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Autor: Søndergaard Jensen, Frank / Elers Koch, Niels
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Measuring Forest Preferences of the Population – A Danish Approach¹

FRANK SØNDERGAARD JENSEN and NIELS ELMERS KOCH

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1. Survey methodology

Data acquisition has been carried out in two national interview-based surveys in 1977/78, which questioned 3087 persons representing the adult population. These two surveys were each conducted using their own methods:

- 1) the experimental method, based on postal questionnaires, and
- 2) the standard assessment method (STA-method), based on personal interviews conducted in the homes of selected persons.

1.1 Population and sampling technique

The Danish population must register births, marriages, deaths and changes of address. This provides an excellent sampling frame, with details of the name, age, sex, address, marital status and occupation of the Danish population (the Civil Register). For the survey, a systematic gross random sample consisting of 3087 individuals, born in the period 1900–1961, has been drawn from this sampling frame. Using stratified random sampling, the sample was distributed over the two surveys: a) the experimental method, and b) the STA-method (cf. Table 2).

1.2 Collection of responses by postal questionnaires (the experimental method)

In the experimental method, respondents assess 52 black-and-white photographs, which, taken in pairs or in groups, only differ in respect of a single factor. Moreover, a series of less ambiguous, well-defined subjects, which are only described verbally – a total of 100 verbal stimuli – are assessed. Assessment is carried out by each individual ranking seven randomly-selected photographs and seven randomly-selected verbal stimuli. The data collection was distributed over one year.

This method, which was developed by KOCH (1974, 1977a and 1977b), is distinguished by its experimental design and by its ability to be applied to many survey subjects. Since the representation of these subjects as photographs or as verbal stimuli has been chosen subjectively, the validity of the results can only be assessed with partial objectivity. The standard assessment method (STA-method) described in Section 1.3 has therefore been used to elucidate and check the results of the experimental method, as far as preferences for tree species and forest recreation facilities are concerned.

¹ Based on a paper given on 14th December 1998 as one of the Monday colloquiums of the Department of Forestry Sciences of the ETH in Zurich.

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1.2.1 Postal questionnaire

An attempt was made to increase the response percentage, through:

- 1) care in the formulation of the packet's physical appeal. The packets were mailed as letters in brown envelopes, with white address labels and the project logo printed in green;
- 2) care in the design of the verbal prompting to respond;
- 3) a stamped, addressed envelope for replies (white envelope, green printing);
- 4) a brief and simple questionnaire;
- 5) potential personal gain for respondents (lottery);
- 6) the use of up to three reminders, sent two, three and five weeks after the questionnaire.

1.2.2 Black-and-white photographs

The survey subjects that cannot be described sufficiently unambiguously and defined clearly in words are assessed on the basis of black-and-white photographs. The experimental method means that the photographs are considered in pairs or groups which, as far as possible, only differ in one single aspect, i.e. the aspect to be assessed. Thus, the photographs are grouped in «blocks», which were taken with the aim of direct mutual comparison (see Figure 1 for an example of such a «block»). Apart from this, all photographs can obviously be compared to each other, although conclusions must be drawn with greater care as a result of the less standardised conditions of recording the images. The photographs were taken by the authors (Koch). The authors consider the motifs chosen to be representative of the subjects to be assessed. This brings an element of subjectivity to the method. Unconscious affinities and antipathies may have had some impact on the choice of locality.

1.2.3 Verbal stimuli

A number of survey subjects have been assessed solely on the basis of verbal formulations, i.e. the so-called «verbal stimuli». This occurs when the subjects can be relatively unambiguously and clearly defined in words. Thus, it has been assumed that such stimuli as «A hare», «A cyclist» and «A family walking in the forest with their dog on a leash» are familiar stimuli, which are perceived relatively unambiguously by all of the interviewees. Certain survey subjects have been assessed on the basis of a photograph and a verbal stimulus (e.g. a bench, a horseman, a fence around some young trees, etc.). This makes it possible to perform mutual checks on the two methods. In most cases – but not as obviously as in the case of the photographs – the verbal stimuli were designed according to the experimental method: they belong in a «block» of stimuli that deviate only with respect to a single factor, i.e. that which is to be assessed. We sought the assessment of a total of 100 verbal stimuli.

1.3 Collection of responses by personal interviews (the standard assessment method – STA-method)

The reason for using the standard assessment method (STA-method) is to elaborate on and check the results given by the

experimental method, as far as preference for tree species and forest recreation facilities is concerned. In this case, the disadvantages of the experimental method are that the individual subjects are only represented by a few black-and-white photographs (and/or verbal stimuli), and the recording locality (or design of the verbal stimuli) was determined subjectively. Use of the STA-method cancels these disadvantages.

In this method, 216 persons representing the population have been shown 80 colour slides, to which they were asked to assign points. From the standpoint of recording locality, these images were selected at random (based on UTM co-ordinates) from the set of possible images that can be obtained in four types of landscape: deciduous forest, coniferous forest, the countryside and forest with recreation facilities. With regard to the time of recording, one set of images was photographed at different times during the winter half of the year (defined in this context as from the end of defoliation until the full growth of new leaves), and the other set, during the summer half of the year. Each type of landscape is thus represented by 20 slides taken in the winter and 20 taken in the summer. However, the special spring and autumn colours of deciduous forests are not specifically represented in the survey.

1.3.1 Interview form

With the exception of questions associated with the STA-method, the form used for the interviews was largely identical to the postal questionnaire, which was used in the experimental method. The questions of the interview form were read out by the interviewer, who also filled in the form.

1.3.2 Display of slides and interviewing

The slides were shown in conjunction with the personal interview at the interviewee's home. The interviewees operated the projector for themselves, thus determining the time for which they could view each slide. The slides were shown to each respondent in a random sequence to prevent the sequence from influencing the assessment of each individual picture. The respondents awarded a score (on a scale of 1 to 10) to each slide. Instructions on how to award the score were given in the form of a slide (one or only a few points, if the interviewee did not like the type of countryside or woodland environment shown in the photograph and more points, if he or she liked the type of countryside or woodland environment).

1.3.3 Stability of opinion

In order to study the extent to which it is possible to influence preferences for deciduous/coniferous forest, the respon-

dents were exposed to the following five propaganda, i.e. factual propaganda for deciduous, factual propaganda for coniferous, emotional propaganda for deciduous, emotional propaganda for coniferous and no propaganda. Propaganda was achieved by showing a slide with one of the texts shown in *Table 1*.

Table 1: The various propaganda tested to see the effect on preferences for deciduous/coniferous forest.

General opening:	The reason for this awarding of points is that we want to know how highly...
Factual for deciduous:	...you appreciate stands of deciduous trees, which, among other things, provide this country with wood for furniture.
Emotional for deciduous:	...you appreciate Denmark's national tree, the beech, which is about to be replaced by other tree species.
Factual for coniferous:	...you appreciate stands of conifers, which, among other things, provide this country with timber for house building.
Emotional for coniferous:	...you appreciate stands of spruce, which play a decisive part in providing Denmark with Christmas trees and timber and, thus, in improving the employment situation and balance of payments.

1.4 Sources of error

Errors of different types are associated with this type of survey:

- 1) sampling error;
- 2) non-response error;
- 3) measurement error;
- 4) errors due to coding, editing and tabulating.

1.4.1 Sampling error

This type of error can be calculated objectively. Since the probability of participation in the survey was known in advance for all persons in the defined population, it is possible to calculate the uncertainty that would be introduced by considering only a single sample out of a large number of possible samples. The sampling error can be used to predict the precision (confidence interval) with which the chosen sample reflects the average result of all possible samples. Thus, if a frequency (percentage) is found in the sample used, the corresponding mean of all possible samples can be predicted with 95% confidence to lie within an interval of four times the sampling error, distributed symmetrically around the frequency that was found in the sample used.

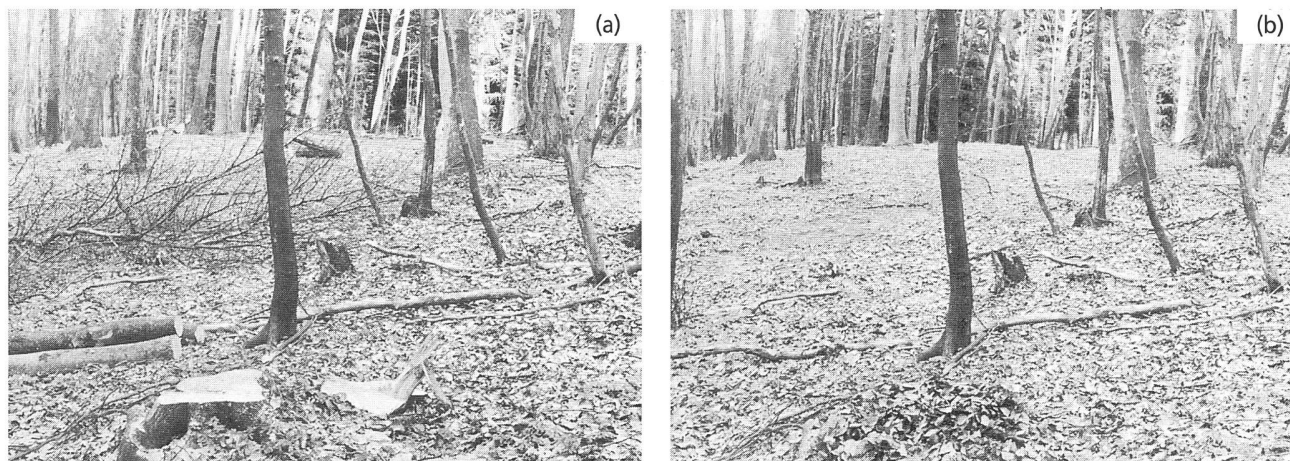


Figure 1: An example of a «block» of photographs from the experimental method: Beech forest with (a) and without (b) logs and branches.

The absolute sampling error of the two surveys can be assumed with 95% confidence to be better than $\pm 2\%$ of the frequencies found, as far as the experimental method is concerned, and $\pm 10\%$, for the STA-method (cf. KOCH 1978, pp. 303 and 364 f).

1.4.2 Non-response error

Non-response can be subdivided into two types:

- 1) Interview non-response, which occurs when the respondent fails to respond to the interview in its entirety;
- 2) Partial non-response, which occurs when the respondent fails to respond, or responds incorrectly/incomprehensibly, to one or more questions.

With regard to willingness and/or ability to respond, the persons who fail to respond differ markedly from the respondents. Non-respondents must therefore be assumed to differ from respondents, from the standpoint of the conditions studied. This error source is often the cause of significant systematic errors in interview-based surveys. This is why great care was taken to derive an answer from the chosen sample. The non-response percentages of the two surveys, and thus the response percentages, are shown in *Table 2*. The response percentages that were attained are considered satisfactory. The high response percentages are without any doubt due to a combination of various factors, including the subject of the surveys.

To determine whether or not non-response destroys the representativeness of the samples, the distribution of all respondents over the most vital grouping factors has been compared to the distribution of the population. As it has not been possible to discern any significant differences, it has been assumed that the respondents (the realised sample) represent the defined population.

Non-response error achieves its maximum effect when all of the persons who fail to respond to a particular question diverge dramatically in a single, identical aspect from the persons who respond. Thus, interview non-response can cause a maximum – and quite unlikely – absolute error of 10,6% in the frequencies found by the experimental method and of 12,1% in the frequencies found by the STA-method.

Table 2: Response percentages of the two surveys.

Gross random sample		3087
Reduction of the population by death and emigration before distribution of surveys		45
Net random sample (I)		3042
	experimental	STA
Distribution of two surveys	2826	216
Reduction of the population by death and emigration before contact	6	1
Net random sample (II)	2820	215
Number of non-respondents	300	26
Number of respondents	2520	189
Response percentage	89,4%	87,9%

For any given question, the total non-response is equal to the interview non-response plus any missing responses to that question, i.e. the so-called partial non-response. The partial non-response was extremely small for all questions in the survey – and often equal to zero in the case of the STA-method. With regard to the primary questions of the experimental method, the total non-response was 13,7%, whereas the total non-response for the primary questions of the STA-method were calculated to be 14,0%.

1.4.3 Measurement method error

The type of information can constitute a major source of systematic measurement error, since the response of the interviewee can be consciously or unconsciously biased.

Information on the external status of interviewees – in the case of the two surveys, for instance, their sex, age, occupation, place of residence and the availability of certain goods in the home, should be considered to be relatively precise, as the interviewee would often be aware of the possibility of a check. Moreover, much of this information is derived from the civil register, which is considered to contain very few errors.

The situation is quite different where information on behaviour is concerned. In the two surveys, this information concerned the following topics: date of latest visit to the forest, choice of forest area, activity in forest, duration of visit, duration, means and length of transportation, size of group and whether or not the interviewee is a horseman, hunter or jogger. Where these circumstances are concerned, the following errors can occur:

- 1) difficulty in defining a specific type of behaviour in the questions;
- 2) defects in the interviewee's memory and/or a need to generalise and idealise (including exaggeration or strategic responses);
- 3) limited opportunities for checking, of which we must assume that the interviewee is aware.

The risk of generalisation in connection with the information on behaviour is limited, since information on the latest visit to the forest is requested. Requirements on the memory of the interviewee are also low since only about a quarter of these forest visits took place more than two months earlier. The risks of idealisation and misunderstanding cannot be precluded.

It is even more difficult to obtain information on preferences with high precision as only the interviewee is able to supply the required information. Furthermore, it is difficult to differentiate objectively between a considered opinion and an opinion adopted in haste. Finally, as far as this information is concerned, there is considerable risk of generalisation, idealisation and strategic responses.

Only one type of information is more difficult to collect than information on preferences, that being information on the causes and motivations that underlie an action or preference. Such information has not been collected in these two surveys. This is not because it would be uninteresting to know the motivations for a given preference, but because it was considered too difficult to collect reliable, valid information on the causes and motivations underlying an action or preference.

As far as the experimental method is concerned, measuring errors can also be caused because an individual other than the selected interviewee has filled in the questionnaire.

With the STA-method, measuring errors can also be due to the interviewer effect. This effect should be understood as the bias which the interviewer consciously or unconsciously introduces into the process of collecting data. We can differentiate between: (1) selection error (another person is interviewed instead of the chosen interviewee); (2) «question» error (the question is ignored, asked incorrectly and/or pretentiously) and (3) recording error (especially in connection with open questions). Similarly, it has been shown that responses can depend on the interviewer's: (1) appearance (e.g. sex, age, race, dress, language and behaviour), (2) ideology (e.g. political, economic, social and religious attitudes) and (3) expectations (cf. KOCH 1977a, p. 51, and BRADBURN 1983, p. 310 ff.).

We have attempted to limit the interview effect by careful instruction of the interviewers and by allocating interviewees to each interviewer at random, similarly distributed over the seasons (summer and winter) and regions (West Jutland, Copenhagen and the rest of Denmark). Nevertheless, it was possible to discern a significant interviewer effect in six of the 14 comparisons of pairs of different types of landscape that were carried out according to the STA-method. Since the differences are small and are not of a systematic nature, this source of error was considered to be of only minor significance, even though the reason for it is not known.

Where measurement errors are concerned, it is generally impossible to quantify in an objective manner. It is only possible to estimate their trend and magnitude. We have attempted to minimise measurement errors by careful design of the questionnaire and interview form, by careful instruction of the two interviewers and, as far as possible, by trying to avoid any direct influence on the collecting of data. Moreover, several different survey methods were used to facilitate mutual checking and, in the case of the experimental method, several control questions were built into its design. A number of validity tests have therefore been implemented, e.g. criterion-related validity (predictive- and concurrent-validity), content-validity and construct-validity (KOCH & JENSEN 1988, p. 405 ff.). Due to these precautions, we conclude that the surveys are not generally encumbered by large measurement errors.

2. Results

A selection of the population's mean assessments is reviewed below. If a landscape manager merely wishes to satisfy the «average man», he will only satisfy a few people; whereas a wide range of alternatives, which is in harmony with the surroundings and the differing desires of visitors, can satisfy far more people. That is why the surveys include results for a series of different population groups, including results relating to the regional and seasonal variation of the public's preferences, as well as results for different types of forest visitor, (cf. KOCH & JENSEN 1988, Appendix B).

Bearing these general reservations in mind, a selection of the results is presented below, grouped according to the character of the stimuli that can be expected to influence the quality of people's recreational activities.

2.1 Environment-related influences

In this context, environment-related influences are those influences over which the landscape manager normally has no control (e.g. aircraft noise and climate). This group of subjects has only been surveyed through a single verbal stimulus: «Tranquillity». We consider it remarkable that this stimulus attained the highest mean assessment of all of the 100 verbal stimuli used. The interpretation of this result is, however, complex: it can hardly be merely a question of physical silence; is not, for instance, the song of a bird consistent with «tranquillity»? Does this result perhaps actually say more about an important reason for forest visits than could be revealed by several more direct questions? – though our understanding of the concept of «tranquillity» naturally varies, for instance, from person to person, from place to place and from time to time.

2.2 Management-related influences

In this context, management-related influences are influences over which the landscape manager can exercise direct control, since the main emphasis is on the different problems encountered in forest management.

1) Nature in general: according to the mean opinion, the forest is preferred to the countryside in the winter. This result applies, regardless of whether we consider deciduous forest, coniferous forest or a forest that has facilities for forest recreation. In the summer – and once again on the basis of the mean opinion – deciduous forest is preferred to the countryside, there is no significant difference between the ranking of a forest with facilities for forest recreation and the countryside, whereas the countryside ranks higher in preference than coniferous forest. We must again stress the fact that this is a question of mean opinions, based on the assessment by a representative sample of the population (16-77 years of age) of 20 objectively selected colour slides representing the four types of landscape, in summer and winter alike (the STA-method).

A lake and watercourse are extremely popular landscape elements in the forest, more popular than a bog. Three alternatives, which a landscape manager can choose between for a small wetland in a forest, have been studied using black-and-white photographs (the experimental method): natural overgrowing, preservation or establishment of a forest lake or draining and planting with ash trees. The public considers a forest lake to be by far the best alternative, followed by an overgrowing bog, which is preferred to a bog planted with ash.

Mammals and birds are especially popular when encountered in the forest, whereas «Mosquitoes» are – not unexpectedly – unpopular. «A roe-deer» attained the second highest ranking of all of the 100 verbal stimuli used – surpassed only by «Tranquillity». Similarly, a black-and-white photograph, showing a road through a coniferous forest, in which a roe-deer can be seen – although not very clearly – on the right-hand side of the picture, received the highest ranking of all 52 black-and-white photographs, whereas precisely the same photograph – but without the roe-deer – only ranked as 15th in the public's mean assessment.

2) Choice of tree species is, of course, one of the most important decisions in forestry. The public's assessment of this question has therefore been studied relatively thoroughly, on the basis of black-and-white photographs (the experimental method) and colour slides (the STA-method). According to the mean opinion, the public prefers deciduous forest to coniferous forest, summer and winter alike. However, the difference is less apparent in the winter, and people living, for instance, in West Jutland, have no particular preference for deciduous forest over coniferous forest in the winter. The public's preferences for deciduous/coniferous forests can also be influenced by promotion (propaganda), even though the forms of promotion tested did not cause any direct alteration in the direction of this preference.

3) Similarly, according to the mean opinion, and on the basis of colour slides, we have ascertained that the public prefers beech forest to other deciduous forest (which in this case applies to all trees except beech), summer and winter alike. Moreover, beech and Norway spruce have been directly compared using five pairs of black-and-white photographs, where the two tree species have been compared at different ages, also for both summer and winter. We can say that, according to its mean opinion, the public prefers beech to Norway spruce.

4) Regeneration, formation and tending of stands: by and large, this review of the results follows operations, from the planting of trees, until they lie as logs beside the forest road.

- Planting distance: in Norway spruce (eight years after planting), a large planting distance (2,25 x 2,25 m) is preferred to a small planting distance (1,25 x 1,25 m).

- Weeding of cultures with chemicals is considered to be less acceptable than with a scythe.
 - Fencing of cultures is a relatively acceptable measure, once people understand or have been informed of the purpose, i.e. to protect certain young trees against deer.
 - Fertilisation is considered to be a significantly more acceptable measure than chemical weeding.
 - Level of mechanisation: the public's general assessment is unambiguous; the less mechanisation in the forest, the better. For instance, a horse is preferred to a tractor for logging timber.
 - Method of thinning: the public prefers selective thinning to thinning by rows.
 - Degree of thinning: the public prefers vigorous thinning.
 - Logs and branches on the forest floor lower the public's ranking (cf. *Figure 1*). This result does not support the myth which asserts that «the public prefers to see forestry at work». This myth also conflicts with the public's general attitudes to mechanisation in the forest and to several operations associated with the regeneration, formation and tending of stands. We must assert that the public prefers certain results achieved by forestry at work.
 - Dead trees: according to the mean assessment of the public, a beech forest without a dead tree is preferred. Are dead trees perhaps too reminiscent of death, decay and destruction and/or chaos? This result agrees with earlier Danish surveys, as well as several foreign surveys, and indicates that the population as a whole has less understanding of the biological significance of dead trees than it has aesthetic/emotional aversion to them.
 - Logs and branches piled beside a forest road have neither a positive nor negative influence on the public's mean assessment.
- 5) Facilities for forest recreation: one general methodological difficulty when assessing the public's preferences for facilities for forest recreation is that the assessment of such facilities could have been based more on aesthetic criteria than functional criteria. However, the weights attached by respondents to the different assessment criteria have not been studied, as the methods needed for such surveys are complicated, resource-intensive and uncertain. If this hypothesis is correct, it leads to a systematically lower assessment of photographs that show facilities for forest recreation in comparison with photographs from which such facilities are absent. This circumstance should be borne in mind when assessing the results below.
- General: according to the mean opinion the public prefers forests without facilities for forest recreation, summer and winter alike (the STA-method).
 - Parking areas: not unexpectedly, the public prefers small parking areas in the forest; the smaller the better.
 - Paths: we can similarly assert that the less specialised and alien to the forest a path is, the more it was preferred by the public. The order of ranking, exercise track – bridle path – cycle path, conforms relatively well to the public's mean assessment of encountering the three types of forest visitor, jogger – horseman – cyclist. And one direct finding is that the public prefers a forest without an exercise track with obstacles.
 - Other structures for visitors have been studied using 14 verbal stimuli. The general impression given by the results agrees with the above conclusions: the less alien a structure is in the forest, the more it is preferred by the public as a whole. Thus, we find it remarkable that, for instance, «A fireplace with fire-wood», «A toilet» and «A playground with see-saws and swings» only ranked as 62nd to

66th out of the 100 verbal stimuli. On the other hand, «A wooden bridge across a cleft/ravine», «A bench» and «A shack (shelter) where you may seek shelter» received relatively high rankings.

- Nature interpretation is a subject that has been studied less intensively than is considered desirable today. More generally – and not unexpectedly – it can be asserted that information on why a given measure has been implemented can make that measure more acceptable.

- 6) Hunting and management of wildlife: as mentioned above, sighting game in the forest received an extremely high ranking. On the other hand, meeting a hunter in the forest is not popular. According to the public's mean assessment, only motorists and moped riders are less popular forest visitors than hunters.

2.3 Influences related to recreational use

Influences related to recreational use denotes the influence of other forest visitors on the quality of a visit to the forest, including the extent of any annoying/harmful behaviour and the rules imposed for limiting such behaviour. The following results have been obtained on the public's assessment of these influences:

- 1) Numbers of forest visitors: not unexpectedly, it can be asserted that the fewer forest visitors encountered on a walk in the forest, the higher the perceived overall quality of the visit. 28 verbal stimuli were used to study seven types of forest visitor: families in the forest, horsemen, joggers, cyclists, hunters, motorists and moped riders; each type in the following numbers: 1, 2, 5 and 10. For all types of visitor, the general public's mean assessment dropped as the number increased. In particular and as far as most types of visitor are concerned, the increase from 2 to 5 resulted in a marked drop in the public's mean assessment, whereas an increase from 1 to 2 or 5 to 10 had less influence.
- 2) Types of forest visitor: the types of forest visitor studied can be split into three groups according to the public's mean assessment of whom it prefers to meet in the forest: (1) the group that ranked highest, consisting of families in the forest, horsemen and joggers, (2) an intermediate group consisting of cyclists and hunters, and (3) the group that ranked lowest, consisting of motorists and moped riders. It is hardly surprising that major differences can be discerned as regards the preferences of different groups of the public. There is generally more approval of the type of forest visitor to which a given group of the public feels most «related», and considerably less approval of all others. According to the public's mean assessment, «A motorist» and «A moped rider» ranked lower than the other types of forest visitor studied – regardless of their number (from 1 to 10) and including «10 hunters». This result agrees with the general conclusion, i.e. that the public desires as little mechanisation as possible in the forest, and that «Tranquillity» received the highest ranking of all of the verbal stimuli used, whereas «10 moped riders» was the verbal stimulus that ranked lowest.
- 3) Annoying/harmful behaviour, by which is meant the forms of behaviour that are regulated/prohibited in the various rules governing public access and visits to forests. The following results have been obtained on the public's assessment of this subject:
 - In general, it can be said that the public's overall ranking of annoying/harmful behaviour is very low. This could be interpreted as an expression of a general acceptance by the population of the rules governing public access and

visits to forests; but it could also be due to knowledge of these rules in combination with a desire to adapt the response to the receiver (an idealised/strategic response).

- The use of different types of transport in the forest: in conformity with the rules on public access to the forest, the public as a whole gave a very low ranking to encounters with motor vehicles (cars and mopeds); cycling is ranked more highly, although not as highly as riding a horse or walking.
- Walking in the forest with a dog off the leash generally received a low ranking; neither did «An area where dogs may run free» receive a particularly high ranking from the public as a whole. There is however far from general agreement among the public over walking with a dog off the leash in the forest: the standard deviation of all the stimuli relating to this subject was very large.
- Major outdoor events are not generally appreciated by the public. The general impression given by the results agrees with earlier conclusions, i.e. the less annoying and alien an event is to the forest, the better it can be accepted by the general public.
- Actual damage to the forest and its trees has only been studied to a very limited extent. Generally, the public – and young women especially – considered the carving of names on trees to be relatively acceptable behaviour, whereas it was considered less acceptable to break a branch off a tree.

Summary

This paper is based on the report entitled «Forest recreation in Denmark» by KOCH and JENSEN (1988). The authors discuss the concept and the interest of preference measurements. The paper describes how the preference surveys developed at the Danish Forest and Landscape Research Institute are implemented. Two national interview-based surveys covering 3087 persons were carried out in 1977–78. The first survey used the «experimental method» based on postal questionnaires. Respondents assessed 52 black-and-white photographs considered in pairs, and 100 verbal stimuli. The second survey used the «standard assessment method». 216 persons were shown 80 colour slides photographed at different seasons. Processing and analysis of data, sources of errors and main outcomes are discussed.

Zusammenfassung

Präferenzmessungen der Bevölkerung zum Wald – eine Erfahrung aus Dänemark

Dieser Beitrag basiert auf einem Artikel von KOCH und JENSEN (1988) unter dem Titel «Erholungsnutzung im dänischen Wald». Die Autoren diskutieren über Interesse und Konzept von Präferenzmessungen. Im Artikel geht es um zwei Befragungen, die durch die Dänische Forschungsanstalt für Wald und Landschaft in den Jahren 1977–78 bei insgesamt 3087 Personen durchgeführt wurden. Die erste Umfrage bedient sich der sogenannten «Experimentalmethode». Die Fragebogen wurden per Post zugesandt. Die Befragten mussten dabei 52 Schwarz-Weiss-Fotos beurteilen, die jeweils paarweise vorlagen und sich in einem Detail unterschieden. Dazu waren 100 Fragen zu beantworten. Die zweite Umfrage verwendete die «Standard-Beurteilungs-Methode». Die 216 Befragten wurden mit insgesamt 80 zu verschiedenen Jahreszeiten aufgenommenen Farbdias konfrontiert. Es wird auf den genauen Ablauf, die Datenanalyse, Fehlerquellen und Hauptresultate der beiden Erhebungen eingegangen.

Résumé

Etudes des préférences de la population envers la forêt – une approche danoise

Cet article s'appuie sur le rapport «La fréquentation des forêts au Danemark» rédigé par KOCH et JENSEN (1988). Les auteurs discutent le concept et l'intérêt des études sur les préférences. L'article décrit les enquêtes sur les préférences réalisées au Centre danois de recherche sur la forêt et le paysage. Deux enquêtes nationales ont été réalisées en 1977–78 auprès de 3087 personnes. La première enquête utilise la «méthode expérimentale» basée sur un questionnaire diffusé par voie postale. Les personnes interrogées évaluent 52 photographies en noir et blanc présentées par paires, et répondent à 100 questions. La seconde enquête utilise la «méthode d'évaluation standard». 216 personnes ont visionné 80 diapositives en couleurs photographiées à différentes saisons. Le traitement et l'analyse des données, les sources d'erreur et les principaux résultats sont discutés.

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Authors:

Dr. FRANK SØNDERGAARD JENSEN and Prof. Dr. NIELS ELSERS KOCH, Danish Forest and Landscape Research Institute, Hoersholm Kongevej 11, DK-2970 Hoersholm, Denmark.