Academy of Sciences in Crisis: A Case Study of a Fruitless Struggle for Survival

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1 The Threat to Organizational Survival

Research organizations may be confronted with "normal" and "extraordinary" trouble. A threat to the very survival of an organization that appears suddenly and comes to a head quickly certainly belongs to the second category. Such events are relatively rare, and therefore particularly worthy of study. The case of the research organization that was part of the former East German Academy of Sciences, whose dissolution was stipulated in the German unification treaty signed on 31 August 1990 and implemented by the end of 1991, provides an example; it will be analyzed in the following pages.[1]

The events that can endanger the very survival of an organization vary with its character. State-financed research organizations are not threatened by the same events that institutes living off the market for contract research must fear. Publicly financed organizations engaging in basic research may be particularly vulnerable as they are dependent on a single financial source for which there is normally no substitute, especially if the research organiza-

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1 The analysis is based on data collected in the framework of a larger project started in May 1990 and dealing with the transformation of extrauniversity research in Eastern Germany; preliminary results have also been presented in Mayntz (1992) and Mayntz (1993). Interviews and inofficial documents of the Academy and of the Federal Ministry for Research and Technology are the main sources of the case study presented here. Supporting evidence can also be found in Gläser (1992) and Klenner (1992).

tion is large and its support correspondingly expensive. On the other hand, it should take something akin to a major political earthquake before a large national research organization financed by the central state must fear not only to be cut back, but to be closed down completely. This is exactly what happened in the case of the East German Academy of Sciences.

State-financed research outside of industry and the universities was organized in the former East German Democratic Republic along the lines of the Soviet model, i.e. in academies. By far the largest and most prestigious of these was the Academy of Sciences of the German Democratic Republic (*Akademie der Wissenschaften der Deutschen Demokratischen Republik*, AdW). The academy included the traditional society of scholars, and in addition about 60 research institutes covering the whole range of disciplines (including the humanities and social sciences). The academy was headed by a president, who was an ex officio member of the GDR council of ministers and reported directly to the head of government. This form of research organization stands in sharp contrast to the institutionalization of publicly financed extrauniversity research in the Federal Republic of Germany, which is characterized by the existence of a large number of functionally specialized research organizations, most of which are financed jointly by the federal government and the federal states, and none of which is directly associated with a society of scholars. In fact, in West Germany academies existed only at the level of the federal states.

It is evident that when East Germany acceded to the Federal Republic on the basis of Article 23 of the West German Basic Law, the fate of the East German research institutions in general, and of the AdW in particular, became an issue. Without going into legal details it is important to note that while the mode of unification chosen implied the extension of West German law to East Germany, it would not have been legally impossible to preserve the AdW, or at least its two main components – the society of scholars and the research organization – separately. Thus, the society of scholars could become the academy of one or several of the new federal states (which is what actually happened). The research organization could similarly have become an institution jointly supported by the new federal states, or it could have come under the provision of joint federal/state financing which covers the German Research Foundation (*Deutsche Forschungsgemeinschaft*), the Max Planck Society (MPG), the Fraunhofer Society (FhG), the Big Science Centers, and the heterogeneous assembly of so-called Blue List Institutes. Surely, the real-

ization of both legal possibilities would have met with substantial difficulties. But the point is that neither of these solutions was ever seriously attempted; instead, the Unification Treaty formulated by delegations of East and West German officials within a period of less than two months set down the binding decision that the AdW research organization was to be dissolved and its worthwhile parts integrated into the existing structure of the West German research system.[2]

It is, of course, impossible to assert that the dissolution of the AdW could have been avoided if it had only engaged in more effective coping. In fact, the overall situation was highly unfavorable for the survival of the AdW research organization. But for the outside observer it is possible to identify situational opportunities and potential responses to them which conceivably *might* have led to a different outcome. Irrespective of the chance of ultimate success, the coping efforts of the AdW were deficient in themselves, and in this sense the AdW at least contributed to its own downfall. Our explanandum is not this outcome, however, but recognizable coping deficits in the way the AdW reacted to a threatening situation.

2 Coping Deficits and Rational Problem-Solving

The requirements of successful coping are basically trivial if stated in a general way. There are, on the one hand, cognitive requirements, in particular (1) the correct and timely recognition of a threat – its nature and its causes; and (2) the identification of promising survival strategies, which include recognition both of the availability and the resources of possible coalition partners. On the other hand, the threatened organization must act effectively – adopt countermeasures, exert pressure etc. Obviously, there are threats for which effective countermeasures are not available: some problems are objectively unsolvable for a given type of actors under real-life conditions. A coping deficit attributable to an actor exists only if he fails to adopt the best *available* strategy.

2 See Article 38 of the *Einigungsvertragsgesetz* (1990). Negotiations started immediately after the realization of the monetary union on 1 July 1990 and were concluded before 31 August, the date on which the unification treaty was officially signed.

So far, this sounds like the familiar model of rational problem-solving: we have an actor, decision alternatives, and some information about their consequences (the pay-off matrix in game theory). But as the empirical case of the AdW will show, this model needs to be extended to afford a satisfactory explanation of coping failure. In particular, it is important to extend its temporal dimension.

The set of strategies available to a given actor at a given point in time (time 1) is, among other things, influenced – enlarged or restricted – by that actor's own behavior at a previous time (time 1-n); time 1-n behavior may open future coalition chances or, on the contrary, foster opposition. In this connection, not only outward-directed actions, but also self-referential behavior by which an actor changes himself is of importance; thus, an actor can change his attractiveness for others, or his behavioral capabilities. This holds for individuals as well as for corporate actors. It follows that coping cannot meaningfully be analyzed as if it were a single-choice situation. Coping reactions (as well as other variants of strategic choice) are part of an ongoing process, where actions are linked sequentially so that future options are co-determined by past choices.[3] Coping is path-dependent.

The potential relevance of present choices for future options is rarely visible a priori. This is not (only) a function of cognitive limitations. Uncertainty with respect to the consequences of a given action (or strategy choice) is (also) an objective feature in cases where the effect of a given action is (a) not immediate, and (b) depends not only upon the outcome of the *present* choice situation, but also on future choices involving other actors. Complex processes whose course is determined by the uncoordinated choices of multiple actors thus meander unpredictably from bifurcation to bifurcation. In such cases it is impossible to collapse the multilevel "decision tree" into a single-choice situation confronting one focal actor. If this is so, the present choices of a given actor may lead him into a future trap, but they may also turn out to be unintendedly functional. Success in dealing with trouble is therefore sometimes not the result of deliberate problem-solving, but a chance result of "right behavior for the wrong reasons."

3 This corresponds to evolutionary processes where the forces of environmental selection impinging upon a given organism or species are, at least in part, a function of past adaptive behavior.

A third point is of importance. As emphasized in the introductory chapter in this volume, coping behavior involving formal organizations is a multilevel process composed of the – interdependent and interacting – behavior of the organizational leadership, subunits enjoying an independent action capacity, and individual members. The trouble-causing external event may be perceived – and responded to – in different ways by the actors on different organizational levels, and these responses become constraining or facilitating, helpful or harmful elements of the situation confronting each of them.

In accounting for the responses of the AdW to the events that threatened its survival, the *process and multilevel character of coping* plays a crucial part. The rapid, but still stepwise build-up of the crisis situation and the parallel sequence of AdW reactions to the (changing) perceived situation will be analyzed in two major phases. These phases are defined by the course of the external events from which the threat to the survival of the AdW derived. This threat did not originate in the AdW's own environment, the science system of the GDR, but was caused by the breakdown of the East German political system as a whole.

In the fall of 1989, when the East German regime began to crumble and Honecker, who headed both the government and the socialist party, had to resign, German unification was neither sought nor held to be possible by political actors in East and West. In the course of less than one year, several dramatic changes in the overall political situation occurred, and each change caught most of the participants in the drama by surprise. This holds, of course, especially for the revolution in East Germany and the opening of the Wall (on 9 November 1989) that ushered in a phase of friendly cooperation between the two German states and constituted Phase I of the process analyzed here.

Phase II began with the – at the time equally unexpected – shift from cooperation (and a possible future confederation) to unification. This shift can roughly be set at March, 1990. On 18 March, the first free elections in the GDR produced a landslide vote against the formally governing socialist party. By the end of April, the parties of the East German coalition government had agreed to seek accession to the FRG on the basis of Article 23 of its Basic Law, and public pressure for a speedy unification had grown explosively. Up to this point, it may have appeared realistic for East Germans to assume that a reformed, and possibly no longer socialist East German state would continue to exist. Only when this was no longer a realistic assumption

was there any reason to fear a political decision to break up and (partly) dissolve the AdW. Skeptics (or optimists, depending on the perspective), however, might have anticipated at least the *possibility* of the disappearance of a separate East German State in the foreseeable future already on 11 February, when the Soviet Union accepted in principle that Germany might become unified. Phase II ended with the political decision, taken in August 1990, to dissolve the AdW.[4]

3 The AdW in Phase I: Opportunistic Responses

In the fall and winter of 1989/90, most East Germans interpreted the general political situation as one of internal reforms. Such a situation presents both opportunities to seek redress of long-suppressed complaints, and a threat to defenders of the status quo. As is likely to happen in all vertically differentiated social systems, the opportunities as well as the threats that the political events implied were different for actors on different structural levels of the AdW. Here as in nearly all other areas of social life in East Germany, the political events of October and November 1989 unleashed a wave of reform initiatives. Most of these initiatives pointed in a similar direction, i.e. against the previous forms of centralized hierarchical control. But this meant different things on different organizational levels of the AdW, and thus led to conflicts that had ultimately fateful consequences no one could have predicted at that time.

For the AdW leadership, the political situation seemed to offer the opportunity of gaining autonomy from the formerly strict political control. Characteristic of these claims addressed mainly to the government in East Berlin, but more generally to all influential political forces in the GDR, is the Open Letter published by the AdW presidium on 28 November 1989, soon after the opening of the Wall. In this letter, which explicitly assumes the persistence of a (reformed) socialist East German state, greater institutional autonomy, improvement of the technological infrastructure of research, access to the international community of science, and a removal of the restrictions

4 For a time table of the major events see Schäuble (1991: 289-314).

placed on basic research by the erstwhile strong pressure to produce applied results were demanded. Soon afterwards (on 7 December 1989), a plenary meeting of the academy formally enunciated the strict separation of the AdW from political parties and other mass organizations. To secure the goal of a greater autonomy and at the same time a voice at least in the development of science policy, the establishment of a Science Council and the introduction of a Science Law was proposed by the AdW president (*AdW Pressedienst*, No. 2/90). On the other hand, the academy leadership[5] did not subscribe, on its own initiative, to any far-reaching internal organizational reforms. The strong insistence on autonomy may later have contributed to the distant relationship between the AdW and the field of politics, and hence to its political marginalization at a time when its active involvement would have been highly propitious.

Passing on to the level of the individual research institutes, we see that their main goal was similarly greater independence from hierarchical control. Their claim, however, was not only directed toward external authorities, but mainly toward the academy leadership itself. In a radical form, the striving of the research institutes for independence harbored the threat of secession of the AdW research organization from the academy as a whole. In fact, this threat was quickly perceived by the academy leadership and strongly resisted. From December 1989 on, the AdW leadership missed no occasion to emphasize that the unity of the AdW should be maintained. As yet, however, the research institutes did not seek to leave the fold of the AdW individually. What they sought was collective independence, and in striving for this, they in fact formed a collective identity that previously did not exist. Thus, from early 1990 on, the institutes that had previously been fitted into the unitary hierarchy of the academy and had been loosely organized into disciplinary groups now began to define themselves as the *AdW Forschungsgemeinschaft* and to demand a board of their own, distinct from, even if formally a level below, the academy president.[6]

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5 The academy leadership – the *Präsidium* – was composed of the president, several vice presidents, the secretary general, the secretary of *Präsidium*, the chairmen of the different classes of the scholarly society, the coordinators (*Sekretäre*) of the different research fields, the district officials of the socialist party SED and its youth organization FDJ, and a union representative.

6 In effect this meant returning to a structure that had existed, in broad outline, before

At the micro-level of individual researchers, finally, emancipation from hierarchical authority was sought in the form of new democratic procedures. Thus the establishment of works councils in the individual institutes as well as for the academy as a whole was demanded, as was the creation of special elective bodies of the AdW scientists, who wanted a voice in research management. The democratic reform movement also called for the election of a new president and of new institute directors. These demands for intraorganizational democratization and renewal challenged the authority of the established leadership of the academy at large, and of its institutes.

The reforms sought by actors at the lower organizational levels thus produced a conflict between conservative defenders of the organizational status quo and those advocating organizational reforms. Since the AdW leadership did not espouse intraorganizational reforms, the lower level reformers articulated their ideas in the *Initiativgruppe Wissenschaft*, which had been formed with more general, political goals in mind. This loosely organized group was instrumental in the formation of a Round Table of the academy, following the model then practiced in East German politics, and in setting up further representative organs, such as the works councils (*Rat der Institutsvertreter* at the academy level, *Institutsräte* at the institute level), a special women's group, and a number of other working groups. The activities of these diverse new bodies overlapped in their concerns. The fact that the AdW leadership did not itself become the spearhead of the reform movement thus led to a fragmentation of the decision structure which was polarized between the old formal authorities, whose claim to leadership was widely contested, and the representatives of the reform movement, who lacked official recognition and formal authority. This impeded the action capacity of both sides. Later, the two sides established a modicum of cooperation[7] that channelled the conflict into a process of organizational reform.

The gradual erosion of the academy's old decision structure, which was not speedily replaced by a new one, resulted from a strategic choice on which there was full agreement on all levels of the AdW and which was generally characteristic of the "bloodless revolution" in the GDR: the option for orderly reforms, rather than for a quick coup d'état or a bloody upheaval and radical

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the academy reform of 1968/69 abolished it in favor of strict hierarchization.

7 The ensuing cooperation between reformers and the old leadership is particularly emphasized by Klenner (1992: 164-168).

abolition of the old governing elite. This was not a deliberate choice, however, but appears to follow naturally from the emphatic assertion of democratic principles, the core value that guided the "bloodless revolution." Along the same line, the decision to draft a new charter and *elect* new leaders was also an affirmation of the newly claimed emancipation from heteronomy. Such a choice was, moreover, congruent with the then widespread belief that the socialist regime, though it had gone astray, rested on basically sound principles, so that reforms rather than a radical turnabout were the appropriate route to take.

It is in the light of such shared convictions that the old AdW leadership and the reformers were able to embark on a process of intraorganizational reform that soon crystallized around the development of a new statute. The new statute was to give a legal basis to the desired, and partly already practiced, reforms. In the course of time, numerous drafts were produced by different groups and individuals within the AdW, with the debate focussing on the different aspects of intraorganizational reform already alluded to. Altogether, it took only three months from the time a first draft statute was officially introduced for discussion by all bodies of the AdW (18 January 1990) until the day that a newly established elective assembly (*Konsilium*) voted in favor of a new statute on 26 April 1990. On 17 May 1990, a new academy president was elected on this basis. Given the existing differences of opinion, this is a relatively short time to achieve a working consensus on a new statute and elect a new leadership, especially in view of the absence of any direct external pressures to engage in such intraorganizational reforms. This relative speed of the decision process reflects a surprisingly low level of manifest conservative opposition – a phenomenon which Western observers of political reforms in the GDR generally noted with surprise.

4 The AdW in Phase II: The Effects of Time Lag and Cognitive Deficits

What may have been a rather speedy reform process if compared to other cases of bottom-up initiated reforms in large organizations was, however, too slow in the face of the continuing political upheavals. The coincidence of the AdW's choice of reform rather than revolution (or stasis) and of a significant

change in the external political situation goes a long way to explain the AdW's strategic action deficits in Phase II.

Although it is obviously impossible to prove, it seems likely that the Modrow government, which was in office until the elections of 18 March 1990, would have accepted the outcome of the AdW's internal reform efforts. But by April, when the academy decided on its statute, the new de Maizière government was in office and the overall definition of the political situation had changed from the paradigm of cooperation and possible confederation to the paradigm of unification, which meant that the future of all major East German institutions was suddenly at stake. The de Maizière government, conscious of its transitional nature, hesitated to take decisions that seemed only meaningful in the context of an independent East German future. There may have been other reasons as well,[8] but it was in any case consonant with this orientation that the government withheld official recognition from the newly elected AdW president until late June (i.e. roughly the time when negotiations about the unification treaty began) and rejected the new statute, asking for a revised version. When this was finally presented, it had become obsolete, since by that time it was clear to all concerned that the AdW would not persist in its old form; the internal reform efforts had produced the "right" results at the wrong time. As a consequence, during the crucial period between March and May of 1990 the academy was practically without a leader accepted both by its members and by its institutional environment. As a corporate actor, the AdW could therefore not take part in the informal negotiations that laid the groundwork for the unification treaty in this period.

There were, however, also cognitive deficits. As briefly mentioned above, the change in the definition of the political situation from cooperation to unification came about stepwise. Starting in February 1990, unification gradually became more probable, so that it was possible, with a bit of political imagination, to anticipate a possible threat to the persistence of the AdW already before the election of a new academy leadership in May of that same year. However, unification did not appear imminent in this period, nor were the implications of an accession on the basis of Article 23 of the FRG's Basic

8 Both Gläser (1992: 40) and Klenner (1992: 170) suggest, for instance, that the East German government resented the autonomy which the AdW claimed in its new statute, including the right to elect its president instead of having him appointed by the government.

Law understood well enough to make the perception of a threat unavoidable. In this cognitively ambiguous situation, the AdW as a corporate actor failed to display the necessary amount of political imagination that would have permitted it to develop in time strategic countermeasures for the possible event that its existence should be challenged.

Several reasons probably contributed to this failure. The leadership void at the top of the academy is certainly one of them. Until May, there existed only the old, discredited establishment that withdrew into passivity; between May and the end of June, the new leadership concentrated on gaining acceptance within and recognition without. Not only was the – old and new – leadership busy solving its own problems; activists on all organizational levels focussed their attention so completely on the difficulties of the reform process paramount on the AdW agenda that they were blind to the hints that a threat might be approaching.

A second factor of importance is the selective orientation of AdW officials toward the East German state, whose imminent disappearance they probably neither wished nor anticipated. The AdW did not receive any clear signals from this particular environment indicating a threat to its very survival. In East Berlin, the problems of extrauniversity research were decidedly at the periphery of political attention. The political Round Table that had been the center of political reform activities until the March elections did not set up a working group dealing with science and research until its very last meeting. In de Maizière's governmental platform, the field of scientific research was only very briefly touched upon, and his affirmation that the state should guarantee the promotion of basic research fitted well with the demands of the AdW, which tried to shake off its former dependence on contract financing by the large state enterprises with its attendant pressure toward applied research and development.[9] The only fact that might have been interpreted as an alarm signal was the increasing orientation of the new East German Ministry of Research and Technology to achieve compatibility with the West German system of research promotion; this orientation had already been evident in the time of the Modrow government (i.e. before the March elections), but became increasingly so after the constitution of the new government in

9 See de Maizière's *Regierungserklärung*, reprinted in *Neues Deutschland*, 20 April 1990: 6.

April. But while advocating structural reforms of the AdW, the responsible minister never openly questioned its continued existence as an organization.

To the extent that the political turbulence did affect the AdW negatively, the problem was perceived mainly as a financial one. In early 1990 it had already become evident that the AdW would be confronted with severe financial strictures, which became increasingly acute when the East German state enterprises had to cancel more and more of their contracts with AdW research institutes. As the East German government was not able to make up for the lacking funds from industry, the AdW was soon forced to rationalize and cut down on its expenditures. Next to the concern with intraorganizational reforms, these financial problems absorbed the attention of the AdW on all levels. The measures devised to cope with the financial crisis included an attempt to privatize production- and service-oriented institutions (or subunits of large institutes), and efforts to promote the transfer of research units both to universities and to private firms forming in East Germany. Perceived as means of rationalization and scaling down, these were ironically also measures fitting a strategy of organizational dissolution and subsequent reintegration of valuable basic research units into other structures.

The fact that the AdW's *East* German political environment did not signal a threat to its institutional survival could be reassuring only if one overlooked the fact that the real challenge to its survival came from actors in the *West* German research policy network. After the March elections, these actors began to discuss the institutional structure of a future unified German research system. In the beginning of this process of opinion formation, maintaining the AdW research organization in a structurally modified and scaled-down form was one of the options considered. But this lasted only until May, by which time the conviction had gained ground within the West German research policy network that the AdW research organization should be dissolved and its worthwhile parts integrated into industrial research, the universities, and other existing forms of state-financed research organizations.[10] There existed, thus, a small window of opportunity for the AdW. Had it recognized this window *and* realized it would only be open for a short time, and had it managed to enter the decision process early enough, the AdW might have favorably influenced the opinion of the relevant policy makers.

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10 For details of this process see Mayntz (1992).

5 The Strategic Requirements of Successful Coping

Even if the AdW – its official leadership or some person or persons able to act on its behalf – had recognized the threat to its institutional survival and its source in time, the question is whether it would have been able to make use of the window of opportunity. To do so, it would have been necessary to convince especially West German policy makers that it made sense to opt in favor of the AdW's maintenance. Negotiation with the new (East German) federal states, which might jointly have supported the AdW, was hardly possible because their establishment, announced by de Maizière at the beginning of May 1990, took place only after the ratification of the unification treaty. In the meantime, fiduciary representatives of the new states had been appointed, but they would have hesitated to make such weighty future commitments as the joint support of the AdW implied.[11] The alternative was to include a reformed AdW research organization among those publicly financed institutions supported jointly by the federal government and the federal states under the auspices of an agreement concluded in 1975 (*Rahmenvereinbarung Forschungsförderung*; see Bentele 1979). This was in fact the AdW's first preference, not only because it appeared more viable, but also because it clashed less with the history of the AdW as a central state institution, and with the "statist" orientation characteristic of the GDR in general. However, the AdW leadership does not seem to have appreciated how unfeasible this solution was in the eyes of the Western policy makers, whose support at this time would have been essential.

It was widely accepted among Western *and* Eastern actors that the AdW was grossly overstaffed, and undersupplied with modern research technology (Meyer 1990; Meier 1990). This made its support an expensive proposition, harboring future resource allocation conflicts among the different organizations vying for state support. The AdW recognized, and was quite willing to

11 Here the fact that the former GDR did not join the Federal Republic as *one* "Land," but that several new federal states were created instead, is crucial; this *one* political actor might well have decided to keep the AdW intact. Simon (1992: 29) considers this to have been the decisive factor for the fate of the AdW.

respond to, such criticisms by accepting severe cutbacks ex ante.[12] But there were other critical arguments which the AdW did not dispel.

One important feature that made the AdW research organization unattractive in the eyes of Western policy makers was the presumed low quality of the research conducted there. At the time when this conviction gained ground among West German policy makers, it was based on fragmentary and mainly impressionistic evidence. Scientists in the AdW recognized the importance of projecting an image of scientific productivity and high innovation potential, but the efforts which they, and subsequently the new academy leadership, undertook to this purpose remained unsystematic and occasionally took the form of a clearly euphemistic self-evaluation. It was the (West German) *Stifterverband*, a sponsoring organization financed by private industry, which, upon the initiative of the (West German) Science Council, commissioned bibliometric studies comparing East and West German scientific productivity; but this took place too late to influence negotiations in preparation of the unification treaty. Preparations for a systematic evaluation by the Science Council started in July 1990; their purpose, however, was not to justify the perpetuation of the AdW, but to provide a basis for recommendations concerning the future of individual AdW institutes after the formal dissolution of the academy.

Another feature that made the maintenance of the AdW research organization appear unattractive was its close association with the overturned socialist regime. The AdW's dissociation from this past was not very convincing. Neither the AdW as a corporate actor nor many of the scientists individually had been actively involved in the reform movement that triggered the downfall of the East German regime. As late as August 1990, only every second institute director had been relieved of his post,[13] sometimes only to be replaced by some other person from the former elite. The members of the scholarly society, in spite of some prodding even on the part of their newly elected

12 In a comprehensive document presented on 23 June 1990 (*Kurzcharakteristik der Institute und Einrichtungen sowie konzeptionelle Vorstellungen für deren Entwicklung und Zuordnung*), the AdW accepts as feasible a 60% reduction of its 1989 personnel of some 24,000.

13 As evidenced by a comparison, performed by Hans-Georg Wolf, of information in the academy's last official yearbook with the information supplied by the institutes to the Science Council in September 1990.

president, were unwilling to give up their membership, though it was an open secret that a certain number of them had received the honor of membership for political reasons rather than for their scientific excellence. Demonstrative actions of rehabilitation likewise remained few. Not even the election of a new academy president (and other academy officials) served to dispel the apprehension that if the AdW survived, large parts of the politically tainted scientific establishment would survive along with it. Klinkmann, the new president, had been a member of the scholarly society only for a few years and was neither a long-term nor high-ranking member of the SED, but he was a well-known member of the former GDR science policy elite who never tried to hide his personal attachment to the East German state. Maybe it would have been difficult to find a prominent presidential candidate *not* identified with the regime, given the specific conditions of the GDR, where the escape route to West Germany had impeded the growth of a strong intellectual opposition. However that may have been – the AdW at any rate did not take the steps that could have dispelled the politically motivated skepticism.

The political conservatism of the AdW did not only harm it in the eyes of Western decision makers, but it also meant that it could not count on a great deal of goodwill on the part of the political forces now governing in East Berlin. Both the East German government and the minister responsible for research policy had a rather ambivalent attitude toward the AdW, wanting to preserve it on the one hand as one of the institutions which East Germany could still identify with, but being nevertheless highly critical of its present state and promoting more or less radical reforms. Not even the fact that scientists who formerly belonged to the AdW now held high positions in the Ministry of Research and Technology in East Berlin proved helpful, as these persons did not identify with the AdW, but with the new government and their minister – a Social Democrat whose major aim was to make the East German scientific system as compatible as possible with the West German one in order to facilitate their future integration. Since neither Klinkmann nor other high-ranking AdW officials had close ties to one of the political reform groups, the AdW remained isolated from both the network of East German political decision makers and from the West German policy network.

But even if the AdW had successfully countered accusations that its scientific work was of dubious quality and that its researchers were politically tainted, there would still have been resistance on the part of the West German research policy network against its preservation as a major German research

organization. This resistance grew out of a feeling shared by the major corporate actors in this network that the institutional structure of the West German system of scientific research was functioning very well. After extended conflicts in the 1950s and 1960s, this system had reached a relatively stable equilibrium in the 1970s, based on functional specialization and a generally agreed-upon distribution of domains (see Hohn/ Schimank 1990 for a detailed analysis). This institutional consensus covered the major research organizations and different categories of research institutes, as well as the research promotion powers of the federal government and of the federal states. In the 1980s, this institutional system had been characterized by high structural stability and a very low rate of conflict. Unavoidably, the introduction of a new research organization into this system would have reopened the Pandora's box of conflicts about legitimate domains and spheres of influence – exactly what the West German policy makers wanted to avoid (Mayntz 1992). To gain the full support of at least some of the major West German corporate actors, the AdW would have had to project the image of an *attractive addition* to the existing system that did *not endanger* its equilibrium. To be fitted into a research system based not on competition but on functional specialization between different organizations or categories of institutes, the AdW therefore would have needed to identify a niche not yet occupied. This was not an easy task, as all the *recognized* components of the chain reaching from basic research to practical application appeared to be represented by existing (West German) research institutions. But as functional needs are, at least in part, a matter of definition, a niche to be filled by a reformed AdW research organization might still have been carved out.

There was widespread recognition within the AdW that, in order to survive as a research organization, it would have to develop a new profile.[14] But there was disagreement among the AdW planners as to what this profile should look like. Some favored the return to basic research and wanted to model the future AdW research organization (for which the name "Leibniz Gesellschaft" was now sometimes used) on the Max Planck Society. Others

14 As Gläser (1992: 42) correctly points out, there was considerable willingness in the AdW to accept advice from the West in doing this. A leading West German scientist was even asked to advise the (new) AdW president in drawing up a plan for the future AdW research organization. But this is an indicator of insecurity rather than of a correct and independent assessment of the nature of this particular strategic necessity.

saw the hallmark of a future Leibniz Society in the close interrelationship between basic and applied research that had been the AdW's leading principle. Still others proposed to split the research organization up into two parts, one of which would parallel the West German Max Planck Society, the other the Fraunhofer Gesellschaft (more involved in applied research). The AdW planners accepted that they would thus enter into competition with existing German organizations. This was in conformity with the affirmation of market principles then en vogue. What the planners probably did not realize is that the principle of competition ran in fact counter to the institutional consensus in the West German research system. Nor would the suggested territorial segregation of basic research domains between the Max Planck Society in the West German states and the Leibniz Gesellschaft in the East German states have solved the problem, as this ran counter to the very idea of unification by accession, which implied not only *one* government and *one* law, but the territorial extension of *all* major West German organizations into the new federal states.

The strategic requirements outlined above were exacting, but not *in principle* impossible to fulfill for a large research organization. If the AdW failed to do so, this is partly due to cognitive deficits, i.e. its failure to perceive what was needed to make it appear, in the eyes of West German policy makers, an attractive addition to a research system of the West German type. But it is not clear that, even in case of a correct and timely perception of the situation, the AdW would have been *able* to do what was necessary. This obviously holds in particular for the projection of a politically acceptable image, something that required much more than skillful impression management. We shall return to this point in the end, after having considered what the AdW *did* do when it realized the threat.

6 Coping Efforts

Between June and August of 1990 it became increasingly clear that the future of the AdW research organization was in peril, even if the brute term "disso-

lution" was not openly used by the responsible policy makers.[15] Just as the situation in Phase I offered different reform opportunities to actors on different organizational levels of the AdW, the threats now differed between them. For the AdW, a formal dissolution meant its disappearance as a corporate actor, even if the scholarly society was later to be recreated (in a deeply modified form). But the fate of individual AdW researchers and institutes was not completely tied to that of the AdW. Some of the AdW institutes, or at least subunits of such institutes, saw opportunities for an independent institutional survival, possibly even in a form they preferred over the past – for instance as a Big Science Center or a Max Planck Institute. Individual scientists, in turn, might have found employment elsewhere if the AdW and their own institute ceased to exist. For them, the severe cuts envisaged by the AdW's own reform plans already spelled danger that could have motivated a search for alternatives, while a simple change in their institute's organizational affiliation need not have affected them at all.

Since the imminent policy decision to formally dissolve the AdW had different meanings for the academy as a whole, the institutes, and individual researchers, their strategic alternatives also differed. Individual researchers for instance could look for employment elsewhere, while institutes could try to be adopted by a new carrier organization. For the AdW as a corporate actor, the only meaningful response was to try to prevent the threatening decision, and this is in fact what its new president attempted.

The event that threatened the survival of the AdW was a *policy decision* taken at the national level. The decision process began officially with the first meeting of the East and West German delegations that were to formulate the unification treaty.[16] The working group that was to draft the section con-

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15 Agreement in the West German policy network to break up the AdW research organization and fit those of its parts which met Western qualitative standards into the preexisting West German structures had been reached by the beginning of July 1990. In the ensuing formal negotiations, however, those who preferred a less explicit formulation that would leave the Science Council some leeway for its recommendations won out. Even in the final version of Article 38 of the unification treaty, the dissolution of the AdW research organization is not thus called, though the legal stipulations to this effect are quite clear.

16 For a detailed description of the negotiations see Schäuble (1991); as Minister of the Interior, Schäuble led the West German delegation, while de Maizière's state secretary Krause led the East German delegation. Below the level of these two delegations, working groups were active at the departmental level to draft the proposals for their respective

cerning the East German research organizations met for the first time on 13 July 1990; on 31 August, the unification treaty was signed. The working group was composed of high-ranking officials from the East and West German Ministries of Research and Technology; additional members were representatives from some other ministries and from three of the (West German) federal states. Occasionally other corporate actors were invited to a meeting. AdW representatives took part in one meeting only. West German research organizations did not participate at all in the negotiations. The decision about the survival of the AdW was thus taken by a small number of officials in a negotiating system in which the academy did not regularly participate. As a corporate actor, the AdW therefore had to rely mainly on indirect representation. Here the East German research ministry was its official advocate – and in fact its only one, the AdW having failed to win the support of Western policy makers in time. But as we have already seen, even the AdW's "born" advocate had an ambivalent attitude toward it and could, in the course of the negotiations, be convinced to accept the – then firm – Western view that the AdW should be dissolved. Last-minute attempts of the academy president to mobilize the East German government in its defense also failed; in any case they came too late in the decision process.

Even though the fate of individual AdW researchers and institutes was not completely tied to that of the AdW as a corporate actor, they still were vitally interested in the outcome of the political decision process. From the very beginning, there had been consensus among East and West German policy makers on the goal to preserve the valuable AdW research potential. For AdW institutes and researchers the big question was how that goal would be translated into effective policy.

In contrast to the corporate actor AdW, even its larger research institutes could not attempt to enter or influence the decision process directly – let alone individual scientists. In policy development, corporate actors preferably interact with other corporate actors. Even if a corporate actor such as a ministry *can* and sometimes does interact with individual research institutes and even with individual scientists, for plainly practical reasons such contacts are limited. Contact patterns therefore tend to be level-specific, with higher-level corporate actors seeking out other higher-level corporate actors. The West German Minister of Research and Technology thus consulted with the big

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policy sectors.

research organizations MPG and FhG by talking to their presidents, while the Blue List institutes which have not formed a higher-level research organization played no role whatsoever in the decision process about the AdW.

Lacking effective representation by the corporate actor AdW, the AdW researchers and institutes had no way of influencing the negotiations directly. Strictly speaking, there are no special-interest organizations within the research sector, and there was not even a powerful union ready to defend the interests of the East German researchers threatened by unemployment. The East German scientist's union was being dissolved at the time, and its members were given a choice of two West German unions (*Erziehung und Wissenschaft*, GEW, and *Öffentlicher Dienst, Transport und Verkehr*, ÖTV) to join if they wished; the more relevant GEW, however, was much more concerned about the infinitely larger group of East German teachers than about the fate of the AdW scientists. The virtual exclusion of the AdW from the policy network therefore meant that its members were without a direct representative in the policy process and had to rely on the advocacy of the East German research ministry to articulate their demands. In this, they were in fact better served than the AdW as an institution, as the East German science minister successfully pressed for a "moratorium" for the AdW personnel, an employment guarantee until the end of 1991, by which time the future of the various institutes was expected to be settled. The East German research minister, a Social Democrat sensitive to welfare issues, had repeatedly been faced with the fears of the academy personnel in the weeks preceding the negotiations, and had assured them of his support in trying to avoid unemployment for them. But his insistence on a (limited) employment guarantee would have been to no avail in the treaty negotiations without the support of the West German representatives. We will shortly come back to this point.

As far as their own active coping strategies were concerned, AdW scientists and institutes could either try to muster their collective force, or they could try separately to save their own skins by seeking alternatives outside the AdW research organization. The opportunities for individual researchers to find employment, and for complete institutes to find new carriers on their own, were much too insecure to motivate exit reactions on a large scale. Where exit was in fact attempted, it was motivated less by the pull of attractive alternatives than by the push of the AdW leadership's perceived inability to ensure the survival of the organization. But if the extent of realized exit reactions was limited, and restricted to individual scientists and at best small

groups, this did not mean that solidarization, and collective activity in support of the AdW, predominated; the most common reaction was rather a kind of stunned helplessness. A reaction profile polarized between flight and total passivity is a well-known consequence of extreme stress (or danger). In this case, the withdrawal into passivity was reinforced by the old habit of expecting to be taken care of by some superior authority. Many leading AdW scientists felt, moreover, ambivalent about the academy, from whose strict hierarchical control they were just trying to emancipate themselves. Therefore, except for some demonstrations on the occasion of the academy's traditional Leibniz Day in June, there was no self-organized solidary action on the part of the AdW institutes, nor massive and publicly visible protest on the part of the academy personnel against the plans to dissolve the AdW – a protest that might have been translatable into political pressure. The resulting pattern of lower-level reactions, i.e. little public protest, and a limited amount of definite exits did nothing to strengthen the defensive capacities of the corporate actor AdW; it rather impaired its stability.

A group of actors that can neither directly participate – nor is vicariously represented – in a decision process affecting its future can still bring to bear its hopes and fears upon the decision makers by – intentionally or not – changing *their* situation. Higher-level actors observe spontaneous developments at lower levels attentively if these are preconditions for reaching stated goals, or pose threats to their achievement. In this particular case, East *and* West German decision makers involved in the negotiations about the future of the East German research system feared that an uncoordinated and speedy migration of AdW researchers to West German industry or new private companies, to foreign countries or into nonscientific professions might lead to an erosion of what was to be preserved. It was also feared that West German research organizations, but also industrial firms would try to pick out and take over the best of the research units, leaving only the blighted rest and thus rendering the restructuration effort futile. Therefore, as soon as impressionistic evidence called attention to the possibility of such developments, there was agreement on the need for provisions to reassure AdW scientists. It was on the basis of this consensus that the East German research minister's demand for a "moratorium" was accepted. The systematic evaluation of all AdW institutes by the Science Council as well as a limited employment guarantee were thus written into Article 38 of the unification treaty. Not being able to

negotiate with them individually, the policy makers hoped that the scientists would collectively change their behavior in response to these measures.

7 Coping Failure: Fault or Fate?

It holds generally that promising coping strategies presuppose the possibility to identify a *manipulable* point, an event or variable within the reach of the troubled actor where successful intervention would avert or mitigate the threat. This "intervention point" may, but need not be the original source of the trouble. In our case, such an identifiable intervention point existed – the policy decision about the future of East German research; this was obviously distinct from the original source of the AdW's troubles. However, access to the promising intervention point was restricted to corporate actors belonging to, or being able to find their way into, the policy network where the decision took shape even before it was formally made. The AdW as a corporate actor could in principle have gained this access; as we have seen, it missed the opportunity. Individual members and organizational subunits of the AdW did not even have the chance of direct access. If they wanted to influence the crucial policy decision, they had to rely on representation or advocacy. In our case, it was not so much a collective effort such as lobbying, or political pressure mobilized by AdW scientists, that ultimately secured some success, but – quite unintentionally – the threatened, and realized, exit reactions, i.e. individual adaptive responses. Individual "save your own skin" reactions achieved what might have been sought by solidary action. This constellation, while not unique, does rest upon very special preconditions: Those actors whose behavior (or decisions) constitutes the imminent threat must in turn *fear* the uncoordinated, individualistic coping reactions or their aggregate effect. This indirect way of exerting influence is thus highly selective in favor of threats to the interests of the higher level (corporate) actor(s), while there is no chance to use persuasion and to argue normatively, to enter into a moral discourse as it were and to bring values to bear upon decisions.

As for the coping deficits of the AdW, we have found evidence in the preceding account of both a fatal *temporal disjunction* and a *substantive incongruence* between coping responses and situational exigencies. With respect to the first point, we have seen how the reform process, started in a situation

that was primarily perceived as offering opportunities, absorbed the attention of the participants and incapacitated the corporate actor in its external relations, producing in the end a result that no longer fit the changed political situation, thus prolonging the period in which the AdW was without a recognized leadership. In this way, the response of the different ranks within the AdW in Phase I *jointly* contributed to coping deficits in Phase II. For the AdW leaders, the threats that were perceived in Phase I came from within the organization, i.e. the danger of secession of the research organization from the academy, and the challenge to the established AdW authorities. Their partly resistant and partly cooperative responses to these internal threats made an internal reform process possible and in this way helped to delay the recognition of, and response to, the external threat.

Much later, reformers in the AdW became aware, and regretted, that they had helped to destabilize and incapacitate the AdW by their reform activities – an effect they could hardly have foreseen at the time. Had they refrained from reform activities and chosen a strategy of status quo maintenance, this would, however, also have been to the AdW's disadvantage. In fact, our case illustrates very well that if the membership of an organization does nothing to challenge its status quo, this is *not* necessarily functional for the corporate actor. A strategy of status quo maintenance would have preserved the (old) AdW leadership intact during the crucial period in the spring of 1990, and might have turned attention more to events in the academy's environment, but it would later have been taken as a sign of intransigent conservatism and made the AdW inacceptable in the eyes of West *and* the new East German policy makers. A revolutionary response of the lower ranks in the AdW, on the other hand, could have produced the kind of "creative destruction" that might have changed the image of the organization in such a way as to enable it to form a "winning coalition" in its fight for survival. But again, this could have come about only unintentionally, for at the time when the choice between reform and revolution had to be made, nobody could have anticipated the future functionality of a more radical response.

An outside observer could easily have recognized that early in Phase II it was imperative for the AdW to enter the political decision process and to try and influence in particular Western decision makers, and corporate actors to whom they would listen. That the AdW failed to act accordingly cannot only be explained by the attention-absorbing effect of financial problems and the internal reform process, which moreover incapacitated the organizational

leadership for a certain time. Misperceptions, too, apparently played a role. Far from merely being simple cognitive mistakes that could just as well have been avoided, almost all of these misperceptions stemmed from strong beliefs and ingrained habits of thinking, such as centralism and "statism," a belief in the future of the GDR, lack of familiarity with federal structures, etc. Given such historically and biographically rooted beliefs and orientations, most of the crucial misperceptions were in fact hard to avoid.

It is questionable, however, whether a correct and timely recognition of the external threat and the countermeasures it called for would have made much of a difference for the coping behavior of the AdW. Its strategic options were *objectively* restricted by previous "choices" of all its component groups. Thus, in order to find support among the relevant decision makers, the AdW needed to project an "attractive" image, but in this it was seriously handicapped by the previous response to the regime change – reform efforts rather than revolution and the immediate and radical displacement of the old AdW elite. But again, this was a "mistake" that appears nearly unavoidable – not only because at the time its later consequences could not be anticipated, but also in view of the *general* normative preference for an orderly and democratic reform process on the one hand, and the low revolutionary potential among the members of the AdW on the other. The AdW, after all, had enjoyed a privileged position in the GDR, and as a consequence of deliberate recruitment policies, the political involvement with and attachment to the socialist regime was relatively high at all ranks of the organization. Having for these reasons acted the way it did in Phase I, the AdW could no longer opt for some of the objectively most promising strategies, including the formation of a strong defensive coalition with the new East German political leaders, in Phase II.

Aside from confirming the propositions about the sequential nature of coping, where past decisions influence present options, the analysis serves to throw doubt on the assumption of deliberate strategic choice. On all levels of the AdW, there was apparently relatively little conscious *choice* among alternative strategies; the actors rather did what they thought the situation (as they saw it) called for – they made what seemed to them the one correct response. This is true of the reform activities on all levels of the AdW in Phase I, and it is also true of the different reactions to the recognized survival threat in Phase II. There were misperceptions, and wrong strategies were enacted, but at each given moment, there were no *obvious* alternatives to what was

perceived and done. Thus, in identifying the *best available strategy*, it is not enough to take into account the (limited) action potential; the action orientation, the beliefs and values of an actor are equally important restrictions, first for what he will perceive, and subsequently for his coping response. Even in critical situations actors often do not survey alternatives, try to anticipate their future consequences, and calculate costs and benefits, but they rather enact what they feel is the "right" response. Their "mistakes" in these cases are such only in hindsight, and if looked at from the outside.

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