a lecturer would his students, paying little attention to the relationship of his field with others that impinge upon it. He shows little understanding of the field officers' or the farmers' positions as a coordinator of many fields of knowledge, for his mind runs on projects.

3. Finally, there is the "county agent at large" type who travels the countryside extensively and builds himself a state-wide or province-wide clientele of favored farmers and county officers whom he likes to visit. The remainder are largely ignored - "because they don't come to me."

It is unfortunate that the true purpose of the specialist in practice is not at all clear in either service and thus as a group they give the author the impression that they find it difficult to adjust themselves to their position of liaison between fundamental research and the farmer.

The research worker has his own satisfactions and social prestige in the university community. The field officer also has a place in his social com-

munity and can obtain real satisfaction from serving the needs of the people with whom he lives. The specialist has neither of these social compensations and therefore tends toward one extreme or the other. Alternatively, he adopts a position of embittered authority which does not endear him to either the research worker or the field officer. This does little to facilitate effective liaison between them.

It is the author's contention that the major challenge to the specialist is to become a two-way public relations officer. At present they have both the technical training and the intelligence to enable them to understand both the farmer and the research worker, given the facilities. What is lacking is a knowledge of public relations techniques. Public relations is a highly skilled profession requiring a comprehensive understanding of both the theory and the practice of "communications". Hitherto, teaching methods and communications techniques have been acknowledged to be of great importance to the district advisory officer and the county agent; this writer believes that they are of equal (if not greater) importance in the training of

specialists.

The county agent is encouraged to embark upon an advanced educational program tailored to meet his needs, whereas the specialist, if he is to gain further recognition, can only enter a specialized research program which emphasizes a field where he should be able to obtain what information he needs from the full-time bona fide research workers. It is not necessary to be able to build a watch before one can learn to tell the time.

In the advisory service the problem is also aggravated because agricultural economics is excluded from the service. The problem has been temporarily solved by the appointment of the liaison officers at the universities and colleges but in spite of the excellent job which these officers do in difficult circumstances, the service would benefit immensely if it had available to it some of the data Michigan extension service can get from the agricultural economics department at Michigan State University.

CHAPTER X

HISTORICAL ATTITUDES TOWARD AGRICULTURE AND RURAL LIFE AND THEIR EFFECTS ON POLICY OF THE TWO SERVICES TODAY AND FOR THE FUTURE

If the difference between the Cooperative Extension Service and the National Agricultural Advisory Service is to be clearly understood, it must be through a fundamental understanding of the history of political philosophy in the two countries and its effect on contemporary attitudes toward agriculture.

I. The Cooperative Extension Service.

At its outset in the Declaration of Independence American democracy was influenced by the agrarian sentiments of its author (Thomas Jefferson) which were undoubtedly a reflection of the then current popular sentiment. Democracy, to Jefferson at that time, was based upon the ideal of universal land ownership as the symbol of political independence and liberty.

The country at that time was so deeply implicated in agriculture, depending as it did on Europe for its supplies of industrial goods, that farming held high prestige as a noble profession, a superior way of life or as Jefferson put it:

> "Those who labour in the earth are the chosen people of God, if ever He had chosen people, whose breasts He has made His peculiar deposit for substantial and genuine virtue. It is the focus in which He keeps alive that sacred fire, which otherwise might escape from the face of the earth. . . . Dependence begets subservience and venality, suffocates the germ of virtue, and prepares fit tools for the designs of ambition. . . . generally speaking the proportion which other classes of citizens bear in any state to that of its husbandmen, is the proportion of its unsound to its healthy parts, and is a good enough barometer whereby to measure its degree of corruption." (Jefferson, 1804).

Later the country discovered that dependency on Europe for manufactured goods was too chancy, and Jefferson, in spite of his philosophy helped to begin to build up the tremendous industrial potential which it has today.

The anomaly which is difficult for a European to understand is that, in spite of the fact that the farm population is now down to twelve per cent of the total and even so is not declining fast enough for economic efficiency; that the industrial revolution in America is upheld as an example to the world in spite of Jefferson's prophecies; that in 1950 forty per cent of the farms produced ninety per cent of the nation's food supply; in spite of all these things it is still politically expedient for a Representative to say in the House: ". . .I have always considered the

farmers of this country as the backbone of American democracy," (Andresen, 1947), and the farm bloc is still considered the most powerful lobby group in Washington. The sentiment of the electorate is still very much in sympathy with the basic ideals of Jefferson in spite of the fact that the country owes its place in the world to an economic structure which is the very antithesis of those ideals.

The position of the extension service in this situation tends in the view of the author to be equally anomalous. Half of its objectives are aimed toward making the countryside a more satisfying and comfortable place to live, the other half toward increasing the efficiency (measured in output per man) of agriculture. The latter objective inevitably entails that the food supplies of the nation are capable of being supplied by a smaller and smaller section of the community. In other words, while socially it makes country life more attractive, economically it tends to make it increasingly impossible without migration.

That this danger exists is recognized, both by economists and by the members of the service, and their policy is going through a gradual transition. For a tax-supported organization, the service is itself in

a rather unique position in its relation to politics and public opinion.

Firstly its policy is extrordinarily broadly defined by statute and administrative directive, and this enables it to mould and remould itself within this broad framework in response to long term trends in public thinking. Its survival, so far, will demonstrate this. Secondly, being an educational organization, it has the means of influencing people's values and by subtle methods can mould political support for itself among certain sections of the electorate. It is regarded as essential, therefore, that the policy makers (and this to some extent includes every member of the service) shall stand firm in the hurly-burly of party political maneuvering and yet remain sensitive to swings in public opinion. As one bathing in the sea may withstand the buffeting of the waves and be invigorated (if he doesn't mind a ducking) but must retreat (like King Canute) before the incoming tide, so the Extension Service can withstand the buffeting of the politicians (using its public relations facilities) but must always be prepared to retreat before the tide of public opinion and retrench itself on firmer ground.

The morality of such apparent expediency is an

interesting study in ethics. One of the most common social diseases among government bureaucracies is an obsession for self-perpetuation; one of the symptoms is a creeping paralysis which can be cured only by drastic political surgery. In the case of the Extension Service, however, it would seem that had the founders of the organization and those who have since supported it been concerned that this might happen, they would surely have defined policy more clearly and would have hedged it about with numerous restrictive clauses. This has not been the case.

The author believes that the Cooperative Extension Service remains vital because it is more than an organization; it is an idea, a democratic philosophy of "helping the people to help themselves" with an immense social value of its own. Like all philosophies however, it cannot be transmitted in a vacuum but must have a vehicle to carry it into people's minds.

It so happens that originally this vehicle was "the giving of instructions and practical demonstrations in agriculture and home economics and subjects relating thereto to persons not attending or resident in colleges." If the ideal were allowed to escape because of a change in the political situation, it would be equivalent to throwing the baby out with

the bath water. It is the view of the author that extension will continue to remould the scope of its subject matter and its method of approach in a changing environment because the philosophy it carries will always be needed in town and country if democracy is to remain personal and vigorous in the atmosphere of massive vituperation that now pervades it.

Of course the providing of technical advice in agricultural technology (including economic advice) will never be discarded, but with their eyes on the future the policy makers seem already to be laying the foundations of a bridge into a new era. Already they maybe can forsee the eventual collapse of the popular political appeal for the doctrine of "agricultural fundamentalism" which most political scientists and economists have long since abandoned. Can they also forsee the farm vote dwindling to a size which, if it is left to stand on its own, unsupported by the urban romanticists would not enable it to command any appreciable political power? That twelve per cent of the population should wield so much power today is partly due to the rural constitution of the legislatures.

As evidence of this change, the author would

point to the growth of urban home demonstration work, the appointment of urban agents, the movement toward urban 4-H clubs and the appointment of consumer agents. If there is any political group which is likely to "adopt" this new work and nurture it in the political arena, it is the labor unions which are fast gaining a power to match that of the farm bloc. Already there is some concern about the tremendous increase in leisure time which will result from a thirty hour work week for labor. Might not extension have a method for helping to solve a problem of this nature?

If any such change as is envisaged should come about, the farmers will not be the losers. It will be recognized that in the long run an efficient agriculture will tend to reduce food prices and taxation. In fact, should the political power of the farmers be reduced to scale, they are likely to retain a better advisory service than they could muster support for on their own. The extension service is after all a great and very successful social experiment and eventually most social advances in an industrial economy tend to rely upon organized labor for their political support. That this experiment has maintained such a consistently high respect in a po-

litical environment where the word "socialism" is anathema, is the highest compliment to the organizers of the service and its policy makers throughout its life.

II. The National Agricultural Advisory Service.

In England since the repeal of the Corn Law, popular political thinking has generally been dominated by commerce and economics. This is particularly true of right wing thinking though the farmers traditionally are conservative. The Labour Party are more concerned about the interests of the urban workers than that of the farmers. Even the farmers themselves prefer to be considered more as economic units than as social units or even as the back-bone of democracy.

Farm policy has been determined more by national and international circumstances than by the interest of the farmers acting through their organizations. It is generally acknowledged that this must be so, but all the farmers ask is that they shall be able to foresee what will be required of them in advance and have such information uncolored by the political expediency of the moment. They need information about their relationship to the national economy and the world situation so that they are better able to understand

agricultural policy and take it into account as they plan the future management of their business.

The National Agricultural Advisory Service could do this work and could do it convincingly, unshackled by political ties. The farmers would soon be able to detect whether this was so. It may, however, be interpolated that such an excursion into the borders of politics would be inappropriate for a minstry department. In this case the work could be done by the agricultural economics departments of universities and agricultural colleges. That such an excursion into the field of policy is feasible has already been demonstrated in the Cooperative Extension Service where the political situation is quite as "lively" as in England. It is true that great care would be necessary, but no more than is already exercised by the B.B.C. in a wider field. It would, however, be a departure requiring both courage and imagination from its inception.

Even outside the field of farming there is equal need. In vain do the government leaders try to acquaint the people with the economic "facts of life" by exhortation to work harder and spend less, because the people have very little conception of what "inflation" is. They are more inclined to regard it

as an attribute of politicians than something real and vital. If the economic education of the public as a whole could be raised, it would be far more responsive to the situation and would react accordingly. Ignorance breeds distrust and distrust breeds apathy.

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