

ACTA

REG. SOCIETATIS HUMANIORUM LITTERARUM LUNDENSIS

Skrifter utgivna av Kungl. Humanistiska Vetenskapssamfundet i Lund

LXIX

Per Stjernquist

LAWS IN THE FORESTS

A STUDY OF PUBLIC DIRECTION OF SWEDISH
PRIVATE FORESTRY



LUND CWK GLEERUP

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A Study of Public Direction of Swedish Private Forestry

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A STUDY OF PUBLIC DIRECTION OF SWEDISH
PRIVATE FORESTRY

BY

PER STJERNQUIST



LUND CWK GLEERUP

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Preface

In order to write a book like this one, experience of very different kinds is necessary. Its framework consists of sociological theory and method. But in several places experience of legal methods has also been essential. And in writing the book I have been struck again and again by the thought how necessary practical experience of forest management is in order to understand the problems involved. Whether my experience of these fields has been adequate is something that must be judged by others. What I would like to emphasize is that investigations of the function of laws and their effects can never be a subject for specialists. They demand diversified experience, varying according to the field of activity being regulated. This is perhaps the reason why such investigations have hitherto been few in number.

The book also has a long history. Chapter II was written and published as early as 1963 (in *Legal Essays, A Tribute to Frede Castberg*, Oslo). My original intention was to elucidate the theoretical starting-points for the project and have their tenability discussed. However, the article did not arouse interest in learned circles and no discussion followed. It is printed here almost unchanged, since the aim of the chapter is to give an account of the assumptions on which the rest of the work is based. Incidentally I have the impression that the intervening ten years have not produced any essentially new understanding which can change what has been said there.

The field-reports were made mainly during the period 1964—66. The collecting of material from published sources, the preparation of the collected material and the composition of the text of the book have been carried on in the years following as far as was possible in the intervals between other more immediate tasks.

The book is the result of contributions by many people although I am responsible for the text. In the team which has carried on the project are included my research assistants at various times Claes Peyron, Dan Magnusson and Lena Lindgren. Among these, Dan Magnusson particularly has worked up the non-uniform and complicated statistical material, a task requiring both skill and perseverance. Of fundamental importance too are the contributions made by reporters in the field-work and the positive and helpful co-operation given by officials and field-personnel. The forest indeed rears wonderful people.

The exacting translation into English has been made by Lektor Muriel Spalding-Larsson.

Financial support for the project has been provided by the Swedish Council for Silvicultural and Agricultural Research and by the Swedish Council for Social Science Research. The latter has also defrayed the costs of printing.

The manuscript was finished at the end of 1969.

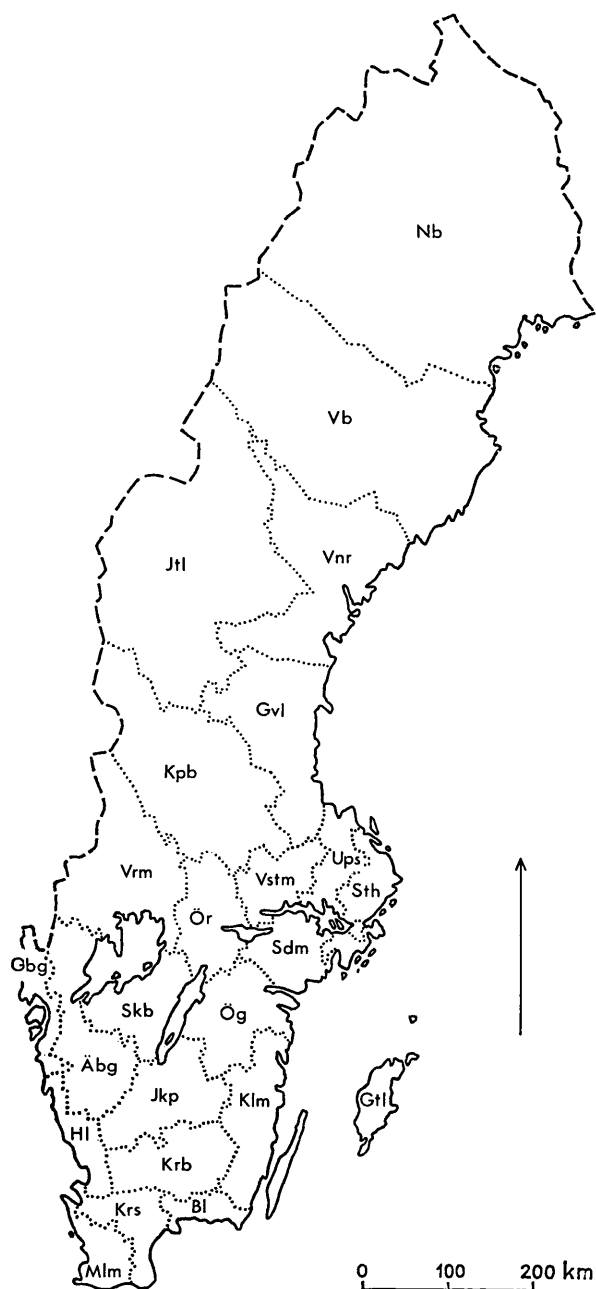
Kylen, December 30 1972.

Per Stjernquist

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Map 1. The Swedish counties.

Abbreviations for the Swedish counties:

Nb	Norrbotten	Ög	Östergötland
Vb	Västerbotten	Skb	Skaraborg
Jtl	Jämtland	Äbg	Älvsborg
Vnr	Västernorrland	Jkg	Jönköping
Gvl	Gävleborg	Krb	Kronoberg
Kpb	Kopparberg	Klm	Kalmar
Vrm	Värmland	Gtl	Gotland
Ör	Örebro	Gbg	Göteborg och Bohus
Vstm	Västmanland	Hl	Halland
Ups	Uppsala	Bl	Blekinge
Sth	Stockholm	Krs	Kristianstad
Sdm	Södermanland	Mlm	Malmöhus

I. Introduction

In 1780 a professor of economy from Hamburg was travelling in Sweden. He felt great sympathy for the Swedish farming population whom he described as beautiful creatures, their gaze full of life, so hardy that the women went lightly-clad and barefoot late into the autumn. But he was worried by their lack of enterprise, by their habit of producing only for their own household needs and nothing more. The natural resources were therefore largely unexploited; trade was almost non-existent. The great pine forests were not cut down for selling but were burned here and there to be used as arable land for a time. At night he often saw the light from these fires. He asked himself how one could encourage these people to work harder and to aim at production for trade. To him the answer to this question did not lie merely in legislation. The laws would be received with strong psychological resistance by the people and must therefore be supplemented by both economic and psychological measures in order to influence the population effectively.¹

Such clear-sightedness was rare at this time. In those days, it was customary to rule by law and the threat of punishment without paying any attention to the attitude of the people. The publication of the law and repressive measures were the means of influence which were taken for granted. On the other hand, there was little understanding of how to use stimulative measures which might give people positive reasons for obeying the laws and still less of how to set in motion pressures within the social groups and their connections. Incidentally, can it be said that a carefully considered understanding of these possibilities is always

¹ BÜSCH, *Bemerkungen auf einer Reise durch einen Teil Schwedens im Jahr 1780* (Hamburg 1783).

to be found nowadays? Is it not often so that the social processes that ensue from a law lie outside the calculations of the legislators?

At the time the professor made his journey burn-beating of forests had long been prohibited by law. The legal prohibition had not succeeded in making the farmers change their habitual actions, however, as is quite evident from this account. Ultimately the reason for burn-beating was that the trees had no value to the farmers except to serve their household purposes. This state of affairs survived surprisingly late even on the outskirts of the great tracts of forest. In the parish of Högsby in Kalmar county in the 1820's and 1830's, it was customary, wrote a contemporary observer, for anyone who needed timber to fell a tree wherever he wanted; only for the very largest trees was some payment made.² It has been reported from the parish of Visseltofta on the borders of Kristianstad and Kronoberg counties that in the 1840's fences were constructed by rolling large logs one on top of another.³

Not until about the 1850's does the sale of forests seem to have had rather more general importance for the farmer's finances.⁴ Burn-beating also gradually died out then. Instead a far more serious threat to the existence of the forests arose, at least in well-situated areas. Felling left extensive cleared areas of land which, because of their size, were less favourable to regrowth than the small areas left by burn-beating.

In order to preserve the growth of forests, the authorities proclaimed a forestry law in 1903, after various preliminaries. On this occasion the legislators clearly realized that the law would achieve its end only if they succeeded in convincing public opinion in the country of its necessity. "In place of the dead rule, there must be a living social organ," which was to follow and support private forestry as far as possible without using force.

The first forestry law has since been replaced by more recent

² *Byskomakaren Jonas Stolts minnen* (Kalmar 1956) pp. 26, 47.

³ Note made by the author.

⁴ SVENSSON, *Bygd och yttervärld* (Stockholm 1942) pp. 82 ff, 88. SVENSSON, "Bönder och borgerlighet" (*Från Småland och Hellas*, Studier tillägnade Bror Olsson, 1959) pp. 343 f.



Figure 1. Pines left after felling.

laws, which, having the same general attitude to the means of influence, have made increasingly comprehensive demands on the behaviour of forest owners. The most recent law, dating from 1948, requires of them, *inter alia*, that the annual felling be evenly distributed and that direct new investments be made in the forests. It has been described as an unusually advanced form of planning legislation, since by this means the authorities are trying to direct the methods of production within an entire sector of the national economy.

Parallel with the legislative development there have been corresponding, very striking changes in the forest owners' treatment of their forests. This is not to say that laws have been the only or even the decisive cause of the changes. For instance, they may have been due to alterations in general environmental factors, as happened when burn-beating ceased.

The purpose of this book is to investigate how the forestry laws have been applied in the field and what effect they have had on the behaviour of forest owners. In other words have the laws managed to penetrate the actual forests and influence those who work them? This study is concerned only with owners of small and medium-sized forests (approximately up to 200 hectares in size). The foresters in large-scale forestry are almost always working for a state or private business organization; in their case, therefore, the social environment and the psychological influences are entirely different. The difference may be put very simply by saying that this study falls within the field of public administration but outside the field of business administration.

The period covered by the investigation is 1905—1960.

In the USA in recent years there have appeared a number of valuable studies of government policies for forestry management — their development, their present content, and their transmission to the field staff.⁵ This book goes further and tries to

⁵ GULICK, *American Forest Policy* (New York 1951). — KAUFMAN, *The Forest Ranger. A Study in Administrative Behavior* (Baltimore 1960). — SOLBERG, *New Laws for New Forests* (Madison 1961). — HURST, *Law and Economic Growth. The Legal History of the Lumber Industry in Wisconsin* (Cambridge, Mass. 1964) especially Chaps. X—XI.



Figure 2. Birch stand.

analyze the effects of a legal programme on the population group at which it is aimed.

A short account of the theoretical background of the study will be given here.

The study of the function of legal forms in different social contexts is still at the preliminary stage. It is a difficult task to *observe carefully* a number of individual processes to gain an understanding of what happens and by comparing these field studies to try to *classify* different elements in these processes. What must be developed in the first place are the problems of the subject.

This is far from being a unique situation. In the other political sciences, too, systematic case studies predominate. From these may emerge more precise and subtle ways of framing questions which can be worked on further by comparison between extended case studies or by quantitative analysis. But without the preparatory work of observation and classification these detail analyses would be diffuse constructions without any basis in reality.

In another respect too there is agreement. The function of legal forms, like the political phenomenon, cannot always be understood without a historical perspective. Many links in the chain would remain undiscovered if the studies were confined to short periods of time. This appears to be the reason for research into the sociology of law becoming increasingly concerned with trying to make generalisations from studies of historical processes.⁶

Investigations set up in this way have been made of the origin of legal policies or programmes and the decision-making processes connected with them;⁷ of the carrying out of legal programmes

⁶ SKOLNICK, in *Law and Society*, Summer 1965 p. 37. GLUCKMAN, *Politics, Law and Ritual in Tribal Society*, (Oxford 1967) pp. 174—176, 235, strongly emphasizes the importance of "extended case-studies" as a method of analysis side by side with numerical correlations. The latter often conceal problems.

⁷ LATHAM, *The Group Basis of Politics* (Ithaca 1952). — HURST, *op. cit.*

⁸ THOMPSON, *The Regulatory Process in OPA Rationing* (New York 1950). — LANE, *The Regulation of Business Men*. Social Conditions of Government Economic Control (New Haven 1954). — KAUFMAN, *op. cit.*

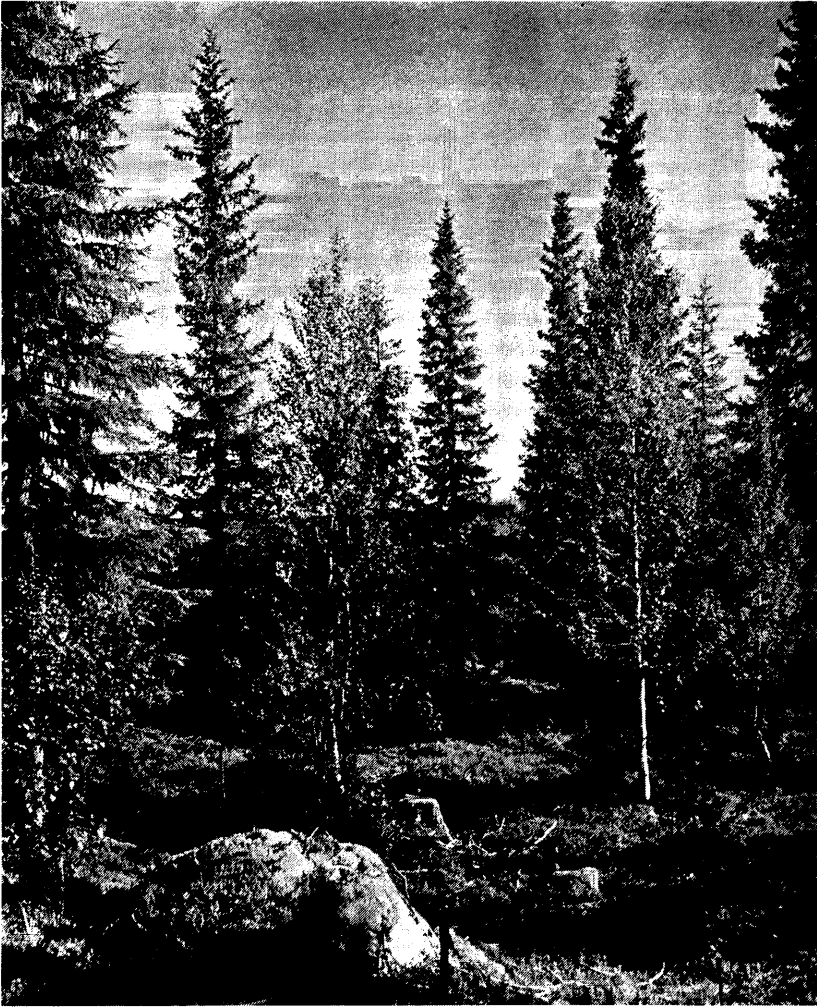


Figure 3. Spruces in a selection-cut farm forest in northern Sweden.

in the field (influence processes)⁸ and of the role of legal forms in organizational systems.⁹

⁸ BERLE and MEANS, *The Modern Corporation and Private Property* (New York 1932). — SCHWARTZ, "Social Factors in the Development of Legal Control: a Case Study of Two Israeli Settlements", *The Yale Law Journal* 63,

As regards method, this study differs from its predecessors mentioned above mainly because it has been considered necessary to provide a plan or model as a basis for the observations and attempts at classification — a kind of model, which builds on the sociological literature available, showing how influence processes of this type may be assumed to work. This abstract model has been considered necessary for several reasons: to give an account of the theoretical assumptions on which the study is based; to direct and make precise the observations; and to provide a firm foundation for future comparative analyses.

With these factual and theoretical starting-points, the lay-out of the study is as follows.

To start with, there is a survey in model form of concepts and results in the sociological literature considered relevant to understanding the influence processes at issue, i.e. those that emanate from laws intended to change social behaviour.

Then follows an investigation of changes in the behaviour of forest owners, their way of tending their forests during the period 1905—1960. The material consists of various kinds of contemporary reports and official statistical surveys.

The next step is to examine the forestry laws, bearing in mind such questions as: How did these laws come to be passed despite political resistance from different quarters? How was the programme of action for the forest owners drawn up? What devices were used to carry out the programme? How was it put into practice at the administrative level? The examination of these questions is based on official and other published or unpublished material.

This is followed by one of the main tasks, namely to throw light on the work of the authorities and especially the field staff in order to influence the forest owners and how they made use of the laws in this work. This takes us right to the front line of the laws. Material for this analysis consists partly of interviews with personnel in different administrative districts and partly of

1953—54. — Cf. SELZNICK, *TVA and the Grass Roots: a Study in the Sociology of Formal Organization* (Berkeley 1949).

archive material as a check on and supplement to the interview material.

In connection with this an attempt is made to work out whether the forest owners have been exposed to influences from different interest groups and organizations and if so what importance the laws have had.

Finally there remains the task of deciding what degree of importance the laws have had in changing the forest owners' behaviour. Here we must weigh their relative effects (both quantitatively and qualitatively) against other factors at work, especially any possible changes in the social, technical and economic environment of forestry. When, as here, the change in behaviour takes place slowly over a long period of time it is not possible to answer this question by using experimental methods. We must be content with assigning the investigation to a period of time in which environmental changes that can be assumed to have worked in the same direction as the laws have taken place only in one or two isolated respects. For this reason the period investigated ends at 1960.

The forestry laws are intended to change the behaviour of individuals so that they fall in with the official plans drawn up for future development. In fact these laws are among the earliest examples of modern planning legislation, which now covers many aspects of life (the use of land and other natural resources, building, traffic, etc.) There are many problems raised by planning legislation. They are all connected with the fact that planning legislation is an instrument for the political goals of government and hence intended to bring about changes in the state of society. This political legislation must of course be analysed in quite another way than traditional legislation which principally is aimed at preserving and modifying established order in society.

II. How are changes in social behaviour developed by means of legislation?

Even nowadays very little is definitely known about the connection between a law being made and corresponding changes in social behaviour, at least in social groups outside administrative structures. What social and psychological processes are set in motion? Are laws effective only on account of the authority and the threat of sanction which emanate from them owing to their connection with legal institutions? Or do they need to be supplemented by measures to persuade the individuals in question, in order to create positive motives for following the law? In which situations is a law ineffective as a means of changing behaviour despite resort to various measures? Questions of this kind cannot be answered for the present because we lack systematic observations and a theoretical survey in this field.

This lack of knowledge has meant that views about the way laws work have swung from one extreme to the other.

The one extreme starts out from the assumption that laws take effect by their mere existence. An illustration of this is found in an investigation made in the 1940's into the work of the Office of Price Administration in Washington. It was observed there that most lawyers in this office attributed to legal norms an effect on human conduct quite independent of the social and psychological situation. They expected that most people would follow the regulations without any special measures being necessary.¹ These observations were then given a more general application:

Our traditional approach to government has been legalistic. It has been assumed that people have an absolute duty to obey the government

¹ THOMPSON, *The Regulatory Process in OPA rationing* (New York 1950) pp. 213, 217.

and that, therefore, all the government planners have to do is issue an order and the desired results are automatically obtained. This attitude about government with its 'light switch' theory of regulation, is not adapted to the mass regulation problems of the modern age.²

The same attitude probably lies behind the fact, common even at present, that legislators seem to lack imagination in trying to find other means of influencing people than by the threat of sanction. They may think, even with regard to laws that aim at changing social behaviour, that special measures need to be taken only for the marginal individual who has difficulty in adapting himself to society. At any rate, the expanding legislation has tended to be accompanied by an inflation in threat of punishment. It has been said — and the assertion is probably correct — that this bias has suppressed the feeling of solidarity with society, since many people react strongly to being dictated to and threatened.

This view means that laws are assumed to take effect through a general respect for the legal system and fear of the threat of sanction of the particular law. But probably the explanation is not so straightforward, least of all with regard to laws which are aimed at changing the behaviour of whole groups. It is likely that the legislators' activity sets in motion influences of a more 'social' nature, just as, according to what we now know, the legislators themselves are open to influences from other groups in society.³ They may consist of slight changes in the demands which people make on one another in the different social interdependences. Isn't perhaps the term 'respect for the legal system' quite simply

² SIMON, SMITHBURG & THOMPSON, *Public Administration* (New York 1958) p. 460. An illuminating parallel is offered by research into the effect of mass media on public behaviour. It was based originally on the assumption that mass media directly influence behaviour, but it gradually revealed more and more intermediate variables. On this, see KATZ and LAZARSFELD, *Personal Influence* (Glencoe 1955) pp. 15 ff. Moreover, it may be pointed out that modern social psychology has felt obliged to caution us against the belief that norms, customs, or propaganda directly cause social behaviour. 'Their role is in shaping and determining needs, goals, perceptions, and meanings, not in operating directly to cause behaviour' (KRECH and CRUTCHFIELD, *Theory and Problems of Social Psychology*, New York 1948, pp. 31 f.).

³ Cf. LATHAM, *The Group Basis of Politics* (Ithaca 1952).

a vague way of expressing these processes? Or more obvious measures may be taken to persuade people that changes in behaviour are to their own advantage, but we do not know to what extent such methods are practised.

Perhaps one might venture to say that in the West European cultural tradition, which also includes the Scandinavian countries and the U.S.A., there is a strong tendency to take given laws as orders which ought to be blindly obeyed. For this reason, the intermediate influences have not been noted. For the same reason, we are not accustomed to imagining that the law may need to be supplemented by an activity which is intended to persuade, convince, and give mutual advantages.

It may also be instructive to compare this viewpoint of the West with the attitude in Russian society. Experts on the subject have pointed out that our strong emphasis on the content of laws and the formal sanctions is not found there. Of far greater importance than in the West, on the other hand, is the informal working upon individuals or groups, by which the purposes of the law are made known to the people:

The West has exalted law. . . . It has by the same token tended to forget that law itself is ultimately dependent on the existence of non-legal realities. Law is not its own justification, nor is it its own sanction. Behind it must lie the consent of the governed, as manifested in community selfconsciousness, common service, a sense of common purpose and destiny. The traditional Russian appreciation of spontaneous informal social relations, based on an inner intuition of group membership, is a challenge to us.⁴

The other extreme starts out from the view that laws do not have any appreciable influence on the behaviour of social groups. Ideas along these lines were found particularly in sociological literature during the decades round the turn of the century,⁵ and probably involved a reasoned reaction against the commonly held belief in the automatic effect of laws. It was assumed that the majority of laws only confirm existing social customs and ways of thinking. From this, it was concluded that people's behaviour is a result of spontaneous social influences far more

⁴ BERMAN, *Justice in Russia* (Cambridge, Mass. 1950) p. 192.

⁵ MYRDAL, *An American Dilemma* (New York 1944) pp. 19, 1048 ff.

than of legal factors, and that laws which aim at changing social customs do not on the whole have a long-lasting effect. This opinion was really an advance because it drew attention to the importance of extra-legal factors in these matters. The best-known exponent of this attitude in Europe, Eugen Ehrlich,⁶ has also furthered the discussion in another respect. He realized that in order to advance in this field of research it was necessary to include a study of the social situations and the different influences found there, instead of treating the influences one by one as separate entities. This was a new methodological approach which only gradually gained ground.⁷

This latter extreme point of view, with all its exaggerations, thus pointed to the future. However, it was to be a long time before it led to any empirical analysis of the relation between legislation and social behaviour. In fact, not until recently have these connections been studied, using modern psychological and sociological approaches to the problem. A study of this kind is the investigation, carried out by Herbert A. Simon and his team, of the American administrative authorities' work.⁸ These authorities often have to introduce into society economic or social plans, in the forms of laws, which are calculated to bring about changes in social behaviour. The writers found that in doing this legal sanctions were only one means among many different methods of influence. Indeed, all the contacts between the authorities and the people in society must be considered as methods of influence. The traditional tendency 'to think of inducement as enforcement' was thus shown to be untenable. It was also considered harmful: 'to reduce the resistances that spring from dislike of threats or sheer displays of authority, plans must seek to harness motivations other than fear and must not be presented in an imperious or haughty manner.'

⁶ EHRLICH, *Grundlegung der Soziologie des Rechts* (München 1913) pp. 15—17, 31 f., 299—304.

⁷ Ehrlich lived and worked in Czernowitz in Bukovina. It is worth noting that Malinowski had a similar East European background; in the field of ethnography, he introduced situation research as a counterbalance to the systematization in special institutions, which prevailed up until then.

⁸ SIMON *et al.*, *op. cit.* pp. 451—87. An older work with a similar aim which might be mentioned is BENTHAM, *Theory of Legislation* (1802).

The writers made a preliminary inventory of officially planned methods of influence. Owing to the nature of the book, they had no reason to extend the investigation to include other variables which may occur between the publishing of a law and corresponding changes in behaviour, or to go deeper into the social-psychological process.

But this much is clear: the legislative instrument cannot be treated as an isolated phenomenon, but must be seen in relation to other social influences. Therefore, it cannot be explained by other concepts and theories than those which are also valid for social control in general.

Before concrete investigations can be made in this field, one must, in other words, try to draw up a model which covers the functional and theoretical relations mentioned.

1. The model

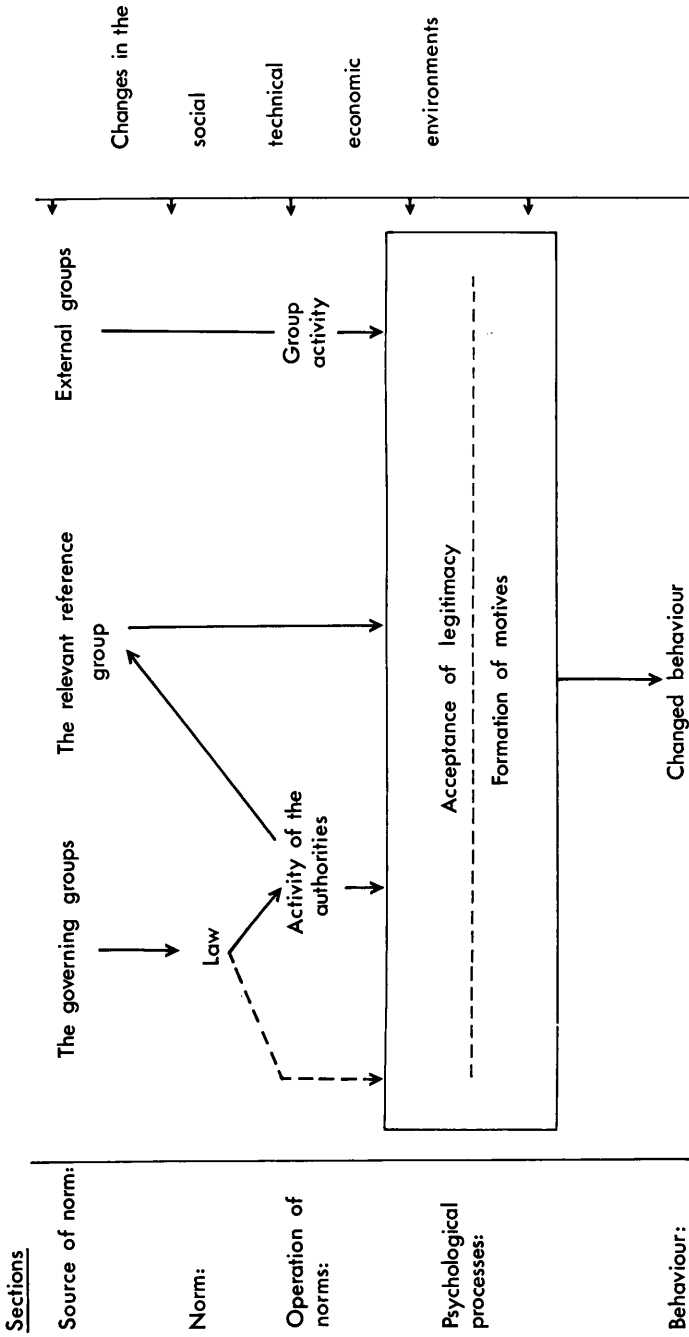
The model given here is an attempt to summarize, on the basis of available observations, the possible ways in which people can be motivated to conform to lawful behaviour. It is based chiefly on the literature dealing with social and legal control. Since research in this field is not very highly developed yet, the model is extremely basic. It will have to be altered, supplemented, and elaborated with new material; and at any rate this will be necessary as new research results are published.

In many respects the model has a limited scope:

1. In the first place, we are dealing with a field of behaviour that constitutes a field of reference for some law, and where, moreover, the behaviour, at least to some extent, conforms to the law. This limitation is due mainly to the way the problem is set out here. But as far as can be judged, there is also a theoretical reason: that the social pressure connected with legislation is of a special kind.

2. Further, it relates only to the behaviour of the public or social groups outside judicial and administrative authorities. The reasons for this are largely the same as those in the previous

Table A.



paragraph. Decision-making in administration has already been made the subject of an advanced theoretical formulation which has gained general support.⁹

3. Furthermore, it holds only for fields of behaviour in which the behaviour has obviously been changed within a comparatively short period. In such situations, it is apparently easier to identify the factors that influence behaviour. If, for example, one wants to assume that legislation has been effective one ought to show the correlation between changes in behaviour and previous changes in corresponding legal regulations. This limitation means that the model on the whole will only cover regulations that *change* group behaviour; a great number of examples can be taken from modern economic legislation and planning legislation. On the other hand, it is not primarily designed for those regulations which are aimed at *stabilizing* mores and modes of action which already exist, as is often the case with commercial and other types of legislation relating to private law.¹⁰ These behaviour-stabilizing laws are obviously what Sumner and Ehrlich had in mind when they maintained that to be effective legislation requires conformity with the customs practised in society. But to measure the relative importance of the law is almost impossible here, since certain conditions, such as historical tradition and the individual's socialization during his formative years, which are both difficult to discover and to appraise, play a decisive part.¹¹

⁹ SIMON, *Administrative Behavior, a study of decision-making processes in administrative organization* (New York 1945). Simon has not, strangely enough, taken into account legal factors among the 'organizational' influences which affect administrative behaviour.

¹⁰ The above division into behaviour-changing and behaviour-stabilizing norms has proved to be practical in different social sciences. MEANS, in *The Structure of the American Economy I* (National Resources Committee; Washington 1939), uses the terms 'administrative rules' and 'canalizing rules' respectively; see especially pp. 120 f. HOMANS, *The Human Group* (London 1951), applies a similar division of norms but has a special terminology: 'norms apply to the maintenance of established behaviour, orders to future changes in behaviour.' Homans also points out that 'orders are always changing into law and custom;' see p. 416.

¹¹ LEVIN, "Policy Evaluation and Recidivism" (*Law and Society Review* VI, 1971) discusses the difficulty of ascertaining the precise degree to which each of several causal factors affects behaviour.

4. Finally, the model only touches on influences from the social, economic, and technical environments of behaviour. Every activity must have a basis composed of people who pursue this activity, of objects and techniques with whose help it is practised, and also of economic resources to ensure the co-operation of other people. Alterations in this foundation, whether due to social inducement or to spontaneous development, change behaviour. In concrete investigations, one must, of course, pay attention to incidental changes in environment factors.

To many people, a theoretical model of this kind may seem to be an unnecessary artifice or intellectual puzzle. In my view this is an error of judgment. The model helps to give a precise account of the theoretical assumptions on which the study is founded and at the same time it gives a survey of the most pressing problems. In doing this, it also makes possible a comparison between various concrete investigations.

What the model can offer, then, is a survey of the ways in which influences work and the factors which contribute to this process. It is imperfect inasmuch as it is not possible to quantify variables in the model other than the extent of the change in behaviour. One cannot express in figures the degree of influence from various factors in the process. This is an imperfection which for the time being cannot be avoided in those branches of social research that do not deal with purely economic relations.¹²

In the following part, the different sections of the model will be considered separately and discussed more fully.

2. Psychological processes

The object of the model is to insert observable, external variables into their place in the influence process which takes place between a law being made and corresponding changes in social behaviour.

Nevertheless one cannot avoid considering the question of how motives are formed in the individual, how an outside impression

¹² Compare EASTON, 'Limits of the equilibrium model in social research'. *Behavioral Science* 1956, pp. 96 ff.

causes changed behaviour. Our opinion on this point can consciously or unconsciously be decisive in our conception of the structure of the process. It can also play an important part in the identification of various factors as possible influences.

At this point we come to a field of psychology that is rather difficult to approach, since motivation is never directly observable. The layman can only try to find the psychological theory which seems to be most generally accepted and state how he interprets it. But a statement of this kind ought to be made.¹³

I am taking as my starting point the fact that changes in behaviour which are fairly constant and which take place in many individuals are connected with changes in external factors. These outside influences — norms, for example, — do not affect behaviour directly. They have an immediate effect on the motives of individuals; that is, their needs, aims, and opinions about which means are best suited to attaining these aims. They do this by transmitting new experiences, feelings, ways of looking at the world around them. Changes in motives then cause changes in behaviour.¹⁴ The basic psychological questions are thus two in number. Can it be supposed that there has been an alteration in the aims of the social group investigated *or* in its ideas about what behaviour is suitable in order to achieve its wishes? ¹⁵

1. The influences can first of all be considered to shape new needs. This is an ordinary phenomenon during the individual's formative years and also, for example, in the consumer market, but it is probably unusual in the situations we are concerned with here. On the other hand, influences may be considered to play a more important part in order to actualize more or less

¹³ I am following essentially the line of argument in KRECH and CRUTCHFIELD, *Theory and Problems of Social Psychology* (New York 1948) pp. 31 ff., cf. p. 587. See note 2 above.

¹⁴ Krech and Crutchfield deny the value of such concepts as authority and suggestion, when it comes to explaining the motive power behind people's actions. The individual in his attitudes should not be looked upon as a passive victim of, for example, authority, but as an adaptable being who actively seeks ways and means to attain certain ends and to modify certain needs within the frame of his social experience.

¹⁵ It is pre-supposed that it is possible to distinguish in all the groups a common pattern of values from the multiplicity of individual variants.

latent values and consequently change the adjustment between conflicting needs. In the social pattern of values are included not only general needs, such as working for economic gain, social prestige, and identification with a particular social group with different variations and degrees of emphasis, but also a great number of specific efforts. If then some more deeply hidden value is brought to the surface of the consciousness this may result in changed behaviour.

2. Secondly, the influences can transmit experiences and views which give a new perspective to the line of conduct best suited to furthering already existing aims. A line of conduct followed previously may be found to be unsuitable — for example, as a result of social sanctions — and is abandoned for others; a prescribed line of conduct may be found to be more suitable than all others and is introduced.

One should not imagine that motives are formed all at once. It is apparently a complicated process, which develops successively. The external impressions can, via insight and the feelings that they transmit, gradually create a new attitude, an ever-increasing readiness to behave in the way desired. After it has become established this attitude may be actively expressed if the external situation demands it or if social stimuli (e.g. orders) are brought to bear on the individual. From a purely psychological point of view, it should be assumed that the individual must always be prepared for the change in behaviour before it is produced. For this reason, a reiterated influence by means of different methods is necessary.¹⁶

But as stated above, the formation of motives cannot be directly observed in the individual and even less can it be observed in a large group of people. It is, however, an aspect which must always be kept in mind in an analysis of every supposed influence, and which perhaps is easier to disentangle in these limited fields with the help of different indices in the material.

Closely connected with the formation of motives in individuals is their pre-attitude to the social system as a whole and to the

¹⁶ SIMON, *op. cit.* pp. 11 ff., 123.

special laws and authorities that affect them. Their attitude to the source of a norm may be assumed to function as a strong motivation and thus affect their behaviour. This can also be expressed by saying that if a social system as such is accepted then there follows a strong pressure of consistency also to accept norms which have developed according to the rules of the system and to uphold these norms at least to a noticeable extent.

This brings us to the problems which are usually summed up in the literature under the term acceptance of legitimacy or some such term. Little is known, however, about how attitudes of this kind are developed and shaped. The subject is also a difficult one to examine. The normal methods of measuring attitudes are scarcely applicable. Acceptance of a social system is expressed in behaviour which probably varies greatly according to the external circumstances. In that case the artificial interview situation must give a very misleading picture of the social reality. Instead of asking about people's attitude to a social system one should observe their behaviour directly in relation to it. The task, then, is to classify typical kinds of behaviour which may be considered to represent positive, passive and negative reactions to the social system.¹⁷

3. The field of behaviour

The activity that is changed may be more or less widespread throughout society. The possibility of external control may vary, as may the possibility of neutralizing the practical results of the behaviour counteracted. The previous behaviour may be more or less rooted in the group norms, a problem to which I shall return in going through the social norms.

All such variations are certainly significant in the choice of methods for influencing individuals. Presumably, after more detailed investigations, we may prove general relationships. The

¹⁷ See further STJERNQUIST, *Political Use of Legal Forms* (in *Scripta minora utgivna av Kungl. Humanistiska vetenskapssamfundet i Lund* 1968—69: 1.).

following table, however, is only meant to give some estimate of the range of possible variations.¹⁸

The range of behaviour

1. Group behaviour:
 - big groups with strong cohesiveness;
 - small groups with strong cohesiveness;
 - big groups with weak cohesiveness;
 - small groups with weak cohesiveness;
 - groups with a special key position;
2. Behaviour of marginal individuals.

The evidence of behaviour

1. Behaviour is directly controllable (e.g. measures concerning land and houses).
2. Behaviour can be controlled only after investigation, and
 - a. is important in a positive or negative direction for a certain person or group (e.g. breach of rationing regulations);
 - b. is not directed against a particular person or group (e.g. breach of currency regulations).

The variability of behaviour

1. Behaviour is binarily defined (it is thus a case of an either-or situation, as with prohibitions).
2. Behaviour can have many shades of variety.

4. The norms

In every society one can find a basic continuity in human wants and human actions as the activity of today evolves from and repeats that of yesterday.

¹⁸ How to measure changes in behaviour is a problem in itself. This aspect may be decisive in the choice of the field of behaviour. It is assumed of course that in the first place the possible use of available statistics is noted.

The influence of essential repetition in wants and in the techniques employed to fill wants is so all-pervasive that it is often overlooked, yet without it the existing organization of resources could hardly have arisen or continued to function. The farmer plants wheat not because of some contract with an ultimate consumer but simply because of an assumed continuity in the demand for bread. Ways of doing things in the immediate future are not going to be essentially different from the ways of the immediate past, though the scientific knowledge of improved methods may exist and though gradually over a period of years great changes may take place.¹⁹

This standardization is now considered to a great extent to be an effect caused by social rules and norms.²⁰ By social norm one understands an opinion or statement within a group indicating what members of the group (or others) ought to do in a certain situation and which manifests itself in criticism and reactions against the person who deviates.²¹

In small cohesive groups, reactions may be very subtle: a tendency to prefer those who follow the norms, a tendency to avoid or dislike those who keep themselves apart. Ultimately group norms depend on the fact that they fulfil deep practical and emotional needs in the members. From an economic point of view, the basic social norms are as necessary as technical tools.

In multi-group societies both norms and reactions are formalized and used by special professional groups. At the very end of the scale are the legal rules which have been defined as 'explicitly formulated rules of behaviour that are enforced by a legal organization distinct from other organizations of a society'.²²

Norms thus form a web in society. The most suitable way of classifying them is certainly to establish the source of the norm, i.e. the group or groups which have developed the norm and which react in order to get it followed.²³ This is what has been done in

¹⁹ MEANS, *op. cit.* p. 96.

²⁰ FESTINGER, SCHACHTER & BACK, *Social Pressures in Informal Groups* (New York 1950) pp. 73 ff. KATZ and LAZARSFELD, *op. cit.* pp. 48 ff. SEGERSTEDT, *Social Control as Sociological Concept* (Uppsala 1948) pp. 19, 23.

²¹ HOMANS, *op. cit.* pp. 123—5. HART, *The Concept of Law* (Oxford 1961) pp. 54—56.

²² HOMANS, *op. cit.* p. 283.

²³ SEGERSTEDT, *op. cit.* pp. 21, 55—56.

the model. There the norms have been divided into categories as they fall back on the governing groups,²⁴ on the actual reference group — that is, the group with which the individual identifies himself in regard to the behaviour investigated — and on other social pressure groups. The latter is a collective term for all extraneous groups, not only political opinion groups, but also, for example, economic companies and all possible interest groups.

Classification according to the sources of the norms is motivated by the fact that the various groups have very different means at their disposal for enforcing conformity.²⁵ Some have a key position in the social structure, others command important production factors, others again have great emotional importance for their members, etc. Of course, the power of norm pressure is not only dependent on the means at the disposal of the source of the norm. The play of these factors is modified by the intensity with which the norm in question is embraced by the group. A law may be considered more or less necessary to bring about immediate obedience, and the choice of pressure methods varies in relation to this. A norm within a personal group can be thought of as dictating morals, or merely as a question of etiquette.

As far as group norms in particular are concerned — the norms within the actual reference group — anthropology has traditionally assumed that they are uncomplicated in the sense that for each social situation there should be only one unequivocal norm. This is perhaps a correct description of the conditions among primitive tribes and isolated country communities in olden times. But it does not always hold for modern society. Present-day social life is characterized by greatly increased contact between the groups, by the individual's mobility and his connection with different groups in different situations in life. This has brought about a reduction in the old strict adherence to norms, but also an increased number of conflicting group norms and conflicting attitudes on different levels of actuality.²⁶ The least pressing

²⁴ Compare the definition of the concept 'official groups' in LATHAM, *The Group Basis of Politics* (Ithaca 1952) pp. 33—40.

²⁵ Compare MEANS, *op. cit.* p. 155.

²⁶ Cf. MYRDAL, *An American Dilemma* (New York 1944) pp. 1031 f. KATZ and LAZARSFELD *op. cit.* p. 79.

group norms pass without any sharp dividing-line into commonly held opinions and ideals which are not combined with reactions against those who deviate.

With particular regard to the norms that fall back on the governing groups, it is important to point out that these need not always take the form of laws, edicts, or law-court practice. Nowadays there is a strong tendency to vary the forms for regulating the behaviour of the people. Main lines of policy laid down in different papers, plans, instructions to authorities, agreements with the group involved are examples of new forms that these norms have taken.

Perhaps the reader is wondering why the moral rules, public opinion, the general precept of a sense of justice have not been included in the model. The answer is given below. Without doubt it happens to a certain extent that a norm has become so widely diffused throughout all social groups in society that it can be designated as a general moral rule. It is not certain on which points such a uniformity occurs in modern states. In my opinion, it is very limited under normal circumstances. One can assume that there is a general reaction against serious crimes which concern everyone and, perhaps, uniform attitudes in contacts with people in authority. Further, one can assume that people generally assent to certain basic principles when they are put forward in an abstract way; for example, one ought to obey the laws — but the position is immediately less certain if they are put into practice in specific cases.²⁷ Be that as it may, if an attitude is really widely adopted it will of course find expression both in the actual reference group's norms and in the norms which stem from different pressure groups. To attribute to it an independent influence outside the social norms is not empirically valid.

5. Operation of norms

The model is built on the hypothesis that changes in the social norms have some connection with observed changes in social

²⁷ I have discussed these questions in more detail in JOSEFSON and STJERNQUIST, *Rättens ursprung och grund* (Stockholm 1961) pp. 24—33.

behaviour, and its object is to analyze the development of this influence process.

The impulse, however, cannot be said to derive from group norms. These norms and corresponding behaviour are in fact two aspects of the same thing. Group norms, group behaviour, and reactions against non-conformity are normally three expressions of a uniform attitude, and all three condition each of the others. Group norms are therefore exposed to the same influence as behaviour, and they change simultaneously. Their role is to prevent — or in some cases to reinforce — impulses from outside.

In some cases the impulse may be derived exclusively from new norms arising within the reference group, for example from norms laid down by a leader or norms created by general agreement between the group members. These isolated cases will be disregarded here.

The impulse, then, is assumed to come from norms outside the reference group, i.e. from norms which fall back on the governing groups or on different pressure groups. Whether this is actually true in a concrete case can only be determined after an investigation of the possibility that, instead, it is a result of economic or technical environmental factors.

I. The question now is: In what different ways do the new norms of this kind influence the formation of motives in individuals?

Attempts to change established behaviour and group norms always meet with fierce opposition, because people have grown accustomed to considering them as the only possible and approved way of satisfying their total aims.²⁸ Under such circumstances it cannot be assumed that a law will be followed all at once; it

²⁸ SIMON, SMITHBURG & THOMPSON, *op. cit.* p. 440 have counted five sorts of resistance to attempts to change people's behaviour; i.e. inertia, mores and beliefs, personal self-interest, resistance to irrational proposals and resistance to subordination. On resistance to change of opinions which are held in conformity with the group norms, see HOVLAND, JANIS & KELLEY, *Communication and Persuasion* (New Haven 1953) pp. 134 ff. A concrete investigation of the factors that make employers react negatively to the American labour laws is given by LANE, *The Regulation of Business Men. Social Conditions of Government Economic Control* (New Haven 1954).

must not only be communicated but also made familiar to the population before it takes effect.

When the effects of political or commercial advertising on the radio and in the newspapers and other mass media were examined, it was found that the process can best be described as a two-step influence. The majority of those that changed their behaviour stated that the determining factor was the influence of other people. These so-called 'opinion-leaders', on the other hand, referred to a far greater extent to what had been put forward by mass media. The process seems to develop in this way: mass media directly influence only a minority of active individuals and at the next stage these people transmit their information by personal influence over those around them. The basis of this theory is of course the concept 'opinion-leader'. The people thus designated are distributed throughout all kinds of groups and organizations. They are not characterized by any special personal traits or any official position. On the contrary, one finds that in different fields of behaviour different kinds of people are the opinion-leaders. But frequently they have two characteristics: a. they keep up more contacts with other groups and people, and have a better general knowledge of the world around them than other members of the group, and b. they have a marked feeling for the views and needs of the group — which after all need only apply to one particular field of behaviour.²⁹

There is no reason to assume that legal norms would work in other ways in principle. When the law is directed at a population integrated into a highly-developed organization, it would be more correct to speak about a many-step influence, instead of a two-step influence. A typical sequence in such cases seems to be as follows: the leaders in the national organization, before the law is made, have taken part in the preparatory work or negotiations or have been consulted in some other way, and by this means have been won over to the new norms; here it is probably important that they are anxious to keep their political relations

²⁹ On the two-step theory and its empirical foundation see KATZ and LAZARSFELD, *op. cit.* pp. 32 f., 116—130; on the concept opinion-leader see also pp. 98 ff.; on the opinion-leader's communication with others in the group, see pp. 82—115.

intact. Then they pass on their points of view to officials and local leaders in the organization. These in turn influence the informal opinion-leaders, who influence their friends. At the same time, on the part of the authorities there is more or less intensive persuasion of the different levels of the organization. Of course it should be added that this is a description of an ideal process, which is not always found in real life.³⁰

II. Sometimes it may look as if the publication of a law by mass media has a direct influence on the population. This is true of laws such as temporary speed-limits on the roads, rationing regulations during wartime, or safety regulations during an epidemic. But closer investigation would probably show that in general the public had previously been prepared for the change in law through the usual channels. In other words the publication of the law only has a liberating effect.

On the whole laws are scarcely suited to affect directly people outside official circles, not least because the content of the law is technical and difficult to understand. There is no doubt that legal norms tend to be simplified and generalized when they are transmitted through the different intermediaries.³¹

III. On all different social levels — as a result of what has been assumed before — the formation of motives in the individual must be influenced by methods which can be reduced to the following four basic types. This holds true no matter from what quarter the influences come.

1. Attempts to actualize latent aims: to effectuate a forestry law one can try to arouse an assumed need in landowners to look after their forests properly and try to make this dominate over a desire for more immediate gain.³² Public and private propaganda

³⁰ On the co-optation of social leaders and institutions into a policy-determining structure see SELZNICK, *TVA and the Grass Roots; a study in the sociology of formal organization* (Berkeley 1949), especially pp. 13 ff.

³¹ AUBERT, ECKHOFF & SVERI, *En lov i søkelyset* (Oslo 1952) — which contains an investigation of the effects of the Norwegian law about domestic help, gives important viewpoints on how the norms were understood by the people questioned and their ability to comprehend the meaning of the regulation; in this case, however, dissemination by means of social intermediaries played only a very small part (see pp. 122—62).

³² Compare GULICK, *American Forest Policy* (New York 1951) pp. 24 f.

of a more or less emotional nature and other *opinion-forming activity* is often of this basic type. A sweeping change in the individual's aims in normal times can only be achieved by education. As an illustration of this may be cited Newcomb's study of a girl's college with a politically radical attitude, where he shows that the majority of girls, who mostly came from conservative homes, during their four-year stay at college became more and more radical in their attitudes; only those for whom the family's acceptance was more important than the college's remained unaffected.³³

2. Attempts to convince people that the new behaviour better satisfies their total aims; to effectuate a law about the protection of workers one may try to show that employers avoid losses and trouble by these measures. Even this basic type is found in *opinion-forming activity*; e.g. propaganda, persuasion, negotiations, advice, and information.

3. Rewarding the new behaviour: those who follow the norms are awarded government aid, or loans, or achieve co-operation with the norm sender.

4. Attaching disadvantages to the old behaviour. Some people perhaps think here primarily of punishment and other governmental measures of an authoritarian and moralizing nature. Such measures form end-points of *supervisory activity*, and the efficacy of this, as we have seen before, depends on the nature of the behaviour. But of still greater importance, presumably, are reactions connected with the *give-and-take* element of social life: the law-breaker finds that others cease to co-operate with him, that he is isolated, that he loses prestige. This presupposes of course that these others are already won over to the new norm.

1 and 2 are aimed at *explaining* consequences of behaviour, 3 and 4 at *creating* consequences.

The methods that are used in practice often contain elements of several basic types. Licensing legislation forbids the old behaviour and rewards the new. Propaganda for the practicalness of the new behaviour usually contains a personal pressure.

Scarcely any activity for effectuating a norm will lack this

³³ NEWCOMB, *Personality and Social Change* (New York 1957).

factor of personal pressure. The use of the term 'methods' should not lead to the misunderstanding that it only applies to the officially planned methods of influence, such as propaganda campaigns, penalties, and promises of subsidies. The term is meant to include the more or less conscious influences, too, which occur in the primary personal interdependences. As was pointed out previously, opinion is to a great extent spread via these. An interdependence of this kind consists of a continual exchange of services and expressions of appreciation which both parties find advantageous.³⁴ There may be a whole chain of interdependences, e.g. one between the norm-sender and an opinion-leader, another between the opinion-leader and his associates. One notices that the relations are often conditioned by each other: the opinion-leader's ability to help his associates often depends on the norm-sender's confidence in him, and his ability to carry out services for the norm-sender depends on his associates' confidence in him. If, then, the norm-sender wants to put forward a demand for changed behaviour, he must see to it that this is not so much of a strain that the opinion-leader cannot retain his influence over his associates, or that the opinion-leader finds the exchange in the interdependence with the norm-sender to be no longer to his advantage. Otherwise the valuable opportunity of personal influence is lost.

It is too early to try and draw up a system of methods of influence, since sufficient concrete investigations have not been made. We should only recall the well-known fact that neither government authorities nor individuals have a free choice of method. Their choice is always limited by evaluations and norms in society and primarily within the governing groups. The limitations may vary in different periods and in different types of society. In some cases, the political goals are stressed and less weight is attached to which means are chosen other than from the point of view of effectivity. In other cases, there is a careful regulation of the methods of influence permitted. Between these, there are all conceivable gradations.³⁵

³⁴ HOMANS, *Social Behaviour* (London 1961) pp. 116 ff., 314 ff. BLAU, *Exchange and Power in Social Life* (New York 1964).

³⁵ MERTON, *Social Theory and Social Structure* (Glencoe 1949) pp. 126 f. Cf. SIMON, SMITHBURG & THOMPSON, *op. cit.* pp. 483—6.

6. The use of the model

The concrete investigation which follows may be seen as a test of the usefulness of the model as an instrument for analyzing legal influence processes. The following chapters take up different items in the model in turn:

Chapter III changes in behaviour

Chapter IV the laws

Chapter V the activities of the authorities

Chapter VI influence from the relevant reference group and other groups

Chapter VII changes in the general environment.



Map 2. Forest map of Sweden.

III. From forest exploitation to constructive forestry*

Sweden is one of the most abundantly wooded countries in the world. Over half — to be exact 56 % — of its total area is covered with forest (the remainder consists mostly of swamp, mountains and other unproductive land). Most Swedes, even those living on the outskirts of large towns, have forests on their horizon. For every inhabitant there is an average of 3.1 hectares of woodland but the variations between different parts of the country are considerable.¹

The forest districts are characterized by the dark, prickly silhouette of conifers. The principal forest trees are Scotch pine (*Pinus silvestris*) and Norway spruce (*Picea abies*) and to some extent birch (*Betula verrucosa* and *Betula pubescens*). Usually they grow in mixed stands. Only in a narrow zone in the very south does deciduous forest predominate, mostly consisting of beech (*Fagus silvatica*).

The forest plays an important part in the country's economy. It has been estimated that in 1938 approx. one seventh of the national income and 40—50 % of exports were derived from forestry products.

* The term "constructive forestry" is used here as a translation of the Swedish key word *skogsvård*. It is extremely difficult to find an English equivalent for this central concept. *Skogsvård* implies something of skilful treatment and tending. Elsewhere in the study other phrases have been used, e.g. "good forestry" and "forest tending".

¹ The statistical information in this chapter, where not otherwise stated, is taken from the official annual statistics: *Det enskilda skogsbruket* 1942—50 and *Skogsstatistisk årsbok* as from 1951. — At the turn of the century there were more than 4 hectares of woodland for each inhabitant.

Sweden's woodland, put at 229,406 km², is mainly distributed over four groups of owners: the State, other public institutions, industrial companies, and private owners. The distribution is shown in the table below:

Table 1. Distribution of forest land over ownership groups in 1960.

	State-owned forests	Other publicly-owned forests	Company forests	Private forests
Area in square kilometres	43,723	14,874	56,410	114,399
As a % of the whole forest area	19	6	25	50

In this investigation interest is focused on the private forest owners. Their number is fairly large. The number of privately-owned forest holdings, the figures for which ought to coincide with the number of forest owners, are shown in table 2, which also gives the distribution as to size.

The great majority of private forest holdings are linked with farming, as the table shows. Pure forestry occurs only to a fairly small extent (52,960 units or 18 % of the total). This means that the owners of private forests are usually farmers. Even the pure forestry holdings usually belong in most cases to members of the farming class. In this group are included in fact the instances in which the owner has leased out the arable land and kept the

Table 2. Number of private forest holdings in 1956.

Area of arable land in hectares	Woodland in hectares									Total
	1—5	6—10	11—25	26—50	51—75	76—100	101—200	201—400	>400	
0	9,802	8,247	12,999	9,819	4,355	2,445	3,339	1,266	688	52,960
0.1— 2.0 . . .	13,657	8,251	8,620	4,105	1,564	870	1,154	372	95	38,688
2.1— 10.0 . . .	19,210	18,992	36,726	29,826	10,984	5,715	6,865	1,995	431	130,744
10.1— 20.0 . . .	4,896	5,079	11,380	9,862	4,194	2,188	2,332	577	144	40,652
20.1— 50.0 . . .	1,766	1,929	4,420	4,259	1,869	865	1,044	274	98	16,524
50.1—100.0 . . .	170	184	413	490	388	247	419	148	72	2,531
>100.0 . . .	32	28	94	123	103	110	265	232	316	1,303
Total	49,533	42,710	74,652	58,484	23,457	12,440	15,418	4,864	1,844	283,402

Source: RLF:s centralregister 1956 (Central register of the Federation of the Countryside Population).

forest for himself, something which is quite common among older farmers. In these cases the forest is only intermittently separated from the farm. Thus it can be established that absentee forest owners who do not reside on the land and professional forest owners were somewhat uncommon at least until now.

It is also shown by the table that the majority of the private forests are small. As many as 166,895 or 59 % do not exceed 25 hectares.

The two largest sizes (> 200 hectares) are not included in the study. These so-called "estate forests" make up only slightly over 2 % of the total number. The reason for their being excluded is that they are run in quite different ways creating a totally different social environment, entirely different psychological influences from those relevant in the other cases.

Up to this point the situation at the end of the period under investigation has been dealt with. What changes have taken place in the number of forest holdings during this period? Unfortunately there are no statistics to turn to. But since forestry and farming are most often combined, we can gain some idea by studying the changes in the number of farms.

Table 3. Average changes annually in the number of farms.

Size in hectares arable land	1913/20— 1927	1927— 1932	1932— 1937	1937— 1944	1944— 1951	1951— 1956
0.26— 2 ha	—1,658	+296	—1,983	+984	—3,187	...
2 — 5 ha	— 70	—233	— 559	—849	—1,690	—1,678
5 —10 ha	+ 35	+263	+ 290	—351	— 727	—1,302
>10 ha	— 372	— 34	+ 256	—385	+ 411	+ 163

Sources: GULBRANDSEN, *Strukturomvandlingen i jordbruket* (1957) tabell 7. 1956 års jordbruksräkning tabell 4.

Since the statistical material is weak, the figures in the lowest group are uncertain and this group incidentally has not been included in the figures for 1951—56. But otherwise the trend is obvious. The smaller sizes have steadily decreased in number; this is also true of farms with an area of arable land of 10—20 hectares. This decrease is spread out fairly evenly over the whole country.²

² 1956 års jordbruksräkning p. 22^o.

Table 4. Number of forest owners on farmsteads according to land tax assessment for 1928.

0— 25 hectares of woodland	167,587
25— 50 " —	55,769
50—100 " —	34,050
>100 " —	21,003
Total	278,409

Source: *Statistisk årsbok* 1930 tabell 100.

The farms that have disappeared have been joined to other farms to form larger units or else they have become pure forestry holdings, the arable land having been left to overgrow, or planted as forest, or leased out. The decrease in the number of forestry holdings may therefore be assumed to have been considerably smaller than the figures in the table. Possibly there has been a slight shift towards larger units.

It will be clear from a comparison of tables 2 and 4 that the number of private forest owners within the different sizes of holdings has not altered so very much during the period studied. Even though the basis for calculation is different in each case and there is thus reason to be careful about details, the agreement between 1928 and 1956 as a whole must be considered surprisingly good.

To sum up our information so far: The private forest owners, apart from the big estate-owners, number about 276,000. In the vast majority of cases, they are farmers who combine farming with forestry on comparatively small areas. No sweeping changes in these respects have taken place during the period 1905—1960. It is still rather exceptional that forest land does belong to absentee owners or professional foresters.

1. Variables in forest management

The purpose of the chapter is to investigate the changes in the way the private forest owners managed their forests in this century. The term "forest management" here includes all the measures taken in growing forests and woodland. We are thus dealing with a very complex activity and so it is necessary to specify the dif-

ferent kinds of practices which have been or are included in it. Since the aim is only to investigate the changes in general, it will be sufficient to distinguish between different types of practices. The more or less technical methods of approach may be set aside in this context.

The different practices found in this complex activity may be grouped round two extremes of forest management: on the one hand, the rationalized, productive type of forestry and on the other hand, the pure exploitation of forests. The practices are therefore classified as either plus or minus variables. The individual cases can then be characterized by stating which practices occur. It is almost impossible, however, to get exact measures of the intensity and usefulness of the practices and it may not be necessary. A rough estimate should suffice in this investigation.

Rationalized, productive forestry is based on the idea of getting the greatest possible yield value in the long view. It includes chiefly the following practices:

1. *Planting or sowing forests* in cut-over areas, old unwooded land and badly overgrown woodland.
2. *Preparation of land* for self-seeding where this can be expected to be favourable.
3. *Clearing* in plant forest and young stands.
4. *Planned thinning* and other *felling* in older stands.
5. *Ditching* of waterlogged woodland.
6. *Construction of forest roads* so that there is access for measures to be taken in the forest (but of course also for use in felling.)

Forestry for the purposes of pure exploitation is the prime example of a kind of management resulting in a decline in value.³ It is characterized by all the plus variables mentioned being absent but has the following minus variables in addition:

1. *Reckless cutting or unplanned felling* of forest.
2. *Forest grazing* which damages the forest or prevents re-growth.

³ Another form of destructive forest management is shown when over-mature forest is retained or when the forest is left without any treatment so that it becomes like virgin forest.

A system of practices has been listed here and it might serve as a guide in the study of the behaviour of the forest owners during different periods. Before the changes in this century are considered, it might be interesting to cast a glance backwards to see how the forest owners treated their forests during earlier periods.

2. Older habits in the forests

Nowadays, as was made clear above, the private forests are generally combined with farming. This was even more common in earlier centuries. The forest was a necessary condition for the rural economy and in most places it was only within the framework of the rural economy that the forest had any value. What kind of treatment did the farming population give the forest? What habits had been developed for the forests?

There is a striking account of this in Boethius' classic work on the history of the great forests.⁴ Strictly speaking the account only covers the northern part of Sweden — Norrland, Dalarna, and Värmland — but for the points relevant here, conditions were the same all over the country, the relatively confined flat areas excepted.

Up until the mid-19th century the cultivated area was often insufficient to meet household needs. The most important side of the rural economy was a primitive kind of cattle-raising which was based on large tracts of forest. Summer fodder was obtained by grazing the cows on the forest-clad moraines with their scanty growth of grass — frequently the milkmaids had to accompany the cows from the farm out to the sheds in the mountain pasture. Winter fodder was gathered from natural meadows and marshlands which were often far apart from each other. In both cases cattle-raising required extensive woodland areas.

The supplies of timber in these areas were used for the owner's household: for fuel, timber for building, and timber for fences round field and pasture. Although the felling of timber for household needs would seem wasteful by modern standards, the growth

⁴ BOETHIUS, *Ur de stora skogarnas historia* (Stockholm 1917).

of the forest was not endangered. All the inaccessible and remote areas remained virgin forest, if forest fires did not break out.

In most of the country and particularly inland the forests were not cut down for selling; the timber quite simply could not be sold. In Büsch's account of his travels — quoted at the beginning of this book — this fact was noted in southern Sweden. The forest had very little value and so it could be burned here and there to make way for short-term cultivation, something which Büsch describes vividly. When the land was no longer tilled, there was a dense re-growth very quickly.

It was rather different in some districts where there was an opportunity to sell forest products even though the payment seldom gave more than a scanty remuneration for the work done. In Bergslagen, the district round the iron mines and the iron foundries in central Sweden, the forest was cut for producing charcoal for the use of the foundries. All kinds of timber were used for making charcoal, even the poorer kinds, within a short distance of the charring stacks and so charcoal burning is considered to have favoured the regeneration of the forest. On the outskirts of the large forests bordering agricultural plains, coasts and towns, there might be more drastic cutting of timber for selling. This felling in combination with burning to get more pasture-land in a few localities gave rise to large expanses of heather which was a great problem for the government. Evidence that these trends did not penetrate the main forest districts, however, is found in the comments cited in the introduction.

This was the situation up until the mid-19th century. At that time the first steam-driven saw-mill was started (1850) and the first pulp-factories were opened (1857); a very rapid expansion of the timber industry followed. At the same time the opportunities of transporting timber increased with the advent of the railway and floating channels for timber. The major timber companies reached out for the supplies of timber on the old areas of the forest farmers. The exploitation of the expanses of forest in the interior of the country had begun. Even in remote districts there was great activity.

The farmers naturally had nothing against selling off the forest resources that they did not need or did not understand how to



Figure 4. Forest exploitation between 1890 and 1900. Parish of Åtvidaberg, Östergötland county.

work. The situation probably seemed the same to them as it did to the forest owners of America up until 1950, according to Gulick.⁵ Every forest owner had seen times when he could not sell even his best timber for the costs of the felling. Why not sell when he had a good offer? And why worry about re-growth which neither he nor his children would benefit from? The timber sold hadn't cost anything to produce; it was a gift from Nature — and Nature would some day provide for new forests.

Whether the forest owner sold his forest as standing timber or produced the timber himself, the felling took place in such a way that it was more or less a case of devastation.

The habit of looking upon forest as a sort of appendage to farming, of using the forest for grazing and, when the chance offered, of exploiting the forest without thinking of its future state may be said to be typical of the attitude of the farming population in past centuries. There were farmers who stubbornly hung on to their forest but they were purely exceptional.

3. Forest management at the turn of the century

There is a detailed account of the state of the privately-owned forests at the turn of the century written by the committee that prepared the first general forest law in Sweden.⁶ The chairman of the committee belonged to the highest circles in the kingdom and was a great landowner. The remainder of the committee when the report was presented consisted of two estate-owners, a highly placed civil servant, two foresters and one representative of the farmer class.

The committee had collected information about the state of the forests by travelling in different parts of the country. Furthermore information from all the regional and local state-employed foresters was requested in accordance with a questionnaire which

⁵ GULICK, *American Forest Policy* (New York 1951), pp. 115, 108 f.

⁶ *Betänkande af den för utredning angående lämpliga åtgärder för främjande af den enskilda skogshushållningen af Kongl. Maj:t den 6 oktober 1896 förordnade komité* (Stockholm 1899) I pp. 34—77. — The basic material is given in part III.

had been sent out. Finally, information had been obtained from the county administrations and the county agricultural societies. These last were associations formed within each county to promote farming and related occupations; they received state support but were otherwise independent. These associations were dominated at this time almost entirely by estate-owners and the men of the land-owning industries.⁷

It was the views of the big landowners, the administration, and the foresters that were presented. However, one gets the impression that the committee had been at pains to give a correct picture of conditions. The committee's report was to be presented to parliament in which the farmers had great influence.

The committee found that the condition of the private forests was very different in different parts of the country depending on the purpose for which the timber was needed, apart from the huge quantities then needed for household use. In Norrland and Dalarna the timber market was dominated by the sawmill industry and the pulp industry, which had been growing rapidly for the last ten years. In Bergslagen, charcoal burning for the iron foundries and the mines still played the most important part but the sawmill and pulp industries had begun to compete for the timber. South of those areas industry only had local importance. The sawmill trade was mainly carried on at small often ambulatory plants and was therefore rather incidental. There was also a considerable export of round-wood.

Everywhere there was *unplanned felling*. Sometimes the forest owner did the felling himself; sometimes he signed a contract with a company or timber merchant which gave them the right to cut down all the trees above a certain size. Whichever form was chosen, more importance was attached to obtaining a good consignment of timber than to the appearance and regenerative powers of the remaining forest. The financially valuable trunks were taken from the stand even though they were in their very best years of growth and small overtopped and damaged trees, and bushes were left. Consequently re-growth was more difficult and the stand in the future became far too sparse for the pro-

⁷ KEMPE, *Studier angående de svenska hushållningssällskapen* (Uppsala 1923) pp. 69, 92.

ductivity of the soil to be used. Felling, then, was carried out without a thought of re-growth.

There were, of course, careful farmers. But the committee noted that their efforts were directed at maintaining and saving the forests, sometimes even over-mature stands. Not even in these instances was there any planned forestry.

The committee found a few rays of light. One was felling for charcoal. This concerned small areas which were cleared of small trees, so that perfect re-growth took place as a rule. Another good thing was the rising demand for pulp wood. This might of course lead to ruthless felling of young forest. But it could also further interest in spending money on and taking care of the forest because there was a market for small dimensions and there was no need to count in centuries before the forest yielded any returns.

Forest grazing was common. Particularly in the south, felling practices were determined by the interest in producing good grazing. People did not want the stands to grow together because grazing plants did not thrive so well in the shade. The farmers did not think they could afford to do without the annual income deriving from forest grazing. The consequence was that the forest was very thinly stocked and resembled something between woodland and pastureland. The only places of refuge for pine forests were stoney hills and gravel, until household needs or lack of money set the axe in motion.

Forest planting (sowing) and preparation of the ground were rare in the forests dealt with here. The farmers considered that the forest would go on growing by itself in the future as it had in the past. The agricultural societies supplied plants, seeds and planters free of charge but the small forest owners did not take advantage of this except in some parts of Bergslagen. On the wide expanses of heather in the western provinces — which had developed because of war devastations in olden times according to the committee — there was a certain amount of forest planting and sowing. The committee was of the opinion that the people in these poorly wooded areas felt the need to get the forest to grow and therefore help in planting forests did not have to be forced upon them.



Figure 5. Primitive cattle-breeding made forest grazing in summertime necessary. Bjurbäcken, parish of Mangskog, Värmland county 1911.

Ditching of waterlogged woodland was reported to be unknown in these forests.

Some of the reports put the question of whether the Crown forests and the company and estate forests which were well looked after could be expected to have a function as models. This was not considered to be the case as the smaller forest owners did not have the necessary knowledge.

Altogether it seems that private forestry still had the character of pure exploitation.

Was this the true picture? One can check it by studying how the representatives of the forest owners in parliament reacted to the account given by the forest committee when it was presented there.⁸ None of them denied that the account was correct. On the

⁸ *Andra Kammarens protokoll* 1903 nr 59—60.



Figure 6. Forest grazing. Parish of Rätan, Jämtland county.

contrary, several statements gave fresh instances of the mismanagement common in the forests.

4. Changes in behaviour up until 1960

How the private forest owners changed the management of their forests in the course of the years may of course be followed most exactly by resorting to statistics. But this is not enough. In order to illustrate at one and the same time columns of figures and the sides of development that cannot be pinned down in numbers, qualitative material is needed, above all descriptions and assessments by experts of the period. And, as here, when it comes to a process of development which has probably not been



Figure 7. Devastated forest. Parish of Undersåker, Jämtland county 1914 (felling 1907—08).

registered completely in statistics supplementation with qualitative material is even more essential.

Naturally it must be remembered that contemporary accounts and estimates may be biased. This risk can be kept in check by making comparisons — as was done in the previous section — between the reactions of opposing interest groups.

Contemporary accounts

The 1920's

At the beginning of the twenties a forest officer, Nils Schager, made an investigation of private forestry on behalf of the state *nationalization board* which was then in operation.⁹ The investigation was based chiefly on the detailed and surprisingly un-

⁹ SCHAGER, *Sveriges enskilda skogar* (SOU 1925: 12) pp. 27—92.

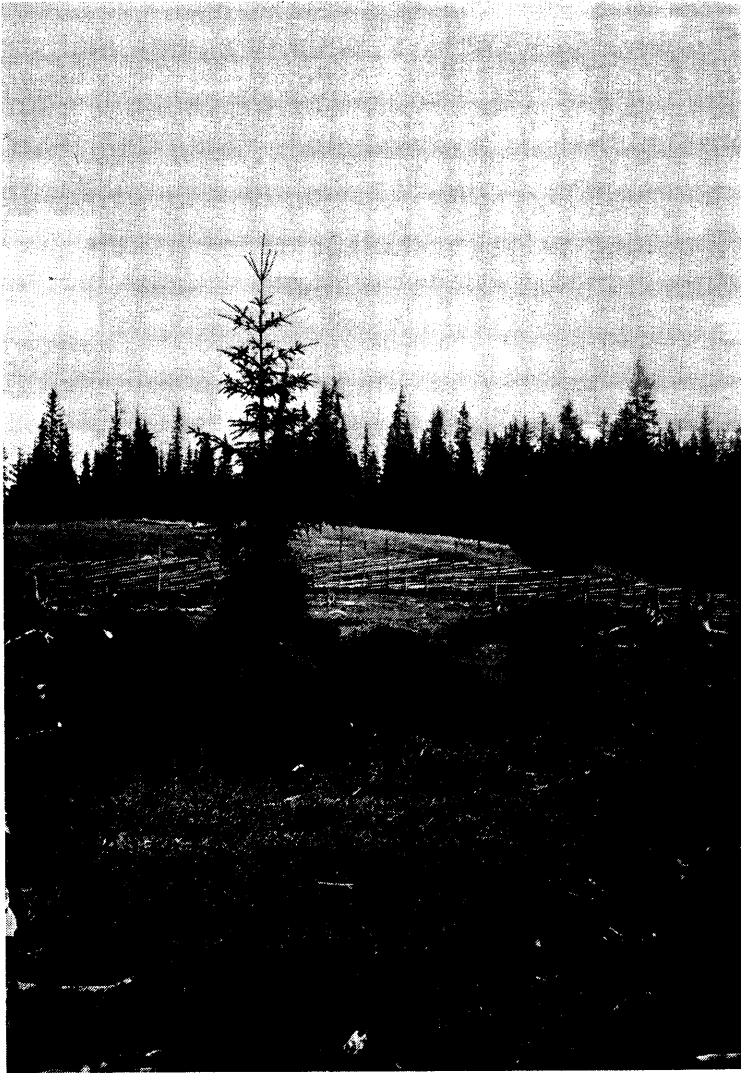


Figure 8. Spruces damaged by forest grazing. Västeråsen, parish of Fors, Jämtland county 1914.

animous answers that the county forest officers¹⁰ gave to a detailed questionnaire. On this foundation Schager put together an account of the management of the private forests that were large enough to produce at least some timber for sale. A summary is given here.

Felling in the form of cutting to a diameter limit and other unplanned cutting was still common. But such felling was being abandoned year by year as the farmers tended more and more to request marking of trees for felling with the help of the county forestry boards. When this was done, the cutting was expedient; otherwise usually it was not. The farmers were generally not considered to have the ability to plan felling themselves in an acceptable way — with the exception of Bergslagen. Above all, the felling was not done so that natural regeneration was encouraged. Nor was there any great interest in planned thinning.

Almost all the county forest officers reported that the farmers clung to the old form of *forest grazing* and were not keen on permanent grazing-grounds.

When it came to *measures for re-growth* there was some advance. It was justified to state that the great majority of farmers were perfectly well aware that they had to answer for re-growth after felling. Despite this, it was very rare for them to undertake forest planting without being prompted by the forestry boards. In most provinces it was customary that the farmers did not do anything about the cut-over areas before the board got in touch with them. Then they usually signed an undertaking, without any great resistance, to plant forests, and further pressures were needed only in exceptional cases. The boards had adapted themselves to the farmers' tactics of wait and see and obtained information about major felling by regular trips and a reliable report system.

The farmers showed more spontaneous interest in *ditching* but they wanted subsidies in some form. It was assumed that the old colonization spirit found expression in this interest.

The time was not yet ripe for such measures as preparation of the soil, clearing and road construction. It should be noted

¹⁰ County forest officer (Sw, *länsjägmästare*): the principal official of the county forestry boards (i.e. *skogsvårdsstyrelserna*).

that the account does not deal with the smallest farms that only had forest for household needs. They revealed worse conditions.

There is naturally every reason to look at this account critically. It may have been darkened by being written on the instigation of the nationalization board. The fact that the material came from the county forest officers may also have affected the picture; they were state-employed officials although they worked closely with representatives of the farmers in the county. But there is an opportunity to check the material by studying the contents of the periodical run by the forest owners' associations. In the 1920's associations were being started among the forest-owning farmers to work for better forestry. The forest owners' association in Jönköping county published the journal "*Skogsägaren*" (The Forest Owner) in 1925. It was soon the mouth-piece for more and more associations, becoming the national medium in 1933.

The contents of the issues of the 1920's do not contradict the account on any point at all. It is often complained that unplanned and erroneous felling still occurred on a large scale and that thinning is an unusual measure.¹¹ In several reports from the field it is said that the most frequent method of felling is still cutting to a diameter limit so that in effect the best and most productive trees were chopped down.¹² Forest grazing is often criticized. In a leading article, it is stated that the clear-cut areas were reduced year by year but that the state of the original woodland was often deplorable.¹³

It may then be said of the 1920's that some development towards better forest management had started but that the old exploitation of forests still went on in many cases.

The 1930's

A decade later the contents of the journal reveal a rather different pattern. The most recent years, as one leading article puts it, were

¹¹ A constantly recurring slogan was: "Every farmer thins his root crops, how many thin their forests?"

¹² *Skogsägaren* 1928 p. 187, 1929 p. 100, et al.

¹³ 1926 p. 153.

characterized chiefly by an increased interest in the care of stands in that the forest was marked before felling. This interest had been encouraged by the fact that smaller dimensions could now be sold for pulpwood. Cutting to a diameter limit was unusual.¹⁴ The greatest weakness now was that no one had succeeded in making it clear to the great mass of forest owners that clearing and thinning should be normal operations.¹⁵

The following statement is probably somewhat revealing: A forester notices that in the last ten years a considerable change has taken place because of the increasing activities on the part of the forest owners. A few years ago the forester — perhaps using gentle persuasion at times — had to collect requisitions for draining, marking of trees for felling, enclosure of pastures and so on. Now the forest owners themselves, at least the young ones, usually bring the matter up. Formerly, the forestry board arranged forest days and lectures in appropriate places, now there is a stream of applications for the co-operation of the board at meetings of the organizations for forest owners, farmers, and young people.¹⁶

The 1940's

Another ten years later the journal explains that the time is now past when private forests were worse managed than other forests. What was needed was more self-activity; it was impossible in the long run to leave the regenerative work in forestry to the county boards.¹⁷ The defects in the state of the forests were due to an over-estimate — even by the experts — of the capacity of the forest for self-regeneration.

This assessment may be said to be confirmed in general by the state authorities in a report on the situation of forestry.¹⁸ The most important criticism was that poorly wooded land was turned into effectively producing woodland so slowly.

¹⁴ 1936 p. 79.

¹⁵ 1936 p. 132.

¹⁶ 1938 p. 5.

¹⁷ 1948 p. 173 f.

¹⁸ *SOU* 1946 nr 41 pp. 72—74, cf. pp. 57—66.

Statistical information

As from 1905, there are annual statistics for the work of the county forestry boards. These authorities, which are described in greater detail in the next chapter, had to supervise the observance of the forestry laws and give the individual forest owner advice and help. It may be objected that these statistics show the development of the work of the forestry boards more than changes in the behaviour of the forest owners. However, the figures show to what extent the forest owners turned to the experts for help in tending their forests — something that was usually a necessary condition for improvement.

The presentation of these statistics will show mainly such types of measures as are directly mentioned in the laws, i.e. felling and forest planting and sowing. Admittedly the development of other types of measures would be of interest for the sake of comparison. But either such statistics are not available or they cannot be used for various reasons. The advance in draining and ditching for instance was more the result of the government's unemployment policy at different times than of changes in the spontaneous or provoked demand by the forest owners.

Changes in the felling habits of private forest owners can be seen in the figures giving the extent to which forest owners requested, and received, marking of trees for felling and other similar directives. The annual statistics have been put together for the whole country and are given in diagram 1. Noticeable differences between development in the different counties seem not to have existed. A comparison between two counties is made in diagram 9 (see Chap. V).

Diagram 1 shows that the private forest owners increased the number of applications for marking trees for felling very considerably during the period as a whole. The steep rise began in 1918. Even at this point it may be commented that the first law regulating felling began to be applied the same year. The increase continued after that with a break for the years of definite depression when felling and thus of course the number of applications fell off. The peak was reached in 1951 during the boom caused by the Korean crisis. As from the mid-fifties

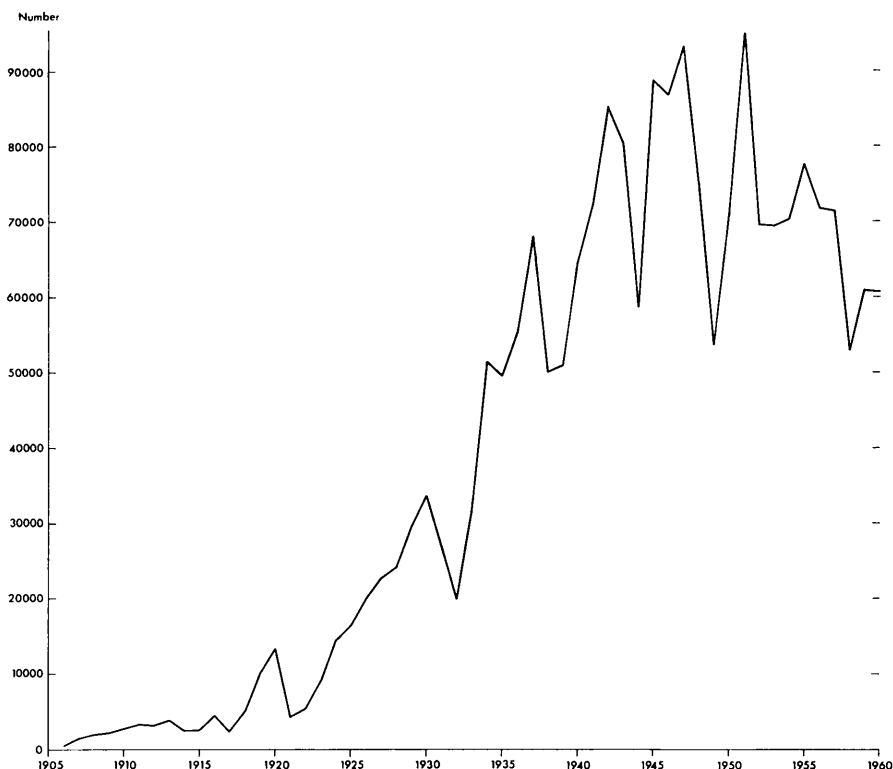


Diagram 1. Number of surveys for felling and treatment of stands (for certain years the number of forest owners who asked for surveys).

Sources: 1905—46: Skogsvårdsstyrelsernas berättelser, printed in *Svenska skogsvårdsföreningens tidskrift*.

1947—50: Sveriges officiella statistik. *Det enskilda skogsbruket*.

1951—60: Skogsvårdsstyrelsernas berättelser, published by Kungl. skogsstyrelsen.

the trend has changed and a more definite decline has begun. To some extent this may be due to the formation of the so-called "forestry areas" (see Chap. VI on this point) and the marking activity organized in the framework of these areas.

Otherwise it has also happened that forest owners got help in marking trees from other experts besides the forestry boards, but these cases were not so numerous that they could affect the

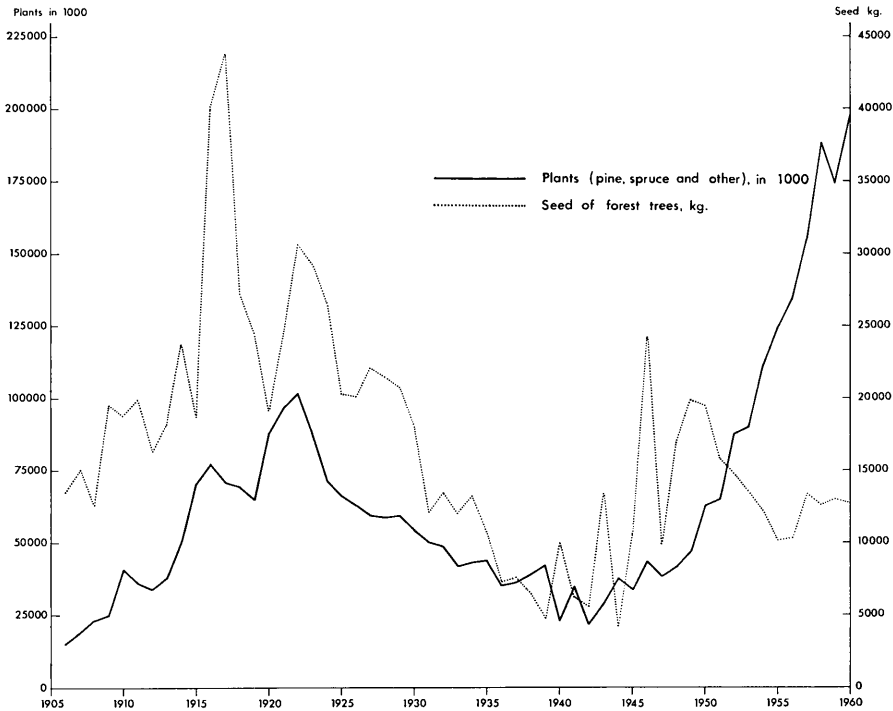


Diagram. 2. Quantities of forest plants and seed supplied by the county forestry boards. (Seed=pine and spruce seed).

Sources: See Diagram 1.

picture as a whole. The forest owners' associations only did marking in exceptional cases before the mid-fifties.

It may be asked how far development has gone. How many of the annual number of fellers in private forests requested marking of trees by the forestry boards? As early as the twenties they were estimated to form the majority.¹⁹ Later estimates by the forestry boards yielded 90 % in Jönköping county in the forties, 50 % in Älvsborg county in the fifties, 70—80 % in northern Kalmar county at the same time.²⁰ These estimates

¹⁹ *Skogen* 1921 p. 125.

²⁰ *Skogsägaren* 1943 p. 180. *SOU* 1956 nr. 33 pp. 27 f.

probably only covered the felling carried out for sale since it is known that the small amounts for household purposes were most often taken without marking. During the latter part of the period studied there has probably been a considerable change from large-scale felling at one time with long intervals between to annual felling of timber for sale.²¹

Some measure of the extent of forest planting and sowing on private forest land may be obtained from the information about the quantities of forest cultivation materials supplied by the forestry boards. The forest-owning farmers probably satisfied their needs via the forestry boards regularly whereas larger forest owners covered their demand elsewhere. The information is presented in diagram 2.

The diagram should be corrected in one or two important respects because of changes in the method of rendering accounts. During the period 1905—1935 are included plants that were delivered to other forestry boards and which have therefore been accounted for twice. This error is probably not large (during the periods 1926—1930 and 1931—1935 the figures are 4.5 and 2.6 million plants respectively). A more important point perhaps is that the figures as from 1936 only account for plants from the forestry boards' own nurseries. But these plants are definitely said to constitute at least 95 % of the total sum of plants supplied.²² The increase in the figures would thus be relatively small.

The graphs in the diagram rise steeply to begin with and then decline noticeably from 1923 until the mid-forties, when a steep rise starts again, especially for the plant material. This decline coincides with the so-called selection period in Swedish forestry. The forestry boards — like the forestry experts as a whole — made propaganda for natural re-growth, to be achieved by making suitably large glades in the stands. The natural re-growth was considered preferable to forest planting on larger cut-over areas. The consequence of this was of course that the interest of forest

²¹ During the 1960's this tendency probably changed again and went in the direction of more extensive felling. *Skogsstatistisk årsbok* 1965/66 p. 89.

²² Notes on table 5 in *Femårsmedeltal, tabellbilagor till Skogsvårdsstyrelsens berättelser* för tiden 1 juli 1960—30 juni 1961.

Table 5. Relative stock of timber according to land tax assessments.

Year Source	Com- panies' forests	Private forests in hectares					
		—25	25—50	50— 100	100— 200	200— 400	400—
1928, SOU 1931 nr 35 s. 167	0.70			0.55			
1933, SOU 1938 nr 53 s. 21	0.78	0.52	0.56	0.63		0.73	
1938, SOU 1943 nr 23 s. 166	0.79	0.56	0.61	0.66	0.70	0.73	0.79
1945, SOU 1950 nr 34 s. 172	0.83	0.61	0.66	0.71	0.74	0.77	0.83
1952, SOU 1956 nr 57 s. 149	0.95	0.73	0.79	0.83	0.87	0.90	0.98

owners in forest cultivation declined until opinion again swung round.

The changes described in the felling and forest-planting behaviour of private forest owners, together with other measures, resulted in their forests gradually giving a better yield value. Attempts have been made to measure this value by giving numbers for the relative stock of timber, i.e. the real state in relation to a defined normal forest. The estimates have been made by the county forest rangers in connection with the land tax assessments. Despite their incompleteness they probably reflect the trend in general. They have been presented in table 5.

IV. The legislators' problems: the legal programmes

As we have seen in the previous chapter, the forest owners' management of their forests changed so much during the period 1905—60 that we may talk about a transition from forest exploitation to constructive forestry. In past centuries the forests were used as grazing grounds — now the animals have been taken away from the forests. Before, the forest owners were accustomed to felling trees wherever it suited them best — now they submit to having trees marked for felling by professionals. Before, it was taken for granted that the forest would self-regenerate — now forest planting and sowing is the accepted method.

What are the reasons for the forest owners having abandoned centuries-old habits in a relatively short time and changing over to new practices? It seems obvious that this development ran parallel to the forestry laws and that it took the same direction as the legal programmes indicated. On looking for reasons for changes in forest management, we are justified in examining the forestry laws first.

To begin with, the construction of the legal tool as represented by the various laws must be investigated. This may be done most conveniently by seeing how the legislators solved the problems confronting them. How were the political openings for introducing legislation created? How were the patterns of action for forest owners planned? How were these patterns interpreted and made concrete at the administrative level? What devices were introduced to motivate the forest owners to follow the programme?

How this legal tool was used in practical matters will be investigated in the next chapter.

In earlier centuries, the Swedish government had often inter-

ested itself in private owners' methods of working their forests.¹ But the regulations resulting from this interest — regulations which were hardly obeyed, indididentally, something that is scarcely surprising considering the extent of the country, the sparse population, the poor communications, and the very slightly developed local administration — fell out of use at the end of the 18th century. Subsequently, private forestry was comparatively free from state interference until the first modern forestry law of 1903. Naturally the ideas and efforts expressed by this law were not entirely new. Interested forces had prepared the ground for the law long before it came into being.

1. Preliminaries ²

About the mid-19th century and after, forest felling increased greatly due to new export openings and new channels of communication. This previously unnoticed exploitation of the forests brought with it fears that timber resources in Sweden would be devastated and the country become uninhabitable. However, these fears scarcely penetrated to the farmers. They spread among the upper classes of society, among civil servants, the clergy, land-owners and to some extent professional foresters. After representations from these circles, the government set up a committee in 1855 to investigate what measures could be taken to prevent a future lack of forests and encourage better forest management. The committee consisted of two foundry managers, two heads of central administration departments, one judge, and two eminent forestry officials. The following year they presented a proposal — an unusually radical one for its time — concerning control of private forest management. If anyone felled trees so much that there was no longer a guarantee of fully satisfactory re-growth, either in the form of seed trees or of young trees and plants, he would be prohibited from using his forest other than for the

¹ A survey is given in STREYFFERT, *The Forests of Sweden* (Stockholm 1938), pp. 12 ff.

² The presentation is based, unless otherwise stated, on published parliamentary material.

absolutely essential needs of the farm and this prohibition was to be enforced until the owner had made provision for satisfactory re-growth. In districts that were climatically or geologically unfavourable all felling could be forbidden except after marking by forestry officials. Those who burn-beat in the forests or grazed goats in them would be fined. The committee further proposed considerable expansion of the state forest administration with the double purpose of creating better management of state forests and making control of the private ones possible.

However, the government considered the time was not yet ripe for control of private forests. But it referred certain proposals concerning state-owned forests for consideration by parliament. In parliament the first-mentioned question came up for discussion notwithstanding. The farmers feared that it would become a major issue in the future. The farming class unanimously opposed anything resembling such a move, i.e. that the State should have the right to legislate on the running of private forests. The farmers refused to go along with any limitations of the private owner's management of his forest, nor did they like the idea that an administrative body should be appointed to control it. In the numerous manifestations of this attitude there were emotionally charged utterances of the type: "I hate all constraint" or "defending private ownership against the power of the State." No one denied that devastation had occurred but the opinion was that the rising value of the forest would make the farmers as careful about tending their forests as they were about all their other property.

Opinion among the farmers, then, was strongly opposed to all state control of forest management. This was also shown in the years following when the question was raised by proposers in parliament. The proposals were unanimously rejected by the representatives of the farmers and were turned down. But in the 1874 parliament there was a government proposal to introduce legislative measures against the devastation of forests. The initiative had been taken by the Swedish Royal Academy of Agriculture which considered that suitable management of private forests could not be attained merely by persuasion without the aid of legislation. This view had also been supported by half (12 out of 24) of the county representative assemblies (the Swedish

landsting, approx. county council) and by the majority (19 out of 26) of the county agricultural societies. The government now proposed a law to apply only to the counties whose councils requested the law by a qualified majority. The law stated that forest owners who felled trees could be held directly responsible for re-growth by state authorities. It then turned out in parliament that there was a split in the schools of thought among the farmers' representatives. The majority and the opinion-leaders still disliked the idea that they would not be allowed to manage their forests as they thought best and that they would be "under the supervision of officials." They also pointed out that enlightenment was on its way among the people so that they would learn to tend their forests soon enough by means of persuasion. But several representatives spoke for the bill since they felt that something had to be done to stop the forest devastation and to prevent a future lack of timber. One of the advocates of the bill in the Lower House also said that the debate bore the same relation to the 1868 debate as gentle May showers to a raging snowstorm. This was undoubtedly the result of the widespread propaganda for forestry legislation which had been carried on in speech and in writing, in local authority communications and particularly in the newspapers with an appeal to patriotic feelings. It may also have had some importance that the farmers after 1867 no longer constituted a special parliamentary estate of their own but sat together with people from other social classes. On this occasion parliament was very close to passing a forestry law, as the question was dealt with when many of the farmers had gone home for the spring farming.³

It was mentioned that half the county councils and most of the agricultural societies backed up the idea of forestry legislation. These regional bodies played an important part in forming opinion in favour of a forestry law because farmers participated in discussions and in making decisions with high-ranking civil servants, clergymen, teachers, landowners, industrialists and

³ It may be noticed in passing that in 1873 special regulations were made for the forest allotted to farmers when the barren areas of Lapland were divided between the State and farmers; in these forests felling was only permitted after marking by forest officials.

others who could exercise an influence on their thinking. The county councils, i.e. the representative bodies of the county appointed by general election, had been instituted in 1863 and up until the turn of the century the farmers constituted about 50 % of the members, slightly less the first few years, slightly more later on. As a rule it was the large farmers who were elected while the small farmers were seldom represented.⁴ The agricultural societies may be described as semi-official societies for the promotion of agriculture within a county or part of a county. The committees of these societies and their meetings were dominated by landowners and industrialists to start with but in the last few decades of the century the farmers began to make their presence felt.⁵

On the county councils the forest spokesmen worked for local laws and they also succeeded in some places. For instance, the county council for the island of Gotland, on which the farmers were in the majority, unanimously requested a law which, on the pattern of the 1856 committee proposal, would incite measures for re-growth by means of prohibitions. The reason lay in the unusually large number of timber speculators and in the unfavourable climate and geological conditions of the island. The law requested for Gotland was passed in 1869 without opposition in parliament. A few years later the county council in Norrbotten — Sweden's northernmost areas, with poor forest growth — likewise unanimously requested a law protecting young forest which was cut down and exported, particularly on the coast. The main principle was that trees which were below a certain minimum dimension were not to be exported or accepted at the saw-mills. Otherwise, everyone was allowed to make use of his forest quite freely. It can be assumed that there was a strong sawmill interest behind this representation. The result was that a local law for Norrbotten was passed in 1874. The governor of the county (Sw. *landshövding*) in the next most northerly county, Västerbotten, then requested a similar law and a majority of the county council supported him. But when 14 parishes in the county

⁴ *Sveriges Landstings Tidskrift* 1924 pp. 8, 10.

⁵ KEMPE, *Studier angående de svenska hushållningssällskapen* (Uppsala 1923) pp. 69, 91.

were asked their opinion all but a few of them were against it. On the whole the impression is that opinion on forest matters did not penetrate downwards from responsible farming representatives to the rural population in general. The statement of opinion by the county council however resulted in parliament passing a law for Västerbotten in 1882.

The re-growth law for Gotland seems to have had little effect. Nor did the dimension laws show a successful result since they prevented thinning and increment felling and hence satisfactory re-growth. At any rate it was clear to the forestry experts that the solution to the problem lay elsewhere.

The agricultural societies — in several counties as early as the 1870's and in general after that date — were active in encouraging forest cultivation of barren areas on small and medium-sized farms. They used a highly varied battery of measures. Foresters and planters were employed to help farmers with forest planting and also to arouse interest in better forestry by means of persuasion. Plants and seeds were handed out free or at least at cost price. Nurseries were run to provide plants. Some societies subsidized forestry schools which trained forest personnel. Instruction in forestry was carried out in elementary schools in the rural districts. Prizes were awarded to teachers who had practical lessons in forestry for their pupils. In order to finance all this work the agricultural societies and the county councils allocated fairly large sums of money particularly in some counties. From 1888, parliament also gave grants for the work, to begin with 25,000 Sw. cr. annually, the sum being raised by stages.⁶

Despite these admirable efforts — the number of planters employed was about 150 in 1904 — not even the agricultural societies themselves could say that they had managed to arouse any great interest in forest planting among farmers. The vast stretches of heathland in the southwestern counties perhaps represented something of an exception. In these districts the farmers did not have to be forced to carry out forest planting. The reason

⁶ There is a large, unsystematic collection of material which throws light on the activities of the agricultural societies in *Betänkande angående lämpliga åtgärder för främjande af den enskilda skogshushållningen* presented in 1899 by a state committee, part III. Cf. KEMPE, *op. cit.* pp. 151, 223.

was thought to be that farmers there lacked timber and so felt the need to plant new forests.⁷

Although the work of the agricultural societies yielded very slight tangible results for constructive forestry among farmers, it had great importance because it committed the farmers' representatives to the struggle to save the forest. These members, who were all opinion-leaders in their own districts, might be expected to spread interest in forestry in the long run to wider and wider circles. In the circumstances then prevailing, however, it was more important that political openings were thus created to make legislation possible.

Attempts to get a re-growth law passed for the whole kingdom had been made repeatedly after 1874 by proposals in parliament but without success for two decades. Resistance among the farmers' representatives was still strong and there was opposition in other quarters too. "Without any support from private interests, the law will try in vain to prevent the mismanagement of forests," it was said. Meanwhile, statements of opinion continued to be produced by county governors and other authorities, by county councils and agricultural societies, and in the newspapers. Several county councils on their part accepted proposals for local forestry laws and requested the government to make them into laws (southern Kalmar county council 1890, Jämtland county council 1892, Västernorrland county council 1895). However, the communes in the different counties had been asked their opinion of the proposals and definitely opposed them. This opposition to forest legislation in the countryside was thought to be due to a natural reluctance to give up freedom of action, lack of knowledge of the scope of the proposals, and also perhaps a certain counter-agitation on the quiet.⁸

Whatever the reasons, the opposition by the communes shows that opinion on the forest question had still not spread from the political leaders to the farmers in general, or even to the local leaders.

At other levels of society, however, opinion forming was being continued. It is symptomatic that in the 1890 edition of the

⁷ *Betänkande 1899* part I p. 71.

⁸ *Betänkande 1899* part III pp. 597—600, 616—17.

reading book in general use in the elementary school there was a new essay describing the consequences of forest devastation and making propaganda for better care of forests. There was also a sentimental poem "Take care of the forest" which had earlier been published in the newspapers. Something of the mood that characterized planting days by the schools when the pupils went out with their teachers and a banner before them is caught in Selma Lagerlöf's account "Forest Day" in her famous book, "The Wonderful Adventures of Nils Holgersson" (1906).

Opinion for intervention against mismanagement of forests gradually became so strong that the 1896 parliament appealed to the government for a public enquiry by experts. On the committee appointed in consequence, some farming representatives were included. In 1899, the committee presented a very detailed and valuable report.

The committee noted that there had been considerable over-cutting in private forests. This brought out a weakness which in the committee's opinion was innate in all private forestry. While a long period of time must elapse between the planting of a forest and its final maturing, the private owner's calculations were usually short-term. All sorts of immediate wishes and needs therefore involved prompt felling in the woods. In many cases an additional factor was the owner's ignorance of forest management resulting in harmful felling. The committee believed, however, that at that stage the private forest owners could not be compelled to do more than ensure re-growth. This demand was thought to be supported by the general opinion then prevailing. We have seen above that this was not a correct estimate of opinion among the majority of those who would be affected by the law. At most it might be said that the demand was backed by those who held "enlightened" views.

The committee proposed a legal rule, the content being that the forest owner would be obliged to carry out felling in a way that was suitable with regard to re-growth and then take the necessary measures with the land to ensure re-growth. The committee was quite aware that such an abstract rule for the behaviour of forest owners would not achieve the main objective. "Instead of the dead rule there must be a living social organ," which both

controlled and helped private forestry. To this end, the committee proposed that in every county there should be a forestry board with the county governor as chairman and one member each for the county council and the agricultural society. The boards would employ expert staff and also appoint people in the different communes to assist in the control of the forests.

The government put the proposal to the 1903 parliament. The bill had by then undergone alteration, an alteration that proved significant for the outcome of the forest question. The committee had proposed that the legal coercive measures should be taken against the owner of the forest. In the government's bill such measures would be taken against the transactor of felling. Since at this time most of the felling of timber for sale was done by timber merchants and sawmill owners who bought stands of trees from the farmers, the law would thus be aimed at another population group. But it seems as if no deliberate tactics were involved here. The alteration was made after comment by the Supreme Court when it scrutinized the bill. The criticism was that it would be unfair to hold a forest owner who had not carried out wrong felling himself responsible for the costs of re-growth, since the re-growth was not considered to increase the value of the land to any great extent in his generation.

It can be observed that the bill caused great anxiety among the farmers' representatives in parliament. They were worried about how the farmers out in the country districts would react to those who voted for such a law. "As I am now a member of this parliament when this law is being made," said one of the leading farmers, "I ought to be able to answer my constituents when they ask me what the law contains; but I cannot tell them how to act in order to avoid a collision with the law." Another pointed out that the forest-owning population of the country would not be content to accept such heavy-handed interference with their freedom and proprietary rights. Since time immemorial the farmers had been accustomed to exploit their forests freely without interference from anyone else. To be put under police supervision in the forest all at once would arouse general opposition.

Oddly enough neither of these representatives tried to get the bill thrown out. They were obviously convinced that something must be done about the mismanagement of forests. We can see how defence of this viewpoint was prepared. It was pointed out that the law would be directed mainly against outside felling transactors. The forest owners would probably find it profitable to act according to the law but it might be different for those who only bought up stands for felling. The special parliamentary committee which dealt with the bill made every effort to make the law acceptable to forest owners and protect them from an arbitrary application by the authorities of the law's imprecise description of behaviour. By re-phrasing the text of the law the committee emphasized that interference was only to be against devastation proper where everyone with a sense of the public good would gladly see the arm of the law reaching out to stop it. The parliamentary committee also defended forest-grazing. A precept was introduced stating that the law would not be an obstacle to using the land for grazing the farmer's own animals. No essential limitation of grazing rights would thus occur. The committee was of the opinion that some grazing did little or no harm to forest re-growth as long as it did not take place unseasonably.

Naturally several members of parliament were against the law despite these modifications but it was passed by a large majority.

In this section we have followed how opinion in favour of a forestry law developed among the upper classes, how it spread to newspapers and authorities, how it gradually also affected the farmers' political leaders in parliament and in the representative bodies of the counties. But when the law was passed it had not yet penetrated to the mass of the forest-owning farmers. They were used to exploiting their forests without any interference from outside. In this situation would the law lead to defensive and protest reactions which would make effective influence on the forest owners' behaviour more difficult? It depended on how the responsible authorities applied the law in practice.

Below is given first an analysis of the programmes of the various forestry laws and how these programmes were developed

further by the authorities. In the next chapter is shown how the work of the authorities in influencing the behaviour of forest owners was carried out in practice.

2. The 1903 forestry law

The first forestry law came into force on January 1st 1905 and applied to the whole country except for the areas in which there already existed special legislation on forests (chiefly Gotland, Västerbotten and Norrbotten counties; cf. above).

This law was a *re-growth law*. It required forest owners to make provision for re-growth. But it did not regulate felling practices as long as they did not have immediate importance for re-growth. No protection for the forest during its development was given.⁹

The law moreover was a "*frame law*." Its description of prohibited behaviour and desired behaviour was vague and indeterminate. It provided a framework with such vague regulations that application could be adapted according to the needs of the various parts of the country. This was inevitable because of the great extent of the country with great differences in natural conditions and economic activity in the different parts. The more exact interpretation of the legal programme was thus left to the local forestry authorities. It could not be denied that this gave them great freedom of judgment. To protect forest owners as much as possible from arbitrary application of the law, it was laid down that the law was only to be used against those who were guilty of "mismanagement" (Sw. *vanskötsel*) of their forests.

The law thus bore a moral imprint. The re-growth measures were like a reprimand. To us it seems strange that re-growth measures could be looked upon as a kind of punishment and not as a productive investment. This was evidently due to the

⁹ According to a law made at the same time on "protection forests", forests on shifting sands and in mountain border districts were protected in such a way that felling for any other than household purposes might not take place unless the trees had been previously marked by state foresters. This was a highly exceptional case, however.

fact that the regeneration costs were not considered to yield a rise in value of the forest until many years had passed. This whole way of looking at the matter was linked with the principle that it was the felling transactors — i.e. those who were guilty of mismanagement — who were ultimately held responsible for the re-growth measures. Admittedly the forest owner was also responsible but he had to get the re-growth costs back from the transactor, if he had not conducted the felling himself.

The directions for forest management in the law had the following tenor. There was to be no felling that might obviously endanger the re-growth of the forest. Nor was the land to be treated after felling so that the re-growth process was obviously endangered. Those who persisted in such mismanagement were obliged to take the necessary measures to ensure re-growth. Strangely enough it would be called mismanagement if someone cut areas bare without leaving seed trees at the edges of the clearing — or for larger areas — scattered over the cut-over area. It should be remembered, however, that forest-planting after felling was a rare occurrence among forest-owning farmers at that time. There was no established habit along these lines; instead farmers relied on natural re-growth. But it was not the aim of the legislators to condemn methodical bare-cutting for the purpose of planting forests. Despite the phrasing, the law was not intended to exclude methods of rational forestry. Another form of mismanagement occurred when a forest was so overcut that the trees remaining were of no use as seed trees and were not likely to grow up to make new stands. A remainder-type forest like this was evidently rather like a bare-cut area. A third kind of mismanagement was when the woodland was burned repeatedly so that the layer of humus was destroyed; such burning was practised in some places in order to improve grazing.¹⁰

The directions did not prevent the woodland being used for grazing the farmer's own animals. Light grazing, it was considered, would not damage re-growth. This exception was for the benefit of the forest owner, not for outside interests.

¹⁰ Cf. statement by the parliamentary committee, *Bihang till riksdagens protokoll* 1903 8: 1 nr. 5 p. 79.

The responsible authorities. The legislators were quite aware that abstract rules to be obeyed by forest owners would not have the desired result. There must be a living social organ which brought the dead rules to life. To this end, the county forestry boards (Sw. *skogsvårdsstyrelserna*) were set up, one for each county council area, 21 in all.

The county forestry boards had an unusually independent position in the Swedish administration. They normally consisted of three unpaid members; a chairman appointed by the government, one member appointed by the county council and one member appointed by the agricultural society. They were not supervised by any superior authority. Therefore they were less state organs than meeting-points for forest interests in the various provinces. The inclusion of local representatives was supposed to make the forest owners understand and accept the new organ and prevent friction arising.

The board was to be assisted by a professional, preferably with higher training in forestry, the county forest officer (Sw. *länsjägmästare*).

As for the task of the boards, the parliamentary committee had stated that legal control ought not to be their principal occupation. The boards were not to act as police authorities but were to be the focus of all efforts to improve forestry, each in its own county. Only voluntarily could the best results be obtained. In the parliamentary paper to the government it was pointed out that the aim of the law should be fulfilled, if possible, by means of convincing without the use of coercion which would all too readily arouse antagonism to the law and diminish interest in forestry.

Following these lines of approach, the regulations for county forestry boards specified their tasks as follows. Firstly, the boards were to encourage private forestry by spreading information, granting money, planting forests, providing seed and plants and by assisting with marking trees on request, possibly without any cost to the owner. Only as a second measure should the observance of the law be supervised.

Legal intervention. In cases in which it was suspected that someone had been guilty of mismanaging his forest, the forestry

Table B showing legal intervention according to the 1903 forestry law.

Inspection by unbiased persons to establish whether there has been mismanagement

↓

Attempts to come to an agreement on re-growth measures. Possibly prohibition of felling

↓

Agreement reached
and kept

Agreement reached
but not kept

No agreement.

↓ ↓

Plea in court which prescribes the re-growth measures to be taken and the time for these
Sanctions:

1. Enforcement by the county forestry board at the expense of the person found guilty.
2. Felling prohibition to be enforced until these measures have been taken or security guaranteed for the costs.

Sanction: a fine and forfeiture of the timber.

Note: In the printed forms of agreement were included a) an admission that the county forestry board had the right to carry out neglected forest planting and an undertaking in that case to pay the costs b) security for this amount. By this means the troublesome court procedure was avoided.

board could set in motion legal machinery, which functioned step by step as is shown by table B.

The step that consisted of trying to reach a voluntary agreement had been inserted by parliament. It expressed the idea that persuasion should be tried before coercion.

According to the government proposal, a decision obliging someone to undertake re-growth measures should be given by the county administration (Sw. *länsstyrelse*). Parliament trans-

ferred these powers to the courts as a further guarantee against misuse of the application of the law.

The interpretation of the legal programme by the county forestry boards seems to have followed the legislators' intentions. This attitude came out very clearly in a discussion organized by the Swedish Forestry Association in 1907 on the question of the application of the law.¹¹ There was no lack of voices in favour of exploiting the law's vague regulations and forcing felling transactors to provide seed trees or preventing them from cutting down young trees. But these were mostly state forest officials. The representatives of the county forestry boards were unanimously in favour of restricting application of the law. They stressed that the legal machinery should be delayed as long as possible and only be set in motion after all attempts at persuasion had proved useless.

There was another opinion along the same lines expressed by the county forestry boards, namely that the importance of the law was mainly indirect. Legally speaking, the law was weak and ineffective but despite this its mere existence had revived forestry. It had given some stability to the opinion held by many of the country's leading and most competent minds. Moreover, it was a functional means of speeding up the spread of information among forest owners because it emphasized that the demands for re-growth measures were serious. In the law then there was "great power, despite its wording."¹²

How the law was interpreted in day to day practice emerges from the minutes of the county forestry boards. As soon as an insufficient number of seed trees were left the minutes spoke of illegal felling. This shows how little they could rely on spon-

¹¹ *Skogsvårdsföreningens Tidskrift* 5 (1907) pp. 352—380. At the first meeting of the chairmen of the forestry boards in April 1904, opinion differed on the stage at which legal intervention should be begun. Some thought that when felling started it might be required that seed trees should be left or that some guarantee of forest growth was given: on refusal, felling should be prohibited. Others thought that intervention should only take place when there was no sign of re-growth on the land. The latter opinion predominated. The minutes of the meeting are preserved in Skogsvårdsstyrelsen i Kristianstads län, ankommande skrivelser 1/1904.

¹² *Ibid.* 5 (1907) p. 352 and 6 (1908) pp. 378 f., 387.



Figure 9. Forest grazing. Södermanland county.

taneous forest planting. An attempt to stop illegal felling was made at an early stage by requesting marking of seed trees. Usually however it was too late and then an attempt was made to get a written agreement on forest planting: inspection, on the other hand, was considered a last resort when all other attempts had proved vain. Negotiations were made also with the object of getting left-over trees which might hinder re-growth cleared away. As a rule the county forestry board turned to the felling transactor, not to the owner. If the owner himself was also the transactor he often objected that the trees were being cut down to improve grazing for the farm animals. This was a serious objection since it had some backing in the law. In such cases the board tried to estimate whether more grazing was needed on the farm and whether the area cleared was suitable for grazing. Only when the estimate was favourable was the objection accepted.

3. The 1918 forestry law

The greatest weakness in the 1903 law was that it did not protect the growing forest. The county forestry boards pointed out that the situation in this respect had unfortunately deteriorated since the law came into force. To avoid being obliged to provide for re-growth the felling transactors did not cut areas bare; instead they often thinned out the forests without any plan, without any regard for the growing potentiality and type of stands, and they only made sure that the woodland was not so bare and empty of seed trees that re-growth could be considered "obviously endangered". The law, then, to some extent favoured the occurrence of understocked forests.¹³

Both spokesmen for the county forestry boards and others made demands for legislation to protect young forest. A proposal with this aim, put forward in the 1910 parliament, resulted in parliament writing to the government and asking for an enquiry into a revision of the 1903 law so that obvious devastation of young forest would be prevented. The strange thing was that the proposal was not opposed by any representatives of the forest owners. One explanation might be that the county forestry boards had already inspired great confidence, among the leading farmers at least. It was emphasized in parliament that the sole aim was to extend the powers of the forestry boards. Another explanation may be that the action was considered to be aimed at the outside transactors and speculators.¹⁴

The committee appointed by the government to take up the matter worked slowly however. At their meetings out in the country they probably found that the forest owners were very suspicious of a law on young forests.¹⁵

The question flared up in a dramatic way when there was a sudden increase in the demand for timber, particularly firewood, during the latter part of World War I as a consequence of Sweden's isolation from the outside world. This demand resulted

¹³ *Ibid.* 6 (1908) pp. 370—388. *Betänkande avgivet av skogslagstiftningskommittén* I (1919) pp. 93—96.

¹⁴ Cf. *Bihang till riksdagens protokoll* 1910 8: 1 nr. 75 p. 6.

¹⁵ *Betänkande avgivet av skogslagstiftningskommittén* (1919) I p. 236.

in great exploitation of well-situated forests with short transport roads. Felling was especially ruthless in such areas as were bought up by timber merchants only to be re-sold when the timber supply had been exploited. In March 1918 both the Swedish Forestry Association and the National Fuel Board demanded immediate measures. The government had the question investigated quickly, apparently over the heads of the committee already sitting, and in May presented a bill to parliament for provisional legislation. Parliament, which was then about to go into recess for the year, passed the law without discussion.

The new forestry law was a *provisional law on felling*, which was in force besides the 1903 re-growth law. It was published on July 10th 1918 and was renewed from year to year.

This new law might also be called a "*frame law*". It contained elastic concepts, which could be used differently in different parts of the country. The main rule was that "young forest" was not to be felled except as "useful and necessary thinning" for the development of the stand. The forestry board had the right to permit another form of felling, however, e.g. in connection with the regeneration of understocked forest. According to the preparatory work on the law, "young forest" meant forest that was up to 40—60 years old, the upper limit varying according to the situation in different parts of the country. Thus all the forest that had not yet reached the stage of developing seeds came within this category. The concept "useful and necessary thinning" was not discussed at all when the law was made.¹⁶

There was a special rule for forest land bought after May 14th, 1918, by people other than certain relatives and for standing timber bought after that date. It was the timber merchants that would be affected. According to the rule, no felling was permitted in these cases if it went against the principles of "good forestry". Even older forest was protected. What was to be understood by "good forestry" was not stated. It was simply said that the public interested in forestry had acquired a good knowledge of this,

¹⁶ *Betänkande med förslag till tillfälliga åtgärder för stävjande av spekulationen vid handel med jordbruksegendom mm* (1918) p. 89. — *Kungl. proposition* 1918 nr. 441 p. 21.

as a result of the information spread by the county forestry boards in the last ten years.

Grazing was protected under this law, too. There was no obstacle to felling in wooded grazing-land, which was necessary for grazing the farmer's own animals.

Legal intervention. If felling or marking of trees for felling was considered to be contrary to the law the forestry board could take the following steps:

(Possibly:) Provisional prohibition of felling other than for household needs (forester employed by the board could give ten days' prohibition)¹⁷

Request to the forest owner and felling transactor to make statements

Prohibition of felling except for household needs

Sanctions: a fine and forfeiture of the timber.

How was the law interpreted by the county forestry boards? There is a comparative investigation of this as from 1919.¹⁸ It reports that the views of the different forestry boards were made unanimous by meetings and discussions among the county forest officers. At the meetings they had tried but failed to find a precise definition of the term "young forest". When different kinds of stands were discussed out in the forests, however, it had been found that there were no differences of opinion about what was actually to be considered young forest. A questionnaire circulated among the forestry boards in the southern parts of Sweden yielded the result that the following upper age limits for young forest were applied:

deciduous forest 40 years

coniferous forest on good quality sites 50 years

coniferous forest on poor quality sites 60 years.¹⁹

¹⁷ The provisional prohibition was introduced as from 1/7/1919; the forester's powers to declare prohibitions for ten days as from 1/7/1921.

¹⁸ LOTHIGIUS, "Tillämpningen och verkningarna av 1918 års provisoriska skogslag", *Skogen* (a popular journal published by Svenska skogsvårdföreningen) 1919, pp. 153 ff.

¹⁹ In the minutes of the forestry board in Uppsala county on the 30th—31st July 1918 the following principles for the application of the new law



Figure 10. Where felling was stopped by a legal prohibition. Högåsen, parish of Fors, Jämtland county 1919.

This meant protection for stands in the period of their greatest increment in value. The forestry boards, however, did not want to tie themselves down by telling the forest owners these age limits, since the judgment was to be influenced by such factors as the quality of the ground, the location and earlier treatment of the stand, factors that were “unfamiliar concepts to the great majority of forest owners”. Forest owners and felling transactors then, could be confronted with uncertain cases, especially concerning forests aged between 45 and 60, but those who were bewildered could ask for information from the forestry board.

Remarkably enough, the term “necessary and useful thinning” is not touched upon. It may be assumed however, that in young

were drawn up: Young forest is forest which has not attained the age of bearing ripe seeds. This usually occurs at the age of 40—60; on good land 40, on poor land 60, deciduous forest generally 40. Thinning and felling in young forest should always be supervised by the county forest ranger.

forest stands of equal age it was not acceptable that thinning was so harsh that the ability of the tree crowns to close themselves was endangered.²⁰ In stands in which the trees were of widely differing ages — a very common type of stand in the private forests of the time — the protection for young forest was certainly difficult to apply and it may be questioned whether it had any importance except for very extensive felling.

Finally, as regards the term “good forestry” — which regulated the felling when the ground or the standing timber had been bought after 14th May 1918 — the county forestry boards agreed that cutting to a diameter limit conflicted with this. Thus the formerly so common purchase of standing timber of certain dimensions was prevented. Instead the timber buyers had to switch to buying standing trees which had been marked for felling. To be on the safe side they largely insisted on marking for felling by the forestry board. In consequence the staff of the forestry boards had to be increased by more than 50 %.

The forestry boards considered that the law was received with great understanding for its necessity. The only people who were irritated were the timber merchants who had bought young standing forest before the law came into force. It was symptomatic that no less than 80 % of the 282 felling prohibitions ordered in the six months following the law applied to such people. The forestry boards also tried to help them to get back something of what they had paid out to the forest owner.

4. The 1923 forestry law

The committee appointed in 1911 finally presented its proposal, which was published in 1919.²¹ As a whole, the proposal can be seen as a combination of the 1903 law and the 1918 law, the former somewhat extended in range, the latter limited. An important innovation was that the committee tried to give definitions in the text of the law of the terms they had used. “Young forest” was to mean a stand that had not yet reached the age

²⁰ Cf. *Betänkande avgivet av skogslagstiftningskommittén* (1919) I p. 240.

²¹ *Ibid.*

when the trees could function efficiently as seed trees. The limit for permissible thinning had been specified so that it excluded thinning to the extent that the ability of the stand to close again was endangered. The committee thought that by means of these definitions the forest owners would get such good guidance that they could make their own decisions fairly definitely without asking the advice of the county forestry board. These specifications would also encourage greater uniformity in the practice followed by the various boards.

The county forestry boards criticized the attempts to set out legal definitions. They were not considered to give forest owners any real guidance. They were also considered to tie down the judgments of the boards in an unfortunate way, since the biological criteria could not express what was really to be protected, namely the period of greatest increase in value of the tree.

A team appointed by the county forestry boards suggested that the control of felling should be extended to cover older forest too, and that this could be done by referring back to the term "good forestry" of the 1918 law. The proposal was keenly opposed, however, by a considerable minority of the forestry board personnel. I do not think that it was a conflict between the advocates of a hard line and those of a soft line in dealing with the forest owners. The discussions give the impression that people had different opinions about the function of a forestry law. The majority saw the law mainly as the backbone for a process of influencing the forest owners in free forms. The minority feared that the law might be taken as a basis for coercive measures and so wanted to limit it as much as possible. Both sides emphasized that the trustful co-operation between the forestry board staff and the forest owners must not be upset by irritating measures. The general attitude to the law was expressed in turns of phrase such as the following: One cannot create good forestry proper by means of law paragraphs alone. Only if one has succeeded, with the aid of the law, in interesting forest owners in good forestry, in making them realize that it is worth while, can one expect any noticeable influence from the law. A law can certainly help against severe cases of mismanagement and neglect, and punishment may be necessary in

extreme cases, but the care of forests that only has fear of punishment as its motive power has no value in the long run.²²

In the bill presented to parliament by the government the above discussion is reflected in the fact that the term "young forest" has been replaced by "younger forest". Moreover, two enticements for the forest-owning farmers which had been in the 1903 law had disappeared. The costs of re-growth would no longer ultimately affect the felling transactor but the owner of the land, and also the priority of forest grazing over re-growth had been eliminated. These details were received critically but did not make the majority of farmers' representatives in parliament adopt an entirely unfavourable attitude to the law as a whole. Definitely unfavourable opposition came mostly only from the farming members from Älvsborg county in the Lower House. Elsewhere the necessity of the law was recognized. Of considerable importance to the attitude of the majority — as the parliamentary debates testify clearly — was experience of the soft and cautious way of applying the earlier laws practised by the county forestry boards; speaker after speaker pointed out that the boards had managed to acquire the full confidence of the forest-owning public. To those who feared that the new regulations for felling would cause financial difficulties for those who only had younger forest on their land it was pointed out that thinning was a way of getting money out of the forest. Or as one speaker put it: If there was a small farmer who was in debt and had to thin his forest he went to the forestry board for help and the board helped as much as possible. Many members testified to the understanding shown by the personnel of the boards for the forest owners' problems.²³

The directions for forest management in the new law were frame rules. There were no definitions of the terms. The parliamentary committee — which had deleted the definition of the term "younger forest" — pointed out that the forest owners were no doubt justified in demanding concrete instructions as to their

²² Discussions printed in *Skogsvårdsföreningens Tidskrift* 18 (1920) pp. 197 ff., 19 (1921) pp. X 189 ff., 20 (1922) pp. 323 ff., 21 (1923) pp. X 117 ff.

²³ *Kungl. prop.* 1923 nr. 104. *Första kammarens protokoll* 1923 nr. 39. *Andra kammarens protokoll* 1923 nr. 41.

behaviour. But it had proved difficult to find definitions to express the economic viewpoints which, after all, ought to be essential to all forest management. The committee was convinced that the county forestry boards would develop a set practice for interpreting the concepts. The county forestry boards had thus been successful in their criticism of this point. They had retained their freedom to elaborate the concepts themselves.

In brief the directions contained the following points:

1) *Felling regulations.* Younger forest was not to be felled except by thinning conducive to the growth of the forest. More felling could be carried out if it was necessary for the forest owner's household needs or if the county forestry board gave permission.

Older forests were not to be felled in such a way that the re-growth of the forest would be endangered.

Forests in the mountains or on the coast which the government had declared to be difficult to regenerate were only to be felled after marking by forestry board personnel.

2) *Regulations for re-growth measures.* If, on felling, there did not remain enough forest of such density and quality that it could be considered satisfactory with regard to the natural conditions, and if satisfactory natural re-growth could not be expected to take place, the forest owner was to take the necessary measures to ensure sufficient re-growth within a reasonable time on the area felled. The plant forest was then to be supplemented and cleared if necessary.

If the trees had been damaged by natural disaster or grazing the same regulations applied. But after a natural disaster measures were not required at greater cost than was covered by the value of the felled trees and compensation received.

The forest owner was ultimately responsible for re-growth measures. These measures were considered a productive investment which in the long run would raise the value of the forest. The county forestry board could also turn to the felling transactor who in that case had to request coverage of his costs from the forest owner.

Legal intervention. The legal measures to be taken by the county forestry boards if necessary to enforce obedience to the

regulations were largely the same as those in the previous laws. Correspondence was total as far as intervention connected with felling rules went; here the law had thus taken over the system which had been in force earlier. As for intervention connected with regulations about re-growth measures the system had been given a different form from the 1903 law (see table C). A comparison reveals, however, that the same sort of intervention was relied on; the pieces were the same but the combination was different. The greatest change perhaps was that one piece had disappeared. The felling prohibition could no longer be used as a means of pressure to enforce re-growth measures.

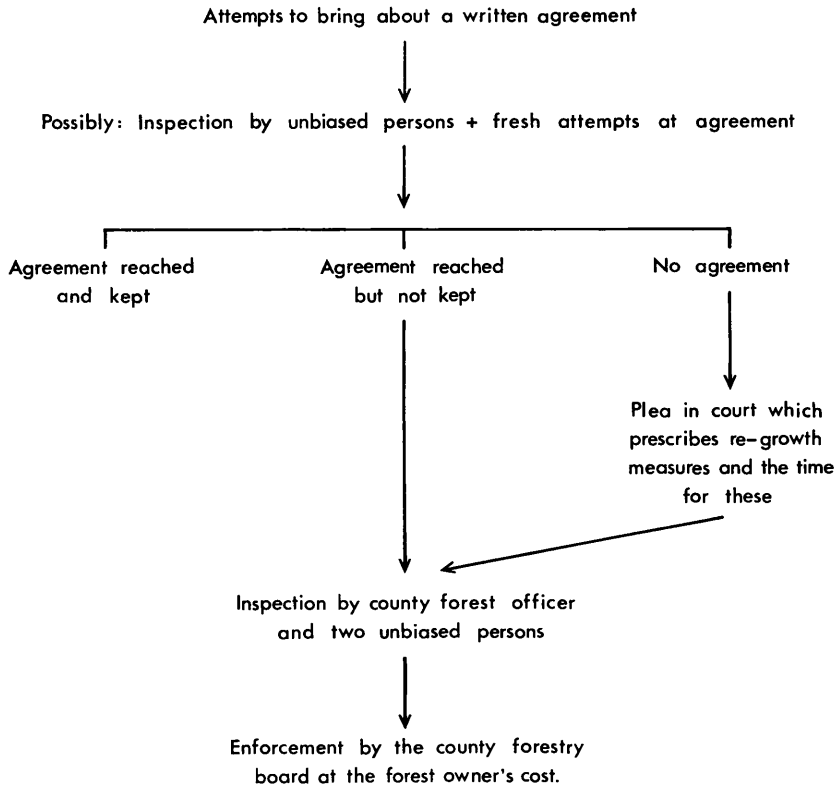
The interpretation of the law by the county forestry boards. The felling rules in the law mainly protected "younger forest". What this was supposed to mean had been left to the forestry boards to decide depending on the natural conditions in various places. They had been given rather vague indications about this task. The protection limit should be raised somewhat above the one in force earlier; what was to be protected was a stand which, given the right treatment, would attain more valuable dimensions.

How did the forestry boards solve this problem? They had to give fairly fixed guidance to the subordinate staff and perhaps the forest owners interested too. A questionnaire sent out in 1944 about the interpretation of the term "younger forest" yielded the following examples of application:²⁴

County and type of forest	Age limit	Part of rotation period
HI, BI, Krs, Mlm: planted spruce forests	50—60 yrs	3/4
Centrally situated counties:		2/3
spruce forest on sites II—III	60—65 yrs	
mixed forest on sites III—IV	70—75 yrs	
pine forest on sites V—VI	75—85 yrs	
Nb, Vb, Jtl, Vnr, Gvl:		2/3
spruce	80 yrs	
pine	100 yrs	

²⁴ LEWIS-JONSSON, "Begreppet 'yngre skog' i 1923 års skogsvårdslag", *Skogsägaren* 1944 pp. 188 ff. All forestry boards had not dared to list definite age limits in their answers.

Table C. *Legal intervention to enforce re-growth measures in accordance with the 1923 law.*



In practice the setting of limits seldom seems to have caused difficulties since both the forest owners and the timber merchants had accepted the interpretation of the board as a norm for their behaviour.

How was the expression "thinning conducive to the growth of the forest" interpreted? Only for stands of equal age could an assessment of the ability of the forest to close again give any guidance. For stands in which the trees were of different ages — as was most common on the farmers' land — it was necessary to fall back on rules of thumb: trees were to be felled if they kept back promising re-growth or were stunted and not capable of

growing, or if they prevented a free development of the crown of better trees etc. Such rules of thumb were listed in the printed directions distributed among forest owners by the county forestry boards. They were no doubt difficult to apply. In practice thinnings had to be accepted although to a forester they were too harsh.²⁵

In the re-growth rules the expression "forest of satisfactory density and quality" had a key position. What was to be understood by this seems not to have been a vital problem. The period during which the 1923 law was in force coincided with the so-called selection period (Sw. *blädningsperioden*) in Swedish forestry. The general attitude even among experts was that natural re-growth was far superior to forest planting and sowing both from a biological and a financial point of view. Felling therefore should not cover large clear-cut areas but instead fairly small regeneration clearings in suitable places in the forest where it was believed that fresh plants would develop by themselves. "They cut down and cut down and thought that re-generation would come of its own accord." It was extremely difficult to check that this selective cutting was done wisely particularly in forests of different ages. Since the official doctrine long believed in natural re-growth, in the self-healing quality of the forest, felling had to be extreme before a forest was considered to be so understocked that forest planting had to be enforced. The law was generally taken to mean that a reduction of the forest's productive capacity by 50 % or more was permitted without intervention.²⁶

The position of the county forestry boards. After only a year the law was extended to apply to parts of the country that had hitherto had special legislation (Gotland, Västerbotten and Norrbotten counties). The number of forestry boards then rose to 24.

As was pointed out before the county forestry board had an unusually independent position in the administrative system. It was not directed by any superior authority; it could make use of its revenue freely, it owned funds and properties of its own, it appointed its own officials. The county forestry boards might be

²⁵ Svenska skogsvårdsföreningens tidskrift 1947 p. 90.

²⁶ Cf. *SOU* 1946 nr. 41 p. 63.

characterized as independent organizations which carried out public duties and received state subsidies. However, co-operation between the county forestry boards was necessary for several reasons: to ensure that working methods and application of the law were more or less the same, to discuss and examine questions of common interest to them, to obtain plant material, etc. The necessary co-operation was organized on the initiative of the boards themselves. At least every third year there was a general meeting and in between there functioned a managing group (called *förvaltningsutskottet* 1908—1925, *centralrådet* as from 1925). The county forest officers also formed an association which probably had most importance in achieving unity in working methods and application of the law through its discussions and excursions.²⁷

During the thirties the demand for a central authority became more and more common. There were several contributory reasons. In political circles a powerful and united leadership of forestry in the country was called for in view of the importance of private forests to industry, farming and employment policy. The government wanted to have an expert body which could be responsible for investigations and reports in these more and more important matters. The greatly increased state subsidies gave rise to demands for a check on how these funds were used and for a levelling out of the resources of the various forestry boards.

The majority of the forestry boards rejected the proposal for a central authority. They were afraid that their freedom of action would be pruned. Despite this the National Forestry Board was set up as from July 1st 1941. In the directive it was stated that this central authority was principally to exercise an advisory role in relation to the county forestry boards. The latter were still to have considerable freedom of action and free play for initiatives of their own. They were not to be moulded into bureaucratic forms or placed in a dependent position as civil servants.²⁸

State control of the county forestry boards was tightened up in 1946, in order to strengthen the possibility of the State to influence

²⁷ An account of these attempts at co-operation is given in *Sveriges skogs-vårdsstyrelser 1905—1944* (Stockholm 1945) pp. 67—74.

²⁸ *Proposition* nr. 94 till 1941 års riksdag pp. 36 ff.

their policy. To this end it was laid down that the county forestry boards had to follow regulations made by the government or the National Forestry Board and that the latter authority would draw up the annual budget for each board.

The government had considered making the county boards completely state organizations. The reason for not doing so was the conviction that success in the work of the boards was due to their independent position and local ties. The boards were allowed to retain their position as organizations for the collective forestry interests in each county.²⁹

5. The 1948 forestry law

One of the first major tasks of the new National Forestry Board was to work out a proposal for a new forestry law.

The county forestry boards this time opposed the idea of stricter legislation. They were of the opinion that on the whole the 1923 law was well suited to creating a basis for further forestry work. They pointed out that forest owners' interest in and understanding of the importance of the forests as a means of production were a necessary condition for continued progress in private forestry. A stricter law might undermine some of the interest in forestry and interrupt the successful co-operation between the county forestry boards and forest owners. Therefore it was preferable to follow the "path of enlightenment". Only one county forestry board deviated from this chorus of protest, the board in Älvsborg county. It considered that "the path of enlightenment" had proved inadequate and it called for direct penal rules which might deter those who acted in opposition to the law, or to the spirit of the law.³⁰

The initiative for the revision of the law came from central quarters. When a central body for forestry and felling policy for the whole country was decided upon, it was natural to feel the need for a new legal programme. This programme, like the earlier ones, was to be the firm basis on which all forestry work

²⁹ *Proposition* nr. 126 till 1946 års riksdag pp. 20 ff.

³⁰ *SOU* 1946 nr. 41 pp. 57—61.

would rest. In the government's instructions for the enquiry, it was stated that the experts should try to lay down rules which were adapted to modern development both from an economic and a social point of view.³¹

The National Forestry Board completed its enquiry in 1946 and presented a draft which was almost the same as the new law finally passed.³² From the enquiry, it can be seen that the law was to express primarily two general goals for forest policy.

In the first place efforts were to be directed to achieving greater and more valuable timber production. Admittedly great progress had been made during the period of the earlier laws but these laws were not thought to have brought about the desired utilization of woodland. To some extent, this was undeniably due to the extreme trend of opinion in the 1920's and 1930's among the forestry boards — as among experts as a whole — that the regeneration of the forest should be based on natural re-growth, on self-seeding. On most types of land this proved to be a far too optimistic hope. In the regeneration clearings the new growth was often sparse and in some cases non-existent so that the ground went to waste land.³³ It was, then, a faulty method which was gradually being abandoned in fact. But the enquiry pointed out certain other inadequacies in timber production and it was considered that those could only be put right by more rigorous law rules. These rules would 1) protect the growth in value of the trees for a longer part of the rotation period than had hitherto been the case and 2) force investments to be made in land that had been bare or poorly wooded since ancient times: heathland, swampy land and land with worthless forest stands.

In the second place, an attempt should be made to get felling evenly distributed between years. To achieve this, stricter legal rules were needed. In raising this objective, social considerations became important. The more regular felling would bring about a more even distribution of jobs for the forest workers, of supply of raw material to industry and of additional income to combined

³¹ *SOU* 1946 nr. 41 pp. 26 f.

³² *SOU* 1946 nr. 41: *Betänkande med förslag till skogsvårdslag* mm. avgivet av Kungl. Skogsstyrelsen.

³³ Compare *Svenska skogsvårdsföreningens tidskrift* 1947 pp. 90, 110.

farming. It was thought, however, that the social considerations did not conflict with the economic goals but would in fact coincide with them.

The proposal was turned down by most of the county forestry boards and by the county forest officers' association.³⁴ They believed that in their work to improve forestry the formulation of the law had less importance than information, propaganda, expert help and subsidies. Stricter legislation, which would mean more coercion, would lead to conflicts between the forest owners and the forestry boards and to a decline in the forest owners' self-activity by the responsibility being laid on the authorities.

The proposal was also opposed by the national organizations representing the forest owners' interests (Sveriges lantbruksförbund, Sveriges skogsägareföreningars riksförbund and Riksförbundet landsbygdens folk). They warned that the trustful co-operation between forest owners and the forestry boards would be harmed by the law. On the other hand, the proposal was supported by the workers' organizations (Landsorganisationen and others), by the joint committee of the forest industries and, strangely enough, by the county forest rangers' association.

The Minister of Agriculture answered the criticism rather evasively. He maintained that the result of the work for improved forestry must always ultimately depend on the contributions made by the individual forest owner. And he added: "In order to make it possible to maintain and increase the interest of forest owners in constructive forestry it is, however, necessary that their freedom of action is not curtailed unless a measure or an omission obviously conflicts with the demands of good forestry." He also made certain modifications to the bill to meet the criticism and softened it even more in his speech in the debate in parliament.

The modified bill was adopted by parliament but with considerable differences of opinion. The arguments on either side did not reveal any new points of view. The defenders of the law often repeated the really empty promise that the stricter rules would not affect loyal forest owners. The law came into force on Jan. 1st 1949.

³⁴ *Proposition* nr. 34 till 1948 års riksdag pp. 47—54.

Starting from the problems raised in this study, I shall make a short analysis below of the most important rules in the new law. It is an attempt to make concrete the kinds of behaviour required of the forest owners.

General rules for forest management. The law is introduced by a general programme for forest management. "Woodland and its growing trees shall be managed, by making suitable use of the timber-producing capacity of the land, in such a way that satisfactory economic gains are made and, as far as possible, an even yield is obtained." This declaration is important in two ways. It gives the objective of the State's forest policy and it is intended to give guidance in interpreting the direct regulations following. The declaration contains a demand for profitability and another demand for an even yield. Forestry should be carried on like an economic enterprise aimed at making economic gains. This principle of profitability must ultimately be the crucial point in trying to decide such questions as what re-generation costs ought to be invested in a given case or when final felling of a stand shall take place. The demand for an even yield may conflict to some extent with these economic considerations. As was mentioned above, it was based on social considerations. To ensure regular employment for the people working in the forests and the regular provision of raw materials for industry in the long term, a certain periodical evenness in felling in every district was required. Even felling was also considered to be important to the individual farms, not least those that were dependent on continuous income from the forests. As will be clear from the following, the demand for evenness was not particularly strictly stated with reference to the smaller forest owners.

The declaration does not limit the private owner in his choice of line of work as long as he more or less fulfils the demands of forest policy. This would have been out of the question anyway because of lack of knowledge about the results of different methods of forest management.

Rules concerning felling. The main rule for felling reads: "forest that can be developed may not be felled except by thinning which is useful and necessary for the development of the forest."

This rule contains several terms which are very indefinite. What is meant in the first place by *forest that can be developed*?³⁵ The law itself certainly gives a definition: Forest is to be considered capable of development as long as it must be considered more remunerative to let the forest stand than to fell it immediately. But this definition scarcely makes for greater precision; it is based in fact on a number of uncertain estimates. The sense is that forest is to be considered as capable of development as long as its expectation value exceeds its clearance value. The clearance value of the forest is easy to determine, if its amount of timber and the current stumpage prices are known. But it is more difficult to estimate the expectation value. To do so, an estimate must be made of the future growth of the timber, future timber prices and costs, and the interest rate. All these preliminary estimates must of necessity be very uncertain even if, as is assumed, temporary economic fluctuations are ignored. As to the growth of the timber, research has not hitherto given any definite pointers for estimating it in different conditions.

The National Forestry Board published directions to serve as guidelines for the application of the law in 1949.³⁶ In these were recommended grounds for making economic calculations, for instance when distinguishing between forest capable of development and not capable of development.³⁷ Although these recommendations were based on statements made by the Forest Research Institute of Sweden, they could not, of course, remove uncertainty about the calculations.³⁸ One of the experts at the Institute also pointed out later: "No one intended to make forest management a slide rule. It will certainly be developed by subjective silvicultural estimates, as has been done hitherto. In

³⁵ This term replaced the expression "younger forest" in the 1923 law.

³⁶ *Kungl. skogsstyrelsens Anvisningar rörande tillämpningen av skogsvårdslagen den 21 maj 1948*, Stockholm 1949. Cf. PETTERSON, *Om skogsvårdslagens tillämpning* (Meddelanden från Statens skogsforskningsinstitut band 39 nr. 2, 1950).

³⁷ *Anvisningar* bilaga 5. A critical analysis of the calculation models has been made by DICKSON, *Ekonomiska principer bakom svensk skogsvårdslagstiftning* (Stockholm 1956) pp. 128 ff.

³⁸ DICKSON, *op. cit.* p. 144: "The pre-conditions on which the estimates of profitability are to be based have never been properly elucidated."

order to make the meaning of the law clear, however, it is necessary to make an investigation in isolated cases, which should be done very carefully. Then the calculations are needed.”³⁹

One question which aroused lively public discussion had to do with the interest rate in the calculations. In the directions published by the National Forestry Board it had been set at 3 % i.e. lower than the forest owners' interest rate on loans. The reason for this was that if the interest rate was put higher, it appeared that a lower protection limit for the forest was arrived at than was generally considered to be good forestry. How this is to be explained is perhaps not worth going into since the bases for the calculations are so uncertain.⁴⁰

In the work of the county forestry boards the calculations were hardly used as a guide in making estimates. After only a few years, the National Forestry Board stated that the calculations had “almost fallen out of use in practice.”⁴¹

Attempts to define the protection limit of growing stands by using economic criteria thus had little success. Even during the discussion of the bill, experts had questioned whether the feasibility of defining the concept “forest capable of development” by means of economic calculations had not been overestimated. Instead biological criteria had been recommended, e.g. age or dimension. Otherwise there would be uncertainty among forest owners and official staff. To this the Minister of Agriculture answered that the element of uncertainty in making a long-term estimate ought to mean that intervention in the dispositions of a forest owner would occur only in striking cases.⁴²

³⁹ PETTERSON *op. cit.* p. 3.

⁴⁰ DICKSON *op. cit.* gives a detailed account of the discussion and the underlying conflict between the two opposed forestry principles, the forest interest principle and the profitability principle. Explanatory contributions to the discussion are made above all by STREYFFERT in articles in *Skogen*, the mouthpiece of the Swedish Forestry Association, 1951, pp. 16* ff and 1952 pp. 94* ff. It may also be pointed out that farm management in Sweden also shows a strikingly low earning power.

⁴¹ DICKSON *op. cit.* p. 143.

⁴² *Proposition* nr. 34 till 1948 års riksdag pp. 64—69, 87.

In practice the county forestry boards have estimated the limit between forest capable of development and not capable of development by following earlier less rigid methods of estimation. According to the intentions of the legislators this limit is no doubt raised slightly. It is possible to say that the age limits commonly applied during the period of the 1923 law have been raised by 10—20 years.⁴³

However, it is not actualized as often as one might think to establish the limit between forest capable of development and not capable of development. The limit applies to stands more or less of the same age. But in most private forestry, the forests consisting of trees of widely differing ages predominate, the result of earlier felling methods. In these cases there is no final felling of entire stands; instead felling of mature trees and cutting to make re-generation clearings are part of the forest thinning. The thinning limit is therefore very important. What is meant by the term in the law *useful and necessary thinning*? According to the general guidelines, it means of course the thinning which produces the greatest value growth in the forest. But there are even fewer objective landmarks to go by in making such an estimate in each separate case. In the directions given by the National Forestry Board, it is stated that the question must be decided in close connection with earlier thinning principles.⁴⁴ In an investigation by the Forest Research Institute of Sweden it says: "In application of the forestry law, however, we are dealing with the very varied stands found in reality. What is useful and necessary thinning here? This question requires some measure of free judgement. Especially where there is a mixture of tree species and in stands of unequal age or uneven growth many questions arise that cannot be answered by rules. The whole performance in detail of marking of trees for felling is somewhat beyond the reach of regulations. However, all this does not exclude the fact that the results of productivity research can have great importance in estimating *the main lines* for thinning. Here are meant such questions as the time for the first inter-

⁴³ Cf. information given in DICKSON *op. cit.* p. 143.

⁴⁴ *Anvisningar* p. 7.

vention, the length of interval between thinnings, the form of thinning and the intensity of the thinning. Since the investigations in question have to do with pure stands of spruce and pine of the same age, often overstocked from the beginning, the results can only seldom be used directly. It will often be a matter of analogism.”⁴⁵

Those who wrote the law thought that by the main rule about felling they had made clear the demands of the law on the forest owners. The statute would bring about greater clarity and less hesitation about what the law requires and does not require. It would thus prevent a feeling of uncertainty among forest owners which might arise if they did not know how the forestry boards would act.⁴⁶ We have seen that this belief was vain. The interpretation of the vague terms of the statute — if they were to be interpreted at all in practice — must be left to the authorities. The legislators perhaps saw this as something desirable in itself. There are statements that the law was not to be formulated in such a way that it blocked development; on the contrary its terms ought to receive new content as the results of research were published.⁴⁷ But there is no discussion of how this striving for elasticity was to be combined with the striving for precision in the descriptions of the desired behaviour. Despite everything, the impression remains that uncertainty among forest owners is not particularly great and that control by the authorities is not very obvious. This must be due to factors outside the law. It was also stated time and again during the preliminary work on the law that legal intervention should occur only in evident cases.

Besides the main rule there is a special rule for felling of the forest which is not capable of development: such forest may not be cut down without the permission of the county forestry board in such a way as to considerably disturb the evenness of the timber yield or to retard re-growth. The social demand for evenness is here expressed in the law. It has, however, not much importance for smaller forest holdings. Its only function here is

⁴⁵ PETTERSON *op. cit.* pp. 17 f.

⁴⁶ SOU 1946 nr. 41 p. 96.

⁴⁷ SOU 1946 nr. 41 pp. 89, 164.

to guarantee the economy of the farm by continuous income from the forest. The intention is not to prevent felling from varying according to personal needs or economic fluctuations.⁴⁸ The demand, in fact, only applies to farms with a fairly large supply of forest incapable of development. They are not common. They will perhaps increase in number in the future, particularly in south and central Sweden, where a great deal of the new forest is planted forest of equal age.

What has been said so far has to do with forests in general. For forests which, by government decree, have been declared *difficult to regenerate* (forests on Gotland and Öland, in Lapland etc.) or *protection forests* (protection against shifting sands or soil) the regulation of felling is much more rigorous. Felling other than for household purposes may only occur after permission has been given by the county forestry board, whose staff marks the trees. In some cases even felling for household purposes may be prohibited.

Re-growth rules. According to these, the forest owner is obliged to ensure re-growth in three different cases: ⁴⁹

- 1) if, on felling, there has not been left standing forest "of such density and quality that, considering the prevailing natural conditions, it can be considered satisfactory,"
- 2) if damage to the forest with the result quoted has been caused by a natural occurrence or by grazing or by trespass,
- 3) if the state of the forest is otherwise obviously unsatisfactory; this applies to forest which has been poor in quality for a long time.

In these cases the forest owner is to take such measures as ensure satisfactory re-growth within a reasonable time, and the measures are to be continued if necessary during the plantation period.⁵⁰ In the last two cases, in principle, no measures can be required exceeding a cost limit which is determined by the value

⁴⁸ Thus e.g. *Anvisningar* p. 9.

⁴⁹ The first two cases largely correspond to the re-growth rules in the 1923 law.

⁵⁰ Plantation period — five years after planting: *Anvisningar* pp. 15, 67.



Figure 11. Thinly wooded pasture-land ("hagmark"). Östergötland county.

of the trees felled and possible amounts of compensation. But this limitation disappears completely when subsidies or loans can be obtained from government funds.⁵¹ Then the county forestry

⁵¹ The conditions for state subsidy are to be found in an ordinance *SFS* 1948 nr. 239, essentially changed by *SFS* 1960 nr. 324. According to this the state subsidy can only be paid out to the amount of 50 % of the remaining costs.

board can enjoin the forest owner to take full re-growth measures in these cases too.

These re-growth rules may seem onerous for the forest owner. The matter was seen in this light that the forest owner is obliged to make a capital investment which immediately remunerates him in the form of increased value of his woodland. In practice no orders of this kind have occurred, as the voluntary applications have been so numerous that they have exhausted the resources of the forestry boards.

Again the rules contain several vague and indefinite terms. It has been difficult to make them more precise partly because the conditions for forest production change on different kinds of land and within different parts of the country and partly because there was a desire not to interfere with the smooth adaptation of the law to forestry development. As to the term *satisfactory* standing forest (see cases 1 and 2), it was suggested that the demand for the density of forest should be made more precise by stating a minimum degree of the closing of the trees according to a commonly used scale. This would result, however, in a very rigid rule. The directions given by the National Forestry Board referred to earlier practice with some tightening up of demands. The meaning of "satisfactory forest" is connected in a way with the thinning limit, which was left to be decided in each case separately. If felling exceeds the thinning limit to any great extent, the state of the forest will obviously not be satisfactory any longer. The term *obviously unsatisfactory* (case 3) on the other hand has been specified by an enumeration of the types of land which are to be considered to have this character: old bare forest land, thinly wooded pasture-land ("*hugmark*"), swampy land etc.⁵² Thus an attempt has been made to give more concrete pointers in this case where it is a matter of purely new investments, not re-investment.

Finally, what is meant by *satisfactory re-growth*? The National Forestry Board's directions tried to define the term by giving a table showing the desirable number of plants per hectare in different parts of the country and at different elevations.⁵³ The

⁵² *Anvisningar* bilaga 6 contains definitions of these types of land.

⁵³ *Anvisningar* pp. 15, 63.

table was based on the possibilities of natural re-growth. However, the general principle of profitability also had to be taken into account. No other re-growth measures may be demanded besides those which are estimated to be profitable. But here again the question arises of uncertain future calculations. "Not only is uncertainty great about future prices and interest rates — the biological connections are also still far from being known. So we lack the chance of deciding with a reasonable degree of certainty how the re-growth measures and the management programme in general will influence production and the economic result."⁵⁴ The rate of interest is put as low as 2.5 % in the regeneration calculations of the National Forestry Board. The theoretical reason is that from the point of view of the whole national economy it is desirable to have a greater timber production than seems to be profitable from the point of view of the private forest owner.

Legal intervention. Like the earlier laws, the 1948 law puts certain coercive instruments at the county forestry board's disposal.

The coercive system connected with the re-growth rules is the same as in the 1923 law.

The coercive system linked with the felling rules has been changed on a couple of important points. Only in urgent cases has the old system been retained unchanged. For regular cases attempts to come to an agreement have been incorporated (see table D) in the same way as into the re-growth system. In doing so, the practice established by the county forestry boards was being followed. They had wanted to avoid felling prohibitions which, because of their coercive character, in many cases diminished the interest of the forest owners in forestry. They had then tried to get the owner to come to an agreement on felling. It was pointed out that such an agreement not, as a prohibition, had the character of punishment since the forest owner's approval was needed. In the negotiations which had to precede the agreement the forestry board had the chance of convincing the owner and arousing his interest in forestry.⁵⁵

⁵⁴ DICKSON *op. cit.* p. 157.

⁵⁵ *SOU* 1946 nr. 41 pp. 151—154.

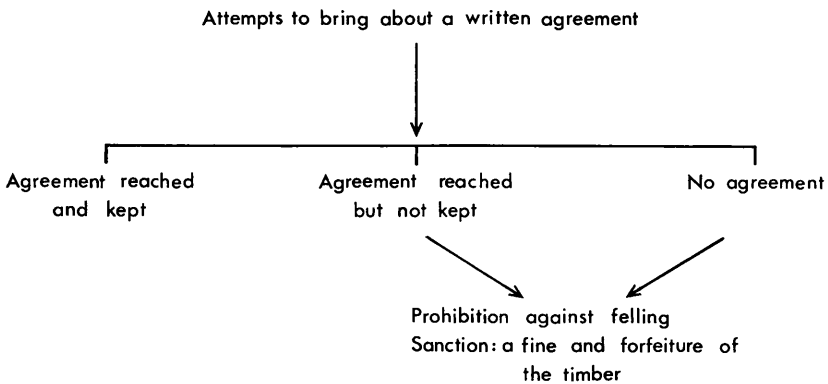
One innovation in the other direction is that the law prescribes direct punishment for felling which obviously conflicts with the law and which has not been done out of lack of judgement. Previously, punishment had been prescribed only for felling which conflicted with a prohibition decree imposed on the forest owner. The new punishment rule was one of the most controversial innovations. During the debate, the Minister of Agriculture stated that it should only be used in flagrant cases when the unlawfulness was unmistakable even to the forest owners themselves. But it might perhaps be said that the legislators entertained quite exaggerated faith in the ability of the law to penetrate the forest owners' minds. "The felling principles introduced under the law of 1923, as they have been in force for more than twenty years, have now become so widely known that it ought to be clear to almost every forest owner when a felling is to be regarded as obviously unlawful", wrote the National Forestry Board.⁵⁶ And the Minister of Agriculture added: "The changes in these requirements that will be made by the new law should moreover . . . quickly be absorbed in the general outlook of the forest owners."⁵⁷ Considering how abstract and vaguely formulated the felling rules were, it may be questioned whether these statements were not over-optimistic.

What the county forestry boards do not have control of. The aim of the law is to guide the forest management of the individual forest owner along certain general lines. But state control is not total. It may not enforce all the measures desirable. Thus the authorities cannot enforce final felling of mature stands, nor thinning of overstocked stands even though neglecting felling will cause great economic loss. Probably it was considered that such neglect occurs so seldom that it does not have very much importance. Nor can the authorities enforce forest cultivation on poor woodlands which do not come under any of the types of land enumerated.

⁵⁶ *SOU* 1946 nr. 41 p. 238.

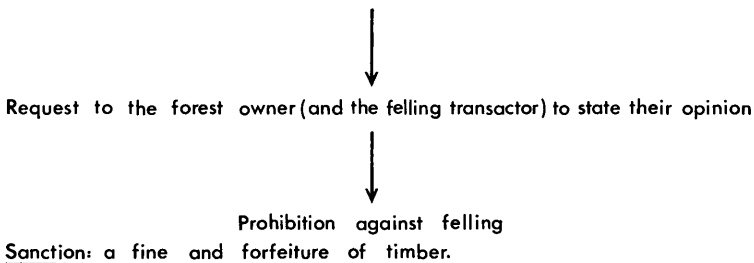
⁵⁷ *Proposition* nr. 34 till 1948 års riksdag p. 115.

Table D. *Legal intervention to prevent felling which conflicts with the 1948 forestry law.*



In urgent cases:

(Possibly): provisional prohibition against felling (forest officer employed by the board can give a 20-day prohibition)



6. Summary

The various forestry laws came into operation in the face of passive resistance by the great majority of forest owners. Reluctance to give up their old freedom of action and uncertainty about what the law would entail were factors in this attitude. Their resistance, however, never became organized, not least because many of the political representatives of forest owners were convinced of the necessity of legislation. Once a law has been applied, it has gradually become tolerated — if not directly

accepted. It is evident that the county forestry boards' method of administering the law was decisive in this matter. It was then considered that the time was ripe to raise the level of legal demands and the same process was repeated anew. This gradual policy was openly acknowledged by the Minister of Agriculture during the parliamentary debate on the 1948 law:

"Both the law of 1923 and the present one are educative laws. They are not intended to bring about a definite result all at once; they only state what we are aiming at. They tell forest owners how they should try to manage their forests and the authorities how they should carry out their work, and the authorities have always tried to persuade the forest owners to make progress. They did not believe and will not believe that it is possible to move from mismanagement to something perfect all at once. As before, they will work step by step and that is the intention of the law. So they will interest those who have mismanaged their forests in making progress which is less than that which can be elicited from anyone who has advanced further in managing his forest properly. . . . I should like to conclude by saying that, like the 1923 law, this one is a step forward. This means that in our efforts to achieve better forestry we have made progress, we have made conquests, we have come closer to ideal forestry. Therefore, we can move our positions forward. We can aim higher. We can continue with our efforts and that is what the new law entails." ⁵⁸

An extremely difficult problem for the legislators has always been the formulation of the patterns of behaviour for forestry. It proved difficult not only to describe the felling and planting or sowing measures to be required but also to specify the situations in which the demands ought to be raised. Some experts tried to find concrete and general criteria which could give the forest owners and the field staff some guidance. Particularly, they tried to establish biological criteria such as the age of the trees, their seeding abilities, the closing of the tree crowns, the number of plants per hectare, etc. But on closer scrutiny these criteria did not express what was really wanted, namely rational

⁵⁸ Mr Sköld, Minister of Agriculture, in parliament. *Andra kammarens protokoll* 1948, nr. 15 p. 140.

and economic forest management. Such management can only be achieved by acting according to economic calculations and since the latter could not easily be expressed in legal language, the only possibility was to hint at them in vague formulations. Again it is another thing that the standard calculations worked out by the forestry authorities did not turn out to be very useful in the practical forestry work.

The legislators then have resorted to vague and abstract patterns of behaviour. In these circumstances it is clear that it was impossible for the forest owners to read and interpret the law.⁵⁹ As someone expressed it, they were probably puzzled by the formulations "like a sow contemplating the starry sky". They were unable to find out what was required of them as regards forestry management. On the other hand they could not let the forest alone. They needed income from their forests. They could solve their dilemma either by acting according to their own common sense at the indefinite risk of unpleasant consequences or by turning to the county forestry boards for assistance.

A legislative problem of this kind is usually solved by using licensing legislation. The law then contains a basic prohibition against the activity to be regulated as long as permission is not granted by the reviewing authority. Since the reviewing of the permissibility of a certain behaviour is thus the responsibility of an authority and is not left to individual judgement, it is possible to use less specific precepts than would otherwise be necessary but perhaps impossible to achieve. The legal pattern of action for the individual is simplified to a general prohibition. An illuminating example of this is the building and land-planning legislation in all countries.

This form of control has been used in Swedish forestry legislation but only to a very limited extent. Concerning forests on land which is difficult to regenerate or otherwise particularly unfavourable it has been provided — in some cases since the 1870s — that felling for sale may only take place after permission from

⁵⁹ Some of the county forest rangers when on forestry courses asked the participants about the contents of the law but did not receive any answer. It should be noted that these were the more interested and far-sighted of the forest owners.

the authorities and marking of trees by their staff. This only applies to special parts of the country (Lappland, Öland, Gotland) where control of this kind seemed natural.

There were probably two circumstances that made licensing legislation inappropriate for forest management in general. One was that such regulation would have been considered such an infringement of the forest owners' freedom that there were no political and psychological opportunities of introducing it.⁶⁰ The other was that the reviewing of a great number of applications for licences would have needed greater administrative resources than the government was prepared to allocate.

A licensing system then was not introduced except for special areas.

To get an overall picture of other possibilities available to the legislators, it is essential to list regulation forms discussed in these connections:

Table E. *Legal regulation forms discussed.*

Elements of the regulation form (legally sanctioned elements in italics)	
1. <i>general precepts</i> in law	norm regulation
2. <i>general prohibition</i> in law+ <i>individual permissions on conditions prescribed</i>	licensing regulation
3. general precept in law+ <i>individual orders and prohibitions</i>	order regulation
4. general precept in law+free inducement activity	negotiation regulation

A norm regulation was of course quite out of the question since the behaviour patterns of the laws were so complicated and imprecise.

An order regulation must always be linked up with some form of previous control of the activity regulated. The method of control may vary from systematic inspections at long or short intervals to collecting occasional information.

⁶⁰ A licensing regulation with a considerable social range must usually be introduced successively in order to be effective without too much effort on the part of the authorities and without too much strain on social solidarity. Cf. STJERNQUIST, "Effectivity of legal instruments in Swedish land planning", *Istituto di diritto agrario internazionale e comparato, Atti della seconda assemblea* (Firenze 1964) III pp. 706 ff.

Undoubtedly the forestry laws were primarily intended and designed to be an order regulation. Both felling prohibitions and prescriptions to plant forests are sanctioned orders. The way in which control of forest management was to be arranged was left to the initiative of the authorities.

However, the forestry laws are not a pure order regulation. In the most recent law there are tentative elements of both norm regulation (punishment for flagrantly unlawful felling) and licensing regulation (prohibition against excessive felling of mature forest without permission). Neither has had any practical importance.

More important is the strong element of negotiation regulation which was there from the start. The legislative organs emphasized that the aim of the law if possible ought to be fulfilled by means of persuasion without the use of coercive measures. The demand for negotiations was underlined further when the law prescribed that the authorities should make an attempt to reach a voluntary agreement.

However, the authorities could approach the negotiation work in different ways. They could see the law as a means of pressure in the negotiations and work by invoking the law and by threats of legal orders. But they could also see the law only as an internal programme designed to give direction and psychological support in an informal negotiation. This second alternative means that the behaviour requested of the forest owners was to be built up gradually by free activity on the part of the authorities.

V. The county forestry boards in action

The preceding chapter was a history of the laws. It described how the forestry laws originated and how the legislators tried to formulate programmes for the forest owners' management of their forests.

However, a law seldom or never takes effect by itself, however carefully thought out and well-written it is. It requires to be implemented by officials or other organs applying the law and carrying its message further. The effectuality of the law largely depends on the education of these organs, their judgement and loyalty to the objectives of the law. Even when the first law came into being, the legislators were far-sighted enough to realize this. Instead of the dead rule there had to be a living social instrument which would control and support the management of private forests. These county forestry boards were described as to their organizational position in the previous chapter.

In this chapter the work of the county forestry boards in influencing the behaviour of forest owners will be examined.

It must be remembered that the tasks of the forestry boards were not limited to bringing the law out into the forests and ensuring that it was followed. The boards were to take all measures that might improve private forestry even if they were not specifically stated in the law. To start with, legislation only took up one aspect of forest management but gradually more and more activities were included. If only those aspects that have a direct bearing on this investigation are considered, the development looks like this:

	1903 law	1918 law	1923 law	1948 law
re-growth measures on clear-cut areas . . .	+	+	+	+
methods of felling	—	+	+	+
forest planting and sowing on old bare areas	—	—	—	+
clearing, thinning	—	—	—	—

Right from the start the work of the forestry boards had all these lines of conduct in view. The legislation was not entirely without importance for those activities that had not yet become regulated in the law, as will shortly be revealed.

The analysis of the influence exerted by the county forestry boards must be preceded by, firstly, an account of the material used in the investigation, and secondly, a survey of the staff and money resources available to the forestry boards.

1. The material of the investigation

Most of the material has been collected by means of field studies of the county forestry boards. The table below shows which boards were visited. The boards not visited are exceptional on account of special geographical and forestal circumstances.

Table 6. The extent of the field studies.

Stockholm	county	+	Göteborg-Bohus	county	+
Uppsala	„	+	Älvsborg	„	+
Södermanland	„	+	Skaraborg	„	+
Östergötland	„	+	Värmland	„	+
Jönköping	„	+	Örebro	„	+
Kronoberg	„	+	Västmanland	„	+
North Kalmar	„	+	Kopparberg	„	+
South Kalmar	„	+	Gävleborg	„	+
Gotland	„	—	Västernorrland	„	+
Blekinge	„	+	Jämtland	„	+
Kristianstad	„	+	Västerbotten	„	—
Malmöhus	„	+	Norrbottn	„	—
Halland	„	+			

The field studies included:

- 1) interviews with central staff and field personnel, particularly those with a long period of service,
- 2) interviews with former officials from an earlier period,
- 3) examination of minutes and archives, sometimes on a random sample basis¹
- 4) tracing memoranda, lectures, etc. from an earlier period.

We have attempted all the time to consider only first-hand information and if possible to find evidence of the facts from several different sources, e.g. to check oral information against a written source. It is evident that in spite of everything there is some uncertainty. It is reduced further, however, by comparisons being made between counties. The method of investigation used is indeed not exact in the strictest sense but it is the only way in which sociological research of this kind can be carried out.²

The field studies were carried out using a detailed questionnaire. It had been worked out on the basis of the theoretical model given in Chapter II and by making use of experience of a few small pilot investigations. While the theoretical aim of the questions was thus decided on the basis mentioned, their concrete form was determined by practical experience.

It is necessary to work with a questionnaire of this kind in field studies of complicated social relations. Otherwise it would be easy to get lost in a mass of data which is difficult to survey. It has sometimes been objected to such a method that it is bound by assumptions and that at the present stage of research we should try to collect material without any particular set of

¹ The forestry boards have presented annual reports of their work, published in Svenska skogsvårdsföreningens tidskrift. These reports, however, proved to be less valuable than might have been thought. Their information is of a stereotyped nature; sometimes they follow the same pattern to the extent that the information is false.

² This is pointed out by SELZNICK, *TVA and the Grass Roots*, a Study in the Sociology of Formal Organizations (Berkeley 1949) p. 250. Selznick uses a similar method for collecting data to that used here. His investigation, however, concerns a rather different set of problems; it is an attempt to analyse organizations as systems of behaviour, not to study their program achievement. See pp. 249—253.

assumptions before the theoretical work can begin. The answer to this is that every research project has a particular aim and starts out from certain assumptions; it is better to state them openly than not to elucidate them at all for oneself and others. The serious risk of overlooking facts and connections not earlier observed is best countered if one is quite aware of the risk and is prepared to counteract it during the course of the field study. These views resulted in seeing the questionnaire as guidance in the field studies, not as an inevitable key. Where it has been necessary, the investigations have partly developed very freely.

The interview material was presented in a report which was sent to those interviewed with a request to check it. In the answers received several additions have been made but no corrections proper.³

2. Personnel resources

The development of the number of administrative positions in the county forestry boards is seen in diagram 3. It includes both county forest officers and other foresters employed, and permanent and extra forest rangers employed for local districts.

The county forest officers usually had an academic education. Only in the first set of county forest officers were there some without any such higher education. The county rangers were trained at lower forestry schools.

Besides the permanent positions there were personnel employed for certain periods of the year. The main groups were the foremen for tree marking, and planters. Their number varied with the number of requests for marking and forest planting by forest owners.

³ In the following presentation, reference to the material has been made when some item of information is particularly important or when facts differ according to the district. — In one case one checker considered that the facts given by another interviewee were the result of a misunderstanding of the conditions. No use has been made of their information.

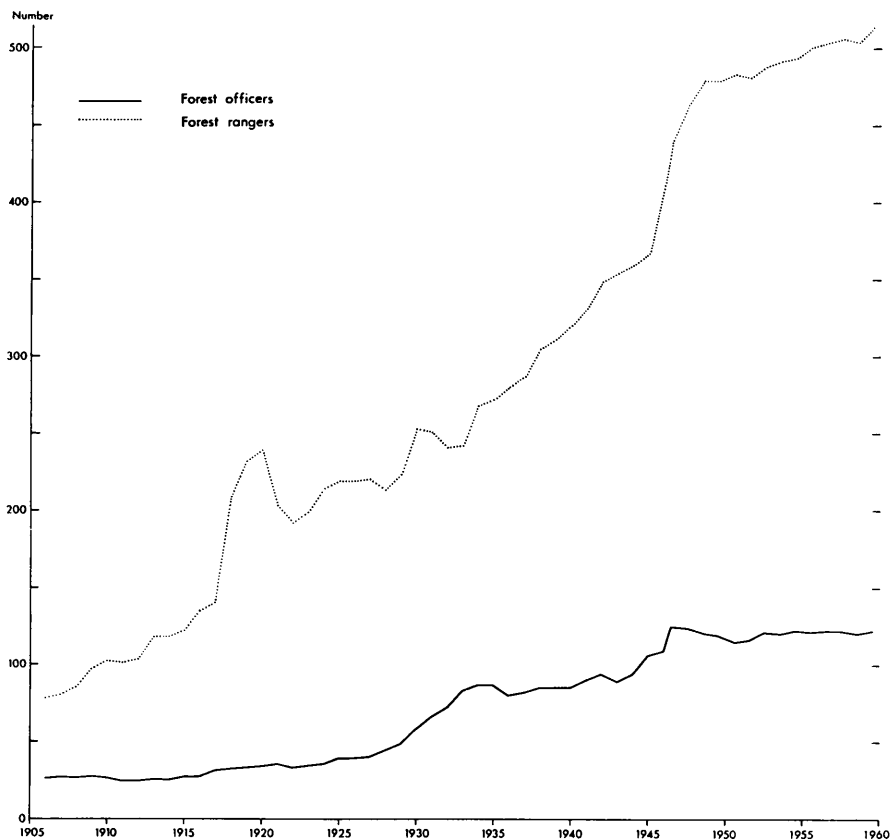


Diagram 3. Number of permanent personnel on the county forestry boards.

Sources: 1905—46

1947—30/6 1950

1/7 1950—30/6 1960

See diagram 1.

3. Financial resources

The size of the financial resources of the county forestry boards for every year is shown in diagram 4. This includes the following items of income:

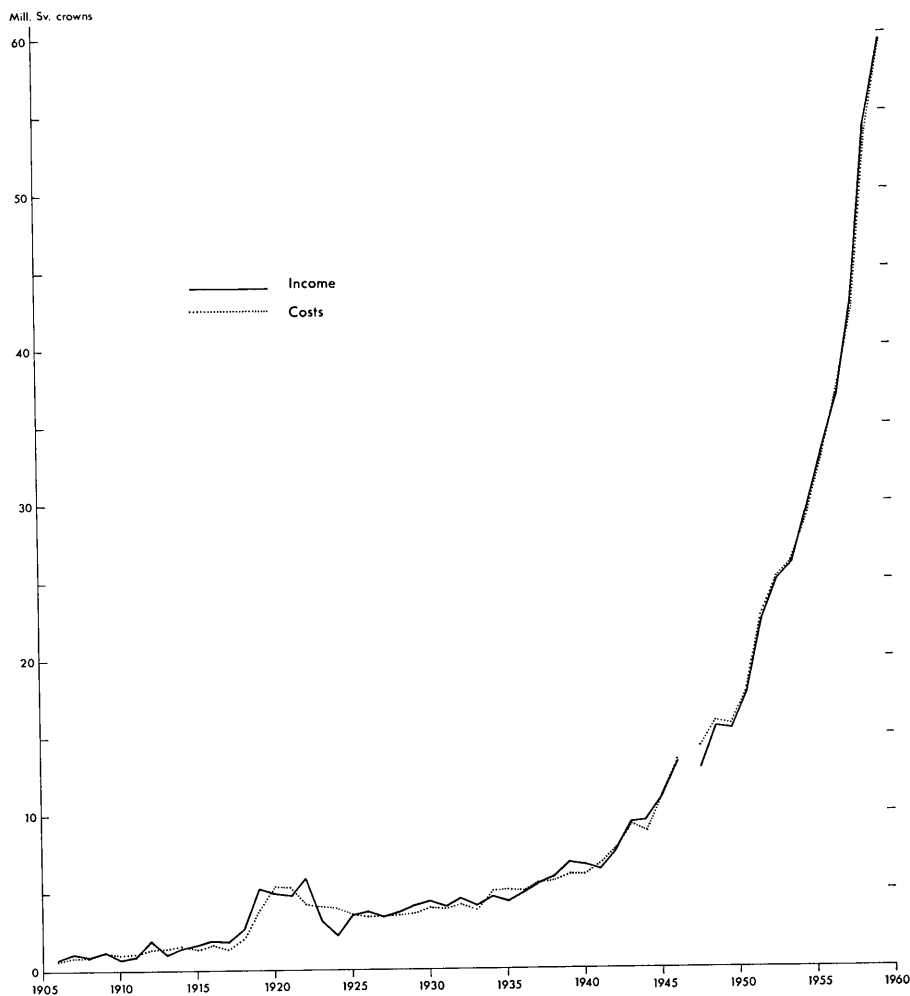


Diagram 4. The total annual income and expenditure of the county forestry boards.

Sources: 1905—46

1947—30/6 1950

1/7 1950—30/6 1960

See diagram 1.

1. Grants from the State. These were always ear-marked for certain stated purposes. In 1906 they amounted to 148,250 and in 1959/60 to 26,098,244 Swedish crowns.
2. Grants from the county councils and the agricultural societies. 1906: 84,250 and 1959/60: 1,921,544.
3. Forestry fees, a special tax on the forests which took different forms at different times. The tax was paid direct to the forestry boards. This source of income ceased in 1946. 1906: 465,887 and 1946: 4,128,630.
4. Income from marking for felling and similar assignments. 1911: 8,751 and 1959/60: 16,281,308.
5. Income from sale of plants and seed. 1906: 17,148 and 1959/60: 11,096,523.

Up until 1940 the county forestry boards were differently situated as regards financial resources. The forestry fees were so constructed that they amounted to greater amounts the better the yield value of the forest in the county. Certain counties could therefore offer forest owners better benefits than others.

4. Arrangement of the analysis

The analysis of the influencing activity of the county forestry boards will be introduced by an attempt to divide this activity into its elementary ingredients. Only after the material has been arranged in this way can it be subjected to processing which is rewarding both theoretically and practically.

A look at the material presented indicates that at least three distinct kinds of elements are involved.

1. *courses of action* in order to influence, laid down by the authority,
2. *contacts* with those to be influenced, that is in this case forest owners,
3. *decision-making* by the authority.

Of these elements, decision-making will not be given special attention. This is because both quantitatively and functionally it plays a very secondary part in the activity studied.

The contacts on the other hand have all the greater importance. They must be analysed further. After some consideration the following division will be tried out:

- 2.1. *forms of contact* or the outward circumstances of contact,
- 2.2. *appeals*, i.e. the way in which the behaviour pattern is presented to the person to be influenced and what kind of acceptance is requested of him,
- 2.3. *arguments* for the behaviour pattern.

Each of these elements presented may of course vary depending on a number of different factors. For instance, the forms of contact may vary as regards the degree of formalization, the spatial situation of those involved, their means of communication, the number of individuals to be contacted, etc. Taking into consideration that there was no formal procedure for contacts in our material the following variations could be found:

- 2.1.1. individual contacts
 - 2.1.1.1. direct close contacts face to face by means of oral conversations
 - 2.1.1.2. direct long-distance contacts by means of letters, telephone, etc.
 - 2.1.1.3. indirect contacts in which the initiator uses an intermediary
- 2.1.2. group contacts in which contact is made with a group of individuals (subdivision as above)
- 2.1.3. contacts via the mass media.

Variations of the other elements will be studied in connection with discussion of the material.

5. Courses of action

In the communication to the government, in which the 1903 parliament reported that it had decided to accept the first forestry law, it was pointed out:

“It seems to be of great importance that the aim of the law, as far as possible, is fulfilled by means of persuasion without the

use of coercion, which might easily arouse resistance to the law and diminish interest in care of the forest.”⁴

In printed statements, or in statements reported in print, made by the leading staffs of the county forestry boards, this recommendation has been generally accepted. No real difference of opinion seems to have occurred in these formulations, in which words such as “enlightenment” and “persuasion” constantly recur. As an early example, an address by a county forest officer in 1907 will be cited:

“The total sum of the new forestry legislation is that, unlike all other laws, it wants to achieve its aim by an information campaign organized beside the law. Since the same institution is in charge of legal supervision and this information campaign I consider this to mean that intervention by invoking the law should be delayed as long as possible. (— — —) Real co-operation between forest owners and the forestry board can thus be achieved and such co-operation is the main purpose of the law.”⁵

This ideology of enlightenment and co-operation may partly be an expression of a more or less conscious need for self-preservation, as the announced ideologies of organizations often seem to be. The existence of the forestry boards was not very securely founded from the start. Statements about enlightenment and co-operation might prevent criticism and other unfavourable reactions in politically influential circles. At the same time it is clear that the county forest officers were personally convinced that the term “by means of persuasion” adequately covered the work of influence they were engaged in and which they considered would lead to constructive forestry. This is all the more surprising as the county forest officers were recruited from a professional body with old features of authoritarianism and semi-military forms.

⁴ *Riksdagens skrivelse* 1903 nr 136 p. 7.

⁵ The county forest officer Arvid Nilsson (Värmland county) in a discussion printed in *Svenska skogsvårdsföreningens tidskrift* 1907 pp. 363 ff. Nilsson went so far as to criticize the 1903 law for not maintaining this attitude consistently; the law, according to its wording, let legal inspection go before attempts to reach a voluntary agreement with the forest owner.

Ideological statements can easily be misleading when one is trying to examine and understand some organized activity. What people say often distracts attention from what they do; this is particularly true when it comes to ways of influencing others, for these ways are often difficult to view objectively.⁶ The risk of being misled is not greatest when working methods differ consistently from the ideology. It is probably more serious that different people involved may have different views about the implications of statements and adapt their actions accordingly. In the present study, it must not be assumed that the words "by means of persuasion" and "co-operation" had the same meaning for everyone.

The fact that the attitude stated was so uniform does not necessarily mean that the line of action was the same everywhere. In fact there is unanimity in the interviews with present and former county forest officers that the working methods of the forestry boards differed so much from each other that there was talk of a *hard* line with the forest owners and a *soft* line with all possible variations in between. At any rate this was the case during the first forty years. The matter came up sometimes at the meetings of the county forest officers in discussion of concrete cases. It happened that the advocates of a soft line taunted the others about their attitude. However, all county forest officers were very independent and hardly took advice from one another. One of the participants has stated that probably not all county forest officers spoke the truth when they so whole-heartedly professed a soft line with the farmers.

As an exponent of the hard line is most frequently mentioned the county forest officer in Älvsborg county Mr Mellquist (active 1914—51). The soft line is most often represented by the county forest officer in Jönköping county Mr Lothigius (1914—44). One of those interviewed who had formerly worked with Mellquist even talks of a special "Älvsborg spirit". That this was a tangible reality is evidenced from other sources. The forestry board in Älvsborg county was the only one to incur so much dissatisfaction among forest owners that it was echoed in the 1923 parlia-

⁶ The problems mentioned have been pointed out and discussed by SELZNICK, *TVA and the Grass Roots* (Berkeley 1949) pp. 8 f.

mentary debate, when the other forestry boards were being highly praised. The same forestry board was the only one to ask for stricter coercive measures against forest owners in the 1946 revision of the law. The board considered that such measures would create a "healthy respect for the law", while other forestry boards warned that there might be a depressing effect on the forest owner which might prevent him from self-activity.⁷

However, the question is where the difference between the various lines of action lay. There does not seem to have been any very clear understanding of this.

(1) Some people believed that the stricter line applied legal coercion against forest owners to a greater extent than the others. Thus there were assumed to be relatively more prohibitions and court cases in Älvsborg county than, for instance, in Jönköping county.

To check up on this view, a comparison will be made between the practices of the forestry boards of these two counties, which, generally speaking, seem to have been opposite poles in the policy of dealing with forest owners. It is a happy coincidence that the two counties are situated next to each other and have more or less the same natural conditions for forestry. The social structure of forestry was similar: Private forest owners predominate. Their number within different size categories in 1928 can be seen in the following table:

Table 7. Number of private forest owners in 1928.

County	0—25 hectares	25—50 hectares	50—100 h.	> 100 h.
Jkg	8,711	4,702	1,980	488
Äbg	16,308	4,330	1,678	449

Source: *Statistisk årsbok* 1930 (according to the tax assessment of 1928).

The only considerable difference is in the range 0—25 hectares, in which Älvsborg county has nearly twice as many as Jönköping county. This may partly be due to different principles of calculation but nevertheless there seems to be an important difference

⁷ See p. 90 and p. 96 above and *Proposition* nr 34 till 1948 års riksdag p. 112.

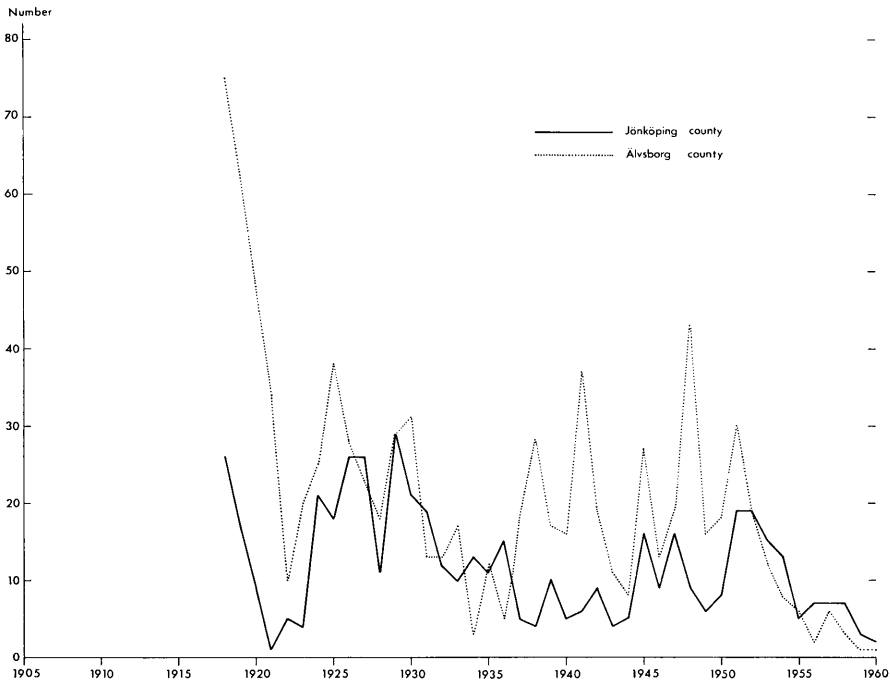


Diagram 5. Number of felling prohibitions in the counties of Jönköping and Älvsborg.

Sources: See diagram 8.

in this respect. Otherwise the comparability of the two is extremely good.

The comparison between the numbers of coercive measures taken is shown in the three diagrams 5—7. The figures are extremely low in comparison with the number of forest owners. The number of prohibitions against felling in Älvsborg county was greater as a rule but the difference is much reduced when considering the number of forest owners. As for court cases and legal inspections, Jönköping county shows the greater frequency.

It is thus shown that what characterized the different lines was not a greater or smaller use of legal coercive measures.

(2) Others had the opinion that the difference lay in the scope which the county forestry boards ascribed to the legal pattern

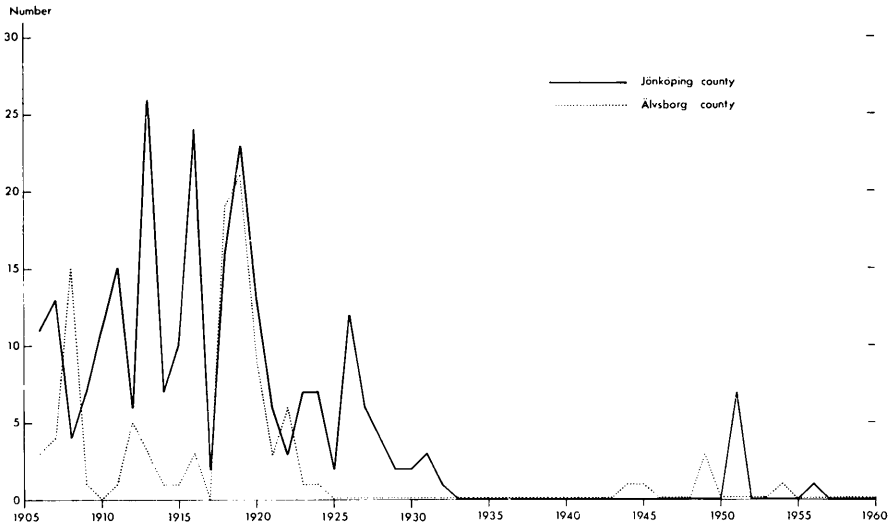


Diagram 6. Number of legal inspections in the counties of Jönköping and Älvsborg.

Sources: See diagram 8.

of action for forest owners. The stricter line was assumed to mean earlier intervention. It is evident that there was such a difference. Some wanted to create guarantees for re-growth as soon as there had been felling. Others considered that they should only intervene when the land proved to have no re-growth (p. 82 above). Some wanted to intervene against felling even over small areas, others did not.

In this connection what is important is not the attitudes adopted in discussions between colleagues. The question is how a stricter attitude made itself felt among forest owners. That it did not result in an increase in the use of coercive measures has been examined already. But of course it may have been felt in other ways.

(3) One difference which is dealt with very vaguely or not at all in the discussions at that time but which is clearly expressed in the interviews is the psychological strategy in field work. In this respect the county forest officers represented very different lines of action.

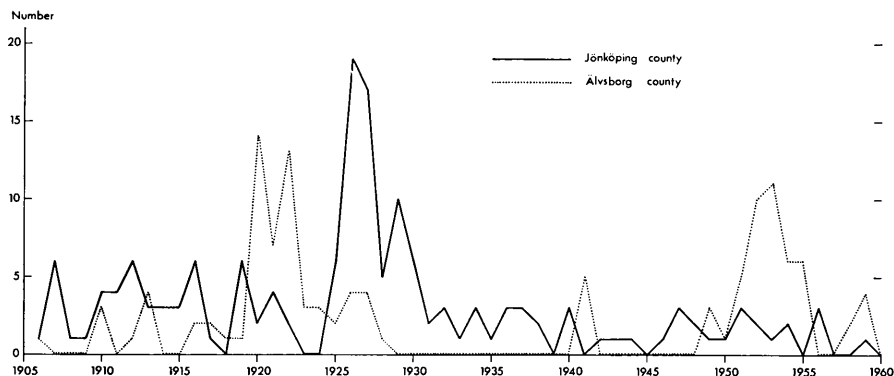


Diagram 7. Number of legal proceedings according to the forestry laws in the counties of Jönköping and Älvsborg.

Sources: See diagram 8.

This difference between counties was observed as early as 1907 by a member of parliament and forest owner from Värmland county who stated:

“If the forestry board intervenes when too much timber is felled then it should say “You should not do that and that, but that and that”, but it should not say “You don’t understand this and so it is much better not to fell anything at all.” We have just heard that a forest officer came to the felling place and said “You don’t understand this”. He didn’t bother to instruct the farmer how to do the felling but said “Stop! You’re not allowed to cut down trees”. I should like to ask if this is the most suitable method of getting the new law into the minds of the public.”⁸

The field work policy which the forestry board in Älvsborg county pursued during the time Mellquist was county forest officer is characterized by contemporaries in this way: The trend was to tell forest owners what the law required of them and to command them to do better forestry. On the other hand, no great effort was made as in other counties to persuade forest owners and help them. That this account is largely correct is clear from the statements made by the forestry board on legal

⁸ Svenska skogsvårdsföreningens tidskrift 1907 p. 373.

questions, in which it asked, among other things, for stricter penalties which might create a healthy respect for the law and deter forest owners from felling without consulting the board first.

It was not only in Älvsborg county that a hard line was taken. A similar policy was pursued in Kristianstad county. It was described in 1932 by the then county forest officer as follows:

"From time to time it has been maintained that the county forestry board when trying to achieve its aim has made use of persuasion to far too small an extent. (— — —) If the forestry board, since both the forestry law and its effects have long been known, had not taken legal measures until after long time-consuming arguments and letters it was quite sure of the impossibility of convincing the forest owner of what his *legal obligations were*, then the management of forests would not have improved as much as it has done."

It is also said that this policy caused several protest meetings among forest owners directed against the county forestry board.⁹

An interesting account of how the forestry board in Örebro county deliberately re-framed its policy has been given by the then county forest officer:

"The argumentation in relation to the forest owner first followed only two lines: orders and economy. As a rule it was a matter of orders. The farmers were very bitter. This was quite understandable for the staff were overbearing and difficult to deal with. On the board, however, some time during the 1920's they simply agreed to change their attitude to the forest owners and go in for a softer line. It was not easy to get the forest rangers to take this new line; they were petty kings in their districts."

The most pronounced representatives of the soft approach describe its implications in the following terms. The staff may not come as controllers but are to behave like advisers and friends. The point is to interest the farmers in their forests by keeping in close touch with them. Anything resembling inspection is not to occur. Only in extreme cases of necessity may the law be invoked as an argument. It is better to use financial advantages

⁹ F. AF PETERSENS, "Skogsvårdshushållning." *Skrifter utgivna av de skånska hushållningssällskapen* X: 1 1932 pp. 58, 61.

as bait. The law only states that prohibition "may" be imposed. So everything is done to avoid the use of prohibitions and upsetting quarrels.¹⁰

How all this happened will be explained later on. Here it will only be added that this account is supported by written statements made earlier.¹¹

One county forest officer, who, according to his own statement, represented a middle way described his policy as follows in 1950:

"During my work — for more than thirty years now — as a guardian of the forestry law I wanted to touch on legal clauses as little as possible and instead tried to take the evangelical road and even if the road was uneven at times it became smoother the further I went. On my journey however I have always had the law to fall back on when the road was impassable."¹²

One important difference between the two strategies obviously lay in the use made of the laws. On the one hand, the activity was planned as a law application, a check on the fulfilment of the demands of the law. On the other hand, the activity was planned more as active counselling; the law certainly had importance as internal instruction about what was aimed at but was not to be invoked externally. This difference probably marked the attitudes as a whole towards forest owners. It may be generally assumed that the more behaviour is interpreted as being forced upon people by legal rules instead of adopted voluntarily, the less incitement there is for the staff of the

¹⁰ The most pronounced expressions of this attitude have occurred in the interview material from Jönköping county since 1914, north Kalmar county since 1935 and Blekinge county since 1931.

¹¹ Statements made by Arvid Nilsson, county forest officer in Värmland (*Svenska skogsvårdsföreningens tidskrift* 1907 pp. 363—365) and Lothigius, county forest officer in Jönköping county (in different volumes of the journal *Skogsägaren*, e.g. 1925 p. 132). The former went so far as to consider attempts to get agreements with forest owners to be offensive to the latter and therefore to be compulsory. "Since all offensive measures by the forestry board go against co-operation with the forest owner I think it necessary to defer such measures as long as possible".

¹² Einar Magni (county forest officer in Jämtland 1930—57) in *Skogen* 1950 p. 52*.

authorities to behave in a reciprocal fashion, to give something in exchange even if it is only helpful conduct.¹³ That such a connection can be traced in the work of the forestry boards appears from the above date.

(4) Another difference concerned the ultimate objective of the work of the forestry boards among forest owners. The difference may be brought out by the following question: Should the forestry boards aim at taking over the most important aspects of forestry management in private forests, above all conducting forest regeneration and marking trees for felling, or should they try to teach forest owners to take care of these aspects themselves? Opinions on this matter varied a great deal according to the individuality of the forest officers, according to their belief in people's potentials of development. Only the two extremes will be presented here.

The grouping seems to have been the same as with the working methods. A few days after a meeting of county forest officers on April 8th 1938 Mellquist sent his colleagues copies of a lecture he had given at the meeting. In it he turned against those who had proposed more education of forest owners. "It is a totally false view we are advocating," he said "if we think that it is possible merely by means of information to create economically sound, enduring and well-managed forestry holdings for owners who lack the financial basis for such forestry". Occupational knowledge was not sufficient for the forest to be managed in the right way. First and foremost a good financial position was needed and the farmers did not possess this. Under these conditions development towards better forest management had only come about thanks to the laws and because the staff of the forestry boards gave the farmers "practical instructions" on how they might comply with the demands. The practical instructions consisted of the staff leading the work of forest planting and marking trees for felling. Mellquist mentioned these activities specifically as a kind of information. He definitely believed that

¹³ GOULDNER, "Organizational analysis" (in *Sociology today, problems and prospects*, ed. by Merton et al. New York 1959) pp. 423—426.

the forestry boards should carry on their activity along these lines in the future too.¹⁴

Opposed to this view, which aimed at giving staff the tasks of marking and leading forest planting and sowing in private forests, there was another which emphasized the importance of self-activity by forest owners. The work of the boards was to teach forest owners to plant and sow and mark trees for felling on their own. It was thought that it was neither right nor possible to have the personnel of the boards take care of all these tasks. A satisfactory state of the forests could only be created if education was organized for the great majority of present and future forest owners. Such ideas were advocated by some county forest officers in the very earliest period.¹⁵ In Jönköping county they won dominance when Lothigius took office in 1914.¹⁶ In some other counties the board has gone even further and asserts that it should work to make itself superfluous.¹⁷

There is a clear correspondence between the psychological strategy and the objective of the field-work among forest owners. Those who were interested in legal control had no faith in the ability of most forest owners but wanted to take over the most important aspects of forest management. Those who aimed at counselling wanted to teach the farmers to be alround forest managers. However, it should be remembered that most forestry

¹⁴ Cf. Magni in *Skogsägaren* 1946 p. 114: "It is just as important for farm forestry as for large-scale forestry to have a more or less stationary body of forest rangers to take care of all the work involved in a rationally run forestry."

¹⁵ E.g. in Värmland county (Arvid Nilsson, county forest officer, in *Svenska skogsvårdsföreningens tidskrift* 1907 p. 365), in south Kalmar county from 1911 (according to the then county officer Mr Danielsson: "as early as 1911 activity aimed at teaching the farmers self-activity, both planting and felling; otherwise the forest rangers would not have had time for all the work").

¹⁶ Cf. LOTHIGIUS in *Sveriges skogsvårdsstyrelser 1905—1944* (Stockholm 1945) p. 150.

¹⁷ In Blekinge county since 1931, in north Kalmar county since 1935. The county officer Nils B. Hansson in Blekinge county: "I coined the phrase at the start of my period of service that the forestry boards should aim at making themselves unnecessary, an aim we tried to achieve. However, it aroused a commotion when it was first proposed".

boards compromised somewhere between the two opposite attitudes.

But it was no easy task to make the farmers self-active. In the 1930's and 1940's the trend in practically all the counties was that most forest owners wanted assistance from the forest ranger:

"The aim of our work was to teach forest owners self-activity. But most farmers wanted to be able to fall back on the assistance of the forest ranger. They wanted support. They wanted a list of marked trees. They wanted to get planters as long as we could provide them." ¹⁸

It was only when the forest owners' own associations started counter-actions in the 1950's that the trend changed. How this happened is illustrated in the next chapter.

The material investigated shows that the county forestry boards in most counties tried as far as possible to avoid referring to the contents of the law and to legal measures. This may indicate a deliberate attempt to gain the confidence of forest owners and arouse their interest in constructive forestry. But one important reason also seems to have been that the support given by the law was felt to be inadequate. The demands of the law were set low and vague to start with. An illustration is given in the following statement by a county forest officer who was involved from the beginning almost.¹⁹

"That the 1905 law did not give any support for intervening against felling not even in order to require seed trees to be left standing meant that the personnel had to coax the farmers. The officials realized their powerlessness and developed methods which were adapted to this. These methods spread and were also used to get the farmers to fulfil their legal obligations to ensure re-growth. It was a correct course that the first law only covered a small area. When the more comprehensive law of 1923 was introduced both the staff and the farmers were prepared for these methods."

¹⁸ Interview with Edvin Nyblom, county forest officer in Västmanland county 1918—1954.

¹⁹ Interview with Uno Danielsson, county forest officer in south Kalmar county 1911—1945.

This means that no distinction was made between application of the laws and free counselling activity. All the work had the same nature and the methods of influence were largely the same over the whole line. But in some counties such a distinction was made and reference to the law and legal measures became a natural working routine.²⁰

6. The first contacts with forest owners

The previous account has already moved towards the front-line activities of the county forestry boards. It began with the statements of principle concerning the task of influencing and continued with the lines of work applied internally. We shall now proceed farther to the contacts between personnel and forest owners.

When the forestry boards began their activities they had to face strong resistance from forest owners. The first law had been passed in opposition to almost unanimous opinion among the forest owners out in the districts. It was regarded by them as a far-reaching infringement of their freedom of action that anyone should interfere in their way of managing their forests. So they looked upon the officials of the board with suspicion and aversion during the first few years. According to their mentality, they reacted by trying to avoid contact or else by being aggressive; there are several accounts of farmers, rifle in hand, protecting their forests against the visits of the forest ranger. There was no organized resistance, since most of the political representatives of the farmers had been won over in advance to the idea of forest legislation. But resistance might easily have intensified and involved leading figures if the contacts had been made unwisely.

It is therefore interesting to see how the personnel of the county forestry boards made contact with forest owners from the start.

²⁰ An unusually sharp distinction was made between the two tasks in Södermanland county by means of a memorandum, included in the forestry board's minutes for 1925 nr 176. In this county the working methods may be described as fairly hard. The conditions in Älvsborg county seem to have been similar.

Naturally, the approach varied according to the individual. What can be given here is mainly a few concrete first-hand accounts which in general may be considered representative.

Henrik Carbonnier, the county forest officer in Jönköping county from 1905—1913, describes his approach as follows:²¹

Carbonnier began his work by making a grand tour of the county. He had had it announced that he would visit different places and give lectures. He travelled by train and by carriage. Interest among forest owners was quite considerable and many of them came to listen to him. Later on too he tried as far as possible to establish contact with forest owners by advertising meetings in different places to give an account of the law and point out the advantages of owning and tending forests. — At the beginning two forest rangers were appointed, each to be in charge of a district. Their task was to try to contact as many forest owners as possible and find out what was happening in the forests. They were to report to Carbonnier on felling which might imperil re-growth and to try to get contracts concerning forest planting or sowing of old bare areas. All this forest regeneration work came under the guidance of specially trained planters. When there was no snow on the ground, Carbonnier undertook inspection trips every week by train and bicycle to check on the work done by forest rangers and planters. The farmers' attitude was very unfavourable to start with. The forest rangers, too, were viewed with suspicion at first but they soon succeeded in getting on good terms with forest owners. They obviously found it easy to get on with people. If it was a matter of inducing someone to plant and sow forest after felling, the forest ranger contacted the person responsible and tried to reach an agreement with him. Only when he had failed did the county forest officer intervene by visiting the place accompanied by the forest ranger. Even then they tried to persuade the forest owner. They could sit on tree-stumps for hours discussing it.

In this account one or two points should be emphasized. It is

²¹ Based on an interview, and on a written account of 1955 (in Skogs-vårdsstyrelsens i Jönköpings läns arkiv). The two sources agree as to content.

clear, and similar information comes from other forestry boards in south and central Sweden, that a large amount of the staff work in the early years consisted of stimulating the planting and sowing of old bare areas and providing service for this. In this respect the county forestry boards quite simply continued the earlier work of the agricultural societies; they also took over their nurseries and personnel. Thus, it may have been easier for them to make contact with the forest owners but probably only to a limited extent, since the work of the agricultural societies was rather modest. It was more important that the direct close contacts with individual forest owners were made by the forest rangers. Only if they failed did the forest officer visit the forest owner. This seems to have been the case in all counties. It is evident from extant journals of travels²² that visits by the county forest officers to private forests were almost always prompted by reports from forest rangers. In this way success in field work ultimately came to depend on how the forest rangers behaved.

A graphic account of the conditions in which a county forest ranger had to plan his early work is given in the following memorandum:²³

“On January 25th 1905, I took up my duties as forest ranger in the eastern district of Blekinge county. The first years of service were anything but pleasant. Wherever I went I was received with suspicion and contempt among the general public who considered the forest law to be bad since it took the proprietary right of the forest from the owner. The fact that the forest law was introduced to stop destruction and help the forest owners with advice and information about the proper management of forests and increase the yield of the forest was not understood by many. The great majority considered themselves to be so skilled in managing their forests that they understood it better than a whipper-snapper like me.”

²² Particularly detailed is the journal kept by the county forest officer in Uppsala county 1909—1913 (in Skogsvårdsstyrelsens arkiv).

²³ From Nils Nilsson, *Minnen från mina 35 år som länsskogvaktare i Östra distriktet av Blekinge län*. Manuscript from 1938 (in Skogsvårdsstyrelsens arkiv).

In the memorandum there are several concrete accounts of how contact was established with forest owners, for instance this one: "On another occasion I arrived at Leryd towards evening in a violent snowstorm. I went to all the farms and tried to get a lodging but wherever I went they refused. At the last farm I came to, the largest in Leryd with about 170 hectares of woodland, I was finally allowed to stay. They showed me first to the other farms in Leryd. When I said I had been there they said to try Hjorthålan. When I came out I met a farmhand whom I started to talk to. While we were talking the farmer's wife had changed her mind and called through the door: 'You don't look dangerous, come in and you can stay, you might get lost and collapse in this dreadful snowstorm.' I thanked her and was pleased. The next morning when I said goodbye I was promised that if I was ever passing I could stay there. After that I was there very often. On this farm there was a very beautiful hundred-year-old stand of beeches of about 1 hectare. It was to be sold for charcoal burning. The evening before the sale I came to Leryd. The farmer's wife asked me to persuade her husband not to sell. I succeeded. Afterwards the farmer was also pleased that it was still standing. Because the deal had come to nothing we became close friends. Leryd was like a second home so often I was there. It was like this wherever I went. By and by things got better. Enemies ended up as friends. It took some time before I was known all over the district. In winter time you had to walk from one place to another often in deep snow. In summer things were easier. Then you could usually cycle."

"The main part of my work was running the nurseries and encouraging the planting of old heathland. It might be considered a rewarding task to plant new forests but this was by no means the case. Here, too, you were met by suspicion and set-backs. In settling the contract for planting forests, grazing rights were demanded. This was a difficult point. In 1908, however, planting began on a larger scale. That year about 150 people were engaged in planting in the eastern district from the beginning of April to the end of May."

7. Forms of contacts

After the first contacts had been established with forest owners a continuous process of influencing was maintained over the years. This will be examined by starting out from the analytical model given earlier. In the first place outward forms of contacts will be described, i.e. the situation between those involved and their means of communicating with each other. The possibilities of variation have been given above. Below will be described the extent to which they occurred in the field-work carried out by the county forestry boards.

It is obvious that direct close contacts between the forest rangers and individual forest owners predominated completely in the work of influence. All the county forest officers interviewed point out the crucial importance of the forest rangers in changing the attitude of the forest owners.²⁴

In what situations did these personal meetings take place?

One common situation was discussion in the forest. Several county forest officers and a number of forest rangers in other counties as well attached great importance to the forest owner being taken along when his forest was being visited. There were several reasons for this. The personnel wanted to prevent all accusations of espionage. They wanted to emphasize that they did not come as inspectors but as friends who wanted to discuss the forest. Experience had taught them that what was said during the walks and demonstrations in the forest owner's own forest made the deepest impression on him. The environment was the most appropriate imaginable for giving instruction on forestry. Often the walk ended with the forest owner asking for some form of service from the forestry board.²⁵ This is the background which explains why some county forest officers would not hear of the word "inspection" being used. But on the other hand there were also forest rangers — not only in the counties pursuing a

²⁴ A real eulogy of forest rangers has been written by LOTHIGIUS in *Sveriges skogsvårdsstyrelser 1905—1944* (Stockholm 1945) p. 154.

²⁵ An early description of this type of contact is given in *Svenska skogsvårdsföreningens tidskrift* 1907 pp. 372 f. from Värmland county. The forest rangers there went round farm by farm district by district systematically.



Figure 12. A county forest ranger. Pontus Österdahl in Tuna, north Kalmar county.

“hard” line — who did not attach any particular importance to the forest owner accompanying them in the forest. There were, then, inspection trips without previous notice to the forest owners. However, they had to be followed up by personal discussions in the forest if there was a need.

Another common situation was co-operation in the forest between the forest ranger (or the “marker” or planter) and the forest owner, after the latter had requested help with forest planting and sowing, marking trees for felling or similar measures. In most counties the attitude was that assistance of this kind was not to be regarded simply as a commission but that the owner should be involved actively e.g. as a marker. In this way there was an opportunity to show the owner in practice how different things could be done and explain why they had to be done. The owner almost always proved to be interested and started to ask about the forest. Co-operation in the forest has also been officially



Figure 13. Course for planters. Halland county 1912.

recognized as a far better lesson than instruction in a classroom or on an excursion to the forest.²⁶ This contact situation in time became dominant but as from the 1950's there was a change which reduced its value. The professionally trained personnel then became more and more expensive, which meant that the forestry boards had to raise the fees for assistance to owners. This in turn aroused demands by the forest owners for an efficient use of service time, as seen from a purely financial point of view. The didactic element thus more or less disappeared, which is generally regretted by the forestry boards.²⁷

In the first three decades before motor-cycles and cars came into use, contact was also made in a third common situation, i.e.

²⁶ *SOU* 1938 nr 58 p. 115.

²⁷ Instead training has been given centrally at the forest schools run by the boards. This training is of course more concentrated than the old type but on the other hand does not reach the same number of forest owners.

during the time spent by the forest ranger on the farms where he was lodging. When there was no snow on the ground, the forest ranger went by bicycle or horse-drawn vehicle and in winter on skis or by horse-drawn sleigh, if possible in combination with railway journeys.²⁸ These means of communication plus the long distances within the rangers' districts made it necessary for the ranger to stay with the farmers on his travels. Among the conditions for receiving assistance, up until the 1930's, it was stipulated that the farmer who asked assistance should provide free board and lodging and free transport. In the evening most of the rangers willingly sat talking to the people of the farm and took the chance of making propaganda for constructive forestry. In this way they made many friends out in the villages. Their circle of listeners, however, often extended beyond the farmer and his family. Many districts were so isolated at that time that it was an experience to listen to an outsider who had news of other localities to tell. It was customary then, at least in some parts of the country, for the neighbours to come in and join the party. An account of these conditions will be given as an illustration.²⁹

"During my early days as a forest ranger I used to sleep out all the week. I cycled to start with, and bought a motor-cycle in 1927. The roads looked different in those days: there might be six or seven gates through a village and there was no proper road to many of the farms. Contact with the farmers was better in those days when you slept out. If a stranger came to a village the farmers often gathered in the evening for a gossip. Then I took the chance of taking applications for assistance and marking, and talking about forestry. Even after I got a motor-cycle I used to sleep out."

²⁸ Cycle and skis were appreciated particularly because they made it possible to move outside the roads. Skis were used generally by the staff as far down as south Kalmar county (acc. to Uno Danielsson, county forest officer 1911—1945). Forestry boards bought furs for forest rangers who rode in horse-drawn vehicles during the cold seasons (e.g. minutes of skogsvårdsstyrelsen i Uppsala län 30/12 1908 § 6).

²⁹ Interview with Carl Stork, planter 1912, temporary forest ranger 1920, county forest ranger 1927—52 in Jönköping county.

Who initiated the contact in the different situations? It has been seen that from the start it was exclusively the forest rangers or other personnel of the forestry board. The forest ranger had to force his way in, press his advice and his services on the forest owner, a task which often made him feel embarrassed. But gradually contacts were also made by the other party, principally by forest owners who asked for marking or financial aid. To follow this change in detail is no longer possible. It started to make itself felt as early as the twenties³⁰ and was fully developed in the thirties.³¹

It is not possible to establish quantitatively how often the forest ranger got in touch with the forest owners on the average. In the first ten years it was a common thing for him to visit each farm according to a plan. In several accounts it is stated that this plan was drawn up so that all the forest owners would have been visited over a four-year period.³² In time, however, the forest rangers became so involved in marking trees³³ that a systematic plan of this kind was impossible to follow. Then they had to depend more on information they could pick up from their personal connections among forest owners.

The forest ranger's contacts with the population enabled him to find out about current or planned felling. He could then open up contacts to prevent misuse much more easily than if he only relied on inspection trips.

The direct close contacts between the forest ranger and individual forest owners predominated entirely in field work. Other

³⁰ Cf. below at note 65.

³¹ See the illuminating account of 1938, given in Chapter III at note 16.

³² "When the cultures were ready in the spring, the forest rangers went off on their inspections. They had a certain time-table to follow, which meant that they visited every parish every third or fourth year. Then they went systematically through the forests. When they made their inspections they had the farmers with them in the forests. I think that there was better contact then than there is now. Then they got orders for plants and seeds and discussed felling and thinning." (C. G. Chöler, forest officer in Jönköping county 1918—22, county forest officer in Skaraborg county 1923—54).

³³ "The forest rangers have had to mark trees for felling from early spring to late autumn long after the snow had fallen, as far back as I can remember." (*Skogsägaren* 1946 p. 114).

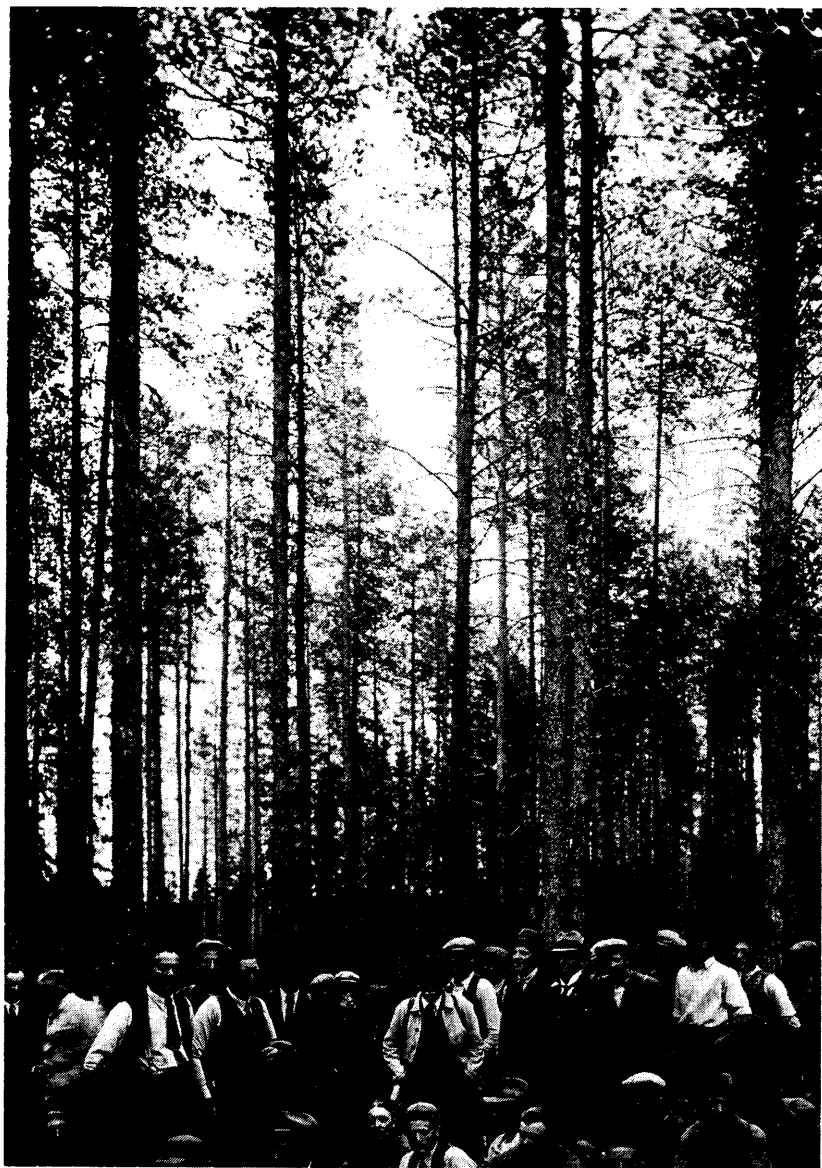


Figure 14. Forest owners on a forest day. Parish of Mattmar, Jämtland county 1936.



Figure 15. Forest sowing by school children in 1907. Parish of Hjorted, north Kalmar county.

forms of contact occurred less frequently and were probably important mainly as a complement. Below, a brief survey of the occurrence of other contact forms is given.

1) Direct close contacts with groups of forest owners.

Lectures on forestry were given by forest officers of the county forestry boards either in places to which the board invited forest owners (an earlier period) or to associations of which the forest owners were members (a later period).

Demonstrations of forestry measures out in the forests were given in various places. The board invited forest owners from the surrounding country to these so-called "forest days". A special form of demonstrations was planting by school-children which in some counties was on a large scale. The planting was led either by personnel from the board or by schoolteachers who had taken a special course.

Shorter courses for forest owners on special forestry methods were arranged in suitable places. These started mainly in the 1930's.

These forms of contact only extended to a minority of forest owners: see table 8 in which the situation is shown at a comparatively late stage.

What importance was ascribed to them? In general the answer to this question is that they aroused interest in the subject of forestry and facilitated individual contacts. One of the county forest officers went further and hoped that in this way opinion could be created to exert pressure upon negligent forest owners.³⁴ Others expected less and considered that their importance lay in their making the forestry boards and their efforts known among forest owners.

2) Direct long-distance contacts with individual forest owners or with groups of forest owners.

Notification by letter was sent by the county forest officers to timber merchants and forest owners, who lived elsewhere and were therefore difficult to see personally. Sometimes letters were also sent to other forest owners after repeated attempts at persuasion by word of mouth had failed. One county forest officer from the earlier period almost totally confined himself to letter-writing. He wrote threatening letters to farmers which resulted in a bad atmosphere. In other cases too it was difficult to prevent contacts by letter being very formal.

In all the counties there was printed propaganda in the form of notifications of the content of the law and brochures about forestry besides publication in the newspapers of articles on these subjects. However, there was some doubt whether the farmers really read the material they received. At any rate it did not seem to get home to them.

3) Indirect contacts.

An attempt to exercise influence on forest owners by means of opinion leaders among themselves was made from the start. According to the first forestry law 1903, a forestry committee might be set up in every parish, consisting of two representatives elected locally and one forest owner appointed by the county forestry board. They were to have the two-fold task of reporting

³⁴ LOTHIGIUS *op. cit.* p. 150.

Table 8. *Information activities, average for the 5-year period 1936—1940.*

1	2	3	4	5	6	7	8	9	10	11	12	13	
County council area	Lec- tures, no.	Forestry courses										Forest excursions apart from courses	
		at educational establishments			for training supervisors			for forest owners					
		no. of courses	no. of hours	no. of parti- pants	no. of courses	no. of hours	no. of parti- pants	no. of courses	no. of hours	no. of parti- pants			
Stockholm county	1	2	83	35	—	—	—	4	25	144	4	210	
Uppsala county	3	2	90	65	—	—	—	6	49	132	10	274	
Södermanland county	1	2	61	78	1	18	55	—	1	8	3	146	
Östergötland county	3	2	73	42	—	5	5	2	91	22	7	284	
Jönköping county	22	4	237	126	3	92	54	5	132	72	24	1,752	
Kronoberg county	3	2	36	66	1	56	10	15	140	311	11	285	
Kalmar county north	9	—	—	—	—	12	2	—	—	—	10	433	
Kalmar county south	2	2	90	48	—	—	—	2	45	69	5	184	
Göteborg county	5	2	40	33	1	17	5	2	10	32	1	16	
Blekinge county	7	1	35	20	—	—	—	1	32	27	4	133	
Kristianstad county	2	—	10	8	—	20	2	1	83	19	5	157	
Malmöhus county	2	—	—	—	—	—	—	1	80	8	3	180	
Halland county	5	1	60	21	—	48	7	1	70	22	12	474	
Göteborg, o. Bohus county	14	2	40	103	1	53	10	—	—	—	9	257	
Älvsborg county	—	3	93	51	—	—	—	—	—	—	9	209	
Skaraborg county	8	3	46	128	1	40	53	2	8	35	8	213	
Värmland county	5	4	388	92	—	—	—	4	35	188	1	34	
Örebro county	8	2	67	65	—	14	6	—	2	12	9	67	
Västmanland county	3	2	102	47	—	45	5	2	25	21	5	131	
Kopparberg county	5	6	161	117	2	502	40	4	60	83	9	333	
Gävleborg county	9	1	22	72	—	10	8	2	460	37	11	384	
Västernorrland county	2	5	294	119	1	27	46	8	213	279	26	445	
Jämtland county	16	2	210	64	1	30	11	2	62	29	11	326	
Västerbotten county	73	8	318	137	—	2	3	6	332	94	8	201	
Norrbottnen county	10	4	480	101	5	347	140	1	222	22	8	173	
Total	218	62	3,036	1,638	17	1,338	462	71	2,177	1,666	213	7,301	

Source: *Sveriges skogsårdsstyrelser 1905—1944*, (Stockholm 1945) s. 64.

cases of neglect and mismanagement, and of influencing forest owners to manage their forests as the law required and the forestry board wished.³⁵ This double function of controller and opinion leader was of course impossible to fulfil. Forestry committees were set up in great numbers in all the counties. As a rule, however, experience showed that they were of little or no use except for distributing brochures and forms from the forestry board.³⁶ They were reluctant to report their neighbours and the few reports were concentrated upon forest owners and felling transactors resident outside their area. They were obviously troubled when the personnel of the forestry board wanted them to put pressure on their neighbours. On the whole this attitude was probably common in the countryside, i.e. that everyone should take care of himself and not interfere in the business of others.

Gradually the number of forestry committees decreased. They were abolished in the 1948 law, but had already ceased to exist (except in the counties of Jönköping and Kronoberg).

Instead, some county forest officers tried to spread opinion through people who were more independent in relation to the forestry board. To this end they took the initiative in forming an association among forest owners in the county with the intention of arousing interest in and spreading knowledge of forestry. They were also to act as agents for timber deals and supervise prices. The first association of this kind was formed in 1925 in Jönköping county on the initiative of the county forest officer Mr Lothigius. Another was formed in Skaraborg county the same year, the following year three more were started, and so on. The

³⁵ The tasks of the forestry committees were briefly defined in the law, and in more detail in special instructions on a model common to all the counties.

³⁶ Among those interviewed there seems to be almost complete agreement on this point. The same impression may be gathered from the annual reports of the forestry boards; see a summary in *Betänkande av skogslagstiftningskommittén* I, 1919, pp. 340 ff. In the very detailed minutes of the forestry board in Uppsala county in 1905 there are 3 reports by forestry committees about absentee forest owners but none after that. Probably this is symptomatic.

county forest officer was not usually a member of the committee of the association but backed it up by acting as counsellor and speaker on excursions into the forest. Lothigius was also editor of their journal containing popular forestry articles.³⁷ During the economic crisis in the early thirties, these associations were re-organized as sales associations for forest owners and thus became quite independent of the forestry boards. Their opinion-leading activity from that time is discussed in the next chapter, where influence by independent social groups is dealt with.

In the south-western counties with their extensive areas of old heathlands and particularly in Bohuslän the forestry boards took the initiative in forming small local forest cultivation associations. The personnel of the board acted as advisers while the actual running was in the hands of a chairman and a local planter. Since the communes were persuaded to give financial support these associations aroused widespread interest in the district.³⁸ However, this was a very limited phenomenon, geographically speaking.

A third method of creating indirect contacts by opinion leaders was to give a number of forest owners basic professional training in forestry and forest management in the hope that when they went back to their farms they would not only take good care of their own forests but would also give incentives to others in their neighbourhood. This was of course a rather expensive method and there was no extensive training of forest owners until the 1950's.³⁹

In summing up it may be stated that the indirect contacts were so limited either in time or geographically, that they cannot have had any great importance in influencing the great mass of forest owners.

³⁷ The journal *Skogsägaren* was first published in 1925; in the first issues it contains detailed information about the rise of these associations and their early activities.

³⁸ WENMARK, "Lokala skogsvårdsföreningar", *Svenska skogsvårdsföreningens tidskrift* 1951 pp. 17* ff.

³⁹ *SOU* 1948 nr 49 p. 52.

8. Types of appeal

The purpose of the contacts was to present the forest owner with a pattern of action for forest management and — at least in general — to request some kind of expression of his willingness to follow the pattern. Here as elsewhere in influencing activity there may be two stages in the appeal; firstly, a behaviour pattern and secondly, a demand for acceptance of the pattern, perhaps in a particular form.

In what ways then were the appeals presented to forest owners? This question will be studied by considering the form of contact which totally predominated in the work of influence, namely the close contacts of the county forest rangers with individual forest owners. For many reasons the observations must be focused on those cases in which the forest owner's treatment of his forest deviated from the pattern founded on the law, i.e. the cases in which more energetic efforts were needed. Such cases were very common during the whole period.

The method of approach of the forest rangers varied greatly. Two extremes may be distinguished, and may be described by the following groups of examples:

I. 1) "We have proceeded in a rather friendly manner. When acute neglect was found, the ranger would say: 'You are obliged to plant, you may not fell here.' Threats were seldom needed. The law is often brought up in the meetings. Our work has become established, but it is pointed out all the same: The law says that it must be like this and like that. The existence of the law is very important." ⁴⁰

2) "It was a curious period here in Älvsborg county when you went about with felling prohibitions in your pocket, as it were. So it was possible to say to a farmer. 'If you don't do this or this, you will be prohibited from felling tomorrow.' But usually you only prescribed how it should be done." ⁴¹

3) "If we came across an illegal felling or a clearing that needed planting, we explained the law. We said that now you must stop

⁴⁰ Interview with staff in Värmland county.

⁴¹ Interview with Eric Björkman, planter 1916, forest ranger in Stockholm county 1925—30, in Älvsborg county 1930—65.

felling because there is a forestry law and it forbids felling as you do it. If they did not obey, then they got a felling prohibition.”⁴²

4) “When I was young — and in those days forests were badly cared for — I took perhaps a harder line and said ‘This is the law and you must obey it.’ Then when I grew older and became more experienced I never took this approach. If someone had done something wrong in the forest I could handle it myself and say, ‘If you put this area in order instead, then I will give up writing a report’.”⁴³

II. 1) “I have seldom or never referred to the law. It is meaningless to go on about the law. When I wanted to bring someone to planting, I might say: ‘This forest is worthless, you must plant here.’ If he objected, we talked about other things first and then I repeated: ‘You can’t have it like that, we’ll fix this.’ If this still didn’t work, I would say for instance: ‘Then I’ll have to tell the county forest officer but surely that’s unnecessary, you can plant a bit at a time.’ He would usually go along with that. We forest rangers had the ambition to cope with the matter by ourselves.”⁴⁴

2) “My predecessor had been very lax and the farmers did as they wanted with their forests. During my first period of service, I found it difficult and had to experiment, threaten them with the law or persuade them. But I found that threats put an end to an interest in forestry among the farmers. I switched over to reasoning with them, to discussing the management of forests and not the law.”⁴⁵

⁴² Interview with Johan Marmling, assistant forest ranger 1920, forest ranger 1924—56 in Älvsborg county (Dalsland).

⁴³ Interview with Evert Westerman, temporary forest ranger 1919, forest ranger 1924—59 in Stockholm county. In this county a hard line was taken up until 1947 (formal contracts, no attempt to bring forth self-activity among forest owners).

⁴⁴ Interview with Eskil Eriksson, planter 1917, marking foreman 1922, forest ranger 1927—62 in Uppsala county.

⁴⁵ Interview with Fritz Eriksson, planter 1920, temporary forest ranger 1920, forest ranger 1924—58 in Västmanland county. Cf. interview with Albert Jansson (marking assistant 1925, temp. forest ranger 1929, forest ranger 1945—61 in Västmanland county): If in my discussions with the forest

3) "You don't need to mention a forestry law. You don't gain anything by people acting in a certain way just to obey the law. But you must be as stubborn as a mule and come back time after time. It was a matter of personal prestige for us forest rangers to manage things on our own. Only in purely exceptional cases are stronger measures needed." ⁴⁶

If we compare these two groups of examples it is evident that the crucial difference between them lies in whether the law was invoked or not. In the first cases the law was the basis of the contact and the appeal was in the nature of an order from a legal supervisor. In the latter cases even mentioning the law was avoided; what was given to the forest owner was rather earnest advice from an expert. It may also be observed that the formalization of contacts that invoking the law meant was accompanied by other formal features. Sometimes this shows even in the term of address (*Ni*, the formal pronoun for 'you', instead of *Du*, the familiar pronoun). But above all the formalization is noticeable in the pressure connected with the appeal. As the examples show, this consisted of implicit or explicit threats of legal procedures and sanctions. On the other hand, those who refrained from using the law had to find informal, personally adapted means of making forest owners follow the desired behaviour. The forest ranger had to do something in exchange, if only retreat from the original demand, as in one example.

This give-and-take attitude was most often implicit. It was not expressed in so many words but was in the air, as it were.

What was it, to be more precise, that the forest ranger gave in return? Of course this varied according to his personality and the forest owner's. All the forest owners could not be treated in the same way. The answer must be in the form of reference to certain commonly recurring patterns:

1) Help with financial problems. In the discussion of the 1923 law in parliament it was testified that the personnel of the forestry boards showed great understanding of forest owners with financial troubles and helped them to get timber for sale by

owners I had said: "You have done something wrong here for the law says this and this" then they'd have been obstinate. You had to convince them.

⁴⁶ Interview with Emil Carlsson, forest ranger 1922—55 in Halland county.

thinning as far as possible.⁴⁷ The same is clear from the interview material from the counties in which a soft line was taken. It is said, for instance, that rangers did their utmost to help those who had difficulties if it might help them in the long run.⁴⁸ This means that the demands on the forest owner in such cases were put lower than they would have been otherwise. But it also means that the forest ranger was interested in the problems of the forest owner and how they might be solved.

2) Help with the forest. The forest ranger or temporary personnel lent assistance in planting and sowing or carried out marking free or at greatly reduced prices during the first few decades, later at cost price. Plants and seed were provided on the same terms. It can be seen, from formulations in minutes and elsewhere, that these benefits were used as a service in return for promises by the forest owner to take certain measures, even those that clearly came under the heading of legal obligations. The value of this assistance was all the greater as it could also have secondary advantages. For instance, by the list of marked trees the forest owner had some security against all too low offers from a timber merchant. It also happened that forest rangers gave their views on the value of the stand marked for felling.⁴⁹

⁴⁷ See Chapter IV p. 90. Cf. NYBLÖM in *Program för Svenska skogsvårdsföreningens exkursion till Västmanland 1924*: Further, in managing farmers' forests many more viewpoints must be considered than those of forestry alone, e.g. . . . temporarily depressed finances which might oblige the owner to fell more than would otherwise be suitable.

⁴⁸ In north Kalmar county the forest rangers were instructed to act in this way. Cf. for Jönköping county LOTHIGIUS *op. cit.* p. 54: in marking trees for felling the personnel should try as far as possible to satisfy the owner's interests and wishes. — Emil Carlsson (above note 46): Sometimes one was confronted with short-term financial needs to fell. Then one made up one's own paragraphs. In such cases one must sympathize and follow one's conscience.

⁴⁹ Cf. KINMAN in *Svenska skogsvårdsföreningens tidskrift* 1907 pp. 415 f and SCHAGER, *Sveriges enskilda skogar* (Stockholm 1925) p. 80. Schager points out on the basis of his interview material that then it was extremely common that the forestry board undertook measuring and simple evaluation of the marked timber. In some counties the forestry boards also made available contract forms to be used in selling.

3) Personal appreciation. This reciprocation was shown in statements by the forest ranger of the type, "Why, you are a sensible man". The reason for such statements having such a great influence as they were said to have had was probably due to the esteem and respect that the forest ranger managed to gain in his district. His view of a man came to mean a great deal. Everyone was keen to avoid the forest ranger's view of him deteriorating and feeling he was perhaps less appreciated than others.

To judge from the interview material it was extremely common that the forest rangers succeeded in taking advantage of their contacts with forest owners to gain high personal trust in their districts.⁵⁰ They did so by treating the forest owners as "people and friends", to use their own words. The confidence was revealed by the farmers turning to the forest ranger for advice on all sorts of matters. They asked him for advice when they met, or telephoned in the evening. The questions were often to do with measuring and pricing stands of timber. Other things too came up: taxation questions, the sale of property, family circumstances, writing letters and contracts and even wills are mentioned as examples.⁵¹ In this way the word of the forest ranger and his judgement meant a great deal among the people in the district. As he had formed a network of interdependences it was easy for him to make new ones.

The difference in approach now described was reflected in the kind of acceptance required of the forest owner. In counties where the contacts had been developed formally, formal acceptance was asked for. Usually the forest owner was required to sign a written contract about forest regeneration or felling.⁵² It also happened that the forest owner had to sign a written appli-

⁵⁰ In interviews with the county forest officers not infrequently there is some surprise reflected at the standing and the esteem attaching to the forest ranger.

⁵¹ Several county forest officers and even the central authorities — the national forestry board — did not like the personnel giving owners advice about timber deals and timber values since they might be considered biased. But prohibitions could not stop cautious advice being given on the quiet.

⁵² In Västmanland county in the 1920's, they changed from requesting contracts to requesting requisitions.

cation for marking trees which was then confirmed by the county forestry board as a binding directive. The forest rangers who worked informally were often satisfied with an oral promise. "We were satisfied with an oral promise, shook hands on it and trusted each other. We did not need a written agreement. Nothing was gained by bringing up the formal procedure."⁵³ As a rule, however, the forest rangers in this group probably tried to get a written application for material for forest planting or help with marking trees. Some people even requested a written contract. This did not need to be taken as anything but a voluntary confirmation of an oral agreement. There was no necessity to see this as a coercive measure. It was therefore considered that such a request did not spoil the good relationship with the forest owner.⁵⁴

We have seen that two contrary approaches occurred in the field work of the county forest rangers. One was marked by legal control, formal procedures and thus mental distance to forest owners; the other involved urgent appeals and spontaneous persuasion which presumed mental closeness to the forest owner. The question is then how common one or the other kind of approach was. It is not possible to answer this question precisely for several reasons.⁵⁵ In the counties in which the county forest

⁵³ Interview with Tord Waesterberg, county forest officer in north Kalmar county, 1935—67. Earlier, written agreements on *forest planting* occurred but were abolished from the 1930's onwards.

⁵⁴ No one could agree on this even. Arvid Nilsson, county forest officer in Värmland county 1905—12 considered every attempt to bring about a written agreement to be an offensive measure which might harm co-operation with forest owners. (*Svenska skogsvårdsföreningens tidskrift* 1907, p. 364). In Jönköping county written contracts were used in the 1920's and then mainly for absentees and timber merchants (interviews with several older forest rangers).

⁵⁵ Attempts have been made to find external criteria which would make such a calculation possible but without success. For instance, it seems obvious to assume that wearing a uniform indicated a formal attitude. Detailed investigations reveal that there was not always any connection, however. During the first few years the forest rangers usually wore uniform or a uniform cap and were obliged to do so according to their instructions. The fact that this custom disappeared in time seems to have been due to general social trends. It might also be thought that careful regulation of the

officer consistently pursued a hard or a soft line respectively the field work more or less followed that pattern.⁵⁶ But the attitude of the majority of county forest officers seems to have been cautious or ambivalent or simply obscure. In such counties the approach varied. Different forest rangers, depending on their personality, brought up the law at different stages. One pointed out from the start the legal obligations of the forest owner while another did so only in exceptional cases. In general, the informal approach seems to have predominated to a striking extent.

Several external factors contributed to this. Among them there is, firstly, the recruitment of county forest rangers. In the south, up as far as Mälardalen, most of them came from farming families. Farmers' sons who had proved good as planters or marking foremen were engaged in vacant posts as temporary and then as permanent forest rangers. Because of both their origin and their training they knew the farmers' way of thinking and realized their difficulties. "We come from the same rank" is a reflection often made in the interview material. Even those who were descendants of craftsmen in the country-side or state forest rangers seem to have been so close to the farmers in their original environment that it was easy for them to establish good contacts with their clients; one elderly county forest officer considered that there was a definite difference, however. On the other hand, conditions might have developed differently in the northern parts of the country, where most of the rangers came from families employed by the major timber companies. There was no recruitment worth speaking of from the urban areas until the last few decades.

However, two circumstances already mentioned in the preceding section also had a similar effect, i.e.

forest rangers (intensive duty to report etc.) would affect their behaviour in the direction of formality. But no clear connection can be discerned here either.

⁵⁶ It is significant that in the counties in which the hard line was taken for a long time, the forest rangers were typified as "petty kings" referring to their behaviour as being authoritative and "dictatorial". The term is found in interview material from Älvsborg and Örebro counties.

- 1) the county forest rangers had to live with the farmers during their travels in earlier times,
- 2) their task was not only to spread a legal programme but also to help forest owners with all kinds of forestry measures.

These external factors may be assumed to have created an inclination among the county forest rangers to set about making contacts with forest-owning farmers in an informal way. But of course these were not always adequate. It emerges from the interviews that it was quite common that the forest ranger wanted to use harsher means of influence than those which the county forest officers who took a soft line considered desirable. In such cases there was active intervention by the county forest officer. In employing forest rangers those who could get results among forest owners in a friendly way were selected. Forest rangers already employed who did not manage personal contacts very well were re-directed to desk jobs or given other internal duties. But, most important, there were discussions with forest rangers about how they should behave towards the forest owners and the arguments they should employ.⁵⁷ An illustration of the forms such oral influence might take is the following account by a county forest officer.⁵⁸

“During my first period of service I had to prevent many prohibitions proposed by forest rangers. Even then there were forest rangers who never made a report but settled the problems themselves with the forest owners. They were good friends with the farmers so these knew that the rangers came to help them. With newly-employed forest rangers too, I have sometimes had to contend so that they did not go on too harshly. When I am out with forest rangers on trips or when I have called them to a meeting I constantly point out that they themselves must take

⁵⁷ The county forestry boards drew up written instructions for forest rangers from the very start. These instructions, which seem to have followed a common pattern, contain directives about the duties of the rangers and conditions of office. But there are usually no directions concerning conduct towards forest owners. An exception was the instruction in north Kalmar county from 1907, which instructed the ranger to “behave oneself humanely” towards people approached.

⁵⁸ Interview with Tord Waesterberg, (see above not 53).

the responsibility for their district and not come to me except when they are unsure as to matters. I also tell the forest rangers that they must do their utmost to help the forest owners who are in difficulties, when it can help them in the long run. Moreover, we have agreed that anything like inspection is not to occur. They are not to travel solely in order to control forest owners."

9. Arguments

The term "argument" covers explanations and expositions of consequences arising from different alternatives of behaviour.

The aim of the arguments is to get a person or a group of people to change from an old kind of behaviour to a new kind. The consequences presented thus have to do with the needs and driving desires of these people. The influencer often does not know the individual's motives but assumes the motives which are the most common in his experience. The pattern of motives among the forest owners during the period investigated may be reconstructed by reference to the experience of those interviewed and to the organization of arguments in newspaper articles and other propaganda material. Particularly valuable in this connection is the forest owners' associations' own journal *Skogsägaren*.

Some of these driving wishes could act as stimuli to adopt the new behaviour. These were often latent and had to be brought to the surface. Others, the dominant wishes, prevented adoption of the new behaviour. Such wishes had to be accepted but it could be pointed out that they were also satisfied by the new behaviour or that the old behaviour could have disadvantages which cancelled out the gains. Starting from the classification of basic methods of influence made in Chapter II on the basis of their motivational aims, a corresponding division can be made for the arguments into following four groups:

- 1) emphasis on latent aims which can be fulfilled by the new behaviour;
- 2) emphasis on the fact that the new behaviour better satisfies the totality of aims;

- 3) emphasis on positive reactions to the new behaviour;
- 4) emphasis on negative reactions to the old behaviour, especially legal sanctions.

This division is followed in the survey below of the arguments used by the personnel of county forestry boards in their contacts with forest owners. By way of introduction it should be pointed out that the effect of the arguments seems largely to have depended on the occurrence of a more or less unconscious personal pressure from the influencer. If he was liked or feared then personal pressure emanated from him making the arguments effective in a totally different way than if the influencer were unknown or indifferent to the other party. This blending of various elements has been pointed out above in connection with the forms of appeal.

1. The dominant aim among forest owners which prevented the new forest management from catching on was the need for ready cash. Money was needed for taxes and some living costs, for investment in agriculture which was constantly being modernized, for new buildings, for payments on the purchase sum for the farm etc. The forest-owning farmers had long suffered from a lack of working capital, and income from agriculture was insufficient.⁵⁹ They were often forced to get money from the forest, which they could do in two ways: by felling trees as soon as they had reached saleable dimensions and by using woodland for grazing animals which could give continuous yield. Both of these forms of economy resulted in sparse and poor forests.

What motives then could be actualized in order to stimulate forest management that would produce greater and more valuable amounts of timber in the future? The most likely method, of course, was to appeal to the forest owner's wishes to increase his assets in the long term. It was pointed out e.g. that he was making a future financial loss by not planting or sowing or by felling trees before they had attained their greatest value. Long-term financial reasoning of this kind, however, meant little compared with immediate money troubles. Moreover, the pro-

⁵⁹ See Chapter VII, note 18. Cf. also SCHAGER *op. cit.* pp. 34—38, 63 f.

spects appeared to be too remote and in the future. The individual forest owner often could not hope for a notable profit for himself — it is striking that account was scarcely taken of any expectation value in the forest — instead it would go to his successors. Not everyone saw this as something to aim at.

Another method was to appeal to more emotional motives. Attempts were made to extend the inclination common among many farmers to tend their farms well to include their forests too (“a well-tended farm should include a well-tended forest”). There was an attempt to activate an ambition not to prove themselves worse than their neighbours, or to arouse a feeling for the beauty of the forest. Naturally enough these three appeals overlapped.

The following statements are given to illustrate what has been said above:

“It was not easy to work in the thirties. Financial reasons did not carry much weight then. It is easier now that the forest has gained greater value”.⁶⁰

“Financial arguments had no effect. You had to try to touch on some emotion. It was effective to point out that a neighbour had planted trees. If anyone objected that he did not gain anything by the measures, I might say: Once you are old, then you will go up to this forest and see how beautiful it is”.⁶¹

“You need not invest all that much money in the forest; something more valuable is required, love for the forest, for the trees, for the very land”.⁶²

Just how effective the emotional arguments were depended of course on the individual. But it may certainly be said in general that they were not enough to overcome the obstacle of an acute shortage of money. In all such cases they had to be supplemented by other arguments.

The account has covered the period up until the Second World War. After that the liquidity and insight into financial questions among forest owners greatly improved, so that long-term financial arguments became more important.

⁶⁰ Interview with Tord Waesterberg (see note 53).

⁶¹ Interview with Eskil Eriksson (see note 44).

⁶² *Skogsägaren* 1928 p. 27.

2. Another line of argument which strongly supports the preceding one was that the forest owner could get his money needs satisfied by the new behaviour too. Perhaps he would not get the amount of money he originally wanted but all the same he got something he could manage on. In that case thinning instead of dimensional felling, grazing pastures instead of forest grazing seemed a better way out of the difficulties. This type of argument was extremely common. In order to be most effective it required that the forest owners realized that the personnel of the board wanted to help them with their financial problems. How this was achieved has already been mentioned in the preceding section.

3. Certain measures in the forest involved expenditure and were not preceded by remunerative felling. This was true particularly of forest planting and sowing in old bare-stripped areas. In such cases, it was pointed out that the owner would get a grant from the forestry board which reduced or perhaps even paid his expenses, and that his own principal contribution was to do the work. The grant system of the forestry boards played a very important part as an argument.

4. A totally different kind of argument was to point out that the authority might resort to counter-measures — especially legal sanctions — if the forest owner did not follow demands. Threats of coercive measures were common in the counties in which a hard line was taken. In counties in which a soft line was adopted threats occurred seldom and only against marginal individuals who could not be approached in other ways, or against timber merchants who had no intention of staying in the district and who were thus not receptive to other arguments.

Threats were usually made by word of mouth; often they were implicit in the way the appeals were put. As a secondary step written cautions were used in some counties.

In Chapter IV are given surveys of the sanction systems provided by the laws in order to force people to obey the legal demands. The kinds of sanctions chiefly used in arguing were felling prohibitions and — when it was a matter of enforcing forest planting — inspection procedures. The former only involved a prohibition against felling timber without the permission

of the county forestry board. It was feared, however, because it was generally felt to have an undertone of punishment. It was regarded as a disgrace to get a felling prohibition.⁶³ The person in view was publicly pointed out as a law-breaker. During the first few decades, it happened that this character was emphasized because the writ of prohibition was communicated publicly by the police. The inspection procedure was of a similar character; the publicity was even greater and furthermore the costs had to be paid by the person whose forest was inspected.

Only to a relatively small extent, however, were the different sanctions actually applied. The figures for the whole country are given in diagram 8. Spread out over 22 county forestry boards the figures seem low in general. In most cases, sanctions seem to have been applied to timber-merchants and land purchasers rather than forest-owning farmers. No completely reliable evidence of this assumption can be given since the minutes of the county forestry boards are incomplete on this point. But it may be symptomatic that the unusually high number of prohibitions in 1918 related to timber-merchants and land purchasers up to 80 %.⁶⁴ The personnel of the boards paid particular attention to this category of people who were considered difficult to deal with. Indirectly, the farmers were also affected as emerges from the following account of the effects of the 1918 law.

"The timber-merchants were incessantly confronted with felling prohibitions or threats of prohibitions when they wanted to fell the timber bought on root from farmers. This of course caused them losses. The timber-merchant class therefore realized fairly soon that in buying standing timber from farmers they had to have a guarantee that the county forestry board had agreed to the marking of trees. Otherwise they risked felling prohibition. So in buying timber they began to require that marking was carried out by the board. The farmers were thus forced to turn to the board for assistance to a large extent and

⁶³ All the people interviewed with rare exceptions are agreed on this. See also *SOU* 1946 nr. 41 pp. 153 f.

⁶⁴ See p. 88. From the minutes of the forestry board in Kronoberg county for the first decade it is clear that only timber-merchants were called upon to sign forest planting contracts.

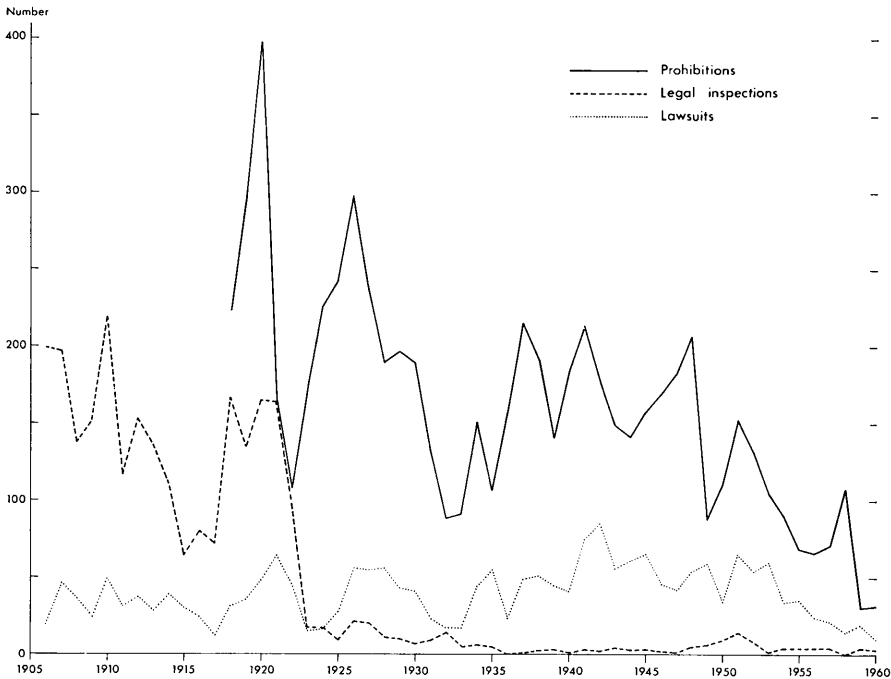


Diagram 8. Number of legal measures taken by the county forestry boards, (excluding the counties of Västerbotten and Norrbotten).

Sources: 1905—46: Appendices of tables in reports of county forestry boards printed in *Svenska skogsvårdsföreningens tidskrift*.

1947—50: *Sveriges officiella statistik. Det enskilda skogsbruket*.

1951—60: *Skogsvårdsstyrelsernas berättelser* utgivna av Kungl. skogsstyrelsen.

the practice of asking for marking by the board's personnel in major fellings soon began to gain ground.”⁶⁵

In general the county forestry boards were anxious after a coercive intervention to get in touch with those affected in order to clear up their situation and win them over to better forestry. As an example of this may be cited an episode in which the forestry board was confronted by collective resistance.

⁶⁵ SCHAGER, *op. cit.* pp. 65 f.

In the parish of Eringsboda in Blekinge county there were vast, untouched tracts of forest at the turn of the century. In 1905 a railway line was opened up there. As a result felling on a large scale was started; in the summer of 1910 no less than 15 sawmills were operating in the parish. The owners of the devastated farms unanimously refused to start forest sowing and planting despite the efforts of the county forest ranger to persuade them. In the spring of 1910 the county forestry board requested inspection of 9 farms in the parish. These inspections did not help either. The majority of the farmers gave each other mutual support in the belief that there was no law that could force them to plant their own land. Then they were summoned to appear in court and all except one were sentenced to plant according to the proposals made after the inspection. The personnel of the board got in touch with them in order to start the work of planting. During the planting, the rancour with which the personnel had previously been faced was replaced by confidence and friendship. With this exception it was seldom that inspection was needed in the district.⁶⁶

10. The role of the laws

Did the forestry laws play any part in the influencing activity in which the authorities avoided resorting to the law and did not operate by using open or hidden threats of legal proceedings? Were they not unnecessary in these cases? This last question is answered with a definite no. Three points of view — more or less explicit — seem to lie behind the answer and a fourth may be added.

(1) The law constitutes a programme for the work of the personnel. It states the kind of forest management which is to be aimed at first and foremost. Were there no general programme the work of the personnel might be lacking in uniformity and uncertain.

(2) On some occasions it may be necessary to resort to legal means in order to refute an open and defiant challenge which,

⁶⁶ Summary following Nils Nilsson's memoranda (see note 23).

were it not met, would publicly demonstrate powerlessness in the county forestry boards. However, not everyone is agreed that a stalemate of this kind need arise.

(3) The law — the existence of which is known but the content of which may be unknown to the forest owners — shows that the personnel has a respectable reason for interfering in how the forests should be managed. The personnel act in an official capacity. The importance of this is known from previous investigations.⁶⁷ It seems that this can be explained, at least partly, in the following way. The official background serves to prevent suspicions that the personnel act from self-interest or because they enjoy manipulating people. Suspicions of such personal aims arouse strong resistance reactions which of course reduce the effect of the influence methods.⁶⁸ This explanation of the importance of the official position is not the only conceivable one but it is probable that it touches on something very basic in this context.

(4) In sociological literature attention has been paid more and more to the part that expectations of social approval or disapproval play in the process of persuasion.⁶⁹ Starting out from this, a further point could be added to do with the *indirect* importance of the law. The legal background may have made it possible to create a belief among forest owners that the personnel of the board represented a widely held opinion, held not only by members of parliament and experts but also by the general public including their own class. Even though the individual did

⁶⁷ In the first place reference may be made to the administrative investigations on the problem of legitimacy. A concrete case study is found in MURPHY, *Water purity, a study in legal control of natural resources* (Madison 1961) pp. 128 f.

⁶⁸ HOVLAND, JANIS and KELLEY, *Communication and persuasion* (New Haven 1953) pp. 23 f, 38, 295.

⁶⁹ HOVLAND, JANIS and KELLEY *op. cit.* pp. 297 ff: Much of the literature bearing on the relationship between communicator prestige and acceptance could probably be interpreted as specifying cues which arouse facilitating expectations of social approval or interfering expectations of social disapproval. Similarly, the power of statements about majority opinion to shift an individual's opinion probably involves the same sort of expectations.

not risk being pointed out as a law-breaker openly,⁷⁰ the influencer may have appeared as a representative of an indefinite social disapproval against which he felt he stood alone. This simplified persuasion. Only when there was collective resistance in a district to the activity of the forestry board would this belief have disappeared or lost its force. Such collective reactions however were apparently very unusual.⁷¹

The above discussion bears upon indirect effects of the laws. It may be assumed that they were not without importance in the influencing activity in which the direct reference to legal rules and procedures overshadowed such more deeply buried processes.

11. Summary

In the work of the county forestry boards in influencing forest owners there were two contrasting courses of action. The difference between them may be characterized as follows:

1.	2.
The law is invoked	The law is not mentioned
Formal pressures: threats of legal proceedings and sanctions	Personal pressures: services in return, disapproval, persuasion
Formal acceptance required	Oral promise accepted.

In the first case the law was used as a means of influence; in the second as an internal programme. In the former case it was a matter of legal control, in the latter of pressing advice in which the law only had the indirect importance of giving direction and psychological support to the influencer. It should perhaps be added that personal pressure in the latter case could take very subtle forms. It could stem from a desire by the forest owner to ensure obligingness and appreciation on the part of the county forest ranger or at any rate to ensure that he was no worse placed in this respect than other forest owners.

⁷⁰ Cf. above p. 160.

⁷¹ There is only one instance in the material; see above p. 162.

A corresponding polarity in working methods has been observed in influence situations of very different kinds, e.g. in administrative organizations. It has there been described as a difference between leadership that uses formal roles and sanctions and leadership that creates social obligations by services in return.⁷² Another method of description is to distinguish between formal contacts with a mental distance and more informal contacts leading to mental nearness.⁷³

In the field-work of the county forestry boards the informal approach predominated to a high degree.⁷⁴ Only in a few counties in which the county forest officer consistently took a formal line did the forest rangers function as legal controllers. There were also counties in which the forest officer had no definite and expressed attitude. In these counties both courses of action were practised but the informal approach was the most usual one. Several environmental factors which enforced close personal contact with forest owners worked to this end.

Which of the courses of action was more effectual in producing the forestry desired? In order to answer this question a measure of changes in behaviour of the forest owners must be found. The number of applications for help with marking trees and for plants and seed respectively might be used as such a measure. If Jönköping county and Älvsborg county are compared in this respect — they have a similar structure in forestry but they were long marked by the opposing courses of action in each — a result, as shown in diagrams 9 and 10 is obtained. In assessing these, it should be remembered that the number of forest owners in the smallest grouping in Älvsborg county was much greater than in Jönköping county.⁷⁵ The comparison can scarcely be considered to show any considerable difference in efficacy between the two

⁷² BLAU and SCOTT, *Formal Organizations* (London 1963) pp. 141 f.

⁷³ WAALER, *Management Development, A Norwegian Experiment* (Harvard University 1962) pp. 40 f.

⁷⁴ The same seems to have been the case in the USA in carrying out similar legislation, e.g. Zoning Ordinances for country districts. See SOLBERG, *New Laws for New Forests* (Madison 1961) pp. 331—337. Solberg points out "the personal character of law enforcement in rural communities as contrasted with its impersonal nature in urban areas".

⁷⁵ See above p. 124.

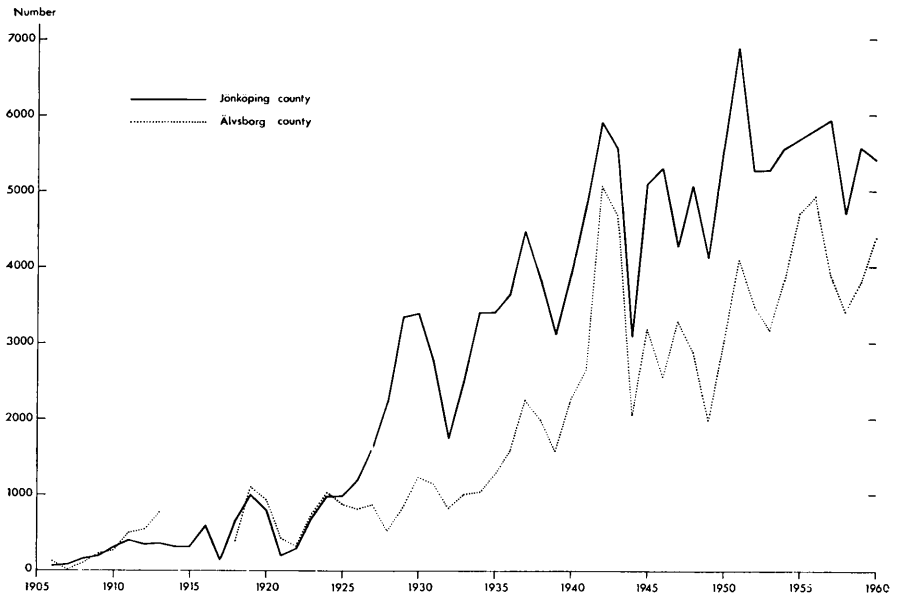


Diagram 9. Number of surveys for felling and treatment of stands in the counties of Jönköping and Älvsborg.

Sources: See diagram 1.

approaches, except that the number of applications for assistance with marking was notably higher in Jönköping county from 1925 onwards, especially up until 1940.

The number of applications, however, is not a very good measure of efficacy. It is obvious that such applications can be extracted by threats as well as by persuasion. It would have been more interesting to follow the development of the self-activity of the forest owners in the two counties. This has to do with behaviour not regulated by law, e.g. cleaning and thinning in young stands, felling for household needs and improvement of poorly wooded land. There is no exact measure of this behaviour. But a difference may possibly be shown by the fact that according to the written material and the interviews the forest owners' interest in forestry was great in Jönköping county whereas such interest was absent or less highly developed in Älvsborg county.

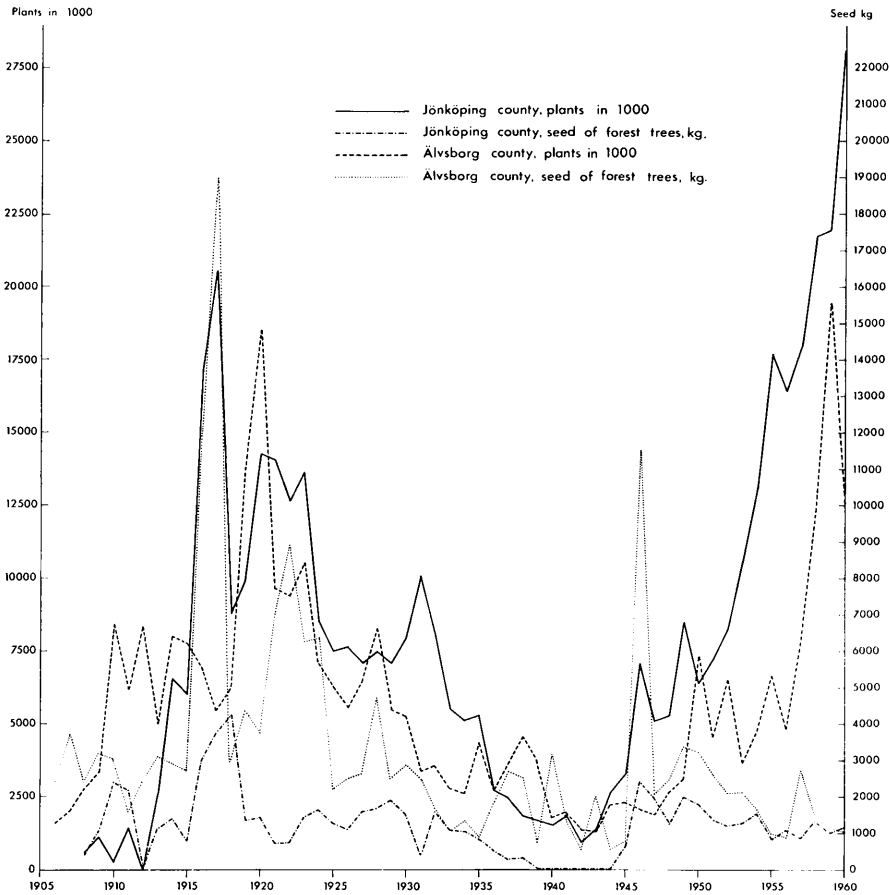


Diagram 10. Material for forest planting and sowing provided by the county forestry boards in the counties of Jönköping and Älvsborg.

Sources: See diagram 1.

The forests owners' interest in forestry should have been expressed precisely in behaviour of the kind mentioned.

When the first forestry law was passed the parliamentary committee stated that the effects of the law would essentially depend on the authorities being able to gain the confidence of the forest owners and arouse an interest in them for forestry.⁷⁶

⁷⁶ *Bihang till Riksdagens protokoll* 1903 band 8: 1 nr 5 p. 98.

What is perhaps most striking in this investigation is the great confidence most county forest rangers succeeded in inspiring among forest owners. It is evident that their course of action which avoided referring to the law played an important part. In the interview answers it is often pointed out that mentioning the law would only have aroused irritation and resistance among forest owners.

The acceptance of the field personnel thus compensated the lack of acceptance of the laws.⁷⁷ Thereby a basis for spreading interest in constructive forestry among forest owners was formed.

⁷⁷ Not even during the last decade covered by the investigation could the law be considered to be accepted. In a leading article in *Skogsägaren* 1952 p. 113 the forestry law is criticized as being "difficult to understand and restrictive" and because it prevented initiative and self-activity among forest owners. Similar criticism was made by Sveriges skogsägares riksförbund in a document to the government dated 4/7 1963.

VI. Social and political pressures

No group norms supporting the new demands for better forestry were developed among forest-owners themselves, at least not during the first forty years. The forest-owners made no demands on their neighbours in this respect; they did not react against bad forestry. The treatment of the forests also varied greatly from farm to farm.¹ There was no success in trying to activate the forestry committees to create opinion each of them in its parish. At the outset it was hoped that they would start discussions of forestry among forest-owners and exercise some influence on negligent fellers. But for reasons mentioned in the last chapter, this hope was not fulfilled.²

On the other hand, still less were there any opposite norms within these groups. Quite the contrary: many forest-owners followed the new signals. There was, then, no need to fear that persuasion would be wasted because the forest-owner was confronted with an unfavourable attitude on returning to his own social environment.

Under these conditions it was natural for the people on the county forestry boards to start considering how to create an opinion pressure among forest owners to promote the requirements of the new law for better forestry. The county forest officer in Jönköping county, Mr Lothigius, presented the problem as follows: "It was not long before the forestry boards realized that legal measures brought about conflict rather than understanding. We would have to resort to other measures. The measures would consist of education in forestry matters and would be organized

¹ SCHAGER, *Sveriges enskilda skogar* (Stockholm 1925) p. 21.

² In Kronoberg county several forestry committees were active during the first few years, as was originally intended, but they were exceptional.

in such a way that the great majority of forest-owners would take part. As the understanding of the proper utilization of forests grew, opinion would be moulded against mismanagement of forests.”³

1. Organizing the forest owners

Education in the ordinary sense of the word was a method which would mould opinion only very slowly. In order to arrive at a quick result, Lothigius took an initiative which “made forestry people listen and tremble with excitement.” He was behind the founding of the forest owners’ association in Jönköping county in 1925 and also inspired the formation of sister associations in other counties in southern and central Sweden.⁴ The principal task of these associations was to make propaganda for better forestry and spread information about it. Since these associations were run mainly by owners of large forests, that is by the upper class of the countryside, and since their activities covered an entire county, it was not possible to work by means of direct personal influence. Propaganda and information were spread mainly in two ways: by means of articles in the journal *Skogsägaren* (The Forest-owner) which had a rather limited circulation, however,⁵ and by means of forest excursions in each parish, at best one per year. It is obvious that these superficial methods would only yield results after a long time.

However, development was interrupted by the great economic crisis of the early thirties, which affected both farming and forestry with marketing difficulties and a devastating fall in prices as a result. It proved to be a necessity for the forest owners

³ LOTHIGIUS in *Sveriges skogsvårdsstyrelser 1905—1944* (Stockholm 1945) p. 150.

⁴ Compare the previous chapter, p. 146 f. On the origin and development of the forest owners’ associations, see the journal *Skogsägaren* first issued in 1925. *Skogsbönder går samman*, published by Sveriges skogsägareföreningars riksförbund, 1957. *SOU* 1938 no. 58 pp. 151 ff.

⁵ Subscribed circulation: 1930 9,000 copies, 1931 10,000, 1933 11,500, 1934 13,000. For the arguments in favour of better forestry see above, p. 156 ff.

to form cooperative marketing associations which would be able to furnish forest products in large quantities at uniform prices and which would try to create new markets, particularly for small dimensions. The twelve forest owners' associations, which did not have business activities on their programme, were re-organized as marketing associations during the first half of the thirties. In 1932 the national federation of forest owners' associations (*Sveriges skogsägareföreningars riksförbund*) was formed as a co-ordinating body.

The new associations included in their programme working for constructive forestry among their members. But as long as business activities were being built up the associations did not have adequate staff or financial resources to achieve anything in the field of constructive forestry.⁶ The national federation took over the publication of the journal *Skogsägaren*. It could have been much more important that in 1935 the national federation decided that the journal *Jordbrukarnas föreningsblad* (The Farmers' Bulletin), which then had a circulation of 200,000, was to be the federation's periodical and that the federation would edit the forestry articles. However, in the thirties the paper only occasionally contained articles designed to interest forest owners in constructive forestry.⁷ The business and organizational aims of the associations dominated here as elsewhere.

But the farmers' youth organizations in certain counties began to organize competitions in forest thinning from 1937 onwards. This was an innovation which was later to have great importance.

On the whole one might say that it was not until after the end of the Second World War that the forest owners' associations once again committed themselves to spreading opinions and information about tending forests. This change in attitude was caused by political pressure on small-scale forestry, which threatened its very existence.

⁶ *Skogsbönder går samman*, p. 115.

⁷ *Jordbrukarnas föreningsblad* has been examined by Dan Magnusson.

2. Political pressure⁸

It was a long time before the forest owners felt any political pressure from other social groups. Ever since the turn of the century the governmental policy had been to protect the farming forest owners against economic power. The goal was to keep both land and forest in the possession of the farming population. In 1906 a law was made to this end, by prohibiting companies and other organizations from buying up land and forests in the northern parts of the country; in 1925 this prohibition was extended to cover the whole country and in 1945 there was a similar prohibition directed against *all* non-farmers, that is, against all those who did not themselves work on the land and in the forests. The background to these legal prohibitions was the general view that farming could not be carried on in the greater part of the country without resort to the forest.⁹

In the post-war period the farmers switched over to the political offensive. In the agreement of 1951 on governmental cooperation between the Social Democrats and the Agrarians, the latter party obtained a statement that a report would be made on how to enlarge farmers' forest holdings by forest land from company and state-owned domains.¹⁰

In this situation, a counter-action developed. At the national congress of the Wood Industry Workers' Federation in 1953 a motion was put forward for the nationalization of the timber industry. In their statement about the motion, the executive of the federation turned from the industry and against farm forestry:

"It appears to the executive, without having studied the matter closely, that a nationalization of Swedish forests would be a great advantage to society. It would probably lead to better management of forests, of the farm forests at least which make up 50 %

⁸ The rest of this chapter is based on a collection of clippings and excerpts which was made by following up systematically contemporaneous newspapers, periodicals and official publications.

⁹ LJUNGMAN-STJERNQUIST, *Den rättsliga kontrollen över mark och vatten* I (Stockholm 1968) pp. 13—18.

¹⁰ The report was presented in 1957 (*SOU* nr. 8) but never led to any practical results.

of our productive woodland, and consequently to better yields. It would be easier to organize forestry rationally and to create the right conditions for more regular and more endurable work in the forests resulting in improved recruitment opportunities to forestry. The shattered forest holdings of the present prevent really rational forest management, mechanization and the development of large-scale operation.”¹¹

The question was submitted to general discussion between all the unions representing workers in forestry and the forest industries. The upshot was that there was no call for general nationalization but, with regard to ensuring security for the labour force, it was considered vital to develop larger units in farm forestry.¹²

This incident was the preliminary to a campaign of fierce criticism of farm forestry which was to last for most of the fifties.

In 1954 the journal *SIA*, the mouthpiece of the unions of the forest and forest industry workers, contained a series of articles designed to throw light on the forest workers' situation in the counties in which farm forestry predominated.¹³ In these articles, the measures taken by the farmers in their forests were described as very unsatisfactory. Many forests were in a poor state as a result of selective cutting; clearing and thinning were neglected, felling was carried on haphazardly. There were plenty of jobs to do in the forests but they were never done. In consequence, the employment of the forest workers was less secure than was necessary. They moved away from the countryside or got jobs with the companies. How would the forest owners get on without workers?

In an article in *Morgon-Tidningen* in Dec. 1954, the principal newspaper of the Social Democrat party, the chairman of the Wood Industry Workers' Federation attacked the forest-owning farmers: "The farm forests," he wrote, "are in general the worst

¹¹ *SIA* 1953 nr. 11 p. 3. The statement was attacked in a leading article in *Skogsägaren* (1953 pp. 135 ff.)

¹² *SIA* 1953 nr. 23 p. 6.

¹³ *SIA* 1954 nr. 21 (Kronoberg county), 23 (Kopparberg county) and 25 (Jämtland county).

tended forests in the country. Our largest and most valuable forest resources are largely managed in a way that must be called absurd. But we cannot and must not accept this situation." As remedies he proposed more joint activities in farm forestry but also a repeal of the prohibition for companies to buy up forests.

The article was much discussed in the press. It also provoked political reactions. The Minister of Agriculture, who belonged to the Agrarian Party, explained that of course he could not take part in any mitigation of the prohibition for companies since his party's policy was to transfer forest land to the farmers as a support for farming. The farmers' unions queried whether the coalition government should continue, since one party was planning an attack on the social class represented by the other party.¹⁴

The chief of the State Forest Service also intervened in the debate and tried to prove, by referring to official statistics, that the State and the companies expended more manpower on forest improvement than the farmers did.¹⁵

In 1955 *SIA* contained a long series of leading articles seriously criticizing farm forestry. The journal maintained that there were no guarantees that the defects of farm forestry would be corrected. The romantic old notion that the farmers themselves cut down the trees, transport the timber and practise forest tending had proved to be completely false in large parts of the country. The workers employed lacked security. There was no demand for nationalization of farm forests but the farmers had to find some forms of co-operation which enabled them to use the superior operational methods of large-scale forestry.¹⁶

In a way the campaign culminated in a Social Democrat proposal in the parliament of 1956.¹⁷ As a starting-point this proposal laid down that the existing distribution of forest land over various categories of owners should be retained in principle.

¹⁴ A survey in *Svenska Dagbladet* 18/12/1954.

¹⁵ In the journal *Skogen* 1954 nr. 21. A reply appeared in *Skogsägaren* 1955 nr. 1 which referred to estimates of the need for silvicultural work made by the second National Forest Survey.

¹⁶ *SIA* 1955 nr. 1, 2, 3, 7, 14—15, 19, 22.

¹⁷ It was called the Sköld forest bill after its principal initiator, the former Minister of Agriculture and then of Finance, P. E. Sköld. Motion nr 175 i Andra kammaren; motion nr 123 i Första kammaren (the same text).

The reasons for retention of farm forests were three: many farms would lose their capacity as subsistence bases if they lost their forests; a resident population in the country-side was necessary to be able to exploit the natural resources efficiently; and it was not considered desirable that the real estate of the country should be controlled by a few people. It was further established that there was no material by which to judge whether the farmers or the companies tended their forests best. But despite these starting-points, the proposal urged stricter legal regulation of the private forest owners. The forestry law should be extended so that it could enforce more forest planting and even thinning and final felling of over-mature stands. The prohibition against companies to acquire forest land should be mitigated in order to facilitate their rounding out their management units. New legislation should be introduced to set up collective organizations to which small forest owners would surrender the whole management of their forests. Membership was to be voluntary in the first instance but if anyone mismanaged his forest he would be obliged to join.

A remarkable point was that the proposers were sceptical of the alternative that the forest owners' own associations would be able to arrange the co-operation needed among the small forest owners.

The proposal gave rise to fierce political debate in the press during the spring of 1956. The non-socialist newspapers warned the farmers that the action ultimately aimed at transferring their forests to the ownership of the State and the companies. The two publications *Skogsägaren* and *Jordbrukarnas föreningsblad* criticized especially the proposed organizations for collective management and the distrust of the forest owners' associations. They saw in the proposal an attempt to form cells which from within would disunite the forest owners and destroy their chances to assert themselves against other social groups.¹⁸

During the spring a great many protest meetings of forest owning farmers were organized all over the country at which

¹⁸ *Skogsägaren* 1956 p. 36 *Jordbrukarnas föreningsblad*, leading article 18/2/1956.

harsh statements were made about the planned intrusions into farm forests.

The proposal was treated in parliament in May 1956; no part of it obtained a majority.

At the same time as this, the Social Democrat Party Conference was going on. In a proposal put before the conference, it was urged that state ownership of forests should be increased, that companies should be allowed to acquire forest land in certain cases, and that the transfer of forest land to re-inforce farming should be stopped. After a heated debate, the conference decided to refer to the bill before parliament.¹⁹ In the press, this decision was taken to mean a step towards the swiftest possible nationalization of the forests.²⁰

After the forest bill had failed in parliament, discussion of forest policy died down but it flared up sporadically later on. Round about the turn of the year 1956—57, two official reports on these questions were published. One of them, was written by a committee dominated by representatives of industry and the workers. It proposed more opportunities for companies to buy forests; any reduction of the woodland owned by the State and companies for supplementing farm forests was opposed. In the other report, presented by a committee dominated by the political representatives of the farmer class, a plan was put forward for supplementing farms with forest land at the expense of non-farmers, the State and the companies.²¹ The latter report was violently attacked in the Social Democrat newspapers.²² It did not result in any practical measures.

In the autumn of 1958 at the request of the government the Forest Research Institute of Sweden published a comparative investigation of the state of the forests among the different ownership groups.²³ It was based on material collected by the second and third national forest surveys. The figures presented

¹⁹ Report in *Svenska Dagbladet* 16/5/1956.

²⁰ *Jordbrukarnas föreningsblad*, leading article 26/5/1956.

²¹ *Skogsindustrins utbyggnad* (SOU 1956 nr. 33). *Jordbruks förstärkande med skog* (SOU 1957 nr. 8).

²² Particularly in *Morgon-tidningen* 6/2/1957.

²³ *Skogstillståndet hos olika ägargrupper* (SOU 1958 nr. 45).

for the stock of timber per hectare, the occurrence of remnant stands and the extent of forestry measures needed were interpreted as showing on the one hand that there were no tangible differences between state-owned forests, company forests and farm forests, and on the other hand that there were considerable differences to the disadvantage of the farm forests.

3. Actions of the forest owners' associations to improve forestry

The political pressure on the owners of farm forests provoked their associations into taking counter-measures. Some of these took the form of defence in speech and writing against the attacks. But besides the polemics against the attackers a steady stream of exhortations and suggestions was sent out to the forest owners to disarm criticism by doing practical work to improve forestry.

Some of the propaganda in the publications of the organizations consisted of appeals to the forest owners to increase their efforts to improve forestry. In a leading article of 1954 the appeal was phrased as follows:

"In a general way, greater demands are being made on forest owners and their associations than before. If forest owners are not on their guard, there is more or less covertly a threat that the State should be given more influence in forest management. In such a situation, more work than ever is required from the forest owners and their associations. As regards the pure tending of forests and timber, a great deal can be done. Nothing is so good that it cannot be done even better."²⁴

"Make 1955 constructive forestry year!" forest owners were urged in the headline of a leading article. The year following one association asked all private forest owners to continue their work in constructive forestry with real energy; "if this is done, all intervention by the authorities will be totally unnecessary".²⁵ The same year the associations sent out forms on which the members were to report all the silvicultural measures they had

²⁴ *Skogsägaren* 1954 nr. 7, leading article.

²⁵ *Skogsägaren* 1955 nr. 1. *Jordbrukarnas föreningsblad* 3/3/1956.

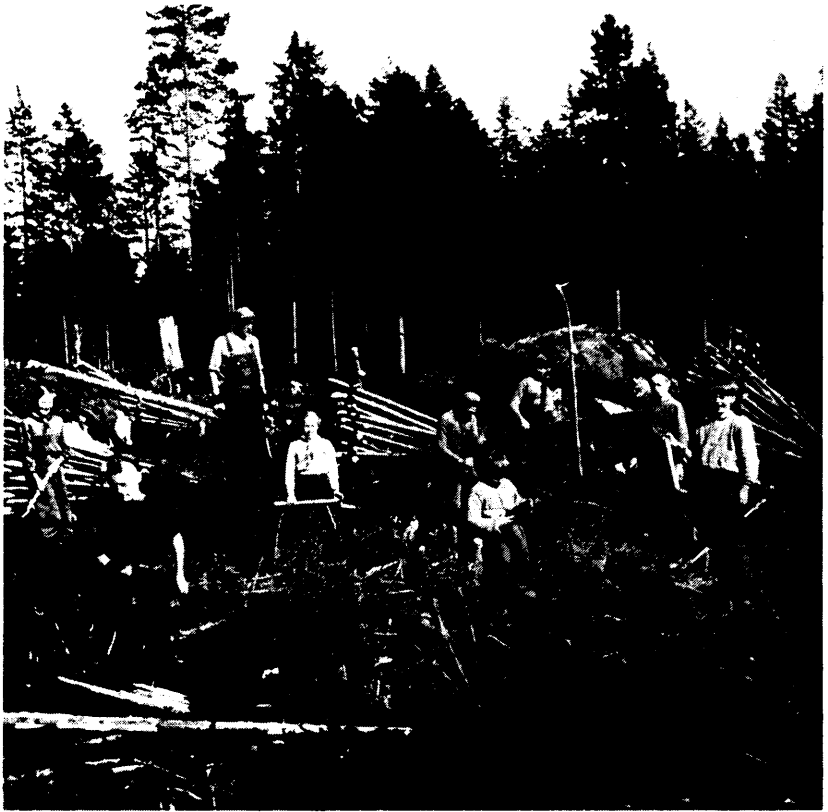


Figure 16. Members of a farmers' youth club remove remaining vegetation on a cut area. Ovanmo, parish of Ramsele, Västernorrland county 1952.

taken in order to supplement the incomplete official statistics.²⁶ In 1957 the top organizations for farming and countryside interests made a "serious appeal" to all owners of farm forests to support the associations actively — at that time they covered only half of the forest owners and 57 % of the farm-owned woodland.²⁷

Another part of the propaganda in the press consisted of popular advice on the tending and treatment of forests and articles

²⁶ *Skogsägaren* 1956 p. 234.

²⁷ *D:o* 1957 pp. 244 f. (special edition).

on progressive farm forestry. Remarkably often, girls are described in words and pictures doing good work in forestry. This was to be an important matter for the whole family.²⁸ Some nation-wide forestry competitions were started on the initiative of the Farmers' Youth clubs and received a good deal of publicity.²⁹

But the really new thing about the associations' drive for constructive forestry — what really made it their "new deal" — was that they offered their members definite forms of co-operation in forestry. Ideas about this were certainly not entirely new. In the years prior to the political pressure these ideas had already been discussed in order to try to come to grips with the problems caused by the increasing shortage of labour in the forests and by the small and shattered forest holdings. But there can be no doubt that the political pressure actuated the co-operative forms being developed further and put into practice.³⁰

There is a study of the forms of co-operation offered and their occurrence in different parts of the country in 1955 and at the end of 1957.³¹ The following forms were to be found in the activities of at least ten of the associations:

- 1) Advice and marking of trees by the personnel of the association on application by the forest owner. This form was found mainly in northern and central Sweden but was never much practised anywhere. Otherwise they would have been in competition with the work of county forest rangers.

- 2) Permanent teams for silvicultural measures and for felling. The team, which was normally made up of one foreman and

²⁸ *Jordbrukarnas föreningsblad* 2/7/1955 (the so-called "forest march").

²⁹ In particular the competition called "The forest — our future" which was started in 1956 and went on for several years.

³⁰ In an official letter to the government in the autumn of 1954, the National Federation of Forest-owners pointed out that the associations had been recommended to extend their activities to silvicultural services as an aid and a supplement to their members' own efforts. In the letter was outlined a form of organization that was to provide the basis for the later forestry areas. See further *Skogsägaren* 1955 pp. 3 ff. Cf. 1954 pp. 243 f: Co-operation is required to maintain and defend farm forestry as an economic operational form.

³¹ *SOU* 1958 nr. 30 pp. 42—55, 261—276.

3—5 workmen, was employed by the association and the farmers were charged cost price. It was mostly in the Norrland associations that there were more than a few permanent work teams. They were organized in 1952 or later. Certain county forestry boards had tried out this method earlier.

3) Providing machines for silvicultural measures. The associations obtained machinery for preparing the soil and planting machines and did the machine work in the members' forests for a fee. One disadvantage of this scheme was that long and uneconomical transports were unavoidable.

4) The above-mentioned forms may be described as more or less hesitant attempts to organize co-operation between the forest owners. The kind of co-operation that was to have most importance for the future was the formation of so-called *forestry areas* (Sw. *skogsbruksområden*). A forestry area was organized as follows. In a particular geographical area, the association signed a contract with as many of the forest owners as could be persuaded to do so. The contract meant that the association put an expert at the disposal of the forest owners for advice, marking of trees for felling, co-ordination of felling and of road-building, selling, planning of forest planting and other silvicultural measures, finding the labour needed, buying implements in common, etc. Care was taken to ensure that the forest owners themselves were activated and so it was the owner who had the final word about which measures were to be taken. The forest owners paid for these services a set fee per hectare and usually an additional fee for every day they received assistance. Each forestry area in southern and central Sweden covered 2,000—5,000 hectares of productive woodland and in northern Sweden 6,000—13,000 hectares; the number of members seldom exceeded 100. Apart from sharing the expert, workmen and machines, this form of co-operation meant that the owner could get much more detailed advice than the county forest ranger could give.³²

³² According to the contract for the Kolbäck forestry area in Västmanland the forestry inspector, among other things, was to visit each forest-owner at least once a year, draw up a list of measures to be taken in consultation with him, instruct the forest-owner on self-activity in the forest and ensure

The first forestry area was started on April 1st 1955 at Hammerdal in Jämtland.³³ In the autumn of 1954 the forest owners' associations had been recommended by the national federation to extend their activities in this direction. New forestry areas were then organized fairly quickly. At the end of 1957 there were 24 and at the end of 1960, 63 involving 3,400 forest owners.³⁴ Since then the development of forestry areas has speeded up further.

It is a common view among the personnel of the county forestry boards interviewed that the associations managed to increase the self-activity of the forest owners considerably by the methods described above. It might even be suggested that in some quarters a social pressure was created among the forest owners themselves. One county forest ranger, for instance, reports that in the 1950's people began to report their neighbours who mismanaged their forests.

4. Summary

This account of the political pressure in the 1950's on farm forestry and the forest owners' reactions is perhaps more detailed than is strictly necessary for the present study. If so, the material presented will at any rate be useful for studies of political campaigns of this kind.

As far as this study is concerned, it is sufficient to establish that it was not until the 1950's that there was any political or social pressure on the forest owners, i.e. during the last decade of the period investigated, but that the political pressure then exercised may be assumed to have had considerable influence on the behaviour of the forest owners.

The political pressure was started by organizations and individuals representing social groups whose aims conflicted with those of the forest owners. It was carried on by means of news-

that as many of the forest-owners and their sons as possible took part in courses. *Jordbrukarnas föreningsblad* 25/2/1956.

³³ The story of its origin is in articles in *Jordbrukarnas föreningsblad* 6/11/1954, 12/3/1955, 10/3/1956.

³⁴ Information received from Sveriges skogsägareföreningars riksförbund.

paper debates and political drives. The forests owners' associations used the same means in their defence. But in addition they appealed to the forest owners to manage their forests in accordance with the times in order to undermine their opponents' arguments. The appeals were made both in the press and by direct personal contacts. In practice there was not much difference between this course of action and the soft line activity pursued by most county forestry boards. But the former had a stronger argument — the impending threat to their own form of enterprise.

It is not possible to find out the extent to which the influence of the associations led to a corresponding pressure among the forest owners themselves. There was probably an intensification of this kind in certain districts but not in others.

VII. Changes in environments

Changes in the forest owners' manner of managing their forests may have been due to the forestry laws, to the activities of the authorities and to social and political pressures — that is to behaviour patterns of different kinds. Another likelihood is that they were due to changes in the general environment, which forced the forest owners to adapt themselves or increased their resources. A development of this kind may have been quite spontaneous but it may also have been affected by political direction.

Environmental changes affecting the behaviour of the forest owners may be considered from the following four viewpoints:
social changes,
changes concerning the forestry holdings,
technical changes, and
economic changes.

Whether any changes of these kinds have really taken place during the period 1905—60 and what effects, if any, they may be assumed to have had on the forest owners' management of their forests will be discussed in this chapter.

1. Social changes?

The socio-psychological situation of the forest owners did not change in any significant way during the period. Throughout, they were the owners of their forests and, as such, not exposed to any directing, state or professional, apart from that which was based on general law. It is evident that collectivization of forestry

in one form or another would have brought about entirely new opportunities to direct forest management. Different forms of collectivization had really been discussed. The idea of nationalizing woodland was put forward in the political discussion of the fifties but more as a propaganda threat than as a practical proposal. On the other hand, a legal form for establishing joint ownership of forest land was created in 1926. But this did not have any practical importance during the period.¹ The attempt to bring together small holdings to form joint-owned units was bound to fail since no legal or economic pressure could be exercised because of prevailing public opinion. The forestry areas described in the preceding chapter which were started in the 1950's were not intended to be a basis for joint management. The owner retains the right to decide about his forest. The forest area is only the field of operation for a joint service organization.

Nor has the social composition of the forest owning population changed crucially during the period. The great majority of forest owners were to be found among the agricultural population, to such an extent that the phrases "farm forests" and "private forests" were used as synonyms in public discussion. The forest owners thus formed a relatively uniform class. This class was characterized by continuity since recruitment took place from among their own families and professional knowledge was passed on from generation to generation. As was said before, there was no outside training in forestry worth mentioning until the fifties.

There are no direct statistics about the number of absentee forest owners. According to an enquiry dating from the beginning of the sixties about 14 % of the whole of the privately-owned woodland was said to belong to holdings on which the owner did not reside.² The percentage of absentee forest owners should be very much lower for several reasons. The enquiry had to do with legal units and not forestry holdings, which often consist of several legal units. Moreover, in the figure are included farmers who had leased out their land and moved to another residence.

¹ For this form see KALLSTENIUS, "Gemensamhetsskogar" I in *Kungl. Skogs- och Lantbruksakademiens tidskrift* 105 (1966).

² *SOU* 1964 nr. 37 pp. 71 f.

Only one element among the absentee forest owners may have had more general importance, namely the timber speculators. Some were landowners who ran a timber business besides a large or small farm, some were professional businessmen. In both cases the farms bought on speculation were not kept for any length of time but were sold back to farmers as soon as the forests had been cut down. This speculative buying was of course very detrimental to the state of the forests.

It happened sporadically in normal times that timber speculators bought woodland. During periods of great expansion the number of such speculations rose. To stop this development, legislative measures were used. The wave of speculation in the First World War led to the first legal rules about felling being introduced in Sweden in 1918. By this regulation the timber speculators were induced to request marking for felling by the county forestry boards, of course "as far as the law permitted".³ A not particularly marked rise in speculative buying in 1938 resulted in legislation that made felling in newly acquired forests dependent on permission during the first five years after purchase. In 1945 the legislators went even further and introduced a licensing control on private individuals purchasing farms and woodland.

Behind this last control was a deliberate government policy to retain land and forest in the possession of the agricultural population. In principle, only those who practised farming or forestry were to receive permission to acquire farm or forest land. It was laid down as an absolute obstacle to permission being granted that the intention of the purchase might be assumed to be timber speculation. Thus an effective stop was put to speculative buying.⁴ Other kinds of purchase by non-farmers were of course also prevented.

Even long before, the land possessions of the agricultural population had been protected against the pressures of demand from companies and other organisations. A legal prohibition in

³ Enquiries by the county forestry boards, printed in *Kunql. prop.* 1938 nr. 262 pp. 13 ff.

⁴ The efficiency of the licensing control has been shown in *SOU* 1954 nr. 16 pp. 50, 55.

this direction was introduced in 1906 in the northern parts of the country and since 1921 it has been in force all over the country.⁵

Changes in the social position and composition of the forest-owning population have thus been slight. On the other hand there has been a great decrease in the supply of forestry workers. After the last great unemployment crisis at the beginning of the thirties there was soon a lack of manpower,⁶ which has since made itself increasingly felt concurrently with the migration from the countryside. However, this decrease in the supply of labour should rather have had an inhibiting effect on the work of forest improvement.

Summing up it can be stated that no social changes which may have contributed to the changes in the behaviour of the forest owners seem to have occurred during the period in question.

2. Changes concerning forestry holdings?

Forestry holdings may have changed more generally during the period in three respects: their connection with farming, their size, and their consolidation.

Since olden times private forestry has been combined with farming. Natural conditions in the country made it necessary except for the few flat areas. Cultivable land is found only here and there and in rather small areas. The forest then — as has been described above — was a necessary condition for the livelihood of the agricultural population.

It was really the timber interests which first introduced a tendency to separate agriculture from forestry. Round about the turn of the century the big timber companies in Norrland began to sell off the arable land from their domains while keeping as much as possible of the woodland. To prevent this practice a law was introduced in 1905 prescribing that new farms would not be

⁵ For the legal prohibitions against companies and other organisations, see LJUNGMAN- STJERNQUIST, *Den rättsliga kontrollen över mark och vatten I* (Stockholm 1968) pp. 13—18, 129.

⁶ The first time a complaint about the lack of labour appears in the periodical *Skogsägaren* is in 1936 (p. 175).

founded unless they got sufficient woodland for household needs. In 1928 this principle was extended to the whole country and it was gradually enlarged to include a demand for an allotment of woodland sufficient to produce timber for sale too. The estimate of how large a forest area would be needed as a support for agriculture was of course a difficult task. In a circular to the controlling authorities in 1938 the following argument was put forward. The vegetation period was considered to be 250 days in the southernmost part of Sweden and 122 days in the northernmost part 500 metres above sea level. This period of time was to be devoted to farming. In addition 115 days were set aside for work with the live-stock and for repairs. The rest of the year the workers on the farm needed work in the forests and the area allotted was to be big enough to guarantee them this occupation.

Government policy throughout the period has been based on the idea that forests were necessary as a complement to the farms in the greater part of the country. The political groups have been more or less in agreement on this point. More as an expression of this policy than as a measure against current poor tendencies, the preventive legislation was intensified in a remarkable way in 1947, when it was prohibited in principle to separate woodland from agricultural holdings. The reason for this prohibition was that even if a farm had superfluous woodland it might be needed to supplement other farms in the district. The rational intention is clear if the prohibition is seen as a provisional measure while waiting for plans for the most suitable re-division of land into units. The future division of land must be decided coherently for a whole district. Before such plans are worked out it is of course inappropriate to permit forest land to be separated from farmland when the forest land according to the planning may be needed in order to supplement agricultural units.

It is possible that the preventive legislation forestalled a development towards separation of farm and forest. In 1956, 52,960 private forestry holdings were not combined with farming, amounting to 18 % of the total number.⁷ It is to be noted, however, that of these no fewer than ca. 3/5 had come into existence

⁷ Table 2 in Chap. III.

by the arable land of the farm having been leased out,⁸ something which the legislation did not prevent. In these cases the forest is not finally separated from the farm and in the majority of cases it still seems to be managed by people belonging to the agricultural class.⁹ The remaining holdings have probably either originated by tilled land having been planted with trees or else they derive from the time before 1928. How the last-mentioned holdings came into being is now impossible to discover.

During the period 1956—61 a rather slight decrease in the number of forest holdings in combination with farming has occurred.¹⁰ Leasing out or planting with trees is probably the reason.

The next question was whether there had been any essential changes in the size of the forestry holdings. A comparison between tables 2 and 4 in Chapter III shows that such is not the case between 1928 and 1956. After 1956 there seems to have been a slight shift in the direction of a larger area per forestry holding.¹¹

One reason for the absence of major changes may have been the government's rural policy. Up until 1928 there were practically no legal obstacles to prevent landowners dividing up their land as they pleased. In 1928 a law was introduced to stop a further deterioration in the division into agricultural units. The control took care of farming but neglected forestry. It intervened to prevent harmful parcelling up of arable land but admitted parcelling up of forest land. The efforts to improve the existing division first found expression in a law amendment of 1947. Then, for the first time, the need for rational forestry units was taken into account. A prohibition against harmful parcelling out of woodland was introduced but this had to give way if there was a need to add forest land to farms. Forests were thus still treated mainly as a support for farming. Only in recent years has there been a change of attitude on the part of the authorities.

Yet there is a clear connection between size and the owner's

⁸ *SOU* 1964 nr. 37 p. 91.

⁹ Cf. *op. cit.* p. 71.

¹⁰ *Op. cit.* p. 80.

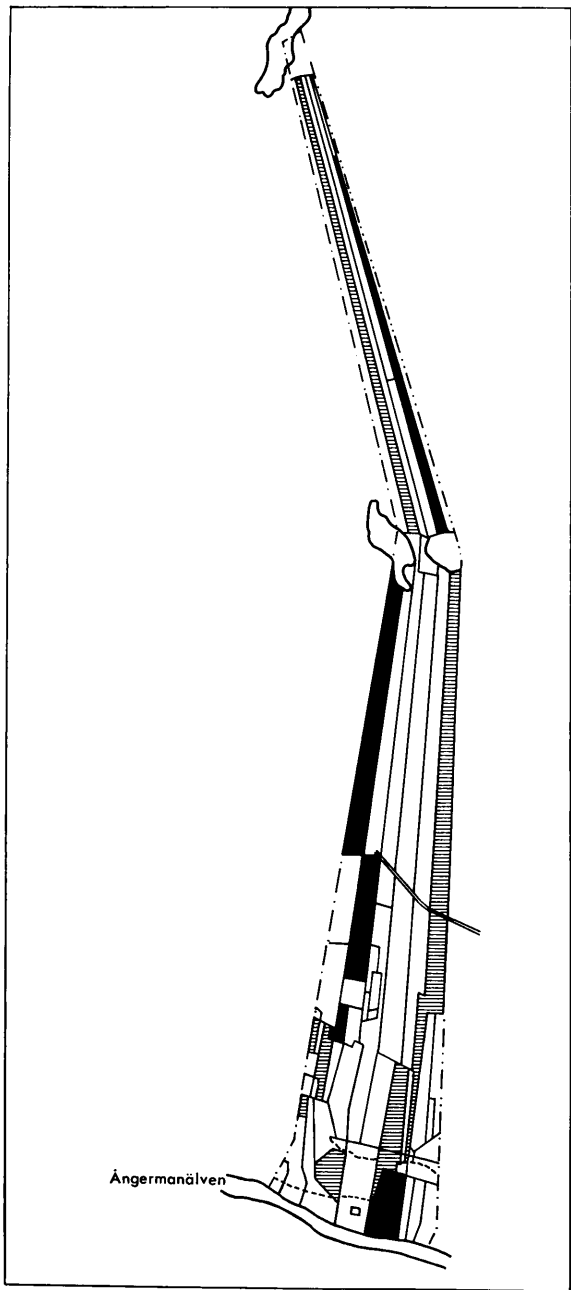
¹¹ *Op. cit.* table 62 on p. 124.

way of managing his forest. Areas that are too small are inadequate for acceptable and at the same time economically viable forestry. Thus it was demonstrated in an investigation made in the 1920's that on small farm forests which only yielded timber for household needs the state of the forest was obviously worse than in holdings which also yielded timber for sale.¹² A later investigation of two parishes in Älvsborg county indicates that owners of forest areas up to about 30 hectares to a far smaller extent than the larger forest owners are willing to take part in instruction or demonstrations or to take advantage of expert help with marking trees for felling or forest planting and sowing.¹³ It is then conceivable that an increase in the average forest area would have led more quickly to better forest management.

The last question concerned possible changes in the configuration of the forestry holdings. Here we touch on a very difficult problem in Sweden. Because of historical conditions the configuration of forestry holdings has become unsuitable throughout almost the whole country. It is extremely common that the holdings extend like narrow ribbon-like or wedge-shaped belts from the farms and the roads out over the woodland. Map 3 gives a good example of this. Justice down to the last inch, undeveloped forestry and partition of hereditary land have contributed to this situation. Because of this the boundaries are unsuitable both for felling, which cannot always be adapted to the nature of the terrain, and for constructions of different kinds e.g. roads and ditches. A rearrangement of the configurations is necessary but has proved to be extremely difficult to achieve. The forms for land-surveying have been complex and expensive. A restraining factor of probably even more importance is the forest owners' fear that they will not be fully compensated for readjustments, that they will lose by the deal. In order to start a general rearrangement of the private forestry holdings simpler forms are needed (something which was introduced in 1972)

¹² SCHAGER, *Sveriges enskilda skogar* (Stockholm 1925) pp. 27 ff.

¹³ The investigation was made in 1959 in the parishes of Sätla and Hyssna by Rolf Johansson. It covered a selection of 60 forest owners from a total number of approx. 140. The results given in the text hold good irrespective of the owner's age.



Map 3. The village of Skarped in Väster-norrland county (Source: SOU 1964 nr. 37 p. 110).

but furthermore there must be a method of evaluation which will gain the confidence of the forest owners. The psychological factors mentioned do not play the same part in large-scale forestry. In the last ten years several major readjustments have been made between state-owned and company-owned forests. As soon as private forests are involved the obstacles are insurmountable.¹⁴

Above all there is no purposeful planning of the rationalization of the forestry holdings. This is a task of great dimensions. It assumes among other things the planning of a future network of forest roads but probably also extensive road constructions. The increasing construction of roads on private forestry holdings since the second World War may therefore be considered to have paved the way for reform.

To sum up: during the period in question there have been no changes concerning the forestry holdings to such an extent that the changed behaviour of forest owners can be explained hereby.

3. Technical changes?

Efforts to mechanize forestry have become more and more necessary since the war due to the lack of manpower in the forests and the sharp rise in wages. However, it has proved to be technically difficult to bring about mechanization because forestry works with large, relatively low-producing areas with varying natural conditions. Additionally, as to private forestry there is the problem that it is split up into small irregular holdings which do not give a sufficient basis for mechanization. This weakness can be counteracted by creating close co-operation among the forest owners. The conditions necessary for this did not arise, however, until the 1960's as a result of the introduction of the so-called forestry areas (see the previous chapter).

The technical innovations during the period which are of some importance to private forest owners in general are the three listed below:

¹⁴ *SOU* 1964 nr. 37 p. 127.



Figure 17. Logging with horses. Parish of Svinhult, Östergötland county 1900.

1) Transport of timber by lorry. In the 1930's the timber buyers began to use lorries for transport on a large scale. According to a rough estimate for the period May 1936 to April 1937 a good quarter of the total timber felled was transported by lorry on public roads and slightly more than a sixth on private roads.¹⁵ It is not known how large a part of this came under private forestry. Obviously the lorries replaced the horse-drawn vehicles and railways and also to some extent the waterways for floating timber. In the post-war period this trend has been speeded up. If it has had any effect on the private forest owners' way of managing their forests it must be because their income has been improved by increased sales especially of wood of small

¹⁵ *SOU* 1938 nr. 53 p. 26.



Figure 18. The first tractor in the forest. Parish of Lekvattnet, Värmland county 1947.

dimensions. This question is linked with the economic opportunities of marketing this kind of timber.

2) The use of the agricultural tractor in the forests instead of horses. This change came after the war and is linked with the increased "tractorization" of agriculture (see diagram 11).

3) The power saw. This was introduced round about 1950 and was soon widely used. As early as 1953 11 % of the forest owners in southern Sweden and 4 % of the forest owners in northern Sweden are said to have used the power saw.¹⁶ In the 1960's it was quite common.

This survey shows that the forest owners' altered way of managing their forests cannot be the result of technical innovations. They have been introduced late in the period and have no direct connection with improvement measures in forestry.

¹⁶ *SOU* 1956 nr. 36 p. 207.

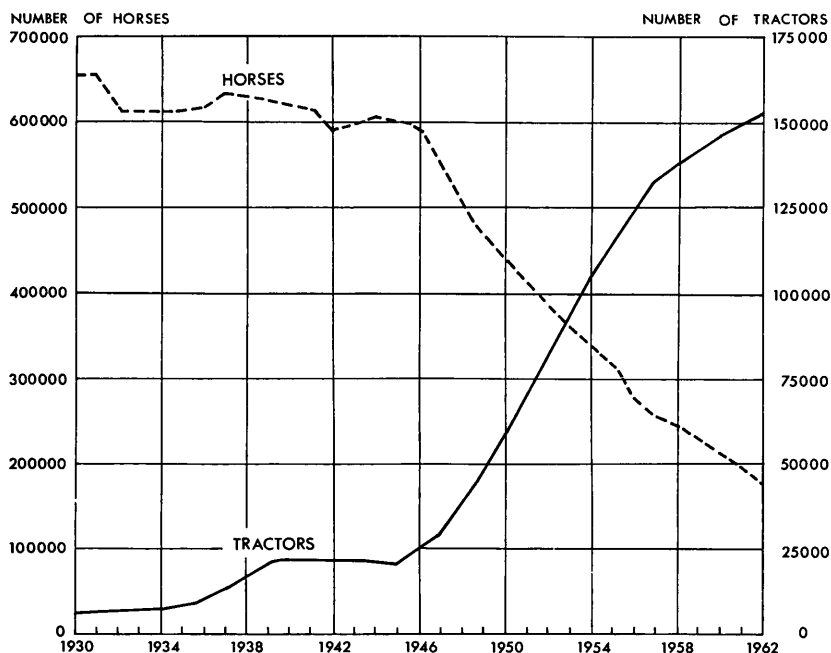


Diagram 11. Changes in the number of horses and tractors in agriculture 1930—62.

Source: *Meddelanden från jordbrukets utredningsinstitut* 2—63 p. 31.

4. Economic changes?

The economic pre-conditions for a productive forestry are primarily dependent on the long time of growth of forest trees. When a stand has been established it takes in Sweden 30—40 years for it to reach saleable dimensions and 80—120 years to reach the most valuable timber dimensions. This means that the stand gives no yield at all until after one generation and that it returns the investment only after two, perhaps even three generations. The capital invested is thus tied up in the forest for a very long time. This circumstances may of course be a restraint on forest planting and other silvicultural measures.

How much these long periods of waiting meant in people's calculations is indicated by the fact that silvicultural measures

had little effect on the market value of the forest land during the whole period under investigation. It was considered that basic improvements increased the value of the forest land by only about ten per cent of the costs invested and that the market price of woodland involved a considerable underestimate of the fellings that lay a generation in the future.¹⁷

The long time of growth of the trees also means that large and in themselves marketable supplies of timber must be allowed to stand, pending their economic maturity. To owners in need of liquid funds there must be a temptation to sell the forest in advance, that is to carry out fellings which in the long run are wrong from an economic point of view.

Productive forestry thus requires that the owner is in an economic position that enables him to take the positive measures and avoid the negative ones.

For forestry combined with agriculture there are a number of additional general features which affect the owner's financial position. The forest has to compete with agriculture for investments. The fact that agriculture generally came first was not only because of tradition but also because investments in agriculture yield a quicker return. A drained field yields a harvest after only a few years but drained woodland only after a generation. However, this aspect should not be over-emphasized since investments in forests often only consisted of work which the owner did himself whenever farming did not require his attention.

It is more serious that agriculture makes demands on access to liquid funds which can lead to premature felling. A large part of the new constructions and purchase of machinery on the farms was paid for by selling timber. The same was true of the sums which new owners had to pay for the farm. The farmers' representatives in particular often declared that the forest was necessary to pay for investments in agriculture.

Accordingly, it is probable that relatively marked changes in the forest owners' liquid resources also change their way of managing their forests. There are no direct data about development in this respect during the period investigated. However,

¹⁷ *SOU* 1940 nr. 3 p. 115. — KALLSTENIUS, "Diskonteringsfaktorn". *Skogen* 1955 p. 132.

there is some information about the size of farmers' debts measured as a percentage of their assets. Taken over all, their debts — with the exception of some short periods — have continued to increase during the whole period up to the end of the thirties. After that there was a notable improvement in the financial position of the farmers. From 1939 to 1950 the percentage of debts for farms with audited accounts fell from 32 % to 20 % on an average. The change was noticeable all over the country but was largest in the forest regions.¹⁸ It was this development that after the end of the war brought forth the economic conditions for a swift mechanization of farming;¹⁹ compare the development graph for the number of tractors in diagram 11.

Particularly important in this connection are the changes in timber prices. If timber prices rise the owner's debts turn out to be less pressing and if timber prices rise more than the general price level, smaller quantities of timber are needed than before in order to pay for an investment. A continuing rise in timber prices can also give rise to an increased interest in longer-term forest management.

The trend in timber prices during the period is illustrated in diagram 12 showing the prices for standing timber at the annual sales from state-owned forests. These give a good picture of the trend since they have been generally used as a guide for the sales from private forests. It is clear from the diagram that the nominal prices for standing timber up until the 1940's varied so much from year to year that it can hardly be called a rising trend. In the post-war years, on the other hand, there was an extremely rapid rise in prices which reached its climax in 1951, later declining somewhat. This picture of the trend becomes even clearer if the stumpage prices are re-calculated taking into account the changes in the value of money. However, it must be pointed out that the diagram does not reveal the shift from coarse timber dimensions to pulp wood which took place with

¹⁸ HJELM, *Studier i det svenska lantbrukets lönsamhetsutveckling under 1940-talet*. Skrifter från Jordbrukets utredningsinstitut 2, 1952, p. 93.

¹⁹ Cf. HOLMSTRÖM, "Produktionsmedelsindustrierna och jordbruket", In *Svenskt jordbruk och skogsbruk 1913—1962*, Minnesskrift utgiven av Kungl. Skogs- och lantbruksakademien, 1962, p. 200.

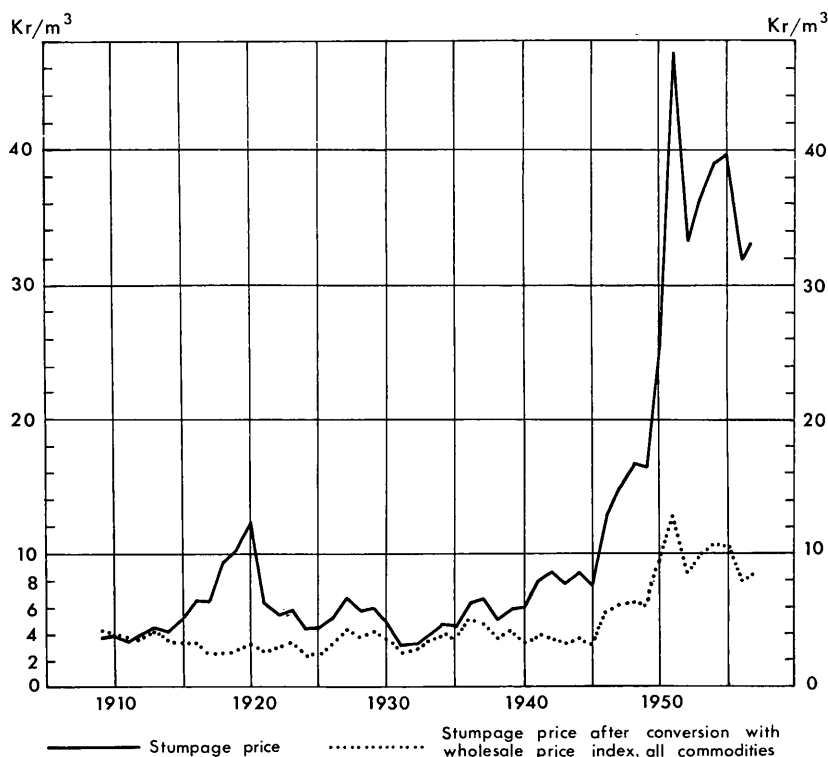


Diagram 12. Prices of stumpage sold from state forests.

Source: STREYFFERT, *Utvecklingstendenser beträffande rotvärden och priser på skogsprodukter*. Kungl. Skogshögskolans skrifter nr 33, 1960, p. 25.

the expansion of the pulp industry. If this is taken into account the picture is more favourable from the forest owners' point of view. This question will be discussed below.

Another important factor is the changes in labour wages for cutting and haulage. It is important because most of this work in the farm forests was done by the owner himself.²⁰ The changes may be seen in broad outline in the table below. It shows that there was no marked rise in this respect either until the mid-forties.

²⁰ *SOU* 1957 nr. 8 pp. 394 f.

Table 9. Real wages for cutters and teamsters. Index 1913/14=100.

Year	Northern Sweden	Southern Sweden
1913/14	100	100
1919/20	111	110
1924/25	90	83
1929/30	106	96
1934/35	98	92
1939/40	126	122
1944/45	159	160
1949/50	213	210
1954/55	303	315

Source: STREYFFERT, *Utvecklingstendenser beträffande rotvärden och priser på skogsprodukter*. Kungl. Skogshögskolans skrifter nr. 33, 1960, p. 87.

One condition for the economy of private forestry which has not yet been considered is the marketing possibilities for different kinds of timber. What changes have taken place in this respect during the period? An answer to this question is given in table 10 which, for the years preceding the forties, is based at times on very uncertain estimates.

It may be gathered from the table that both the total felling and the timber felling have undergone surprisingly small changes. The marked shift which has taken place concerns the consumption of small dimensions. The chance to utilize these in an economic manner is a pre-condition for a common practising of planned thinning. It is therefore important to study these tendencies more closely.

Table 10. Estimated annual felling. Millions of m³ solid volume under bark.

Year	Saw timber	Pulp wood	Other roundwood	Fuelwood	Total felling
1913	13.7	6.4	3.7	13.0	36.8
1927	12.9	10.7	3.3	11.2	38.1
1937	14.0	17.8	2.8	10.4	45.0
1945	9.5	10.3	1.6	27.5	48.9
1957	14.2	29.2	1.9	5.4	41.7

Source: STREYFFERT in *Svenskt jordbruk och skogsbruk 1913—62*, Minneskrift utgiven av Kungl. Skogs- och lantbruksakademien, 1962, p. 375.

The alterations have meant that the purchase of pulp wood has greatly increased during the period while the consumption of charcoal wood, fuelwood, and other small dimensions has greatly decreased. These are long-term trends. Between consecutive years there have often been considerable variations. Of the years listed in the table, 1937 was a boom year with a pronounced peak for pulp wood purchase and 1945 a year which was still affected by war conditions.

Even regionally, considerable shifts have occurred. The purchase of pulp wood was long confined to Norrland, Dalarna and Värmland. In other parts of the country the pulp industries were few and small and the purchases confined to their immediate surroundings. The small wood dimensions were used there for the sale of fuelwood to the cities and municipalities and in central Sweden for the production of charcoal. The demand for these products declined gradually, something which caused obvious difficulties for forest owners in the south and central parts of Sweden during the period 1925—35. From the mid-thirties these problems were solved by the rise of a pulp wood market covering the whole country.

It may be added that the production of saw timber increased gradually in southern Sweden and declined in the northernmost parts of the country in the last few decades.²¹ This shift came about because the natural forests in the north had been exploited to the full while the re-planted forests in the south had reached timber dimensions.

The rise in stumpage prices and the demand for pulp wood might in themselves just as well have resulted in premature fellings as in planned thinning.²² In fact both these tendencies emerged before the law of 1918 was introduced. Only when development led to a noticeable improvement in the economic situation of forest owners in general — a change which began to make itself felt at the end of the thirties — were there economic conditions favourable to planned forestry.

²¹ *SOU* 1963 nr. 63 p. 20.

²² See e.g. *Den norrländska förbudslagstiftningen och dess verkningar*, Betänkande, Stockholm 1913, p. 77.

5. Summary

The investigation in this chapter has dealt with the question of whether there have been any changes in the general environment of forest owners which may have influenced their way of managing their forests during the period 1905—60.

The social environment, the technical environment and the structure of the forestry holdings do not seem to have changed in any decisive way. Slight variations have occurred but these cannot be considered influential factors for various reasons.

On the other hand there was a pronounced improvement in the economic situation of forest owners during the period, mainly due to rising wages and stumpage prices, and better marketing possibilities for small dimensions. As has been pointed out before, this constitutes an important incitement to long-term forest management. However, this significant change only became noticeable at the end of the thirties to be increasingly intensified in the following decades. The behaviour changes studied on the other hand present an earlier and in other respects deviating process. This shows that it was not primarily economic changes that produced changes in behaviour.

Starting from the low interest rate in the official regeneration calculations (see Chap. IV, p. 107) one may make the reflection that forestry management would have had a different and more extensive course of development if the economic factors had been allowed to act uncontrolled.

The investigation stops at 1960. The general environmental factors are no longer constant in the same way after that. The 1960's are characterized by the forerunners of great changes in the field of forestry. The flight from the countryside has increased very sharply and has meant a more rapid closure of small farm holdings. It is calculated that the decrease in the number of farms is now in excess of 5,000 per year and that this development will accelerate further. The result is that areas are made available for enlarging the remaining holdings or for extension of large-scale forestry domains. By a new law of 1965 the legal prohibition against the acquisition of woodland by

industry has been repealed. Simultaneously, the purchasing activity of the state has tended to increase.

Furthermore, the sharp increase in costs for labour has resulted in efforts to mechanize forestry being intensified. As a basis for mechanized operation large woodland areas are needed. Private forest owners have therefore been forced to co-operate to an even larger extent. The number of forestry areas amounted to 291 on January 1st 1966, covering over 1.7 million hectares and 28,000 forest owners.

Last but not least, the 1960's have been the decade in which the effect of improved schooling for the vast majority of the people has first become noticeable in working life. At the same time the education in forestry for forest owners, formerly so neglected, has been highly developed. At bottom the changes in the sphere of education are perhaps the most important of all.

VIII. Conclusions

This investigation is not to be regarded only as a chapter in the history of the forests and forestry in Sweden. The main intention has been to make a contribution to the general question of the usefulness of laws in bringing about changes in society. This has been done by studying a concrete case, a concrete action over the years to change the behaviour of forest owners with the aid of legislation. This single study cannot of course provide a basis for general results. But it is intended to have a general importance in another way. It constitutes a test of the efficiency of the proposed model as an instrument for analysing processes of influence of this kind and it contains attempts to extend the model.

1. The concrete study

What were the reasons for the changes in the forest owners' behaviour illustrated in Chapter III?

During the whole period, 1905—60, there was a clear parallelism between the development of legislation and the development of improved forest management in private forests. Particularly striking is the abrupt increase in requisitions for marking trees for felling which occurred with the introduction of the 1918 law with its regulations on felling. However, this does not prove that the laws were the decisive cause of the changes in behaviour. Other factors may have been at work simultaneously and with greater effect. To clear up this question the development of conceivable factors outside the activities of legal authorities was examined. The result was as follows:

1. Political and social pressure intended to change the behaviour of forest owners was not applied until the 1950's, that is, in the last decade of the period.
2. Social or technical changes or changes in the structure of forestry holdings that may have affected behaviour were not found during the period.
3. From an economic point of view, there was an improvement in the forest owners' situation at the end of the 1930's; before then there were no lasting economic changes.

By a process of elimination, then, it might be established that during the greater part of the period investigated the activities of legal authorities have been the principal reason for changes in behaviour. But the pre-condition for this conclusion is that all other possibilities have been found, investigated and eliminated successfully.

The search for other possible factors of influence than those already discussed have only led to a doubtful point. From time to time one comes across the line of thought that changes in the forest owners' behaviour are connected with a change in their general attitudes, developed by influence from the industrial and urban cultural pattern. In former times, the country population tended to follow traditional patterns of action and avoided taking risks. Gradually, however, the value attached to economic efficiency by an urbanized and industrialized society and its favourable attitude to innovation spread to the countryside. In this way the diffusion of new felling methods and forest planting was furthered, just as the construction of forest roads and the separation between forest and pasture were.¹

It is thus a question of a change in the motives of forest owners. New aims and new methods of approach were encouraged by contact with the urban and industrial population. It is naturally almost impossible to find out if and when this change of attitude attained such an extent that it could generally affect behaviour.

¹ Cf. HAHTOLA, "The Impact of Social Change in Forestry". *Readings in Forest Economics* (Oslo 1969) and JÄRVELÄINEN, *Factors Influencing Silvicultural Activity*, Communicationes Instituti Forestalis Fenniae 73. 2 (Helsinki 1971) pp. 16—27.

This seems not to be assumed to have happened until after the end of the Second World War.

Since this possibility only applies to a minor part of the period investigated — a part that is characterized otherwise by changed background environment — it seems to have very little significance in this context. But it gives cause to reflect on matters of principle. General attitudes which spread from one field of activity to another do not do so automatically. It is not just that modernization and rationalization are in the air, independent of the social, technical and economic environment. The diffusion takes place by means of certain channels. And what channels may have been important in the present case? It may first be pointed out that the forestry laws which succeeded each other just expressed the new evaluations. Above all, however, the only possible channels — with sufficient permanence and force — seem to be educational programs, the personnel of the county forestry boards, and the forest owners' own organisations. All these have already been discussed. In fact, it is not a matter of a new, independent factor but of a way of thinking which is behind the influence processes already discussed and is diffused by them.

There is thus no reason to give up the conclusion that during the greater part of the period the activity of legal authorities was the basic reason for the behavioral changes in private forestry.

This does not mean that the part played by the laws is not open to doubt. The legal influence process has its formal point of departure in the laws but it may contain activities with extremely varied and sometimes almost non-existent connections with the law. The investigation shows this very clearly. In some cases, the field personnel in their work of influencing used the norms and sanctions of the law as pressures. In the majority of cases, however, the personnel avoided invoking the law; they worked with give-and-take methods and mutual understanding; they used the law simply as a vague internal framework in formulating appeals to forest owners.

As the laws, then, only had an internal use² there were three

² The laws may also have had importance as a kind of authorization for the field personnel, see p. 163 above.

circumstances that made the forestry programme effective in the field:

1. No organized resistance. This did not mean, however, that the programme as such was accepted by forest owners. There were several obstacles in the way: firstly, that the contents of the programme were vague and incomprehensible and secondly, that the programme was dressed in legal terms and therefore became compulsory. The legal form did not give the programme legitimacy but on the contrary impeded acceptance.

2. Good contact between the authorities and the forest owners. The programme was not accepted in its legal form, admittedly, but in the more concrete form it was given in the appeals and arguments of the field personnel. One condition necessary for this seems to have been that the law and legal sanctions were not invoked. The field personnel had to work with social pressures, particularly different kinds of reciprocity.

3. Financial opportunities for the forest owners to follow the programme. The measures requested did not involve any great cash outlay, mostly the owner's own work. In addition, the county forestry boards made contributions to the costs to a great extent.

It may be maintained that the work of influencing carried out by the field personnel struck a balance between the effort to attain definite changes in behaviour in individual cases and to create a general acceptance of the legal programme for forestry. The balance was determined from the start by the fact that the programme applied to a very large population group; that it demanded, psychologically speaking, a very considerable change in behaviour; that it was not accepted in the population group; nor could it mobilize active support among other population groups. The fact that personality differences, too, determined the balance has emerged from the investigation.

The efforts to create acceptance of the forestry programme were successful. On the basis of what has come to light in the material about the forest owners' reactions and those of their organisations, the development between the beginning and the end of the period may be summed up in the following table.

Acceptance of	1905	1960
The legislative system (source of norm) ..	+	+
Field personnel	$\pm$	+
The law	-	-
The pattern of behaviour	-	+

2. Supplementing the model

In Chapter II a sequential model was presented. Its purpose is to register important elements in the influence process and to state their temporal relation to each other. However, it gives only a rough frame for the analysis. Just how approximate is shown by the fact that the majority of the external elements recorded recur as chapter headings in the book.

The concrete study has provided a basis for a further development of the model. This might consist of

1. addition of items overlooked
2. differentiation of items.

1. The model perhaps gives the impression of describing a one-sided influence from the top layer of society down towards the individuals whose behaviour has been changed. The intention has been, however, that it should also express influences in the opposite direction. Several of these items are in fact of the kind that cover either influence from above or from below. The acceptance of legitimacy may thus be either positive or negative, it may be a matter of either positive or negative reactions to the influencing system or parts of it. The concrete study gave instances of the latter alternative. It is shown how consideration for the negative reactions of the forest owners affected the design of the legal programme and of the authorities' activity.

Organised resistance to influence from above is expressed in various group activities. This means that the influence emanating from the relevant reference group or from external groups may either converge on the official influences or diverge from them. The model is to be read in such a differentiated way that it brings to mind both alternatives. This should perhaps have been indicated more clearly.

The concrete study gives grounds for supplementing the model in one respect. It emerged that a legal programme may be set going not only by the authorities but also by educational institutions. This influence did not play a very important role during the period studied but there is no doubt that, later and in other cases, it is a very active factor.

2. Differentiation of individual items has mainly applied to the activities of the authorities in the preceding study. This item was divided up in the following way:

1. Drawing up courses of action
2. Contacts with those to be influenced:
 - 2.1. forms of contact
 - 2.2. appeals
 - 2.3. arguments
3. Formal decision-making.

Some of these sub-sections have been more highly specified in different variations.

Forms of contact:

- 2.1.1. Individual contacts
 - 2.1.1.1. direct close contacts
 - 2.1.1.2. direct long-distance contacts
 - 2.1.1.3. indirect contacts through an intermediary
- 2.1.2. Group contacts (same categories as in 2.1.1.)
- 2.1.3. Contacts via the mass media.

Appeals:

- 2.2.1. Formalized appeals, e.g. orders and reference to legal rules. They are stamped on the approach in general: formalized arguments, e.g. the threat of formal sanctions, and sometimes also demands for formalized confirmation of the appeal (written communications etc.)
- 2.2.2. Informal appeals, e.g. advice and persuasion. They are linked with informal and often very subtle rewards and counter-reactions.

Arguments:

- 2.3.1. Emphasis on actualizing new or latent aims
- 2.3.2. Emphasis on persuading people that the behaviour required better meets their manifest aims
- 2.3.3. Emphasis on rewards of the behaviour required
- 2.3.4. Emphasis on negative reactions to the old behaviour.

The last two types of argument, as appeared above, might with advantage be divided up into formalized and informal.

3. Implications for democratic leadership

The most fascinating thing about this investigation has been to follow the contrast between the bureaucratic and the democratic method of leadership. Some reflections on this subject therefore will conclude the book. In a bureaucratic and hierarchical society of the type represented by the states of the western world the method of leadership is overwhelmingly bureaucratic. It is exercised by means of legal orders and legal force. The leaders are isolated from those they are to lead and do not seriously concern themselves with their problems. The forestry laws and some of the forestry boards followed this model. But the fact that they were dealing with a large and politically important population group obliged most of the county forestry boards to change over to the democratic method. They led forest owners by informing them and convincing them. Their personnel were close to the people and helped them to solve their problems while at the same time they spread the new line of conduct in the forest.

Can it be assumed that the democratic method of leadership will gradually become more widely used? At the moment there is a great deal of talk about the direct participation of the people in the decision processes of the authorities. But the crucial obstacle to such social development surely lies in the very structure of society. As long as society is constructed as a hierarchy with sharp distinctions made between experts and laymen, as long as the people do not constitute a living unit but are dis-united by one-sided group interests, then the bureaucratic method of leadership will probably continue to dominate.

In the prevailing view, law and governmental force are identified. The law is regarded as a coercive measure. This investigation has shown that this need not be the case, that the law can fulfil quite different functions in society. The common view is correct only in so far as it constitutes an adequate description of what happens in societies with a wide gap between those who govern and those who are governed.

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Uppsala county	Per Stjernquist
Södermanland county	Göran Wendelhof
Östergötland county	Tomas Beckman
Jönköping county	Eva Bendz
Kronoberg county	Jan Nyberg
North Kalmar county	Per Stjernquist
South Kalmar county	" "
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