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Johan WISSERHOF*

KNOWLEDGE FOR SPATIAL POLICY: the role of strategic research

Abstract: The direct contribution of research to the preparation of spatial policy in the Netherlands is relatively small. The policy-making processes rely heavily on the utilisation of 'in-stock' knowledge. The knowledge stock, however, has been built up partly by strategic research. Strategic research, therefore, is an indirect source of knowledge for spatial policy. Strategic research is defined as systematic investigation to acquire knowledge that may contribute to the solution of medium- or long-term societal problems.

In this paper, the question is posed how strategic research can be conducted in such a way that it contributes to the knowledge stock for spatial policy. The answer is sought in a multiperspective, interdisciplinary and actor-oriented research approach. Such an approach in a way complies with the multiple perspectives of policy-makers on societal problems: Technical, Organisational and Personal/Political (T+O+P). The information needs of policy-makers are not only problem--oriented (the T perspective) but also actor-oriented (the O and P perspectives).

A conceptual framework for strategic research is presented which includes multiple perspectives on spatial developments. Five perspectives for spatial research are distinguished: the social construction of spatial developments, the institutionalisation of interests, regional restructuring, societal steering by policy-makers, and the performance of policy. Each of these perspectives involves interdisciplinary and actor-oriented research. The conceptual framework is briefly exemplified by applications in the study of rural regions. Finally, the actual contribution of the conceptual framework to the knowledge stock for spatial policy is discussed.

Key words: spatial policy, strategic research.

* Johan WISSERHOF, Faculty of Policy Sciences, Catholic University of Nijmegen, P.O. Box 9108, 6500 HK Nijmegen, the Netherlands.

1. INTRODUCTION

There has been a sense of dissatisfaction about the relation between research and policy in the field of physical planning in the Netherlands for a number of years already (cf. van Lohuizen and Daamen, 1976; ter Heide *et al.,* 1980). Although research can contribute to informed spatial policies the actual utilisation of research seems to remain limited. This has been attributed to factors both on the part of research and on the part of policy. Studies of research utilisation have yielded the insight, however, that research and policy should not be conceptualised as two different and conflicting 'cultures' but as the two ends of a continuum of knowledge production, transformation and utilisation: the so-called 'knowledge household' (van Lohuizen, 1986; Horrevoets and ter Heide, 1992). The limited utilisation of research in policy-making then becomes a question of how to transfer knowledge elements in such a way that they reach the right persons at the right moment in a policy-making process: 'knowledge management' (Arts, 1991; Arts and van Alphen, 1996). In knowledge management, research and policy are two activities that are intertwined in the course of a policy-making process. The knowledge household, moreover, not only includes research results but also assumptions, beliefs, judgements, expert advice, etc. Research results are not *a priori* superior to other knowledge elements. There is no sharp dividing-line between scientific knowledge and 'policy knowledge'.

This paper deals with strategic research in the context of the knowledge household for spatial policy. It includes a conceptual framework for strategic research that contributes to the knowledge household of policy-making in the field of physical planning. Strategic research is defined as systematic investigation to acquire knowledge that may contribute to the solution of medium- or long-term societal problems. The interesting feature of strategic research is that – unlike policy research or policy analysis – it is not part of policy-making but still it is aimed at acquiring policy-relevant knowledge. This dual nature of strategic research raises particular questions as to the way in which knowledge resulting from strategic research may contribute to policy--making.

In the next section, the relationship between strategic research and spatial policy is examined in greater detail on the basis of empirical findings of utilisation research and a comparison with other policy fields. Then, some requirements of strategic research are identified on the basis of certain characteristics of policy-relevant knowledge. In the fourth section, the aforementioned conceptual framework is presented and briefly exemplified by applications in the study of rural regions. The paper concludes with a discussion of the actual contribution of the conceptual framework to the knowledge household for spatial policy.

2. STRATEGIC RESEARCH AND SPATIAL POLICY

Spatial policy has some characteristics which are conducive to the utilisation of research in policy-making. Firstly, planning, by definition, is common practice in the field of physical planning. Now planning, as systematic policy preparation, is closely connected to research. Policy preparation in the field of physical planning therefore generally involves research. Secondly, the planning of the physical environment has a long-term character. This requires careful consideration of the decisions to be made which favours the utilisation of research. Thirdly, the broad scope of spatial policy requires knowledge on a wide range of subjects. Knowledge on all of these subjects and their interrelations will not always be available so that additional inquiry or research is often necessary.

The 'gap' between research and policy in the field of physical planning may therefore be less deep than in other fields. Nevertheless, direct utilisation of research in the preparation of spatial policy in the Netherlands appears to be a relatively rare phenomenon, both at the local and at the national level (Arts, 1991; ter Heide, 1992b). Policy-makers rely primarily on their personal experience and on knowledge already available within their organisation; they utilise 'in-stock' knowledge. An important reason for this is the high time--pressure on policy-making processes. Research, especially strategic research, is simply too time-consuming to provide a direct input to policy-making (cf. Galle, 1988). Results cannot be expected before the policy is being formulated. This finding has implications for the contribution of strategic research to the knowledge household of policy-making in the field of physical planning.

Given the fact that policy-makers mainly utilise 'in-stock' knowledge, strategic research can only contribute to spatial policy in an indirect way. An appropriate contribution would be to supply the 'knowledge stock' or knowledge household for spatial policy (cf. ter Heide, 1992b). Three types of (indirect) contributions may be distinguished in this respect: 'multiproject' strategic research, agenda-building strategic research and critical strategic research (ter Heide, 1992a). Multiproject research is strategic research that can be applied in several projects of policy research or policy analysis. Knowledge generated in policy research often remains bound to the specific project in which it was produced. As a result, different projects may yield similar knowledge elements, which is not quite efficient. Strategic research is a useful medium for generating basic knowledge that can be utilised in different policy research projects. Agenda-building research is strategic research that serves to recognise new policy issues which are not yet on the political agenda. Hence-unlike policy research, it is particularly oriented toward the longer term. Critical research, finally, is strategic research meant to exhibit problems which are not sufficiently considered in current policies. Such research can contribute to the improvement of these

policies. Due to its reflective nature, it is less likely to be conducted in the context of policy research.

Contributing to the knowledge household for spatial policy is no mere 'enlightenment' of policy-makers. Strategic research will have to provide results that fit into the knowledge household while in the enlightenment model there are no specific requirements as to the form in which research results should be provided. Researchers may just hope that their results reach a memorandum, a newspaper, a radio program, etc. The disadvantage of this kind of 'enlightenment' is that research results may get distorted in some way or another. If strategic research is aimed specifically at contributing to the knowledge household of policy-making the question arises in what form exactly should the research results be provided.

In some policy fields related to physical planning, such as environmental management and water management, there are specific requirements regarding the form of strategic research results, namely the form of computer models. Many policy-makers in these fields have a strong preference for quantitative, mathematical decision support (cf. Wisserhof, 1994). Accordingly, policy--making in these fields involves the application of elaborate decision support systems, consisting of sets of interconnected computer models describing different processes in the environment. These systems are used to assess the impacts of alternative policy options in order to support the formulation and choice of a definitive option. Since the running of a computer model requires relatively little time, computer-aided impact assessment is quite possible during a policy-making process. The development of computer models, however, generally requires a number of years. Hence, model development is primarily a matter of strategic research while the application in policy-making is part of policy research or policy analysis.

In physical planning, however, strategic research cannot be strongly directed to the development of computer models. Unlike the policy fields mentioned, spatial policy is not only and primarily concerned with physical processes but with social processes as well. It is hardly possible to model these in a mathematical way fit for a computer. Strategic research in the field of physical planning, therefore, will have to provide results in a different form in order to contribute to the knowledge household of policy-making. In what form exactly is examined in the next section.

3. POLICY-RELEVANCE OF STRATEGIC RESEARCH

Strategic research, by definition, is not part of policy-making. This means there are no firm organisational links between policy-making organisations and

strategic-research institutions such as universities. Strategies aimed at enhancing the policy-relevance of strategic research, therefore, should not be directed towards organisational structures that facilitate research utilisation. Rather, the way (strategic) research is conducted, the research approach, is a matter of concern. In addition, attention may be given to the reporting of research results, the guidance of research, and to research programming as strategies for improving the utilisation of strategic research in policy-making (cf. ter Heide *et al.,* 1980). This paper, however, is focused on the research approach. The question is posed how strategic research can be conducted in such a way that it provides knowledge which fits into the knowledge household of policy-making, thus being useful to policy-makers.

In searching for bridges between scientific knowledge and 'policy knowledge', it has been pointed out that policy-makers apply multiple perspectives to societal problems: Technical, Organisational and Personal (T+O+P) (Linstone, 1984; cf. Allison, 1971). The Technical perspective is focused on (cognitive) problem solving, the Organisational perspective on organisational continuity and the Personal or Political perspective on individual power positions. This means that policy-makers are not only concerned with societal problems as such (the T perspective) but also with the people and organisations related to such problems (the O and P perspectives). In other words, they are not only problem-oriented but also actor-oriented. Policy knowledge includes both these types of perspectives. Information on a particular problem as such does not suffice; the various actors involved are also important as well as their views and interests with regard to the problem. This implies that the information required is often subjective. After all, different actors will have different ideas and concerns about a policy issue; and each actor's view will be supported by different information concerning the issue. Policy knowledge, therefore, does not comprise a supposedly objective description of a societal problem but a range of differing informations about the problem, each sort of information related to a particular view. In other words, policy knowledge is pluralistic in nature.

The pluralistic nature of policy knowledge has important implications for the conduct of strategic research that is supposed to be policy-relevant. First, the research should include multiple perspectives on policy issues. A major implication of this is that it must be interdisciplinary. Every scientific discipline has its own research objects, concepts, methods, etc. constituting its specific paradigm. If strategic research is to yield pluralistic knowledge, fitting into the knowledge household of policy-making, it should include the frames of reference of a number of relevant scientific disciplines. Otherwise, "[...] the over-riding problem with the utilisation of scientific knowledge is its fragmentation" (Hagerstrand, 1991, p. 66). In the case of spatial policy, this is particularly pressing because of the comprehensive nature of this policy field. Spatial policy in many countries has expanded and become more differentiated

along four dimensions: a geographical dimension, a functional dimension, a temporal dimension, and an institutional dimension (ter Heide, 1992b). Along the geographical dimension, spatial policy has included a widening range of levels of geographical scale that are taken into account when deciding upon the location of societal activities. Along the functional dimension, the societal activities themselves have become ever more differentiated. The development of spatial policy along the temporal dimension comprises a growing attention to policy implementation, particularly the type of short- and medium-term interventions required to reach long-term policy goals. Along the institutional dimension, spatial policy involves intensifying collaboration between various agencies, both public and private. This multidimensional nature of spatial policy particularly requires interdisciplinary strategic research into spatial policy issues.

A second implication of the pluralistic nature of policy knowledge is that strategic research should be actor-oriented, focusing on the different actors involved in the policy issue under consideration. Policy knowledge does not exist independently of these actors. For a large part, it consists of the various ideas and interest of the very actors. Different actors often have different views, which are supported by different sorts of information. There may also be information that is shared by all actors but such intersubjective information often constitutes only part of the knowledge relevant to a policy issue. Moreover, so--called objective information is sometimes (deliberately or undeliberately) biased by particular views. Besides, 'objective' scientific information generally also includes uncertainties, and assumptions and choices on the part of researchers. In short, there may be a discrepancy between the (intersubjective) policy knowledge required and the ('objective') scientific knowledge provided (figure 1) (cf. Geldof, 1992).

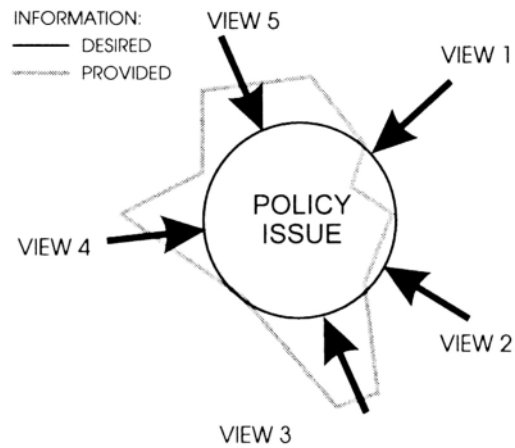

Fig. 1. Objective information?

In order to circumvent the pitfall of providing partially biased information under the cloak of scientific objectivity, researchers should rather recognise the subjective views involved in policy-making and provide information that is explicitly related to each of the various views (figure 2) (cf. Geldof, 1992). The scientific quest for objectivity then takes form as the effort to bring up all of the views in a balanced way. All relevant actors are identified, their ideas, interests and roles with regard to a policy issue investigated, and information which supports a particular actor's view is expressly labelled as such. In such a way, research provides insight into the 'cases' of the various actors involved. This type of insight is potentially useful to policy-makers since it is geared to the pluralistic nature of policy knowledge. It allows for informed political choices among various views. Policy-relevant strategic research, therefore, is not directed primarily towards an 'objective' description of in case of physical planning, the physical, social, economic, cultural and political circumstances and developments in a particular region. Instead, it focuses on the actors acting in the region(s) under consideration, thus revealing their ideas, interests, positions, actions, etc.

The above plea for actor-oriented strategic research links up with recent developments in spatial planning and human geography. In spatial planning, researchers have introduced an action-oriented approach towards physical planning as opposed to a logical-deductive approach (cf. Wissink, 1986; de Kievit, 1993). In human geography, there is increasing attention for the role of the perceptions, power relations and actions of actors in spatial developments. One might say that geographical research is becoming more sociological than 'spatial' (cf. Werlen, 1993; Marsden, 1996). Actor-oriented strategic research therefore, is not only policy-relevant but also scientifically relevant.

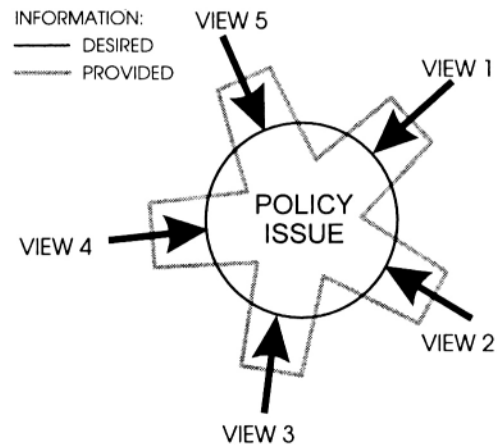

Fig. 2. 'Subjective' information

4. A CONCEPTUAL FRAMEWORK FOR POLICY-RELEVANT STRATEGIC RESEARCH

The previous section has yielded two main criteria for policy-relevant strategic research in the field of physical planning: it should be interdisciplinary and actor-oriented. In this section, a conceptual framework is presented which provides a basis for meeting these two criteria in strategic research.

Spatial developments can be studied at roughly three or four levels of analysis: the spatial level as such, which may be subdivided into a physical--spatial and a socio-spatial level (the natural environment and its societal use, respectively), a social level (the people who induce spatial developments), and a cognitive level (the perceptions of these people). The physical-spatial level is the most concrete, the cognitive level the most abstract. This basic conceptual framework is visualised in figure 3. At each level, different aspects of spatial developments are studied. Research may also cut through two or more levels of analysis, as will be explained in greater detail below.

Due to its multilayered nature, this conceptual framework facilitates interdisciplinary strategic research. Spatial developments are analysed according to a number of aspects, which require an input from various disciplines. Roughly, the spatial aspect is the subject matter of many geographical concepts and approaches, the social aspect of sociological science, and the cognitive aspect of philosophical and psychological disciplines. The framework contains several research perspectives along which interdisciplinary research may be conducted. Both 'horizontal' and 'vertical' perspectives may be distinguished in figure 3. In figure 4, five such research perspectives are depicted:

- social construction of spatial developments;
- institutionalisation of interests;
- regional restructuring;
- societal steering by policy-makers; and
- performance of policy.

The perspectives of 'societal steering' and 'performance of policy' focus on policy as a main research topic while 'social construction', 'institutionalisation' and 'regional restructuring' pertain to societal processes in general. Each of the research perspectives can be applied to a specific region. This does not mean that strategic research should be limited to the regional level, as will appear from the brief elaboration of the five perspectives below.

The social construction of spatial developments comprises the study of the perceptions of the actors in a region under consideration (the cognitive system in figure 3), particularly how these perceptions of developments in the social and spatial systems arise and evolve in the course of time. This perspective may not only reveal the different problem perceptions of different actors but also problems which are left out of consideration, for example, because of a strategic

interest of the most powerful actors. By highlighting such 'obscured' problems, strategic research fulfils the agenda-building role mentioned above. The perspective of the institutionalisation of interests is focused on the social processes by which actors gradually try to obtain an established position in the region under consideration, for example, by mobilising an 'advocacy coalition', by founding an interest organisation or by initiating a regional development project. Due to the power-politics often involved in institutionalisation processes, this perspective implies the critical role of strategic research mentioned above.

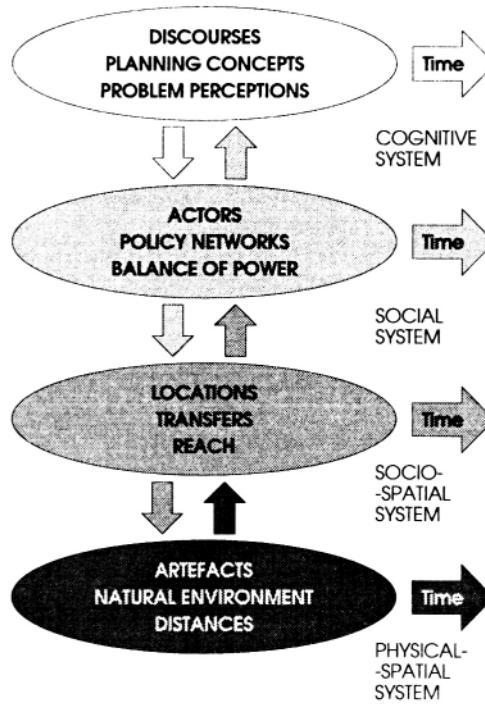

Fig. 3. Conceptual framework

The perspective of regional restructuring pertains to the study of spatial--temporal dynamics (the development of the [physical and socio-] spatial system in figure 3). These dynamics may currently be characterised by 'time-space compression' (Harvey, 1989). Time-space compression means that barriers in time and space are overcome through a scale increase of human existence. The world is becoming a 'global village' by means of transport, communication and information technologies. At the level of a region, this means that processes inducing regional development may operate at much higher geographical levels, up to the global level. For example, the world food market influences the choice

of agricultural crops that are grown in a rural region. Conversely, regional developments may affect processes at the national and international levels. The growing intensification of cattle-breeding at a local and regional level, for example, has an impact on the market of meat and dairy products across the world. Strategic research into basic processes like time-space compression may yield the aforementioned type of 'multiproject' knowledge for policy-making.

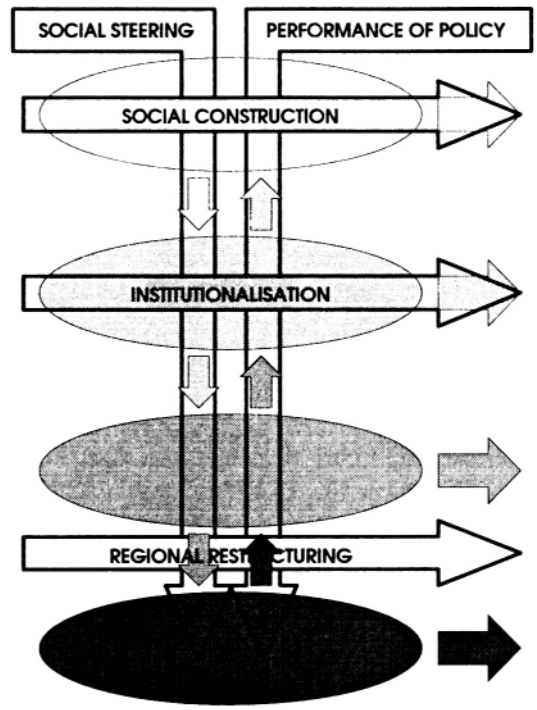

Fig. 4. Research perspectives

The two 'vertical' research perspectives in figure 4 are societal steering by policy-makers and performance of policy. In the perspective of societal steering it is investigated how policy-makers and politicians attempt to influence developments in the social and spatial systems in accordance with their planning concepts in the cognitive system. What sort of policy arrangements are drawn up, what kind of steering strategies are employed, which steering instruments are applied? Are certain strategies and instruments more effective than others? etc. Again, this research perspective is likely to yield 'multiproject' knowledge.

The performance of policy, finally, comprises the impact of (cognitive) planning concepts on social and spatial developments. It is often said these developments are driven by economic forces in a rather autonomic way; spatial policies may have relatively little impact. Research into the performance of policy aims at finding out which policies (spatial, economic, social, etc.)

influence spatial developments, and to what extent and through which decision--making processes they influence these developments. Such strategic research may have both a critical and an agenda-building function; critical by highlighting flaws in decision-making processes, and agenda-building by pointing at uninfluenced but undesired spatial developments.

As for the second criterion for policy-relevant strategic research (actor--orientation), the structure of the conceptual framework facilitates actor-oriented research as well. Earlier conceptual frameworks for spatial research have often been restricted to the physical- and socio-spatial systems (cf. Hoekveld, 1971; Veldman, 1982). The above framework includes a social system and a cognitive system in addition. This means that the actors involved in regional development and their perceptions of spatial developments will have to be considered when conducting research on the basis of the framework. This is not only the case in the perspectives of 'social construction' and 'institutionalisation'. Also the perspectives of 'societal steering' and 'performance of policy' run through the social and cognitive systems, thus necessitating analysis of relevant actors and their problem perceptions. Only the perspective of 'regional restructuring' does not cross the social and the cognitive systems. Theoretically, research in this perspective can be conducted by means of a structuralist rather than an actor-oriented approach. Yet, recent studies of regional restructuring tend to adopt an actor-oriented as well by 'following' actors as they enter into and construct networks of social relations (Marsden *et al.,* 1993). These 'networks of power' are highlighted as important driving forces of regional restructuring (Murdoch and Marsden, 1994). This indicates that the physical- and socio-spatial systems cannot be studied in a profound way without recourse to the social and the cognitive systems. The perspective of regional restructuring therefore also involves actor-oriented research, and thus complies with the pluralistic nature of policy knowledge.

5. DISCUSSION

It may be concluded that the conceptual framework briefly outlined above can serve as a basis for policy-relevant strategic research, theoretically. This theoretical conclusion, however, must be tested empirically before definitive conclusions can be drawn. To that end, the framework is being applied in studies of rural regions by the rural research group at the University of Nijmegen. Since the framework has been developed only recently (Wisserhof, 1996), not much empirical evidence has been built up as yet with regard to the actual policy relevance of strategic research on the basis of it. Until now, one study has been completed: an evaluation of the so-called 'rural area pilot projects' in the

Netherlands by an interdisciplinary research team consisting of a sociologist, a spatial planner, a political scientist and an environmental scientist (Goverde *et al.*, 1997). The study adopted the perspective of 'performance of policy', and revealed the interaction patterns among the various actors in five rural area pilot projects. It was valued by the policy-makers concerned because they previously had little insight into the social processes or 'decision-making mechanisms' involved in these projects. The study thus joined policy-relevance to the depth of scientific inquiry; it contributed to the knowledge household of policy-making for rural areas by revealing 'hidden' processes. Hence, it seems a promising paradigm for further applications of the above conceptual framework. At the moment, a comparative study of rural development in two peripheral rural areas in the Netherlands is being conducted on the basis of the framework (the perspective of 'regional restructuring') as well as research into (conflicting) problem perceptions of local inhabitants and policy-makers in a few European regions (the perspective of 'social construction').

It should be noted, finally, that the conceptual framework has been developed for strategic research in the first place, and not so much for policy research or spatial design. Hence its rather comprehensive nature. Strategic research, due to its relative distance to policy-making, can have a broad outlook and/or penetrate deeply into underlying processes. In policy research or policy analysis, there is not always time to pay sufficient attention to each of the four systems of the framework, as was indicated before. Policy research is often restricted to a specific aspect of a topical policy issue. In that case, the (comprehensive) conceptual framework seems less appropriate. With regard to spatial design, an important activity in the field of physical planning, the framework has little to contribute either. It is developed primarily for research purposes. It might only stress the need for 'multilayered' design in the sense that spatial designs should not only satisfy (physical- and socio-) spatial criteria but also social and cognitive criteria. In other words, the design of a particular place should not only be functional (the spatial system), it should also be pleasant to live in (the social system) and express cultural values (the cognitive system). The conceptual framework may thus serve as a frame of reference for policy research or spatial design but its primary purpose is to contribute to the policy--relevance of strategic research.

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