

**Paper prepared for the ECPR
Workshop on "Policy Change"
May 7-12, 2007
Helsinki, Finland**

**"Double speed policy change".
A postpositivist framework for the study of clean air policy in France and Greece**

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Policy analyses have repeatedly shown that the policy process is far from constituting an ordered phenomenon as presumed by the sequential approach in the 1970s (H. Lasswell, 1956, C.O. Jones, 1970). The study of policy change shows the same complexity which proves difficult to model. Various explanatory models have been proposed but their comparability remains rather low. Authors do not always engage at the same level of analysis and the way in which the notion of "policy change" should be conceived is rarely discussed. Indeed, the unit of analysis varies from one case to another without an explanation of the preferred choice. This subject must be considered seriously because, depending on that choice, the way of perceiving the process of change differs strongly. Further, studies of change are often not very expansive on the definition of the term policy change. However specifying its components, (i.e. the elements that one must observe to confirm or not the presence of policy change) appears a necessary preliminary stage before trying to qualify the process of change.

The first part of this paper seeks to identify the various units of analysis usually employed for the study of policy change and argues for the relevance of the choice of "public problems" as the most pertinent unit of analysis. The second part proposes a specific definition of the notion of policy change which serves as a basis for the development of an analytical framework respectful of the complexity of the phenomenon. This framework is based on the postpositivist approaches to public action (M. Edelman, 1991; C. Rochefort & R.W. Cobb, 1994; D. Stone, 1997) and puts the process of problem definition at the heart of the analysis. The last part briefly presents the main results of the application of this framework to an historical analysis of clean air policy in France and in Greece (C.A. Vlassopoulos, 1999, 2000).

This study makes it possible to note that the components of policy change do not evolve at the same tempo, neither with the same intensity. I have qualified this phenomenon as "double speed policy change"¹. This thesis results from the analysis of a specific empirical setting and to this end cannot claim generalisation before it is tested in other cases. Nevertheless the comparative and historical dimensions of the analysis and the choice of two countries varying considerably in their social, political and economic structure strengthen the validity of the results.

¹ In French I qualify this phenomenon as "changement à deux vitesses". I have not found in French or in English a term signifying simultaneously 'tempo' and 'intensity'. An alternative formula could be "double dynamics policy change".

A/Looking for a unit of analysis

A survey of the literature shows that there is no consensus on the level to choose in order to better apprehend the process of change. The most commonly selected unit is “public policy”. The choice of public policy as unit of analysis presents however certain disadvantages that I will discuss first. Secondly I propose that if one moves the attention from public policies to “public problems”, this can moderate these disadvantages and create new perspectives for the study of policy change.

1. The limits of the "policy" choice

Public policies constitute the most often used unit of analysis for research. But the definition of the term "policy" has never been the subject of consensus among specialists. It is used to describe various forms of public action which are not without effects on the observation of policy change. Moreover, public policies are temporarily and spatially situated. The limited life time of a policy does not allow a longitudinal analysis and prevents the discovery of policy inheritance. Further, since public problems are multi-sectoral, a public policy covers only a part of the problem administration. In the study of policy change what is interesting however is to study how various policies merge or separate themselves over time to answer a given problem.

We can represent policies like Russian dolls enclosed within one another. Let's take the example of the environment which is often used as a case study for "policy changes". What is called environmental policy represents a *sectoral policy* made up of a series of *issue policies* like clean air policy, water quality policy wastes management policy, etc. An issue policy can also be divided in more restricted *sub-issue policies*. Motor vehicle pollution policy or industrial pollution policy are examples of this type. Further, the policy to promote clean motor vehicle technology is a component (or measure) of motor vehicle pollution policy. In short the term "public policy" concerns very different levels of public interventions.

In his presentation of the advocacy coalition model P Sabatier (1988, 138) studies an issue policy (clean air) but uses indifferently sub-sectoral (like air pollution) and sectoral (like agriculture) examples. P. Sabatier and A.M. Brusher's (1993) article covers the impact of the new environmental policy on a series of issue policies in the basin of Lake Tahoma. What the authors call a "policy subsystem" comprises a large number of actors coming from all the issue policies under examination (water, air, town planning) to whom is added the new environmental coalition. H.C. Jenkins-Smith (1988), analyses a series of very restricted measures related to U.S. energy policy like the size of the Petroleum Reserve, the price of natural gas, or the organisation of the refinery market. For him the term "policy subsystem" refers to a rather narrow configuration of actors who is relatively homogeneous because it is composed of energy experts in each one of these issues. P. Hall (1993) studies a paradigmatic change within a policy sector, that of British economic policy, and its impact on issue policies that compose the sector (inflation policy, unemployment policy, monetary policy, fiscal policy, etc.).

The choice of a sectoral or sub-sectoral unit of analysis is not without importance for the study of policy change because it has implications for the way in which this change is perceived. The sectoral level is a much more crowded space than the sub-sectoral. For example the

environmental sector includes all the actors concerned with soil pollution, sea, air problems, etc. This overload in actors with different perceptions and interests make changes and policy learning rarer than changes exclusively concerning an issue or sub-issue policy. These changes when they occur cover the theoretical foundation of public action (there intensity will be discussed below). Thus P. Hall describes the passage from Keynesianism to the monetarism of the British economic policy as a paradigmatic change. P. Muller and B. Jobert (1987) speak about the change of "référenciel global" within the French agricultural sector of the 80's. P. Sabatier and A.M. Brasher refer to major changes of the belief system (deep core) to describe the impact of the environmental sector on a series of the pre-existing public policies². These large-scale sectoral changes cover however only one dimensions of the process of change and risk under-estimating the importance of sub-sectoral changes. Issue policy changes are more diversified. These policies can undergo the effects of the paradigmatic change which affects the sector to which they belong (as in the case examined by P. Hall). They can also undergo internal modifications often of low importance that P. Sabatier describes as "near core" or "secondary aspects" and P. Hall as change of first and second order. These changes concern the adjustments of current programmes. Issue policies can lastly undergo more important changes affecting not only policy instruments but also the perceptions and beliefs of policy actors. In that case, as the example of clean air policy shows, new programmes can emerge without any large-scale sectoral change.

The study of a sectoral policy with simultaneous analysis of a series of representative issue policies can give a rich image of the process of change but the choice of public policies as unit of analysis is likely to prove temporally and spatially restrictive. First, the temporality of public policies does not coincide with that of the problem that they deal with. To take up again the example of clean air, an *ad hoc* policy on the matter began in France with the 1961 law and in Greece with the programme of 1982. This does not mean however that before these dates the problem was not known. It was dealt within other public policies. To fix attention on a public policy runs the risk of ignoring the period preceding its emergence, which is highly important for the comprehension of its inheritance. Further, the appearance of a new policy does not inevitably eliminate the other policies which coped with the problem up to that point. The actors in place fight in order not to lose the budgets they control and the influence they exert over the matter. Thus, after the appearance of an *ad hoc* clean air policy, industrial policy continued managing a part of the problem.

The choice of public policy as a unit of analysis leaves therefore certain dimensions of the process of change in the shade. The shift of attention from policies to public problems seems to better respect the complexity of the phenomenon.

2. The "public problem" choice: a post –positivist approach

We can define public problems (or policy problems) as social problems dealt with by the public

² Baumgartner and Jones study many case where the new environmental sector transformed issues perceived positively (nuclear plants, pesticides) to problems perceived negatively. Thus, the authors observe "dramatic" policy changes. We consider that those examples constitute rather cases of policy creation than policy change. Most of the time policies that perceive issues negatively do not bring an end to policies that perceive the same issues positively. For example, nuclear energy production and the use of pesticides in agriculture continue besides the fact that alternative energy and agriculture policies have been invented. In that sense policy change appears less dramatic.

authorities³. This first definition requires better specification because the concept of a 'public problem' is as polysemous as the concept of public policy and can cover different realities. To take up again the previous example, environmental degradation is a public problem as well as air pollution, motor vehicle pollution or pollution by lead emissions. All these problems take the form of the same Russian doll that we evoked above: air pollution is an environmental problem, motor vehicle pollution a component of air pollution and lead emissions a component of motor vehicle pollution. Is there a most pertinent level for the study of policy change?

To answer this question we adhere to the postpositivist approach which proposes considering social and public problems through three epistemological premises: 1. Problems are complex events related to the construction and reconstruction of political causes, of structures, of roles and of moral positions (Mr Edelman:45; D. A. Rochefort and R. W. Cobb, 249). 2. This construction takes the form of a definitional process through which the participants' successive interactions get the problem "unrolled" (M. Spector & J.I. Kitsuse: 126). 3. This definitional process is a question of power because those who manage to impose their vision of the problem distribute the roles between the actors concerned and decide on the measures to be applied. (E.E. Schattschneider, 1975,102; D. Stone, 1997, 197)

Postpositivist sociology and in particular the influential work of M. Spector and J.I. Kitsuse, covers primarily the construction of social problems. When these studies refer to the public authorities, they are perceived as an additional actor in the current definitional process. When a social problem is transformed into a public problem, its definition follows a specific process which has to be connected to the fact that the entry of a problem within the public sphere places the official authorities in the position of the orchestrator of this process. Social actors can negotiate only via the official authorities. What is the impact of this situation in the definitional process? Make into

In the case of a social problem, negotiations between actors cover primarily the causes of the problem and marginally its consequences. The importance attached to the causes is obvious since these distribute between the different actors the cost of the resolution of the problem (which will pay and which will benefit). The reference to the consequences of the problem has only a symbolic impact: justifying to the other participants the perception that certain actors have of a given situation. Whatever the justifications are, it is up to the actors concerned to solve the problem while agreeing on its causes and, therefore, on the solutions to apply. On the contrary, in the case of public problems, the evocation of the consequences has at the same time a symbolic and concrete impact. This difference is related to the fact that those who are concerned with the problem do not coincide with those who are responsible for solving it, namely a public authority.

Each reference to the consequences of the problem constitutes, in the case of public problems, not only a justification legitimizing to differing degrees the intervention of political leaders ("we act to protect the citizens' health ", "we act to guarantee safety", etc), but also a means of the distribution of competences within the State. In this sense M. Edelman (1991, 50) writes that the construction of a problem invites the recognition of the authority of those who claim to have one or another

³ Baumgartner and Jones use the term 'valence issue' to describe issues that are perceived and discussed only in a negative way.

type of competences. Let us take again the example of air pollution: it can be defined as an industrial problem or as a motor vehicle problem. This determines the causes of the problem. It can also be defined as a public health risk or as an environmental problem. This determines the consequences produced by the presence of the problem. As will be seen below, according to whether the definition of the problem covers health protection or environmental protection, the distribution of competences between administrations changes.

It is then possible to claim that the definition of a public problem is carried out through a double definitional process: the first determines the causes of the problem and answers the question "what is the problem?"; the second determines the consequences of the problem and answers the question "why does this situation constitute a problem?".

To reveal this double process a specific partition of public action must be performed. One could choose to study environmental degradation. But the environment does not generate a definitional debate on its consequences. Environmental protection is a "self-justified" question in that it constitutes an accepted social value (to say that one must protect the environment does not require any additional justification). In order to be able to identify the double definition of a public problem, an "hetero-justified" problem must be chosen namely a problem that necessitates a broader justification to be admitted as indisputable: this is the case of air pollution which has to be justified with reference to environmental quality, public health, quality of life, etc. Simultaneously the selected problem must be sufficiently broad to be able to generate a debate on its causes. For example, in J. Gusfield's study drinking and driving constitutes a mono-causal problem: the problem is alcoholism. The quality of the roadway, the driver's age, young drivers' training, etc can also cause accidents but are not discussed. To obtain a multi-causal problem one must therefore climb up a level and to choose the problem of road accidents.

According to what precedes, various arguments can be put forward to support the relevance of the choice of the public problem as a unit of analysis in the study of change.

1- In order to reconstruct the process of problem definition and redefinition this choice invites us to adopt a longitudinal viewpoint. During this process the problem can pass through different sectors and be the subject of various public policies. Thus the analyst must go beyond the narrow borders of a sector and/or of a public policy to study their inheritance and thus to better appreciate the weight of the past and the innovative elements introduced in each definitional stage. This also makes it possible to identify within the same study the different dimensions of policy change: the impact produced when the problem penetrates a new sector, the effects of the emergence of a new programme or the adding of new measures into the current programme.

2- As an issue of power, problem definition divides the actors into winners and losers and legitimates certain courses of action to the detriment of others. Thus, the reconstitution of the definitional process has to go together with the identification of the problem subsystem⁴ and

⁴ We use the term "problem subsystem" instead of "policy subsystems" in order to describe the actors mobilised around a public problem and participating more or less actively to successive formulations of policies in order to cope with the problem.

of the programmes of action. The analytical framework proposed below is based on the interaction between these three variables and their evolution throughout the definitional process.

3- The distinction between the definition of the consequences and the definition of the causes of the problem makes it possible to better specify the relationship between changes of ideas, changes of actors and changes of policy content programmes/measures and thereby to better evaluate the tempo and the intensity of the process of change.

B/What policy change might mean and how it might be analysed?

As C.J. Bosso suggests (1993, 201), the effort to better understand the process of problem definition can answer in a more relevant way the "why" and "how" of policy change. More than the question of "why public policies change?" it is the question of "how this change is carried out?" that is privileged here. Because public policies always generate winners and losers, change is always possible. The dissatisfied are in search of favourable conditions enabling them to improve their position by modifying the dominant definition of the problem and the policy action. In other words, change must be considered as a natural phenomenon and immobility has rather to be the subject of interrogation. In order to propose an answer to the second question it is important to define precisely what policy change might mean. Following such definition we will propose a framework for the analysis of policy change.

1. Variables and dimensions of Policy change

M. Howlett and M. Ramesh (1998) rightly affirm that there is not only one source of change, nor only one tempo of change, nor only one intensity. Policy change is an eminently complex phenomenon and its study requires not only the specification of its components (i.e. the elements that must be analysed to affirm the presence, or not, of change) but also the consideration of its tempo (i.e. the rapidity with which the change occurs) and its importance (i.e. the deviation produced in relation to the previous state balance).

In a more or less explicit way, policy change is recognized when a new programme emerges. P. Sabatier (1988: 1) explicitly refers to change as a change in governmental programmes. He relates this change to modifications of the belief system within a "policy subsystem". R. Rose and P.L. Davies (1994) evaluate the rhythm of policy change in terms of the number of new programmes voted in the space of a century in Great Britain. P. Hall (1997: 279) identifies three orders of change covering various components of current programs (the organisation of the instruments, the instruments themselves and the hierarchy of goals behind policy). F. Baumgartner and B. Jones (1993: 132-33) remain less precise in their definition and evoke alternatively the change in "policy outcomes", "policy enactments", "policy action" or "program creation". For those authors policy change is the result of the interaction between policy venue and of policy image. The two independent variables mainly underlined as being at the origin of policy change are actors and ideas. According to changes in ideas and actors, policy change can be more or less rapid, more or less important (M. Howlett & M. Ramesh 1998, 473). Simultaneous changes in ideas and in actors should generate rapid and paradigmatic policy change. One can bring two criticisms to this correlation between actors, ideas and programmes.

First, the analysis seldom goes beyond the obviousness of the appearance of a new actor, a new idea and/or a new program. This is more often the case when the analysis is longitudinal and multisectoral. The scale of the data pushes toward the choice of quantitative rather than qualitative analysis. For example the very interesting analyses of F. Baumgartner and B. Jones and that of R. Rose and P.L. Davis remain primarily quantitative and do not seek to appreciate the concrete impact of the change on the studied reality. The analysis of air pollution in France and in Greece makes it possible to note that the appearance of a new actor and new programme can be less innovative than it appears at first sight. Consequently the study of policy change does not have to be limited to the identification of innovative elements. It has to seek to evaluate the importance of change: to what extent does the emergence of a new actor disturb the previous balances, to what extent does the content of a new policy programme modify the pre-established method of problem regulation? In this case a quantitative approach is important as an entry to identify the periods of upheaval and the emergence of new actors, new ideas and new programs likely to challenge the status quo. But in order to study the extent of change the simultaneous use of qualitative longitudinal analysis, especially discourse and content analysis, seems equally necessary.

Secondly, as G. Dudley and J. Richardson remarked (1998: 731) "a paradigmatic shift in terms of ideas and values may not be immediately expressed in terms of policy outcomes". Indeed the case of air pollution contests the correlation between change in actors and ideas and change in the policy content. We will see further that the appearance of new actors and/or of new perceptions of the problem may not generate changes in the content of policy. However all these partial changes must be considered seriously because they can introduce important modifications. The change of discourse and problem definition can for example influence the balance of power between policy actors and transform the nature of the subsystem. This was the case in France at the beginning of the 1970s: the subsystem became less pluralist and more homogeneous and made it possible to limit the visibility of the problem and to prevent the emergence of new measures.

From what precedes, it appears to us relevant to consider policy change as *the result of changes in all or some of three interactive variables: ideas (problem definition), actors (public and private) and policy content (measures)*. Further there is no reason to consider *a priori* that these variables evolve inevitably at the same tempo and with the same intensity.

2. Constructing an analytical model

The distinction between the definition of consequences and the definition of causes can serve as a means to better specify the relationship between the changes of the above three variables and therefore to better evaluate the tempo and the intensity of policy change.

Since the determination of the causes influences the actors that have to assume the cost of problem resolution, the study of the causal definition should allow the identification of the private actors mobilised around the problem. The definition of the consequences should make it possible to identify the institutional actors and the way competences are distributed between policy sectors. Therefore it should be possible to connect changes of the causal definition with changes in the balance of power between private actors and changes in the definition of the

consequences with institutional restructurings. As we will observe in the following paragraph, the definition of air pollution as a motor vehicle problem actively mobilised car manufacturers within the problem subsystem. At the same time, the industrial lobby became less visible and is positioned at the margin of the subsystem. Its definition as an environmental problem transferred in both countries, the attribution of the political and administrative responsibility for policy making to the Environmental sector. The changes in the perception of the consequences and/or causes of the problem should in addition modify current programmes in order to adapt them to the new causes to fight and the new consequences to avoid.

Like any attempt to model reality this analytical framework schematises the complexity of the process of change. Air pollution shows for example that the public and private actors do not act independently of one another: the interpenetration between the public and private spheres and the close relations established between public agencies and organised interest groups means that the mobilisation of a public actor often involves the implication of the corresponding administration and vice versa (J. Chevallier, 1994, 373). This observation should not however negate the interest of the analytical framework presented here which does not claim to be exhaustive but rather proposes a relevant reading of the complex phenomenon imperceptible as a whole.

The longitudinal study of the double definitional process signifies reconstituting the genealogy of the policy problem, i.e. the stages through which it passed until arriving at its current definition. As M. Spector and J.I. Kitsuse propose this involves “unrolling” the problem and the best way to do this seems to be to move backward. This operation can end when the researcher considers that he or she has acquired sufficient information on the inheritance of the policy to be able to appreciate the process of change. All documents which provide information about the way the problem is defined and discussed in the public sphere are useful (daily press, reports, transcription of debates, meetings and interviews). With regard nevertheless to policy problems parliamentary debates, which are available on a continuous basis for long periods of time and transcribed with precision, constitute a major source of investigation. They not only allow the collection of dominant discourse but also the identification of the phases of the appearance of new governmental programs and/or of the abolition of previous programs. The difficulty here is above all semiological: seldom are the same terms used in the long term to speak about the same phenomenon. The historical approach and the use of the parliamentary records’ index makes it possible to reconstitute the various terms employed to qualify the problem. This is a central part of the definitional analysis. Air pollution for example has been qualified since the 19th century in France as: putrid odours, black smoke, nuisance, pollution. The use of the term “air pollution” appeared in both countries only in the 1930s.

Moreover it is important to juxtapose the phases of redefinition of the causes and consequences with the chronological listing of the program set up. The study of air pollution does not always shows a coincidence between the two processes: there can be definitional change without the appearance of a new program. Lastly, around each period of redefinition and emergence of new programs it is important to locate and identify the actors present and the balance of power between them. After this preliminary work the tempo and the intensity of change can be appreciated. Therefore discourse analysis is an important source of information. Do all the actors accept the dominant definition of the problem? Do some actors take a less active part in the debates? Do they remain vague in the way that they evoke the problem? Content analysis of the

current program constitutes a second major source of information. Do programmes comprise clear objectives? Do they define precise and feasible means different from those employed up until now? What is the margin of action they give to policy actors?

C/Two speed policy changes in clean air policy in France and Greece

The double definitional process of air pollution since the beginning of industrialisation covers the period from the beginning of the 19th century in France and the beginning of 20th century in Greece. As it is impossible to present in detail this long definitional story, we will selectively present certain changes which better demonstrate the contribution of the analytical framework proposed here. Despite the social, political and economic differences between the two countries the comparison reveals certain regularities in their policy change process.

1. Redefining consequences and institutions

For almost two centuries air pollution in France has known only one redefinition in terms of the consequences that it generates. The discourse which developed around the Napoleonic law of 1810 to justify the intervention of the state in the domain of air quality defined air pollution as a public health risk. This definition had a direct impact on the institutional organization of clean air action. The principal "expert" heard on this matter was the hygienist present within the public service and in Parliament. Throughout the 19th century hygienists gradually affirmed their position within the new problem subsystem. During the same period the new "grand corps d'Etat" of the mining engineers, was created and charged with promoting industrialisation. Mining engineers also looked to control the problem and to impose their technocratic vision of pollution over the health vision. This confrontation between engineers and hygienists within the state led to a specific division of competences that reflects the balance between contradictory visions and interests. This compromise was given concrete expression by the 1961 law on air pollution and odours. Air pollution was defined as a public health problem and the ministry of health was named the official authority responsible for the coordination of clean air action. However the law did not give any possibility for autonomous action to that ministry: measures to combat industrial pollution were elaborated and applied by the mining engineers within the ministry of Industry and the measures concerning motor vehicle pollution remained the responsibility of the ministry of transport in direct collaboration with car manufacturers. The new law tried to assemble in only one text the various components of the problem managed until then within various public policies but the administrations partially competent in this field with the support of the polluters' lobby succeeded in maintaining their competencies confining the ministry of health to the role of a simple supervisor.

The environmental era in the 1970s marked an important change in the previous equilibrium: air pollution was no longer discussed as a health risk and was defined as an environmental problem. This definitional change can be described as rapid as far as the discussions on environmental degradation started officially in 1969 and two years later the first program for the protection of the environment emerged. Since then air pollution has been transferred into the new policy sector. This change can be also described as radical because the nature of the problem changed since it started to be discussed in new terms. At first sight we can say that this redefinition produced important modifications to the problem's subsystem. First of all, the new ministry of

the environment emerged in 1971, and in 1973 by simple decree and without any public debate the ministry of health was deprived of its competences which were transferred to the new ministry. Was this change as radical as it initially appears?

The French ministry of the environment was made up by the transfer of civil servants and of competences from the pre-existing administrations. In the case of air pollution, the issue was taken over within the new ministry by the mining engineers transferred from the ministry of industry to the new ministry. The environmental era served as an opportunity for the mining engineers to impose themselves as the body most adapted to deal with the problem. With this reorganisation they also took charge of motor vehicle pollution but they did not contest the authority of the ministry of transport and of car manufacturers who continued to decide on the policy to be followed on the matter. In other words, after the 1970's the polluters and their administrations managed to exclude the health authorities from the subsystem and to monopolise clean air policy (C.A. Vlassopoulos, 2007). In the light of the role that the hygienists and the mining engineers played for one and a half centuries, the changes that occurred in the 1970s appear minor insofar as they rather confirm the persistent incapacity of the health specialists to impose themselves within the problem subsystem and the capacity of the polluters to control the domain. Thus the conditions of policy making and implementation remained eminently fragmented and controlled by the actors hostile to clean air policy objectives. The respect of previous balances can explain why the redefinition of air pollution as an environmental problem did not give rise to a new governmental program. The 1961 law stayed active for another 25 years after the creation of the ministry of the environment.

The case of Greece reveals certain similarities which confirm the capacity of actors to contain the process of change. For historical, political and economic reasons the first national public debate on air quality emerged in Greece a century later (in 1911). Pollution was not defined as a public health problem but as an urban problem. From 1909, E. Venizelo's progressive party placed the country's modernisation at the centre of its political project (G. Mavrogordatos & C. Hatziossif, 1992). To carry out this modernisation project the new political class represented by the Venizelian party was supported by a new technocratic elite trained in civil engineering at the new Polytechnic School of Athens. All modernisation policies drawn up by the elite of town civil planning engineers concerned the organisation and rationalisation of urban space. Whereas there was neither real industrialisation nor car traffic at the beginning of the 20th century, the debate on air pollution covered above all motor vehicle pollution which was better integrated into the urban dimension of the modernization project. The absence of car manufacturers in Greece also facilitated the development of a very rigorous political discourse against the new means of transport (C.A. Vlassopoulos, 2005). From this moment and until the environmental era all the legislative initiatives in the field of air pollution were taken by the technocratic elite within the ministry of public works and the ministry of transport. Further, the creation in 1923 of the Technical Chamber of Greece, which played the double role of representative of the engineers' interests and of official advisor to the government on development policies, gave scientific validation and support to the ministerial initiatives.

As was the case in France, the environmental era redefined air pollution as an environmental problem. After the end of the dictatorship in 1975 a new ministry of the environment took charge of the problem. Even more than in France, the appearance of this ministry marked no rupture in

relation to the past. The new ministry of the environment consisted of a reinforced Ministry of the Public Works promoted to a Department of the Environment, of Town Planning and of Public Works. As in the French case, this definitional change did not give birth to new clean air measures.

In the two countries studied, the redefinition of the consequences of the problem marked some changes but the tempo and intensity of these changes varied according to the variables under consideration. Only the way of representing the problem changed radically since it was discussed in new terms and presented as a 'new' problem. New institutional actors appeared during this period and competences were redistributed within the State. But an analysis of these changes in the light of an historical approach makes it possible to appreciate the weight of policy inheritance: the actors already involved in the administration of the problem had sufficient legitimacy and authority to allow them to contain the change. Thus, the appearance of the Department of the Environment did not trouble the established equilibrium. Further this definitional change did not modify the measures set up to deal with the problem.

T.1 "Redefinition of the consequences and policy change"

Variable \ Type	SPEED		INTENSITY	
	FR	GR	FR	GR
IDEAS	Rapid	Rapid	Radical	Radical
ACTORS	Rapid	Rapid	Weak	Weak
PROGRAMME	None	None	None	None

2. Redefining causes and polluters

In France air pollution was initially defined as a problem that was due to industrialisation. Some rare debates mentioned other sources of pollution like the car or central heating but they received little publicity. Until the 1990s (with an exception at the beginning of the 1980s marked by the European debate on acid rain) all public debates put the emphasis on industry. This remark confirms D. Stone's and M. Edelman's analysis when they note that in the public sphere problems are always defined in a simplified way. The first causal redefinition took place in 1996 with the enactment of the law on air pollution and the rational use of energy. Since then air pollution has been defined as a motor vehicle problem.

The powerful lobby of car manufacturers with the intimate collaboration of the ministry of transport succeeded for nearly a century in keeping the question of motor vehicle pollution off the political agenda. A public policy monopoly was thus created around motor vehicle policy which maintained it at the periphery of the clean air subsystem in order to preserve the agenda denial. Three factors (conjunctural, political and strategic) met to make it possible to break this balance.

First a confidential study on the harmfulness of motor emissions was published in the daily press. At this time the Minister for the Environment was seeking an issue to mark her political career. Finally the mining engineers of the ministry of the environment supported their Minister because they perceived her legislative project as an opportunity to discharge industry of the blame that had hung over it since the 19th century (C.A. Vlassopoulos, 1999).

What was the impact of this new causal definition on the actors involved? This redefinition did not create new actors. It did however redistribute the power between existing actors. For the first time, the Minister of the Environment played an active role in clean air policy. Further the balance of power between polluters was reconfigured. The industrialists who were until this moment very active within the subsystem fell back to the periphery of the subsystem. On the contrary, car manufacturers became much more active and placed themselves at the heart of the subsystem. Thus it is not surprising to observe that the former were quasi absent from the negotiations of the 1996 law while the representatives of the car manufactures intervened very actively.

Was there an impact on the policy content? This time a new programme was set up aiming at motor vehicles and car traffic for the first time. The enactment of this law, the causal redefinition of the problem and the redistribution of power between the actors leads us to suppose the presence of a major change. This first estimation is moderated however after analysis of the preparatory debates and of the contents of the 1996 law. The pressure exerted by the motor lobby was very high obliging the Minister to progressively remove from her project the most radical and innovative measures. The document finally enacted constitutes a vague text full of wishes without regulatory measures and requiring a considerable number of decrees for its application. The rupture envisaged initially by the Minister for the Environment did not take place. This observation also makes it possible to nuance the importance of the changes concerning policy actors. The reinforcement of the Minister for the Environment within the subsystem was real but its autonomy remained limited because the other actors did not loose all their resources. If car manufacturers lost the symbolic, definitional battle, they succeeded in imposing their limits regarding the content of the new law. The traditional fragmented way of dealing with the problem also remained unchanged and the ministry of transport continued to exert its control over decisions concerning motor vehicles.

In contrast to the French case, air pollution in Greece, has been discussed particularly as a car traffic problem. A law was passed in 1912 concerning the rationalisation of industrial facilities but did not generate public debate. The second attempt to define industry as an important polluter by the dictators at the beginning of the 1970s consisted of a demagogic effort to condemn capital in the name of public interest. Otherwise all the history of air pollution in Greece has been marked by the clear condemnation of car traffic and the appearance of rather strict and innovatory regulations. For example, in 1911 the law on civil and penal liability for drivers was followed by a protectoral decree forbidding lorries from crossing the town centre of Athens. In 1930, the Highway Code condemned drivers whose vehicle emitted noxious fumes. While in France the problem of fumes emitted by diesel engines is still hardly discussed, in Greece, a prescription of 1937 stipulates that: "all types of diesel vehicles which emit smoke and odours [...] will be penalised by a withdrawal of their licence for between two and ten days". Thus in Greece we do not note any major redefinition of the causes of the problem. The political change of 1981 and the

great publicity given to the problem during the electoral period made it possible, however, to set up in 1982 the first *ad hoc* clean air programme. This generated for the first time the mobilisation of certain categories of actors like the Trust of car importers and the taxi drivers' trade unions. Like past initiatives, this program was quite strict proving the autonomy of which the Greek government disposes in dealing with this dimension of the problem⁵.

T.2 "Redefinition of the causes and policy change"

Variable \ Type	SPEED		INTENSITY	
	FR	GR*	FR	GR
IDEAS	Rapid	Slow	Radical	Weak
ACTORS	Rapid	Slow	Weak	Weak
PROGRAMME	Rapid	Slow	Weak	Weak

[* The specificity of the Greek social and political context makes the description of causal redefinition and change difficult to schematize]

D/ Some conclusions

1. Both definitional processes of the air pollution in France and in Greece show that with each redefinition stage the subsystem undergoes modifications. Changes in the perceptions of the consequences primarily has an impact on the institutional actors responsible for problem solving while changes in the definition of causes influences the identity and position of private actors. Policy content does not change with each change of definition.

In the two cases studied, the only change which marks a rupture with the past is in the definition of the problem. In each redefinition a new perception of the problem is created: the nature of the problem changes in the sense that it is mentioned and discussed in new terms. Changes (even rapid) concerning the configuration of actors and the policy content appear much less radical. I have qualified this phenomenon as "double speed policy change". This is related to the policy inheritance, i.e. to agreements and practices contained in the way of dealing with the problem which reduce the rupture introduced by changes in the definition of the problem. When the battle over symbols and representations is lost, actors can mobilize other means to preserve their interests and position.

Even if these changes do not mark a rupture and do not succeed in breaking the established methods of problem administration, they open prospects for further modifications in policy variables. F. Baumgartner and B. Jones (1993, 16) claim that "issue redefinition and institutional control combine to make possible the alteration between stability and rapid change that

⁵The Greek case made it possible however to demonstrate a limit in the acceptance of a connection between the way a problem is defined, the actors mobilised and the contents of the policy: in a context like that of Greece at the beginning of the 20th century the political and social spheres are disconnected and policy initiatives do not respond to publicly expressed social needs. Thus a series of initiatives (like that of the 1912's law) remain confined within the government space and the mobilisation of the actors concerned remains very superficial.

characterizes political systems" Paraphrasing this statement we claim that *problem definition and the configuration of actors combined with the policy contents make possible simultaneous changes of variable tempo and intensity*.

2. Does clean air policy tell us something about endogenous and exogenous determinants of change? No regularity appears on this subject. Generally there is a combination of external and internal elements to the subsystem which combine to produce the change. This is the case with the transfer of air pollution policy into the environmental sector which coincided both in France and in Greece with the imposition internationally of the new environmental values at the end of the 1960's. By appropriating these new values, actors already involved in clean air policy succeeded in consolidating their position within the subsystem. Motor vehicle pollution policy is related to the European debate on acid rain and NOx emissions but also to research within some French scientific communities and to the ministerial initiative for agenda setting. In Greece, motor vehicle pollution policy is primarily due to internal elements (the town planner's sovereignty and the absence of a motor vehicle lobby).

Actors in search of opportunities to modify the existing equilibrium as well as actors looking to preserve this equilibrium are always present within policy subsystems. This seems however more the case for the French clean air policy subsystem than for the Greek one which is monopolized by a community of experts and lacks strong interest groups potentially hostile to the policy content. The plurality within the French policy subsystem has prohibited any possibility for a common base to build a consensus and thus for policy oriented learning (H.C. Jenkins-Smith 1988, 199).

3. Does the combination between historical and comparative analysis make it possible to formulate generalisations? The results regarding the analysis of clean air policy change can be valid only for the studied cases. Nevertheless the thesis of «double speed policy change" can take the form of a "proposal for generalisation" to be tested in other case studies. The analytical framework for observing policy change, can take the form of a "formal theory" (R. Boudon, 1991, 76) which does not aim to explain the policy change process but to underline the usefulness of considering certain variables in the study of policy change.

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