wetenschappelijk onderzoek- en documentatie centrum

analysing evaluative research

WODC

ministerie van justitie

ANALYSING EVALUATIVE RESEARCH

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1.0. Introduction

Countries throughout the world are developing in such a way that society is becoming more and more complicated and complex. One result of these developments is that the government's part in regulating the life of the community is constantly becoming more important. Innumerable measures have to be taken. These give rise to important questions, such as : how well do these measures serve their purpose; what undesirable side-effects do they produce; what do all these efforts cost, and what do they achieve? This knowledge can only be obtained by continual scientific evaluation of the government's policy. The primary purpose of scientific evaluative research must be to reveal whether a measure which has been taken or is being considered is effective. Such research also has to show in what circumstances the measure is effective and whether it works on everyone, on a certain target group, or on certain persons in certain situations.

Analysing policy, however, is not the only valuable aspect of evaluative research. As a scientist the researcher will also want to know why certain measures are effective and others are not. The answers to these questions why are also of scientific and theoretical significance, since they will provide material for or against existing scientific theories.

This paper confines itself to the present state of affairs in one section of government activity. It deals with research into the effectiveness of government measures which are designed to control undesirable behaviour. Here the government chiefly makes use of penal sanctions to achieve its purpose. The subject of this paper is further limited by the fact that it only deals with research into the primary preventive effect of measures. 1)

1) By primary prevention we mean that measures are aimed at persons who may possibly start behaving undesirably.
Secondary prevention, on the other hand, is concerned with measures aimed at persons who have already behaved undesirably (preventing recidivism.).

This paper consists of three sections. The first will be about the present state of evaluative research. The second section will go into the reasons why evaluative research in the field of primary prevention has dropped behind both in quantity and quality. The last section will suggest a number of ways in which evaluative research can be improved.

2.0. The present situation

2.1. Incidence of evaluative research

At the beginning of this year the Research and Documentation Centre of the Ministry of Justice in the Netherlands carried out a literature survey to discover how much empirically tested knowledge there was about the primary preventive effect of measures. The survey was not restricted to the effect of penal measures. Other measures were also considered and their effect examined, provided they were connected with the prevention of criminal behaviour.

The chief aim of the literature survey was to make an inventory of research which evaluated by empirical means the effect of primary preventive measures. Defined in this way, the field was so wide that it had to be narrowed down in two respects : firstly, by limiting the sources consulted, and secondly, by dealing with publications that had recently appeared. Appendix I gives the sources that were consulted. We concentrated our search mainly on the years 1970 to 1974 inclusive. But the survey was not confined to research done within this period. Other research was included if our attention was drawn to it by literature references.

Forty-six research projects in all were found. This number does not of course, represent the actual number of projects in this field. There are various reasons for this. Firstly, it was impossible to acquire in time all the literature we tracked down. Secondly, some of the reports we did acquire in time proved unsuitable for our purpose. Finally, we were restricted by the number of aspects we selected in the literature (see Appendix I), which meant we could not examine all regions of deviant behaviour in equal depth. This applied in particular to traffic offences.

In spite of these restrictions, the general conclusion is that the quantity of research into the primary preventive effect of measures is small. This is certainly the case if one remembers how extensive the spectrum of undesirable behaviour is which the government takes measures to control.

2.2. Subject of evaluative research

The studies we found may be arranged in two ways. We can look at the sort of measures under consideration, or at the type of behaviour which was the subject of the study. In this paragraph these two aspects will first be developed separately; this will be followed by a survey arranging the studies according to these aspects.

Measures against delinquent behaviour may be divided into two groups. There are measures designed to control delinquent behaviour:

1) directly and
2) indirectly.

The group of measures aimed directly at delinquent behaviour may be subdivided into:

A. Measures that in one way or another make delinquent behaviour unattractive. This can be done by prohibiting it, morally censuring it, pointing out its bad effects, or attaching negative results to it. This is chiefly the field of penal measures;

B. Measures that make delinquent behaviour practically impossible, or more difficult, or remove the reward connected with it. Some examples of this are prevention by means of technical devices such as burglar alarm systems and surveillance by closed TV circuits.

C. Measures that reduce the delinquent nature of the behaviour by ceasing to label it "undesirable". This belongs to the field of decriminalisation.

We shall not subdivide the group of measures designed to control indirectly the occurrence of delinquent behaviour. These are measures offering alternatives for delinquent behaviour, making these alternatives more attractive or more attainable. Supplying public transport at night to prevent drunken driving, or providing recreational facilities to prevent vandalism are two such measures.

Delinquent behaviour may be divided into the following main groups :

1. Traditional criminal behaviour, such as crimes against the person and offences against property;
2. Behaviour that has more recently been declared an offence, its penal nature having been set out in modern criminal law which has developed as an accompaniment to the affluent society.

Traditional criminal behaviour may be divided into two categories:

A. Traditional criminality which is characterised by the fact that others than the perpetrator suffer harm. These forms of behaviour are regarded as crimes in most countries. Crimes against the person, offences against property, vandalism etc.come under this category.

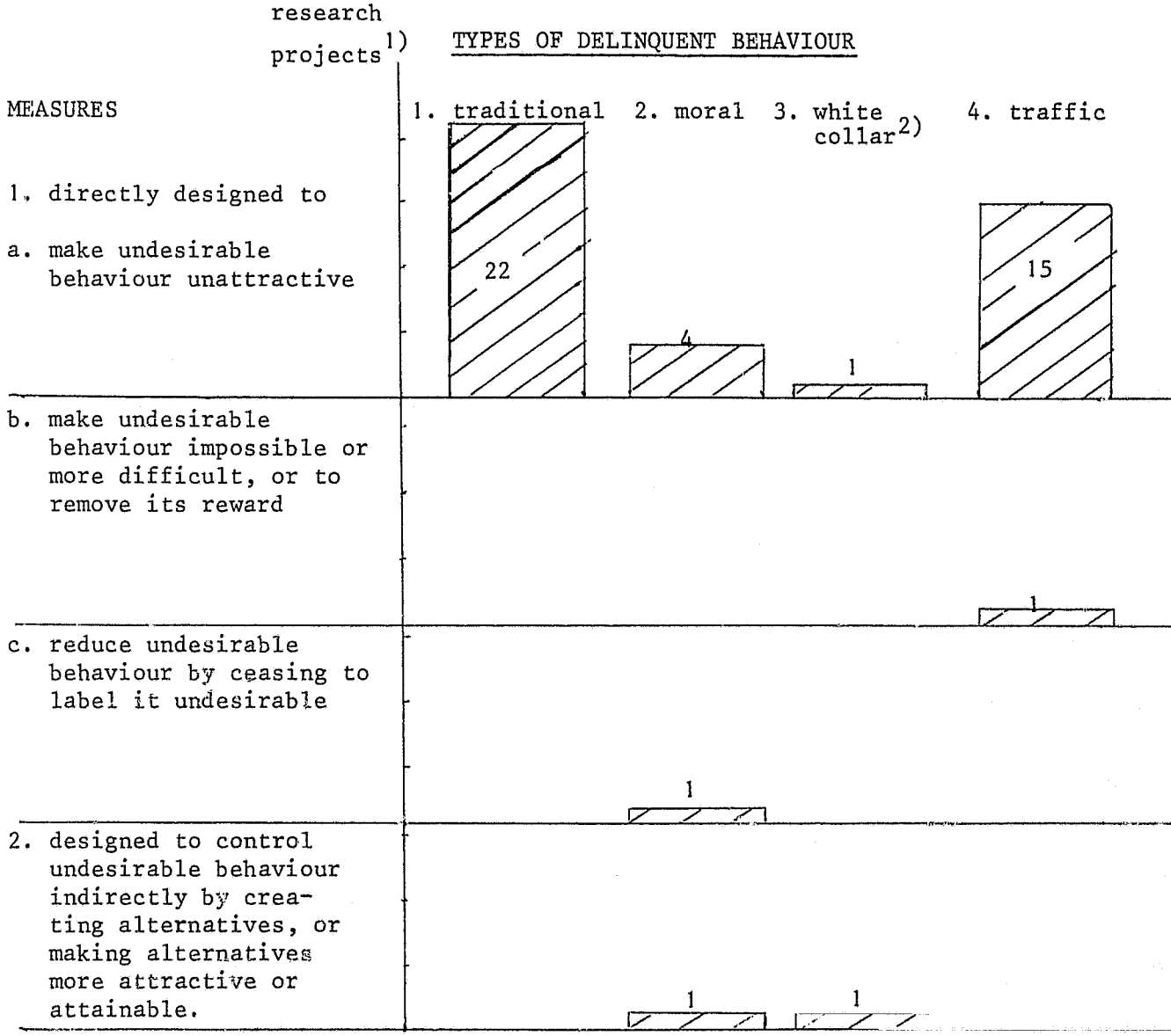
B. Moral criminality, where at most the offender himself is the one to suffer. Whether these acts are regarded as offences varies from one country to another. This group included sexual offences, illegal gambling, abortion, use of drugs etc.

Behaviour that has been more recently declared an offence may be divided according to the sort of law that has been broken:

A. The contravention of economic, fiscal or environmental regulations, often called white-collar criminality.

B. The contravention of traffic regulations.

In the following plan studies are divided according to types of measures and sorts of behaviour.



1) This table actually covers 43 projects, 2 of the projects concerned 2 different measures, and 1 study dealt with 2 behaviour areas. There were 3 projects which were impossible to classify, either because they fell outside the above behaviour areas or because they were not related to any particular measure.

2) These include only economic, fiscal and environmental offences.

This gives a clear enough picture. In the first place it is obvious that researchers have concentrated almost exclusively on measures which make delinquent behaviour unattractive in one way or another.They have been primarily concerned with so-called repressive measures. It is also evident that not all forms of delinquent behaviour have been studied in equal depth. The emphasis has been on traditional criminality and traffic offences. There have been hardly any studies in the field of economic and environmental law and tax evasion.

2.3. Quality of evaluative research

Evaluative research must satisfy certain methodological demands. Some of the main requirements are:

1. The measure evaluated must be capable of being put into proper effect. In this connection it is also very important to ascertain that the population at risk a) is aware that the measure exists and b) knows what it is about. It still happens too often that the people concerned are ill-informed about measures that are actually meant for them.

2. It is equally important that the objectives of the measure in question should be made operational. For this purpose, research data should be collected in such a way that the change in what is usually called the dependent variable can be correctly measured.

3. The design must be such that results can be ascribed unmistakably to the measure taken. Campbell (1963) calls this the elimination of rival hypotheses. He compiled a list of ways in which what he called the internal validity[1)] of the study might be impaired. He examined a number of research designs and showed to what extent each one avoided these forms of impairment.

1) Campbell uses the term validity in a rather different sense. Internal validity means the extent to which a certain research scheme eliminates the possibility of the dependent variable being changed by any factor other than the independent variable - the measure. External validity is the question of the generalisability of research results.

4. The results must be capable of being generalised to apply to the population at risk. The most important requirement is therefore that the research group should be representative of the population.

A number of research designs will now be presented, typical of those actually used in the field of primary prevention. They are arranged in diminishing order according to how well they eliminate rival hypotheses : therefore, from the point of view of internal validity, from good to poor. Use has been made of Campbell's notation in describing these designs. O stands for an observation, X for the measure to be examined. The O's and X's occurring in the same line follow each other in time, and relate to the same group. A dotted line between two lines means that the groups are nog equivalent. An R means that the groups have been compiled at random.

The following designs can be distinguished:

1. The pretest-posttest	R O X O
Control group design	R O O

Campbell classifies this design as a true experiment. The research subjects are taken from the whole population at random and distributed over an experimental group which is exposed to the measure, and a control group which is exposed to the measure, the researcher must be able to control the measure completely and make sure that it affects only the experimental group.

In studying the primary preventive effect of measures, it is obviously rather difficult to satisfy the requirements of complete randomisation and control. Complete isolation of the experimental variable also presents problems. Therefore the research designs below are often used. Campbell calls the first two quasi-experimental schemes.

2. The non-equivalent	O X O
control group design	O O

This design, which much resembles the real experiment described above, and, according to Campbell, is often confused with it, has the drawback that the experimental and control groups are not equivalent from the outset. This is because it is impossible to distribute the subjects from a common population at random over the two groups.

Attempts are made to meet this objection by matching beforehand, or by checking relevant factors afterwards. The fact that the two groups are not equivalent means theoretically that there are more potential rival hypotheses.

3. The time-series experiment 0 0 0 X 0 0 0

In this design there is no control group, nor is it necessary for the researcher to control the measure. If there are enough concrete data, this type of study can be carried out ex-post. Most of the threats to internal validity can be eliminated, as the important thing is trend changes. One of the major drawbacks of this scheme is that trend changes can also be caused by factors that occur simultaneously; this must be compensated for, when interpreting the results of the study. Another possibility is to include the time-series of a control group (whether equivalent of not) for purposes of comparison.

4. The ex-post correlational design

This is a more comprehensive type of research design which Campbell calls pre-experimental : the static group comparison.

X 0

0

More than two 0's are compared here at the same time, all of which have been influenced in different ways by the measure (X). This may be because a number of groups have been exposed to the measure and others have not. Or it may be because the extent to which this has occurred varies from group to group. Here the main problem is that it is impossible to ascertain how widely the groups differed before the measure was taken ; in theory, this would permit a good number of rival hypotheses. It is also difficult to determine the causal relation here. Campbell considers this design useful mainly for a pre-study in which hypotheses can be eliminated. The hypotheses that slip through this test must be examined afterwards in a better design.

5. The one-group
pretest-posttest design O X O

In this design the same group is studied once before and once after the measure. This design is the most unsatisfactory of all, since it is difficult to eliminate all kinds of rival hypotheses. Things may happen at the same time as the measure, for instance, which may equally well explain the difference between O_1 and O_2. The difference observed may simply be a result of the passage of time. Pretesting may also possibly influence the result, or it may be a matter of a rather extreme situation returning to normal. Finally, the selection method, together with the above factors, may be responsible for the results.

We shall now show to what extent the studies we found satisfy the above requirements.

1. The pretest-posttest control group design

Two studies comply with this research design. In both cases a certain preselection of the population in question occurred, after which units were distributed at random over experimental and control groups. Such preselection naturally makes it more difficult to generalise. One of the studies (Törnudd, 1968) was fairly limited in scope, and the dependent variable was measured by means of official arrest figures. (The objections to this will be dealt with under scheme 4).
The other study (Schwarts and Orleans, 1967) made such use of independent variables - the threat of punishment and an appeal to the conscience - that they are unsuitable for direct use. Thus the practical value of both studies is fairly limited, but their great contribution is that they show that experiments in this field are possible.

2. The non-equivalent control group design

Five studies come under this heading. (one of them - Decker, 1972 - made use of this design and design 5. This study will also be discussed under 5). In 4 of these studies[1] the researchers either collected data

1) Buikhuisen and van Weringh, 1969; Michaels, 1960; Munden, 1966; Weaver and Tennant, 1973.

themselves, for instance, by personally checking tyres, or sufficiently concrete data were used, such as accident figures. One of the studies used the selfreporting method. This method is obviously less reliable (see objections under design 4). Prematching and post-checking for comparability were restricted in 4 of the studies - in 2 they were restricted to one factor - without its being made clear why these particular factors and not others had been matched or checked.

3. The time-series experiment

There are 10 studies in which some form or other of trend comparison is used. Four of them[1], all concerned with traffic, comply with the design as defined by Campbell. The researchers use sufficiently concrete data, mainly accident figures, to establish changes in the dependent variable. These studies concern measures which were introduced fairly abruptly. Possible rival hypotheses are carefully considered. One of the studies is diffucult to generalise, since it deals with a specific population, i.e. servicemen stationed on an air base. Of the six studies, one (Schwartz, 1968) is a close investigation as to whether the incidence and gravity of rape cases were affected by the introduction of more severe penalties. This study, however, makes use of the official figures for rape, and does not take sufficient account of other possible explanations for the changes. We knew too little about the way in which one study (Virtanen, 1970) was carried out. The other studies we examined (Kutchinsky, 1973a; Schöch, 1973; Sellin, 1967 a and b) were simple trend comparisons, three using official crime statistics. Alternative explanations were not considered.

4. The ex-post correlational design

This form of research was used in 12 studies, in all cases to test one or more of the deterrent hypotheses. In 10 of these studies[2] the researchers used official crime and prison statistics; the 2 others (Waldo and Chiricos, 1972 and Jensen, 1969) used self-reporting.

1) Barmack and Payne, 1964; Campbell and Ross, 1968; Robertson, Rich and Ross, 1973; Ross, 1973.

2) Antunes and Hunt, 1973; Bailey, 1974; Bailey and Smith, 1972; Bailey, Gray and Martin, 1974 ; Bean and Cushing, 1971; Chiricos and Waldo, 1970; Gibbs, 1968; Logan, 1972; Tittle, 1969 and Tittle and Rowe, 1974.

As we know, the drawback to using official figures is that they only give a partial picture of the dependent variable - delinquent behaviour. These figures have also proved to be sensitive to other factors besides changes in the volume of crime (Seidman and Couzens, 1974). Even prison statistics proved not to be faultless (see, among others, Tittle, 1969 and Bailey, Gray and Martin, 1974). Finally, the theoretical model used is fairly simple, and only a few relationships were examined out of a whole complex of factors influencing one another. For instance, the number of crimes known to the police depends partly on the size of the police force and that in turn depends partly on the number of crimes known to the police. Besides, only a proportion of all the crimes committed are known to the police. How large a part this is depends on police detective work and the willingness of the public to report crime to the police. These in turn are determined by, among other things, the readiness of the police to do something about crime. This readiness is influenced by the degree of probability that the offender will be punished; and this is determined by the prosecution policy of the public prosecutor and the sentencing policy of the courts. These are only a few examples of the whole complex of relationships that develop when the criminal law system goes into action.

It is also a moot point whether self-reporting is a reliable system. Presumably some of the persons questioned do not entirely trust the guarantee of anonymity which they are given. This will be especially true of the more vulnerable group, those who have committed a fairly serious crime. This will mean, of course, that the more serious crimes are underreported. It is also possible that the ones who most fear punishment repress the thought of their delinquent behaviour, and therefore under-report this behaviour. It is in any case noticeable that crime studies in which self-reporting is used often deal with less serious offences than one comes across in official statistics (Zimring and Hawkins, 1968). We have already explained that the drawback of the correlational design is that internal validity may be jeopardised, so we will not go into this again now. Finally, the subjects in the two-selfreporting studies were a student population; this considerably limits the possibility of generalising.

5. The one-group pretest-posttest design

This method was used in 8 studies. In 3 of them (Bundesanstalt, 1974;; Decker, 1972; Road Safety Research Institute (S.W.O.V.), 1971) sufficiently concrete data were used, while in the other studies [1] the researchers used official figures or self-reporting. Only in three studies was any kind of control used to increase the internal validity of the study.

6. Other forms of research

There are another 7 studies which cannot be classified in our categories. In one of these (Gunnarson et.al. 1970) it was not clear what design had been used, as we had only a brief summary of the project. In 4 studies [2] a design was used which much resembled the ex-post correlational design, except that no correlational calculations were used. In the two other studies (Sellin, 1964 and Graves, 1964) two different situations - with and without capital punishment and the numbers of crimes against the person during weeks with and week without an execution taking place - were simply compared. In 5 of the 7 studies, moreover, official crime figures were used.

7. Research into the effect of sanctions falling outside the scope of this survey.

There are 2 studies on the effect of sanctions, dealing with behaviour areas other than those we have named. One of them (Tittle and Rowe, 1973) uses a combination of designs 2 and 3 to examine the effect of the threat of sanctions on the one hand, and moral exhortation on the other, upon cheating in a college. Considering the kind of population studied, and the situation that had to be controlled, no great problems were encountered in carrying out the research and collecting the data. One study (Bowers, 1968; Salem and Bowers, 1970 and Bowers and Salem, 1972) is an ex-post survey in which data were collected about certain types of deviant behaviour in colleges and universities, and about the sanctions imposed.

1) Chambliss, 1966; Kutchinsky, 1973b; Savitz, 1958; Springer and Mittmeyer, 1974; Naeve, 1974.

2) Fattah, 1972; Teeven, 1972; Beutel, 1957; Campion, 1964.

Using the data obtained, 4 different models were studied in the analysis with regard to the causal relations between formal sanctions and deviant behaviour. This study had the advantage of covering a wide range - 99 colleges - but the disadvantage that it had to rely on self-reporting for determining deviant behaviour. Finally there was a laboratory experiment (Reifler, Howard and Lipton, 1971) which examined the effect of exposure to pornographic material. All these studies have the disadvantage that they can only be generalised to a limited extent.

Summary

Summarizing the results of the foregoing section, we find that of the 47 studies included (one of which was counted twice), 19 made use of an experimental or quasi-experimental design. True, 11 of these 19 studies did not completely meet the requirements of the design selected (in one case it could not be ascertained whether it had done so or not). In 30 studies, moreover, insufficient concrete data were collected about the dependent variable.

Finally, the results of a number of studies could only be generalised to a limited extent owing to the population chosen. Summing up, one can state that, from a methodological point of view, too many evaluative studies are not sophisticated enough.

2.4. Conclusions

In this section the data on the present state of evaluative research into primary prevention will be summarised in three main points.

1. Government measures to control deviant behaviour are not subjected sufficiently to scientific evaluation.

2. As this study has shown, the attention of researchers to the primary preventive effects of measures is unevenly distributed in two respects:
   a. Attention is paid primarily to the effect of measures that make deviant behaviour unattractive (repressive measures). This is, par excellence, the field of penal measures such as imprisonment and police action. There is a consicuous lack of interest in evaluating the effectiveness of alternatives to penal law. Although these are obviously scarcer, a closer study of them is fully justified because they are patently more humane in character.

b. Attention is paid almost exclusively to the effects of measures against traditional criminality, notably index crimes, and traffic offences.

3. The quality of many of the evaluative research studies done so far is not good enough. A study group of the Organisation for Economic Cooperation and Development, evaluating the present research into traffic, came to the same conclusion (Road Research, 1974).

3.0. Explanation for the present situation

3.1. Why is so little evaluative research done?

Two sets of factors may explain why so little evaluative research is done. The first are factors related to the government's attitude to evaluative research. The second have to do with researchers and the carrying out of research.

3.1.1. Factors related to the government's attitude

For evaluative research to be done, the government must be prepared in principe to alter its policy. If it is not, all evaluative research is useless. One of the major hindrances to evaluative research is resistance to change.

Another restrictive factor is the tendency to protect one's own organisation and allied organisations from criticism of their policy. It is a fact that anyone who allows his policy to be subjected to evaluative research is laying himself open to attack. Such research may be embarrassing or may threaten the organisation whose policy it is studying. In theory this may be the policy of the same organisation that has commissioned the research, or the policy of an organisation with which the principal is on good terms, and wishes to remain so. Another possible factor is that government officials sometimes do not fully realise how important contribution is that scientific research can make to policy development. This is partly due to their lack of knowledge about these possibilities.

Researchers themselves, of course, are also partly to blame for this situation. Their methods, the polarising attitude they often assume towards the government etc., are certainly partly responsible for the fact that the government relation to research is by no means ideal. In this respect researchers could do more about image-building.

3.1.2. Factors related to research and researchers

First of all, there are technical factors which impede research. It is difficult, for instance, to measure the effect of primary preventive measures on deviant behaviour. In the case of many offences, we often do now know how frequently they go undetected, nor whether this number bears any permanent relation to the number of known offences; this "dark number" makes research in a number of fields more difficult. Moreover, as it is largely impossible to control the independent variable - the measure - it is often difficult to confine the effect of this variable to the experimental group. As our study has shown, the extreme difficulty of satisfying the requirement of complete randomisation restricts the possibility of carrying out true experiments.

Besides these technical difficulties, there are also factors of a psychological and tactial nature which may be an obstacle to research. The researcher is often unable to persuade the government to allow him to research the effect its policy is having[1]. One of the reasons for this failure to overcome resistance is that the training which the social science researcher undergoes pays hardly any attention to this aspect of scientific research. Training courses should pay more attention to tactics and psychology.

Sometimes training courses also fail to teach students now to handle management problems of all kinds which may arise in the course of evaluative research. This often involves large-scale operations which are quite beyond the average researcher.

Finally there are financial factors which may impede evaluative research. It is affact that this kind of research is expensive - often very expensive.-Limited funds automatically limit research possibilities. As we have just said, government officials do not realise that scientific research can help them solve their problems, so it is difficult, when scanty funds are being distributed, to obtain a high priority for carrying out evaluative research. This is another reason why more use will have to be made of psychology for "selling" research.

1) This is even more true of experiments. Here the difficulties are even greater, because there are ethical and political objections to experiments with penal measures.

3.2. Why is evaluative research so unevenly distributed?

We have seen that evaluative research is unevenly distributed in two respects : firstly, because it has continued to confine itself largely to measuring the effects of penal sanctions, and secondly, because research has concentrated particularly on what we have called the more traditional forms of criminality, and on traffic offences. Why this one-sidedness? It is, of course, theoretically possible that our results are a product of the method we have followed. Our research, after all, was related to a random sample of journals, most of which were criminological. This might explain why most of the research in our study is of a criminological nature. But this could only be a partial explanation. Firstly because we did not look only at criminological journals; secondly because we used the abstracts on crime and delinquency; and finally because we must assume that important evaluative studies in the field of primary prevention, wherever they were published, would certainly have been publicised in the literature we studied. Presumably therefore our observations, generally speaking, give a true picture.

What explanation then could there be for the bias which we noticed? Let us start with the question of why so much attention has been paid to repressive measures. This question is not difficult to answer. Both from a relative and an absolute point of view the number of alternative measures is remarkably small. Alternative sanctions are still rare within the judicial system. The fact is that this kind of alternative is only possible in a limited number of countries. Something that does not exist cannot be evaluated. From a penological point of view it is certainly desirable that more creative thinking should be directed towards finding alternative punishments of this kind. At the same time it is very important that especially when such measures are introduced, evaluations should be made of their effect on the offender and of the reactions of the victim and of society in general to these new ideas.

It has already been stated that few evaluations are made of measures in the economic, fiscal and environmental fields. As regards the environment, a possible explanation is that people have only recently realised that this is a serious social problem. This could explain why evaluation has lagged behind in this field as compared with others. Considering the seriousness of the problems involved here, we hope it will soon make up this leeway.

Technically, this area of research offers great possibilities, since pollution, theoretically the dependent variable, can be measured objectively.

The absence of research into the effectiveness of measures adopted to combat contravention of economic and fiscal laws may be partly explained by the difficulty of obtaining access to these areas. It is difficult for researchers to ascertain malversation in this area without the cooperation of the persons concerned. But this does not apply to all transgressions. Contravention of price control, for instance, is fairly easy to ascertain. Schwartz and Orleans (1967) showed that it was easy to observe behaviour changes in the making of income tax returns. So we must look for other explanations. Perhaps it is partly due to the fact that offences of this kind are not felt to be real crimes. Partly because they are not regarded by the penal system as real criminal problems (Zimring and Hawkins, 1968), and partly because they are offences with which many people are familiar. True, they know they are not right, but they feel no moral disapproval. From a social point of view, however, these are offences which can cheat the community on a grand scale. It is therefore important for criminologists to start studying the effectiveness of measures taken in these fields.

Finally, we must mention one area that is often neglected :the wide field of government measures aimed at increasing the welfare of the country's inhabitants. This field includes modernising educational systems, increasing employment, improving housing, providing recreational amenities for young people, etc.

Measures of this kind, which presumably in theory have a favourable effect in that they help to prevent first offences, are hardly ever evaluated. This is understandable to some extent. These are complex operations aimed not so much at preventing crime as at promoting human welfare. The fact remains, however, that it is important to check what effect these social amenities have on criminality. In fact, it is also important to determine such relationships in order to form criminological theories. Criminologists should therefore avail themselves more of the possibilities of experimenting offered them by the government

3.3. Causes of methodological shortcomings in evaluative research

The fact that research is of a low standard can be explained by our previous statement that little research is being done. Thus little technical skill is accumulated in examining primary prevention, with the result that little can be learnt from the strengths or weaknesses of previous studies. Training in criminology is therefore way behind, and cannot familiarise future researchers with the methods and techniques which can be used in research into the effectiveness of primary prevention measures. Another of the consequences of this lack of research experience is that future researchers are not made aware by their training of the research possibilities opened up when measures are abolished or new ones introduced.

Perhaps even more important is the fact that the panel of researchers are too easy-going in fixing the requirements which evaluative studies must meet before they can be describe as "scientific".

4.0. Improving evaluative research

There are two distinct means by which evaluative research can be improved. Firstly, we can show how more evaluative research can be done. Secondly, we can make suggestions for raising the standard of this research. We shall start by showing how more evaluative research can be done. Then we shall indicate how the standard of evaluative research can be raised by improving research techniques and organisation. Moreover we shall have to see how research into the effects of measures to combat deviant behaviour can be improved by constructing a theoretical framework.

4.1. How can evaluative research be promoted?

Anyone wanting to do evaluative research is very much dependent on the cooperation of others. He may need this cooperation because experimental variables must be introduced (e.g. traffic surveillance must be intensified); because, to enable scientific research to be done, random selections must be made; or because the researcher must have access to the systems he is evaluating or the persons who form part of them. Evaluative research therefore encroaches very much on everyday life. Moreover, we have already observed that anyone who permits his work to be subjected to evaluative research puts himself in a vulnerable position, since the research may show that the policy which has been followed has not come up to expectations.

In view of all this, it is obviously not easy to obtain the cooperation which is absolutely necessary for this sort of research to take place. How can this cooperation be obtained? As so often is the case, political pressure may be effective. This is, so to speak, a task for researchers' organisations. As a group they must bring pressure to bear on the government. But the difficulty is that researchers are often individualists. Each goes his own way, and this means that researchers have little influence as a pressure group.

However, researchers will have to come to realise the importance of organised action. It could gain them facilities and opportunities which they would not have obtained as individuals. But political pressure alone is not enough.

It is very important to foster mutual understanding and for the two sides to establish close cooperation. To do this we need research promotion. This will benefit not only researchers but also administrators. Research promotion means that researchers must show administrators how research can help in developing policies. This presupposes that researchers are prepared to cooperate with the government in considering certain questions of policy, to help the latter make a good analysis of the problems, but especially to point out which problems, or aspects of problems, should be studied more closely by means of research. This kind of cooperation is also necessary for each side to obtain a truer impression of the other. Researchers tend to stereotype administrators as authoritarian, out to manipulate others, indifferent to research unless it suits their own ends ; while administrators see researchers as theorists whose studies take far too long, who hold abstruse talks that are of no practical use, etc. Such stereotyped ideas are extremely unprofitable. The scientific staff of government bodies can provide as useful liaison by briefing researchers on the objections that may be encountered if certain plans are submitted, and by pointing out to administrators how important it is to involve researchers in government. Certainly the researcher will still have to have patience with the resistance that evaluative research, because of the threat inherent in it, tends to arouse. He will have to make allowances for it when presenting research plans. How successful he is will depend on how well he had done his homework (for instance, by getting important personages interested in what he wants to do), and on his relationship with the administrators in question.

We should like to make one more remark on this subject. The resistance engendered by evaluative research depends partly on what the researcher is asking of the administrators. Sometimes, as we have already said, the researcher wants drastic changes, such as the introduction of new measures. Such difficulties could often be avoided if researchers were more aware of the numerous possibilities of taking up new measures which are soon to be announced, changes in legislation which are on the way, new plans that are under discussion etc.

There are many opportunities for the researcher to join spontaneously in what is going on, rather than demand drastic measures of his own. If he suggests measuring the effect of such proposed changes he will generally receive a more favourable reply.

4.2. How can the standard of evaluative research be improved?

Raising the standard of evaluative research is of course primarily a question of improving its methods and techniques. Actually a new specialisation is needed here, a kind of "measurology". But this should not be confined to methods and techniques. It should not only deal with questions as : how can behaviour changes be measured; but also such things as the organisational problems with which researchers are faced, the psychology of promoting and introducing projects of this kind, teaching researchers to anticipate the resistance they will probably meet, and - last but not least - how to make sure that the results of the research are actually incorporated in policies. For this is often not the case. It is a matter of great importance to promote a science of measurology. We shall have to make systematic efforts to do so, since it is the only way to get better and more extensive evaluative research done. A first step might be to convene experienced researchers. Seminars should be held to discuss the problems inherent in evaluation research and the solutions that have been found. If the problems are listed this may be a powerful stimulus for new projects to be carried out to solve them. The experience gained in the course of these seminars should be recorded in a kind of "measurology" manual, so that when future researchers are being trained, they can gain more benefit from practical experience and theoretical knowledge. Such seminars could also have a stimulating effect on evaluative research.

4.3. The need for theoretical models

One of the things we notice in all the projects carried out, and in the literature on primary prevention, is that they are built on weak foundations of theory. Little headway has been made in developing a theoretical model that throws light on the effects of primary prevention.

In fact, the present models, including those recently evolved, are still based largely on Bentham's model. As these models have few if any empirical foundations, they express a belief rather than a statement on the reality of primary prevention. Projects have also been too fragmentary so far. Usually they centre on a few aspects of the model used, and are too disconnected to allow the accumulated research findings to give a complete picture of the possibilities of achieving primary prevention. The issues investigated, moreover, are often too wide. Research is done, for example, into whether severer sentences result in a lower crime rate, or whether a stronger police for results in fewer road accidents. Such enquiries, however, pay too little attention to the matter of who responds to the measures taken and who does not, and why.

It would go beyond the scope of this paper to suggest a complete theoretical model. We can however give a general outline for evolving one.

In the first place the model must take into account three aspects of primary prevention.

1. The measure. Each measure has its own characteristics, which may help it achieve its aim or hinder it. These characteristics depend on the kind of behaviour for which they are designed, and on the people involved. The principles of penology and sociological jurisprudence are important factors here.

2. Behaviour. The crucial question is why people behave deviantly. Characteristics of man and his evironment are of great importance here. This is the field of behavioural sciences such as sociology, social psychology and the psychology of deviant behaviour, supplemented where necessary by data from other disciplines.

3. The government organisations responsible for implementing and maintaining laws and measures. These organisations do not operate in a vacuum: they are influenced by the measures taken and by one another's activities.

Changes in sentencing policy, for instance, may affect the crime detection policy of the police, and thus the number of know delinquents.

In the second place, such a model must pay great attention to elaborating related concepts, such as:

the likelihood of being caught and punished;
perception of the sanction; the sanction's
significance for the persons in question;
their knowledge of the present laws and
sanctions; relative deprivation; instrumental and emotional behaviour.

If a model is elaborated in this way, hypotheses can be decuded from it and tested by the methods previously described.

In the third place the model must deal with more specific questions. The main thing is to know what works in what circumstances and also to know why a thing works or not. Generally speaking evaluative research must ask more questions, such as:

1. On what persons does the measure work, and on whom does it not work? (Instead of the more dichotomous question: Does the measure work-yes or no?)
2. Why does the measure work in one case and not in another?
3. What are the characteristics of the persons responding to the measure, and what are the characteristics of those immune to it? What are the differences between them?

Only by concentrating on answering such questions will we find out to what extent, with the means at our command, we can achieve primary prevention, and to what extent we cannot.

4.4. Summary

It is stated that scientific evaluative research is a "must" for the government. It should become a matter of routine for new measures to be evaluated before adoption. One might even consider planned trial periods, during which a measure was evaluated in its introductory phase. A measure would only be definitely adopted after the trial period if the evaluation results were good. This would certainly be valuable in primary prevention, the subject of this paper.

It is noted that this kind of research is lagging behind both in quantity and quality. Moreover, the research that has been done is one-sided, concentrating chiefly on deterrence by negative sanctions in the fields of traditional crime and traffic offences.

A number of explanations are given for this situation. Both the function and the interests of the government and the methods and training of social science researchers are important factors. Finally, a number of suggestions are given for promoting more and better evaluative research.

APPENDIX I

The sources consulted:

1. The documentation system of the Scientific Research and Documentation Centre of the Ministry of Justice of the Netherlands. The categories examined for empirical research were : general prevention ; types of undesirable behaviour which presumably has been researched, such as offences against property crimes against the person, drunkenness, traffic, tax, environmental and economic offences; authorities concerned with this undesirable behaviour such as the police and the judiciary.

2. A letter to 29 criminological institutes in various countries asking for information on their own research (current and completed) on primary prevention, and bibliographies. To these we received 16 replies.

3. Journals
   a. Summaries on Criminology and Penology, volumes 1970 to 1974 inclusive;
   b. the following journals, volumes 1970 to 1974 inclusive:
      1) Canadian journal of criminology and corrections/Revue Canadienne de criminology
      2) Crime and delinquency
      3) Journal of criminal law and criminology
      4) Journal of research in crime and delinquency
      5) Law and society
      6) Social problems
   c. the following journals, 2 volumes: wherever possible 1973 and 1974:
      1) Acta criminologica
      2) International journal of criminology and penology
      3) International review of criminal policy
   d. the following journals, 1 volume, wherever possible 1974:
      1) American behavioral scientist
      2) Blutalkohol
      3) British journal of criminology, delinquency and deviant social behaviour
      4) Howard journal of penology and crime prevention
      5) Issues in criminology
      6) Journal of applied social psychology
      7) Journal of criminal justice.

8) Monatschrift für Kriminologie und Strafrechts reform
9) Nederlands tijdschrift voor criminologie
10) Revue de droit pénal et de criminologie
11) Revue de science criminelle et de droit pénal comparé.
12) SISWO; berichten over onderzoek.

4. The Documentation Centre library, containing 574 works, chiefly in the criminological field.

5. Bibliographies in journals and literature lists, and references in the literature we found.

Appendix II

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