

DEVELOPMENT, ENVIRONMENT AND
POLICIES CONCERNING RISK
Elements for a research proposition
by Patrick LAGADEC
English abstract

Septembre 1977

n° D 168 0977

DEVELOPMENT, ENVIRONMENT AND POLICIES CONCERNING RISK :

ELEMENTS FOR A RESEARCH PROPOSITION

by Patrick LAGADEC

English abstract

INTRODUCTION

The author points out the fact that nowadays development is increasingly questioned and which appeared formerly as a "bet to be taken up" or a "proof of courage" has become a "risk", an object of debate or, at least, of study. It is no longer possible to ignore the problem ; but it is important not to jump from one extreme to another and to reject any form of risk-taking.

Three questions are examined in the paper :

- . how to define risk and the problems related to it ?
- . what factors are obstructing consideration of risk-taking -consideration which leads to the questioning of usual schemes and frameworks of management- ?
- . how to undertake the study of such a problem, which is not solely a technical one ?

I - THE FIELD OF INVESTIGATION

- 1 - The author defines risk as including two dimensions which should be considered simultaneously: failure, which can range from a simple loss to catastrophe, and uncertainty, which makes any danger seem more

frightful, as there is little chance for preparation.

Risk could be more precisely defined as the hazards due to a discontinuity -wanted or not- in the usual course of affairs. Immediately it appears that risk management does not require the involvement of the day-to-day technician but of leaders used to strategic options, strategic responses to unusual events, and, moreover, as risk is related with possible dangers and often with large ones, risk involves politics. Choice is at the heart of risk.

- 2 - Society has to cope with two types of risk, the exogenous type, which is represented by natural catastrophies, and the endogenous type, which is sociotechnical and socio-economic. In the first case Man is increasingly responsible for what happens. In the second, hazards are more and more frequent and important because of the increasing complexity and the accelerating rate of change in human systems.

II - A FIRST SET OF SOCIAL ATTITUDES TOWARD RISK RANGES FROM IGNORANCE TO REJECTION OF THE PROBLEM.

- 1 - With regard to public attitudes toward risk, the author claims that the aspect of risk is usually neglected when a new technology is introduced. He calls that "first ignorance". But "ignorance" is not always so innocent and rejection often appears as a practice of management.

- 2 - Several reasons lead to this rejection :

. instead of questioning the sources of risk, it is easier to avoid problems, to regard proposed actions as absolutely good or positive.

- . hazards, which are rare discontinuities, singular events rather than a part of a pattern which reoccurs over time, are difficultly tackled by our usual tools (means, extrapolation,...)
- . investigations in risk analysis lead to problems of interest : shadow is often preferred to debate and precision.

These reactions contribute to the development and reinforcement of an "escape behavior" on the part of the persons responsible for the decision. The author mentions several :

- a) NEGATION : "all necessary safety measures have been taken, the decision is irreversible".
- b) DISPLACEMENT of the question : "risk is acceptable because there are other risks which are taken".
- c) REFUSAL of studies, refusal of publication : to keep the debate down.
- d) PUBLICATION of rough or even almost false data : leads to debates about truthfulness, and confusion emerges. And "Reasonableness" becomes an important argument.
- e) Solemn PROMISE, affirmation beyond any doubts : statements are given with conviction and determination.
- f) Cast DOUBTS on scientists and science : "errors in science are famous", do not listen to the scientists opposed to the project".
- g) EXHORTATION, menace, accusation of the opponents : are called "irresponsible", etc.

- h) Some ASSURANCES : it is asserted that the problem has been studied at length, by prominent scientists and technicians.
- i) Radical REJECTION of the question of risk : a determined blindness coupled with unbounded optimism.

The applicability of these 9 points is demonstrated in the appendix. A case study on an oil refinery in Brest (Brittany-France) compares statements in newspapers and journals given by the decision makers and opponents.

These escapist behaviours are likely to succeed, for several reasons again :

- . Actions are generally presented and justified as absolutely necessary. There is no room for investigation or debate. There is no room for risk assessment.
- . Project-management generally races toward irreversibility or what might be claimed as a point of no return. When it is a question of running through a decision process there is again no room for a real investigation.
- . As Kalecki said "planning is alternative thinking" but the reverse is generally preferred : the elimination of choice is easier and often actively sought. In this context the question of risk become a marginal and a purely technical one.

III - FOR A RESEARCH AND MANAGEMENT POLICY CONCERNING RISK

With regard to research in the risk area, the author prefers the title "risk assessment" to "risk analysis" as the former seems to better indicate the importance of including the social aspects. The author then gives an extensive review of the contributions of H.J. OTWAY to the area, explaining Risk Estimation, Risk Evaluation and Risk Management.

- a) The author severely criticizes the statistical approach as it is often used in risk-taking policy, the idea of "objectivity" in the choice of risk, the notion of "acceptability" etc... He quotes and follows L. Mc GINTY and G. ATHERLEY (New Scientist, 12 May 1977) : "we believe that, in practice, it is extremely difficult to quantify risks in the way this approach demands, and, more crucially, that it is impossible to compare risks of different types, undertaken for different reasons in different social circumstances". In this debate it seems particularly interesting to come back to the problem of technical and political discussions as K.W. KAPP did in the field of economy "... we shall have to face the task of introducing to an increasing degree politically formulated norms into the socio-economic process. In short we face the task of operating with objective substantive and socially acceptable criteria which have been politically sanctioned" (social costs, neo classical economics, environmental planning : a reply in Political Economy of environment ; problems of method Mouton, The Hague-Paris 1972, p. 124).
- b) Then, the author turns to the psychological approach to risk analysis and exposes the main points of the FISCHBEIN Model, a good tool, certainly, but to be completed : especially, the author points out that it seems difficult to join the psychological approach and the sociological one ; he disagrees with the idea of a simple continuum and with the idea that aggregating individual attitudes will describe social response. He quotes L. NIZARD in introduction to this sociological approach and finally questions the role of psycho-sociological analysis : is it to better understand the social context to better prepare the choice process considering all the relevant actors, or only to reinforce the position of leaders and enable them to better manipulate public opinion ? In other words, is "risk evaluation" a simple "estimation" of psychological factors related to a proposed action or a real whole

analysis of the problem of a society confronted with a major hazard ?

- c) Thirdly, the author analyses the problem of decision making process which has been sufficiently criticized as to become a subject of anxieties in case of major hazards. The sequence : decision-operation- and then information (when all is surely irreversible) appears to be extremely unadapted for large scale and risky decisions. One thesis is to claim (or to think) that things have now become too complex to permit an opened democracy ; the experts would have to decide and keep the elected members informed. The opposite thesis is to assert that there is an urgent need for new forms of democracy, new institutions, new ways of involving citizens and elected members if we want to cope with the burden of reaching an operating social consensus when major hazard is a problem. Such a project requires strong emphasis on social learning because we are particularly weak in the field of managing social progress, social control on development, social innovation. When risk is concerned this question is particularly important : if we want to avoid increasingly authoritarian processes and general apathy, on the one hand, and increasing opposition, controversies, violence and sabotages, on the other hand.

CONCLUSIONS

Three particular proposals are selected for further research :

1. Estimation : is this type of analysis really "objective" ?
Which contextual factors influence this "objectivity" ?
2. Evaluation : the question is to identify social preferences on particular subjects and to develop social learning in order to achieve coherence between these preferences and social needs in general.

3. Decision making : the problem is to reach some operating compromises between different groups involved -without ignoring the future generations or the geographically distant agents-.

Two types of risks may be discussed : the concentrated risks and the diffused ones.

Case studies, speech analysis, and general investigation on risk theory will be the main topics of the author's research.