MIRROR, MIRROR ON THE WALL, WHO IS THE FAIREST OF THEM ALL?
Why Public Policies for Environmental Problems have failed so far in
Representative Democracy

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ABSTRACT

This paper contains an analysis of the failure of public policies for environmental problems in political systems with representative democracy and a mixed economy. An attempt is made to answer the question, why environmental policies have failed so far. A theoretical analysis as well as an empirical application for the Netherlands is used to answer this question.

First, an integrated theoretical framework is developed to analyze the problem of government failure in public policy. The economic theory of non-market failure of Charles Wolf jr., combined with the economic theory of regulation of James Q. Wilson and the economic theory of collective action of Mancur Olson jr., are the building stones for this theoretical framework.

In the second part of the paper, two recent cases of environmental policy in the Netherlands, i.e. traffic control in private transport and the reduction of manure production in intensive cattle breeding, are analyzed. The theory of non-market failure offers a satisfactory explanation for the apparent government failures in both cases of environmental policy.

In the last part, some solutions for the government failure in environmental policies derived from the theory of non-market failure are discussed. The paper concludes with the statement, that representative democracy is either part nor cause of non-market failure in environmental policy, and therefore should not be substituted by a form of 'enlightened dictatorship' (or 'eco-fascism'). Instead, democratic reform is both possible and necessary.
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'There has to be some way to measure success in the [Civil] Service. British Leyland can measure success by the size of its profits [...] However, the Civil Service does not make profits or losses. Ergo, we measure success by the size of our staff and our budget. By definition a big department is more successful than a small one.'

1. Introduction

In 1979 Charles Wolf jr., affiliated with the Rand Corporation in Santa Monica, published his well known article on non-market failures. In that article he is presenting a mirror to the government, though the non-market inadequacies are not the mirror images or 'duals' of those associated with market activities.

In this contribution we will concentrate on the theory of non-market failure, which offers us possible answers on the question why the intervention of the government in environmental affairs did not meet so far the high, maybe too high pitched expectations. In section 2 we present an assessment of the theory of non-market failure. In the first part the original contribution of Charles Wolf jr. to the theory of non-market failure is discussed. In the second part of section 2, Wilson's economic theory of regulation and Olson's economic theory of collective action are summarized. Each of these three theories of non-market or government failure offer a possible explanation for the disappointing results of environmental policies in representative de-


3 Wolf, op. cit. 1979, p. 131.
mocracy so far. The three theories can be combined into a theoretical framework for the analysis of government failure in representative democracy. In section 3, this theoretical framework is applied to two cases of environmental policy in the Netherlands. On basis of the results of this application we present an outline for improvement of the structure of the environmental policy process in order to prevent government failure in future environmental policies in section 4. We conclude our argument with a short discussion of the possibility of democratic reforms in representative democracy versus the threat of ecofascism to solve environmental problems in section 5.

2. The theory of non-market failure

2.1 The original contribution of Charles Wolf jr.

In this section we will concentrate on the theory of non-market failure as developed by Charles Wolf jr, which offers us four possible answers on the question why the intervention of the government in environmental affairs did not meet so far the high, maybe too high pitched expectations. In analogy with the economic theory of market failure Wolf distinguishes four categories of non-market or government failure. These four categories of government failure result from the several distinctive characteristics of non-market demand and supply (regardless of the equilibrium point of public demand-supply)\(^4\). They can be summarized as follows.

1. The disjunction between revenues and costs of non-market production with as a result redundant costs.

The possible gains from change are uncertain, while the costs of the maintenance of the status quo are low. For that reason, opportunities for the minimalization of the costs or maximalization of the productivity as well as for economies of scale are ignored with redundant costs - X-inefficiency\(^5\) - as a result. Moreover, these redundant costs increase over time.

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2. The development of internal standards (internalities) and organizational goals.

The non-market agencies, lacking the direct performance indicators of the market - consumer behavior, market shares and the profit-and-loss bottom line - have to set their own standards. These standards - or internalities - are the goals that apply within non-market organizations to guide, regulate, and evaluate agency performance and the performance of agency personnel. They boost agency supply curves above technically feasible ones, resulting in a higher input and/or lower output than the socially desirable. In that respect, internalities are the inverse of the externalities associated with the market. The existence of externalities means that some social costs and benefits are not included, while the existence of internalities means that some organizational costs and benefits are not excluded.

Wolf distinguishes three types of such internalities. First, the organizational goal of budget growth ("more is better"). Second, the desire for technological advance ("new and complexe is better"). Third, information acquisition and control ("knowing what others don't know is better").

3. Derived externalities.

The existence of externalities is one of the reasons for intervention of the non-market in the market. However, the intervention of the non-market will generate unanticipated side effects too. The side effects of the non-market are overlooked because of the short time horizon and high time discounts of the politi-

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6 Refer to the 'economic theory of bureaucracy' as originally developed by William A. Niskanen, Bureaucracy and Representative Government, Chicago etc. 1971.

7 W.H. Riker and P.C. Ordeshook, An introduction to positive political theory, Englewood Cliffs N.J. 1973, p. 293, state: "Liberals are likely to see a greater externality in the regulation to prevent an externality than in the prevented externality itself". They refer to Milton Friedman, Capitalism and Freedom, Chicago 1962, p. 32, who characterized this problem in the following way: "The use of government to overcome neighborhood effects [i.e., externalities] itself has an extremely important neighborhood effect which is unrelated to the particular occasion for government action. Every act of government intervention limits the area of individual freedom directly and threatens the preservation of freedom indirectly...".

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cal actors. Derived externalities in the non-market domain are side effects that are not realized by the agency responsible for creating them, and hence do not affect the agency's calculations or behavior. The likelihood of derived externalities is further enhanced by both demand and supply characteristics associated with non-market output (refer to category 1 above: the disjunction between costs and revenues of public provision).

4. Distributional inequity, especially in influence and power.
   In that, it can be distinguished from distributional inequity as result of the market which is more in income and wealth. The distributional inequity is elaborated by James Q. Wilson, who claims that policy proposals, especially those involving economic stakes, can be classified in terms of the perceived distribution of their costs and benefits. These costs and benefits may be monetary and non-monetary and the value assigned to them as well as beliefs about the likelihood of their materializing can change. Besides these costs and benefits may be widely distributed or narrowly concentrated. The theory of Wilson will be discussed in the next section.

These four categories of non-market failure of Charles Wolf are visualized in Figure 1 below, in which non-market failure is compared with the well-known types of market failure.

In particular the derived internalities are, following Charles Wolf, central to the theory of non-market failure, whereas externalities are central to the theory of market failure. The hard core of his argument is that the implications of the non-market failures might be worse than the consequences of the market failures. As a result, counter-measures are needed against the counter-measures against market failures. Hence, counter-counter-measures against market failures. In other words, it is not the question whether costs are asso-

9 Wolf, op. cit. 1979, p. 117.
10 Note that market failure is not the same as market imperfections.
ciated with the budget mechanism, but whether these costs exceed the costs linked with the market mechanism. A mutual comparison of the (marginal) costs and benefits of both mechanisms is needed in order to decide, whether the provision of specific good or service has to take place through the public or private sector\textsuperscript{12}. It is a choice between imperfect alternatives.

**Figure 1. Categories of market failure and non-market failure**

<table>
<thead>
<tr>
<th>Market failure</th>
<th>Non-market failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>increasing returns</td>
<td>redundant and rising costs</td>
</tr>
<tr>
<td>externalities and public goods</td>
<td>internalities and organizational goals</td>
</tr>
<tr>
<td>market imperfections</td>
<td>derived externalities</td>
</tr>
<tr>
<td>distributional inequity in income and wealth</td>
<td>distributional inequity in power and privilege</td>
</tr>
</tbody>
</table>

The non-market failures are, among other things, due to the monopoly in the non-market. It is indeed, as is stated by Emanuel S. Savas, strange that we are vigorously opposed to monopolies in the private sector and enforce laws to break up monopolies and conspiracies that would restrain competition. In the public sector, perversely, we have often chosen monopoly and prohibited competition in the mistaken belief that competition constitutes wasteful duplication\textsuperscript{13}. We will return to this alleged 'schizophrenia' in the last section of this contribution.

\textsuperscript{12} Refer to Hans van den Doel, Democracy and Welfare Economics, Cambridge 1979, p. 153, who argues that comparison of the reality (and not of the ideals) of the public and the private sectors of industry inevitably leads to the conclusion, that the two sector produce under circumstances of unequal power and imperfect competition, so that neither fully makes use of the possibility of meeting the consumers preferences. In other words: the reality of both market and non-market mechanisms produces benefits as well as costs. The choice between these mechanisms can only be made on basis of a full comparison of marginal costs and benefits of both.

\textsuperscript{13} Emanuel S. Savas, How to shrink government: privatizing the public sector, Chatham 1982, p. 134.
Yet we have to remind the warning statement of Wolf, that the parallel categories of Figure 1 should not be misunderstood\textsuperscript{14}. That there are four categories of failures on each side of the ledger does not mean that the collective effects of market and non-market failures tend to be equal. Moreover, despite some of the similarities in terminology on the two sides, the non-market inadequacies are not themirror images or 'duals' of those associated with market activities. For example, externalities on the market side of the table are qualitatively related to the internalities on the non-market side only in the sense that each is a major source of shortcomings in the market and the non-market contexts, respectively. In his opinion, externalities in the market sector are conceptually much closer to derived externalities than to any other category in the non-market side of the ledger.

Wolf concludes his warning with the following conclusions for the comparison of market and non-market failures.

1. The typical miscarriages of the non-market (i.e., of government) are not less identifiable, characteristic, or predictable than those commonly attributed to the market.

2. The typology of these characteristic non-market failures suggests that they are both formidable and relatively neglected.

3. Whether they are more or less formidable than the failures of the market may be ascertainable and demonstrable in some contexts, but is likely to be debatable in others.

4. The choice between markets and governments is not a choice between perfection and imperfection, but between degrees and types of imperfection, between degrees and types of failure. In many instances, it may be simply a choice between the disagreeable and the intolerable.

2.2 Other explanatory theories of non-market failure

Wolf named his theory 'a theory of non-market failure'. Other economists and political scientist have made important contributions to the theory of non-market failure without making explicit references to such concepts as market failure and non-market failure. Yet their contributions can be considered to provide useful building-stones to a

\textsuperscript{14} Wolf, op. cit. 1988, pp. 85-87.
more general theory of non-market failure. In particular the political-economic theory of regulation of James Q. Wilson and the economic group theory of Mancur Olson jr. produce relevant insights for the analysis and solution of the problem of non-market failure. Hence, we present a short discussion of both theories.

The economic theory of regulation of James Q. Wilson

In many publications the sociologist James Q. Wilson has suggested that policy proposals, especially those involving economic stakes, can be classified in terms of the perceived distribution of their costs and benefits. The costs and benefits of policies may be monetary or nonmonetary, and the values assigned to them, as well as beliefs about the likelihood of their materializing, can change. Indeed, changes in the perceptions of these costs and benefits, at least among political elites, have become so common and have had such profound effects in recent years that he pays special attention to this phenomenon. The political significance of costs and benefits arises out of their distribution as well as their magnitude.

In the opinion of Wilson magnitudes are certainly important (politics is replete with discussions of 'windfall profits', 'tax burdens' and 'unmet needs'), but the incidence of these magnitudes is especially relevant to political action. The distribution of policy consequences (i.e., costs and benefits) affects the incentives to form political organizations and to engage in collective action. Moreover, perceptions of the fairness and unfairness of a policy profoundly affect the extent to which it is regarded as legitimate and thus the difficulty (or cost) of finding persuasive justifications for that policy.

Costs and benefits of public policies may be widely distributed or narrowly concentrated. Income and social security taxes are widely distributed; subsidies to a particular industry or regulations impo-

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sing costs on an industry that cannot be fully passed through the consumers are narrowly concentrated. Though there are many intermediate cases, four political situations can be distinguished by considering all combinations of both dichotomous cases.

1. When both costs and benefits are widely distributed, majoritarian policies may to be expected. All or most of society expects to gain; all or most of society expects to pay. Interest groups have little incentive to form around such issues because no small, definable segment of society (an industry, an occupation, a loyalty) can expect to capture a disproportionate share of the benefits or avoid a disproportionate share of the burdens.

2. When costs and benefits are narrowly concentrated, considerations are present for interest group-politics. A subsidy or regulation will often benefit a relatively small group at the expense of another comparable small group. Each side has a strong incentive to organize and exercise political influence. The public does not believe it will be much affected one way or another. Though it may sympathize more with one side than the other, its voice is likely to be heard in only weak or general terms.

3. In addition to these two symmetric cases there are also two asymmetric cases. When the benefits of a current or prospective policy are concentrated but the costs widely distributed, client politics is likely to result. Some small, easily organized group will benefit and thus has a powerful incentive to organize and lobby. The costs of the benefit are distributed at a low per capita range over a large number of people, and hence they have little incentive to organize in opposition - if, indeed, they ever hear of the policy. However, an important organizational change has occurred that has altered the normal advantage enjoyed by the client group in these circumstances - the emergence of 'watchdog' or 'public interest' associations that have devised ways of maintaining themselves without having to recruit and organize the people who will be affected by a policy. Absent such watchdog organizations, however, client politics produces regulatory legislation that most nearly approximates the producer dominance-model.

4. Finally, a policy is conducted or may be proposed that will confer

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16 In the Netherlands the emergence of these 'watchdog' or 'public interest' organizations has been recognized by the cultural anthropologist Köbben, who called this phenomenon 'zaakwaarnemersgedrag'.
general (though perhaps small) benefits at a cost to be borne chiefly by a small segment of society. When this is attempted, we are witnissing entrepreneurial politics. Wilson gives the examples of anti-pollution and auto-safety bills being proposed to make air cleaner or cars safer for everyone at an expense that was imposed, at least initially, on particular segments of industry. Since the incentive to organize is strong for opponents of the policy but weak for the beneficiaries, and since the political system provides many points at which opposition can be registered, it may seem astonishing that regulatory legislation of this sort is ever passed. It is, and with growing frequency in recent years, but it requires the efforts of a skilled entrepreneur who can mobilize latent public sentiment (by revealing a scandal or capitalizing on a crisis), put the opponents of the plan publicly on the defensive (by accusing them of deforming babies or killing motorists), and associate the legislation with widely shared values (clean air, pure water, health, and safety). A policy with a concentration of the benefits will be accepted only when those who profit of that policy are organized. Important is that the entrepreneur serves as the vicarious representative of groups not directly part of the legislative process. In that situation, a broker is recommended, especially as an authoritative, former entrepreneur (like Dekker [Philips] or Wagner [Shell] in the Netherlands) is asked. It is true that in the environmental policy field organizations like Greenpeace and World Life Fund act as broker, but they are mutually too divided to counterbalance the lobby of the organizations which represent the polluters.

The two dichotomous policy dimensions of cost versus benefits and of narrow concentration versus wide distribution can be combined into a 2 x 2 matrix, as presented in Figure 2. This figure gives a

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17 The reverse is true for a policy with concentrated costs, as is the case with the environmental policy focussing upon the polluter ('de vervuiler betaalt'). The interest group-theory can be applied to the policy already conducted as well as to the policy planned for the nearby future. The philosophy behind both is the same: the polluter has to pay, but the costs might be distributed differently.

18 The concept of the 'political entrepreneur' has been introduced into public choice-theory as early as in the nineteen sixties by Richard Wagner. Refer to Terry M. Moe, The organization of interests. Incentives and the internal dynamics of political interest groups, Chicago and London 1980.
summary of the policy theory developed by Wilson.

Figure 2. Four types of public policies

<table>
<thead>
<tr>
<th>benefits</th>
<th>concentrated</th>
<th>distributed</th>
</tr>
</thead>
<tbody>
<tr>
<td>costs</td>
<td>interest</td>
<td>entrepreneurial</td>
</tr>
<tr>
<td></td>
<td>politics</td>
<td>politics</td>
</tr>
<tr>
<td>concentrated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>distributed</td>
<td>client</td>
<td>majoritan</td>
</tr>
<tr>
<td></td>
<td>politics</td>
<td>politics</td>
</tr>
</tbody>
</table>

The central point in the theory of regulation of Wilson is, that the concentration or distribution of costs and benefits is not the only thing that matters, but also the way in which these costs and benefits are organized. Taken together, both the concentration/distribution characteristic and the cost/benefits characteristic of public policies determine the organization of those policies.

The economic group theory of Mancur Olson jr.

The emphasis on narrow concentration versus wide distribution of cost and benefits of public policies leads us to the well-known economic group theory of Mancur Olson jr, sometimes also called the economic theory of collective action19.

Olson defines groups as a "number of individuals with a 'common interest'"20, i.e. a number of individuals who strive partly after the same individual goal. This concept goes back to the classical economics. Following Wicksell21, however, Olson emphasizes that when the individual members of the group strive to further their personal interests in a rational manner, this will not imply that the group as a whole will also strive rationally to further its own interests.


20 Olson, op. cit. 1971, p. 8.

There is no 'invisible hand' to achieve harmony between individual and group optima. When it is assumed that an individual will serve his own self-interest, it may not be assumed a priori that he will also serve the interests of his group\textsuperscript{22}. The individual optimum may conflict with the collective optimum of the group.

The group's aim is to provide a collective good to the members of the group. A pure collective good has two characteristics: once it is provided nobody can be excluded from the consumption of the good (non-excludability) and consumption by one individual does not rival with consumption by another individual (non-rivalness). Together, these two technical characteristics of pure collective goods cause the so-called 'participation problem' in the collective action of a group. An individual considering participation in such collective action of a large group can make two assumptions about the success if this action to provide a collective good:

1. he assumes that, even if he himself does not participate, the collective action of the group will succeed and the collective good will be provided by the others who will participate;
2. he assumes that, even if he does participate, the collective action of the group will fail and the collective good will not be provided by the others who will participate.

The first assumption will lead to 'positive apathy' of the rational individual. As soon as he feels that others will provide the collective good, he has no incentive to participate in the costs because he cannot be excluded from the consumption of this good. It is only to his advantage to keep aloof. The second assumption will lead to 'negative apathy'. When others will not participate to achieve the desired collective good, it is often not worthwhile for the individual to participate in the collective action of the group. He will receive no benefit from his participation but only bears the costs of this activity. Whatever assumption the individual makes, he will not participate in this model of collective action unless:

a. he considers the outcome of the collective action of the group so important that he will bear the risk of paying the costs of his participation on his own, or
b. he regards his participation in the collective action of the group

\textsuperscript{22} Refer for an analysis and various applications of Olson's theory Hans van den Doel, op. cit. 1979, pp. 41-72.
as a very important private good, for example because participation gives him power, prestige or social contacts.

The problem is that in a large group the individual's participation in the collective action of the group has only a very small effect on the outcome (success or fail) of the group's collective action, whereas in a small group his participation will effect the group's outcome\textsuperscript{23}. In a large group his participation or non-participation will make no difference: either the collective good will be provided, and then he benefits without paying his share in the costs, or the collective good will not be provided, and then he avoids paying his share of the cost of the group's activities which have been in vain. In other words: in a large group there is little or no incentive for an individual to participate in the collective action of the group and to pay his contribution. The rational individual is tempted to expose parasitic behaviour or freeridership.

Olson's model of collective action can be employed as the theoretical foundation of the well-known Prisoner's Dilemma Game of A.W. Tucker. The outcome of this game is suboptimal in the sense, that both rational prisoners will confess and provide evidence of the other's complicity. As a result, they both will spend many years in prison. This suboptimal outcome proves that individual rationality does not necessarily lead to collective rationality of the group (or of society) in those cases in which the individuals are unable to influence each other's participation decision.

However, there are some solutions for this dilemma in a large group. The conflict between individual and collective rationality is caused by the characteristics of freedom of exit and non-commitment. In Olson's model of collective action individual group members are free to leave the group if they do not like the outcomes of the collective action of the group. Also they are not committed to the agreements within the group about the distribution of the costs and benefits of collective action. Freedom of exit and non-commitment, characterizing a negotiations democracy\textsuperscript{24}, result in parasitic behaviour of individual group members. In order to prevent such behaviour,

\textsuperscript{23} In a small group individual contributions in the costs of collective do influence the outcome of the group process. Individual contributions do matter, and in addition they can be guided much better by mechanisms of social control in the group.

\textsuperscript{24} Refer to Van den Doel, op. cit. 1979, pp. 53-62.
the group might turn to democratic acceptance of coercion. The members of the group themselves make provisions to escape their Prisoner's Dilemma and they do this democratically, i.e. by majority decision. These provisions imply negative sanctions towards individual members who do not join a cooperative strategy: individual members will be punished individually so that they will prefer to cooperate when they take the possibility of being punished into account.

Secondly, instead of negative individual sanctions on individual group members who refuse to join a cooperative strategy, the group might decide to employ positive individual sanctions to stimulate the individual group members to comply to a cooperative strategy. These positive individual sanctions are called selective incentives. Olson argues that a group may try to attract individuals to join the group not by offering them collective goods as a result of collective action of the group, but by offering them private goods and services which they only receive when they join the group and from which they can be excluded if they do not join. For the group then, the provision of a collective good is the main objective and the provision of individual goods is a side-objective, necessary to attract individuals to join the group. For these individuals, the main objective to join the group and to participate in its collective action is the receipt of private goods, whereas the receipt of collective goods resulting from the collective action of the group are only a side-payment for them.

Negative sanctions resulting from democratic acceptance of coercion against individual members refusing to join a cooperative strategy, and positive sanctions in the form of selective incentives towards individual members joining the cooperative strategy, both imply that the pay-off matrix from individual behaviour in the Prisoner's Dilemma will change. Or, stated differently, that individual calculations about whether or not joining (or staying into) a group are no longer guided by arguments pro and con about the collective good aspect of the group's activities; they also have to take into account the arguments pro and con about the private goods they will consume when they join (or stay into) the group or they will not consume when they not join (or leave) the group. The dominance of the non-cooperative strategy above the cooperative strategy in the Prisoner's Dilemma is caused by the structure of the pay-off matrix. This dominance can only be broken by a change in this pay-off matrix, and this is precisely what the employment of negative or positive sanctions does.
Hence, the conclusion of Olson's logic analysis of collective action is, that in a large group individual group members will not participate in the collective action of the group (for reasons of positive or negative apathy). They only will be persuaded to participate in the collective action of the group when the group decides to impose negative sanctions on non-cooperative individual behaviour (punishments resulting from the democratic acceptance of coercion), and/or to impose positive sanctions on cooperative individual behaviour (rewards in the form of selective incentives).

2.3 Towards an integrated theoretical framework for the analysis of non-market failure in representative democracy

The three theories of non-market failure of Charles Wolf jr., James Q.Wilson and Mancur Olson jr. can be combined into an integrated theoretical framework. We present this integrated theoretical framework point by point as follows.

The specific demand and supply characteristics of non-market production give cause to the following difficulties in the public sector.

1. The occurrence of redundant costs in the public sector resulting from the disjunction between revenues and costs of non-market production. These circumstances do not stimulate cost minimalization and productivity maximalization, but cause X-inefficiency.

2. The development of internal standards (internalities) and organizational goals in the public sector resulting from the lack of direct performance indicators for non-market agencies and agency personnel. These internal standards and organizational goals give cause to bureaucratic over-production in the public sector.

3. The occurrence of derived externalities in the public sector resulting as side-effects from non-market intervention in the market. These side-effects are not realized by the agency responsible for creating them, and hence do not effect the agency's calculations or behaviour.

4. The occurrence of distributional inequity, especially in influence and power, in the public sector resulting from the perceived distribution of costs and benefits of public policies and policy proposals.

The distributional inequity in the public sector can take the shape of four different forms, depending on the specific combination of distribution/concentration of costs/benefits of public policies.
5. **Interest politics**, resulting from a narrow concentration of benefits in combination with an equal narrow concentration of costs of public policies. Interest politics imply a sharp conflict between proponents benefiting from the policy and adversaries bearing the policy costs. Policy proponents and adversaries form a small segment of society, the majority of citizens not being involved and therefore not being interested. The outcome of interest politics is uncertain and depends on accidental events disturbing the balance of power between proponents and adversaries.

6. **Entrepreneurial politics**, resulting from a broad distribution of benefits in combination with a narrow concentration of costs of public policies. Entrepreneurial politics imply a strong opposition of small segments of society bearing the costs of the public policy from which everyone takes only a small benefit. In this case, public policy receives only small but fragmented support and provokes very strong opposition. Such policy requires a skilled political entrepreneur to collect public support and to conquer strong opposition of inflicted segments of society. The outcome of entrepreneurial politics depends mainly on the efforts and qualities of the political entrepreneur.

7. **Client politics**, resulting from a narrow concentration of policy benefits in combination with a broad distribution of the costs over society. Client politics imply a strong urge for public policy from the small segments of society taking large benefits, and a weak opposition against this policy because hardly anyone of society feels the his part of the policy costs. The outcome of client politics will be in favor of the public policy involved, because the beneficiaries of that policy will organize strong public support.

8. **Majoritarian politics**, resulting a wide distribution of policy benefits and an equal wide distribution of policy costs over large segments of society. All are most of society expects to gain; all or most of society expects to pay his share of the policy costs. The outcome of majoritarian politics will be in favour of the public policy involved, because interest groups will have little incentive to organize opposition against the policy.

   However, interest groups do not organize themselves automatically or spontaneously, and collective action is not necessarily successful.

9. The organization and the collective action of a group depend on the solution of the **Prisoner's Dilemma**, which causes the conflict between
the individual rationality of the group members and the collective rationality of the group as a whole. This conflict between individual and collective rationality, resulting from freedom of exit and non-commitment in the group, inflicts in particular the large group. Most likely such a large group will not organize and will not succeed in the undertaking of collective action.

In a large group, two different solutions for this problem can be agreed upon, i.e. the democratic acceptance of coercion (negative sanctions) or the employment of selective incentives (positive sanctions). The democratic acceptance of coercion implies that the group decides democratically, by majority decision, that those group members not joining a cooperative strategy will be punished for their behaviour and thus are forced either to comply to the group or to leave the group. The employment of selective incentives means that the group rewards individual members joining a cooperative strategy by providing them private goods and services. Thus individuals are encouraged to join (or to stay in) the group. In both cases the pay-off matrix of individual group members is changed and the dominance of the noncooperative strategy over the cooperative strategy is broken. In both cases also a skilled political entrepreneur is required to organize the group, to organize the decision making on democratic acceptance of coercion and/or the employment of selective incentives, and to undertake successful collective action of the group.

Points 1 to 4 of this list are derived from the theory of non-market failure of Wolf. Points 5 to 8, derived of the theory of regulation of Wilson, are a specification of point 4. Point 9 is derived from the theory of collective action of Olson and implies a further specification of the points 5 to 8. Taken together these points form a list of research questions to be answered in the analysis of concrete cases of public policy failure.

3. Two cases of non-market failure in environmental policy in the Netherlands

In this section we analyze two recent cases of non-market failure in environmental policy in the Netherlands using the integrated theoretical framework of non-market failure in representative democracy we have discussed above in section 2. These two cases, viz. the problems
of traffic control in private transport and manure reduction in intensive cattle breeding, have been prominent in the political debate on environmental policy in the nineteen eighties in the Netherlands. Public policies to control these problems have not been effective yet. However, in the near future the need for an effective solution for these problems will dominate the political agenda for environmental policy.

3.1 Traffic control in private transport

Dutch public policy with regard to road traffic and transport has been dominated by discussions on regulating instruments versus financial instruments. Regulating instruments aim at direct and physical reduction of private road traffic and transport. These instruments intervene in the quantities of car sales and car use, of driven kilometers, of emitted waste products, and so on. Financial instruments, e.g. taxation, aim at indirect reduction of private road traffic and transport. These instruments intervene in the prices of car sales and car use, of driven kilometers, of emitted products, and so on. Regulating instruments set aside the market mechanism by overriding individual preferences; financial instruments make use of the market mechanism by targeting at traffic and transport prices, and thus influencing individual behaviour without overruling individual preferences.

Financial instruments are market-conform instruments. They may be preferred above regulating instruments for two reasons: In a market economy, government may use financial instruments to improve efficiency in allocation, for example to internalize externalities in the market prices. In a system of representative democracy, government may use financial instruments to improve the legitimacy of public policy by respecting individual preferences instead of overruling them. For these theoretical reasons financial instruments may be preferred, but in Dutch traffic and transport policy they are still under political consideration. The introduction of pricing elements in private traffic and transport implies that some individuals or groups in society will benefit and others will pay for the costs. Hence, in order to solve an allocation problem we are confronted with a distribution problem be-

25 For an extensive discussion of regulation versus taxation of traffic control we refer to the chapter of Rietveld in part B of this book.
tween winners and loosers.

Political agreement on the employment of financial instruments in traffic and transport policy has not been reached so far because of lacking consensus on partly the policy objectives but mainly on the policy instruments. Various financial instruments have been proposed by a study committee of an important platform of environmental interest groups in the Netherlands, the LMO ("Landelijk Milieu Overleg")\(^{26}\). An important financial instrument is 'road pricing'\(^{27}\). The general introduction of road pricing implies a strong rise of the variable car costs. A rise of the variable car costs with an average of 50% will result in a decrease of 25 to 30 milliard car kilometers, assuming a price elasticity of -0.4. Part of the thus yielded tax income (initially dfl. 13 milliard, later on dfl. 10 milliard) may be employed to stimulate public transport, car pooling, bicycle traffic, and so on. Such expenditures may double the effects on traffic behaviour but will simultaneously decrease the tax yield to about dfl. 8 milliard.

From a theoretical point of view road pricing, i.e. levying a tax per private car kilometer, seems a powerful financial instrument to control and reduce private traffic and transport. Yet political agreement to employ this instrument in public policy has not been reached in the Netherlands. How can we explain this? To answer this question we can return to our integrated theoretical framework of non-market failure.

First, it seems that in the responsible Dutch government departments of Traffic and of Environmental Policy internal standards and organizational goals are more directed towards employment of direct and physical regulations than towards the use of indirect financial instruments. In the traditional bureaucratic culture civil servants


\(^{27}\) For an analysis of this instrument we refer to the chapter of In 't Veld in part B of this book.
have a classical preference for using direct regulations above indirect financial policy instruments; bureaucrats are not used yet to think in terms of market-conformity. Many technical implementation difficulties have been used as counter-arguments against the introduction of road pricing, but this massive resistance leaves the impression of an ideological aversion against this instrument.

Second, road pricing as an instrument for public intervention in private traffic and transport may derive new externalities. For example many private traffic and transport activities do not satisfy private wants of consumers, but are necessary for activities of economic production and thus are part of the economic activities of firms and business, either to bring raw materials and labour to the production place or to distribute the goods and services to the retailers and consumers. Road pricing will increase the costs of such transport, thus increasing the costs of the products transported. This may be considered right on as one of the policy objectives of road pricing, but these effects should be taken into account apriori in the policy preparations.

Third, road pricing implies high traffic costs for large and powerful but still minority groups in society and small environmental benefits for every individual. This means that entrepreneurial politics are involved. And as we have seen above, the incentive to organize is strong for opponents of the policy but weak for the beneficiaries. The implementation of road pricing as an effective instrument of environmental policy requires the efforts of a skilled entrepreneur who can mobilize latent public sentiment, put the opponents of the plan publicly on the defense, and associate the legislation with largely shared values. Such a political entrepreneur in traffic policy seems to be lacking nowadays in the Netherlands. Opponents of the policy of road pricing are very well organized; organizations of the road transport business and organizations of private car drivers haven been rather succesful in the fight against road pricing until now. These organizations have professional staffs with good contacts in the relevant government bureaucracies (sharing the same organizational standards and goals), and very skilled in exploiting the technical and implementation difficulties of road pricing.

And fourth, in comparison with these powerful opponents environmental interest groups have large organizational problems. The discussion on road pricing is rather technical and it is very difficult to
mobilize the public around technical issues. Here we witness Olson's problem of collective action in a large group. Such collective action is hampered severely by the phenomena of parasitic behaviour and free-ridership. Collective action will not be undertaken or will not lead to success as long as individual behaviour in traffic matters is dominated by the non-cooperative strategy.

These four factors of non-market failure are a satisfactory explanation for the lacking agreement in politics and society on road pricing as an effective instrument to control and reduce private traffic in the Netherlands.

3.2 Manure reduction in intensive cattle-breeding

The Netherlands have developed a large agro-industrial business sector. During the post-war area Dutch farmers and bio-industrialists have been remarkably successful in improving their productivity. The bio-industrialist complex has blossomed under the protective umbrella of the state. Present farm policies of the European Community are by and large modelled after the original national programs initiated by the Netherlands government in the immediate post-war years. Essentially, such policies offer generous income support for farmers through guaranteed price levels for the most important agricultural products. However, such price guarantees lead of course to overproduction of commodities involved. In addition, lavish public subsidies are given to improve land quality and to facilitate the restructuring of production units, as well as a wealth of tax subsidies.

At the start of the nineteen nineties these policies cost Dutch tax payers (and consumers) at least df1. 10 milliard (1% of GDP) annually\(^\text{28}\). Farm policy in its present form may be explained as a result of the interplay between a strong and well-organized lobby (the 'Green Front'), and its own government department of Agriculture. Moreover, agriculture is a highly complicated and technical policy field, resulting in an largely uninformed and uninterested electorate.

In recent years 'green' awareness has grown in this extremely densely populated country (436 inhabitants per square kilometer in 1989) and by now it is generally understood that farm reduction will

\(^{28}\) For an overview of some selected facts and figures in Dutch agriculture we refer to the chapter by Folmer in part B of this book.
have to be reduced in order to preserve the natural habitat and in particular to save the supply of drinking water in the longer run. Policy makers, however, still seem to be extremely reluctant to pursue and enforce environmental and economic-financial policies aiming at an effective reduction of the volume of waste generated by livestock, i.e. manure. As in the case of traffic control, again there is a choice between direct, physical regulation of manure production and indirect, financial regulation by taxation (and, logically, subsidization).

New legislation has been created recently, but this legislation may be criticized for containing the wrong type of policy instruments. The following policy instruments can be distinguished in this recent agricultural legislation.

*The Act on Soil Conservation (1987), containing:
- legal norms for manure deposits;
- special norms for protected areas, areas where drinking water is produced and areas with phosphate-accumulation;
- during winter and frost periods manure spreading is prohibited.

*The Act on Manure (1987), containing:
- total livestock and manure production must be registered;
- rules for detailed record keeping of sales and transportation;
- a ban on manure production expansion above the level of 125 kg phosphates per ha;
- transportation guidelines;
- tax on manure surplus;
- manure banks.

*The Nuisance Act, requiring ecological permits for farms.

*Subsidies.

*Research on industrial manure processing; in the year 2000 capacity must be increased to 20 million tons per year.

*Education and information.

From this list it can easily be seen that the policy-makers have opted for a complicated policy mix of new subsidies, setting legal norms for manure deposits, record keeping, monitoring, and related forms of regulation. The disadvantages of such policy measures are by now well-known. Fraud, pressure of lobbying interest groups and discretionary power of civil servants may undermine their effectiveness. Moreover, a large number of public employees is involved in setting and maintaining environmental norms and paying out all kinds of subi-
The effectiveness of this complicated mix of policy instruments for controlling and reducing manure production in the intensive cattle breeding industry may be doubted seriously. Information about the farmers manure producing behaviour and about the effects of the policy measures on this behaviour is vital for the success or failure of the policy. However, this information is for policy-makers hard to get and for actors in agricultural business easy to distort. In addition, it is very difficult for policy-makers to judge the quality of the received information. All these information problems are well-known from the principal-agency theory. Furthermore, the instruments of subsidiation and physical regulation are susceptible for negotiation attempts of interest groups, in particular where unclear definitions of norms and unclear prescriptions for government intervention are at stake. This also stimulates the counter-part of lobbying, i.e. discretionary behaviour of public officials.

De Kam has made an interesting suggestion for an alternative policy instrument to avoid all these problems. He proposes that the government should introduce 'green' taxes (structured like excises) that raises prices of inputs, notably of cattle feed. Thus, negative externalities of present production techniques will show up in prices of the relevant farm produce. The proposed taxes would improve the environment and further increase the efficiency of agricultural production. Since only a few large importers and processing plants handle cattle feed, the administrative and compliance costs would be low. The sheer bulk of the tax base (feed stuffs) clearly hampers any attempt at fraud. Of course, such green taxes (or ecotaxes) should be considered and introduced by the EC, since no member state can pursue such policies alone. Also a 'poll' tax per animal might be considered, but the introduction of such a levy would imply higher administrative costs and more opportunities to fraud. Hence, such a poll tax on cat-

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29 Refer for the important role of information in the employment of tax instruments the chapter by Dietz and Termeer in part B of this book.


31 He presented this idea at the symposium Environmental Protection. Public or Private Choice, organized by the Timbergen Institute on April 7th 1990, at the Rijnhotel in Rotterdam.
tle would be a second best solution as compared to the proposed green tax.

Other policy alternatives are as well in discussion. E.g., an adjustment of cattle feed composition, resulting in a reduction of mineral-emission of about 30%. A second proposal implies the introduction of technical measures to reduce NH₃-emission, such as manure injection, immediate underploughing, and adjustments in accommodation. This may effect a reduction of NH₃-emission of 50%. However, even if these two proposals would have been realised, there is still a manure production surplus. This surplus can only be diminished by a reduction in the livestock through a public buy out or through general reduction measures. Also the manure processing industry could be expanded through public subsidies and through prices or retributions paid by the cattle breeding industry.

Why is it that policy makers are so reluctant to pursue and enforce market-conform financial policies to reduce manure production by intensive cattle breeding? First, it seems that in the department of Agriculture internal standards and organizational goals are more oriented towards the use of direct and physical regulations rather than towards more confidence into indirect financial instruments. As is the case in the attitude of the department of Traffic against road pricing, civil servants in this department have a strong preference for direct regulation above market-conform financial incentives. These preferences are shared by most of the agricultural interest groups and lobbies. Hence, the inevitable outcome is that in agricultural policies financial instruments are always embedded in physical regulations.

Second, the employment of financial instruments to reduce manure production in agriculture might cause new externalities, as only Dutch farmers would have to bear the costs as long as other countries do not employ the same (or comparable) policy instruments. Only the enforcement of such instruments within the framework of the agricultural policies of the EC would prevent the rise of new externalities in the form of unfair competition between farmers of different nationalities.

Third, as in road pricing, the costs of financial arrangements to control and reduce manure production would be borne by a minority of intensive cattle breeders, and a large majority of society would enjoy only minor benefits per individual from the improved environment. A majority of probably uninterested winners earn only a little gain, a
minority of very interested and powerful loosers will be confronted with large costs. This combination of concentrated costs and dispersed benefits clears the way for entrepreneurial politics. The implementation of financial measures to control and reduce manure production in intensive cattle breeding requires a skilled political entrepreneur to mobilize latent public sentiment, to put the opponents of the plan publicly on the defense, and to associate the legislation with largely shared values in society. Such an entrepreneur appears to be lacking in Dutch agricultural policy. This lack is reinforced by the rather technical and complicated character of issues in the agricultural policy field.

And finally, against the strong organization of opposing agricultural producers (farmers and cattle feed producers) stand only weak organized environmental interest groups. It is very difficult to mobilize the public around such complicated and technical agricultural matters. Again we witness Olson's problem of collective action in a large group. Collective action will not be undertaken or will fail to succeed as long as individual behaviour in agricultural matters is dominated by the non-cooperative strategy.

These are the factors of non-market failure that count for the explanation for the lack of agreement in politics, public administration and society on the employment of financial instruments to control and reduce manure production in intensive cattle breeding. The same factors of non-market failure explain the lack of enthusiasm for the suggestion of De Kam to introduce green or ecotaxes to solve this problem.

4. Is there a solution for the problems of non-market failure in environmental policy?

The analysis of non-market failures in environmental policy in the Netherlands presented above in section 3 could give rise to serious pessimism about the possibilities for a solution for these problems. It is clear that the market does not solve environmental problems but is in many cases the cause of them. But these problems cannot be solved either by the non-market, i.e. by government policies, because of non-market failures. What we really need is counter-measures against the various non-market failures, or as we already have stated in our
introduction counter-counter-measures against market failures.

What counter-measures against non-market failure in environmental policies can we think of? The recent publication of (semi-)official government reports on environmental problems in the Netherlands and on environmental policies to attack these problems, for instance 'Zorgen voor Morgen' ('Cares for the Futures') and 'Nationale Milieubeleidsplan' ('National Policy Plan for the Environment')\(^{32}\), in the late nineteen eighties perhaps can be considered as a benchmark for a fundamental change in the debate on environmental policies.

From a more optimistic point of view, at least five silhouettes of such a change in environmental policy might be discovered\(^{33}\). First, there is a beginning development in the relationship between government and business in environmental affairs, from a bipolar and adversary model to a environmental policy network. Various new actors have gained access to this policy network, e.g. individual firms, labour unions, consumer organizations, organizations of investors and environmental organizations. All these new actors have changed the power structure of the political arena, and this causes a change in the structure of the power game from a zero-sum situation to a positive-sum game in which Pareto-optimal gains and win-win solutions can be found.

Second, and consequently, the change in role patterns in an environmental policy network leads also to a search of all actors involved for their own policy instruments, determined by their positions, their interests, and their possibilities. And this enables agreement on (partial) solutions for environmental problems without any government intervention at all. A political market is growing, on which by means of exchange and negotiations all actors involved may find compromises for the solution of environmental issues. Such a political market could be a substitute for both the economic market with inherent market failures and the government with inherent non-market failures.

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\(^{33}\) These five silhouettes of a clean economy in the Netherlands have been distinguished by W.A. Hafkamp, Contouren van een schone economie, ('Silhouettes of a clean economy'), inaugural lecture Katholieke Universiteit Brabant (KUB), 16 November 1990.
Third, in recent years many individual firms have started to organize within the firm an internal department responsible for the scanning and solution of environmental problems caused by the production techniques of the firm. This activity has been stimulated by an increasing opinion at the management level of firms that the care for environmental problems of business is an inevitable part of the strategic policy of business. The failing enforcement and control of government environmental policies towards business may have been an additional incentive: when governments fail in their duties, individual firms and business have to take their own responsibility.

Fourth, these three developments have induced a beginning change in the government's position in environmental policy. A reorientation on environmental law-making, the enforcement of such laws, and the construction of new policy instruments has started recently. In particular the manner in which government has employed the argument of 'legal liabilities' of individual firms in recent legal procedures on environmental affairs has been very effective. This active government attitude appears to have also strong preventive effects on business behaviour in environmental problems. The control of environmental policies will be more adequate and more intensive, as well as may make more use of financial-economic incentives instead of physical regulations.

Fifth and last, new forms of cooperation of environmental activities between individual firms and between firms and (semi-) government organizations are established. In particular activities of 'firm-external' environmental care are organized in new forms of cooperation and coordination, such as the collection, transportation and recycling of waste products, the support of firm-internal environmental activities, the development of general standards for environmental pollution and environmental protection by production activities, and so on.

These five silhouettes of a fundamental change in environmental policy in the Netherlands can be discovered as a positive fact, but that depends of the particular point of view taken (optimism versus pessimism). From a normative standpoint, these five silhouettes of fundamental changed should be welcomed and should be stimulated, because they can yield possible solutions for the non-market failures thus far hampering an effective environmental policy in the Netherlands.

The establishment of a policy-network with an enlarged political arena and with free negotiations and exchange between all political
actors can lead us beyond the dichotomy market/non-market, and hence can offer us a way-out of the various failures, either market or non-market. The reorientation in the environmental behaviour of both the firms and the (semi-)government organizations may solve some problems of market and non-market problems, respectively. And all of these developments could be stimulated by the fifth change, the growth of an external policy network for environmental affairs in the business sector itself.

However, all this does not mean that the distributonal cost and benefits problems of environmental policies (Wilson's regulation theory!) will be solved easily, nor that the Olsonian problem of collective action of large groups in environmental policies will not arise anymore. In both cases a very skilled political entrepreneur is required to mobilize and organize the individual citizens having an interest in the effective solution of environmental problems, to manage the political agenda towards effective political solutions, and to act as an important countervailing power against the lobbies of powerful interest groups from various sectors of commercial services, industry, and agriculture. Every policy change that is effective will inevitably imply winners and loosers, and hence will provoke resistance from business and society. This is certainly true for the necessarily radical changes in environmental policies. Only organized bottom-up political pressure will enforce such radical changes.

5. Conclusion: eco-fascism versus democracy

Various forms of market-failure can be employed as arguments for government intervention in the economy. In analogy with the theory of market-failure a theory of non-market failure has been developed in the nineteen seventies and eighties, mainly following publications of Charles Wolfe jr. We have offered in this chapter an integrated theoretical framework for the analysis of non-market or government failure, in which we combined the insights of Wolf with the contributions of James Q. Wilson (theory of regulation) and Mancur Olson jr. (logic of collective action). This theoretical framework proved to be a useful tool for analyzing some problems of environmental policy in the Netherlands.

Sometimes it is suggested that an effective environmental policy
is frustrated by the inherent limits of (representative) democracy, causing serious delay in decision-making, fragile coalitions and compromises, compromise-based and hence ineffective policies, and last but not least, democratic resistance against radical but necessary policies.

Such an interpretation of the limits of democratic policy-making is then followed by the statement, that if democracy is the cause of all problems of environmental policy, democratic institutions and procedures should be set-aside for a form of 'enlightened dictatorship' that, although perhaps not legitimate in the beginning, should earn its legitimacy by enforcing effective solutions for environmental problems where democracy has failed. Such alleged failure of democracy in the defense of the vital interests of spaceship Earth and its population is then a legitimate argument for substituting it for a form of 'ecofascism'. The theory of non-market failure gives evidence for our conviction that democracy is not the cause of the problem and that substitution by enlightened dictatorship will only aggravate the problem. In our opinion, democracy is not part of the problem of environmental problems but the heart of the solution. Only democratic reform will offer effective remedies for non-market or government failure in environmental policy. Hence, democracy should not be abolished but should be strengthened, if not for the sake of democracy itself, then for the sake of our environment and of our future.