

5. The Ambiguity of the West: Objectives of Polish Research Policy in the 1990s

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For the part of Europe that was enclosed by the so-called Iron Curtain, the autumn of 1989 represents the beginning of sweeping political changes. During the 1980s the Soviet Union had adopted a liberalising approach under the leadership of Mikhail Gorbachev, and subsequent political developments meant that after four decades of authoritarian rule and planned economy, the former state socialist Central and Eastern European Countries (CEEC), altered their course towards democracy and capitalism. The surge of liberalisation culminated in the dissolution of the Soviet Union in 1991, and the definitive fall of the Iron Curtain.

One of the policy fields where these sweeping changes became visible was research policy. The role of science and research for society had to be renegotiated and the relationship between politics and science to be re-defined. According to the Soviet model that had been adopted in the state socialist CEEC, scientific activities depended on political protection. Both applied research (technological self-sufficiency) and basic research (which was meant to support ideological convictions) were seen as building blocks in the state socialist body politic. Science historian Konstantin Ivanov (2002: 319) describes the basic principle for the model as “the requirement that the production of scientific knowledge be closely linked to the industrial and economic needs of the society”.

One of the countries where such a research ideal was strongly implemented and practised during the period of state socialism, was Poland. However, the Polish transformation of research policy differs in a number of ways from the rest of the CEEC. The reasons for these differences have been discussed in the light of the country’s political history (Norling 2014: 88). A crucial aspect is the specific heritage of ideas on science and the role

of research in society. Many social science studies understand this heritage as a consequence of Poland's chequered political history.

The Polish state, even though established as early as the tenth century, lost its independence in 1795 and was not re-established until 1918, subsequently becoming a Soviet vassal state after the Second World War. The country has thus endured long periods with a lack of full sovereignty. This has in turn contributed to civil society and citizens being conceptualised in opposition to the government and the state administration. The Polish political culture is therefore characterised by an attitude to state power as being 'external', 'foreign', and 'unauthorised', without legitimacy anchored in civil society (Gerner 2009: 221). Instead legitimacy was vested in a social class called the intelligentsia (*inteligencja*), that is, a group of individuals that possess social characteristics associated with higher education. The intelligentsia played a crucial role in the formulation and defence of the national identity and the creation of cultural, political, and scientific values beyond state authority (Kennedy 1991: 238).

An important part of the philosophical tradition of the Polish intelligentsia concerning science and research before the Second World War was formulated according to the Humboldtian liberal model with its emphasis on scientific freedom and independence of politics (Herczyński 2008: 15–17). During the years following the end of the First World War, the Polish research system and research policy were, to the extent they were formulated, in line with a tradition of that kind (Kozłowski 1998: 90). Consequently, when the Soviet model of research policy was introduced, it went against the research ideal of the intelligentsia. However, when research policy was reorganised after 1989, the intelligentsia's ideal of the role of science in society again became an important starting point for political practice (Connelly 2000: 78), implying a break with the policy that had been formulated by the Polish communist party PZPR (*Polska Zjednoczona Partia Robotnicza*) in line with the Soviet model.

During the roundtable discussions held in connection with the transition from state socialism to democracy in 1989, scientific autonomy and the greatest possible freedom from political control were emphasised as part of the framing of the new politics between the *Solidarność* trade union and PZPR (Jabłeczka 2009: 84–5). The scientific faction responsible for this issue at the time formulated a policy model for research that was almost opposite to the Soviet model. The ideal of scientific freedom and self-autonomy, and the separation of politics from science were then realised in Poland. The formulation of the role of science and research no longer lay in the hands of

politicians but with academics themselves, not unlike the model envisioned by the intelligentsia in the inter-war years.

In practice this development meant that The State Committee for Scientific Research (*Komitet Badań Naukowych*, KBN) became responsible for the formulation of the new research policy and the organisation of the research system. KBN was to function as a more or less autonomous body in relation to the Polish government, and it not only dealt with research grants but was also responsible for research policy at macro level in order to safeguard the freedom of science from political control. This solution was in several ways unique compared with how research systems and research policy were structured in the other CEEC after the fall of state socialism. Nowhere was the idea of scientific autonomy incorporated so clearly into political practice as in Poland. The scientific production of knowledge thus rapidly moved from resting on an ideal of societal utility to one that acknowledged the intrinsic value of science. This ideal was also strongly rooted in Polish political history, research policy traditions, and the culture of the intelligentsia.

However, modifications of the new Polish research policy soon started to take shape. The early 1990s were a time of crumbling economy, the need for mobilisation of public resources for building up the market economy was perceived as urgent, and subsequently the country's entry into the EU had to be prepared. All this contributed to comprehensive renegotiations and reinterpretations of the anti-politics oriented model with academic self-organisation as a basic choice (Norling 2014: 11–12).

This chapter examines these comprehensive renegotiations and reinterpretations, mainly by analysing Polish research policy discussions in the journal *Sprawy Nauki* during the 1990s. The study uses the concepts of 'boundary-work' and 'demarcations' regarding science as introduced by American sociologist Thomas F. Gieryn (1999), along with concepts of critical transformation theory. Epistemologically the approach is a social constructionist one, assuming that ideas about science and its demarcations are historically, socially, culturally, and politically conditioned. The question of what constitutes science is therefore seen as an empirical issue, not one to be answered in general. By using concepts of critical transformation theory, a strand of thought that has emanated from postcolonial studies, emphasis will be given to the analysis of symbolic geographical positions for the boundary-work. The study thus examines the notion characteristic of European history and the present day of a 'Western European' identity that is superior to other imagined symbolic European identities such as an

‘Eastern European’ or ‘Southern European’ one in terms of ‘modernity’ and ‘development’ (Andrén 2001: 35–7).

There is a significant difference between studies of a symbolic Eastern European identity position in relation to a Western European one and the ‘Orientalism’ discourse examined by postcolonial studies. Here, rather than studying an identity completely ‘beyond’ the symbolic Western European identity, the research concerns an imagined ‘not really there’ identity, that is, an identity that can ‘almost’ be likened to the symbolic Western European, but which does not quite succeed – socially, culturally, economically, or politically (Lindelöf 2006: 72–4).

There are several explanatory models for how an East European symbolic ‘almost identity’ of this kind arose. For example, sociologist Klaus Eder emphasises (2006: 264) that the geographical proximity to ‘the other’ – in the form of tsarist Russia and later the Soviet Union – played a crucial role in the relationship between the imagined East and West. Another explanatory model discussed by the Hungarian historian György Péteri is that the Iron Curtain contributed to a kind of de-Europeanisation of the now post-state socialist countries, which characterised both notions of the East in the West, and of the East in the East (Péteri 2010: 2). Again, however, this is not about a symbolic identity position that completely ends up in the unknown ‘other’, but that instead means something in between, both included in the Western European norm, and at the same time outside of it. Both Eder and Péteri, therefore, call this position the telling ‘second other’.

A designation that, like ‘the second other’, is used to describe the imagined distinction between ‘East’ and ‘West’, is ‘semiperiphery’, as opposed to the ‘core’. Instead of periphery, the symbolic geographical identity position of the CEEC is here to be understood as something between the periphery and the core. Like the identity position ‘second other’ it is thus about an exclusion that is not complete (Blagojević 2010: 186). The discussion on symbolic geographical identity positions that informs the present study contributes to analysing the boundary-work in a more initiated way. Concepts such as ‘semiperiphery’ and ‘core’ help to distinguish and understand what forms of linguistic representation were possible and viable for use in the boundary-work, as opposed to what forms were not.

An autonomous research policy is realised

January 1991 saw the launch of KBN, officially the actual basis for the new autonomous Polish research policy model, according to *Ustawa z 12*

stycznia 1991 r. o Komitecie Badań Naukowych (The Act of 12 January on the State Committee for Scientific Research). At that time KBN consisted of two units (commissions), one for basic research and one for applied research. These became more clearly defined and formed part of a structure of a number of special committees that were to be the guardians, each within their own field, of the autonomy that would from then onwards characterise scientific endeavours. Generally committee members were academics, often professors with special knowledge in their particular field. Those elected could also be replaced every six months in line with the idea of openness and transparency in the new formulation of research policy. This would mean that autonomy would always be assured and the research world would have considerable influence on political developments concerning research.

KBN was thus initially given the role of a guardian of the autonomous scientific community. A new law was enacted by parliament that established that KBN was to function as the highest authority regarding research policy, and that its chairperson would not simply be of ministerial rank but would also be a valid member of the government (*Ustawa 1991*). It also stated that KBN's tasks would include,

Providing the government and parliament with guidelines for Poland's research policy, including proposals for the proportion of GDP that should go to R&D

Providing the government with proposals for plans and budget for R&D

Defining the focus of R&D

Distributing budgeted funds to institutions and research teams, and following up on their use

Initiating and overseeing legislation and financial proposals regarding research and technological progress

Signing international agreements on cooperation in technology and research (*ibid*).

KBN had almost the entirety of the state research budget at its disposal, and would fund all research activity and research institutions in the country. In this way two roles were combined: that of a research ministry with duties concerning strategic planning and activities and executive duties; and responsibility for funding all research. KBN's management team consisted at that time of five ministers who represented the government, twelve researchers, elected by the research community, and two representatives of

the subcommissions for applied and basic research. All decisions were made based on a voting procedure, and KBN's chairperson had a veto whatever the issue (Jabłeczka 2009: 88–9).

The reason for such a drastic reorganisation, giving KBN a status that was decision-making rather than advisory, and eliminating “politicians from the entire decision-making process”, as well as holding the entire budget for funding research, can, according to science historian Jan Kozłowski (1998: 94), be understood in the light of the fact that,

In the Polish reform, creating a new path and rejecting the past resulted in a denial of every organizational and political principle, even if some of these principles, such as research funding by various sectoral departments or the involvement of politicians in science policy formulations, are common in democratic countries.

This new, almost utopian, research policy model, in which science in its entirety was governed by representatives from their own sphere, is remarkable, not least in consideration of the research policy development Western Europe went through during the same period. There the situation was instead characterised by a change process dominated by an ever greater management spirit and a move towards centralised budgeting and planning processes. The EU's common research policy gained in significance, with institutional arrangements in the form of research councils, new framework programmes, and the Lisbon Convention, not least as an effect of the then increasing management and control of the public sector. The Polish case was thus detached from the trend towards increasing research policy control in Western Europe during the period in question, despite the fact that during the roundtable discussions the Poles had expressed their wish to be included in the ‘Western European’ community.

Research policy reforms after 1989

The political situation immediately after the roundtable discussions of 1989 and the creation of KBN meant that General Jaruzelski occupied the post of president of Poland and PZPR was still guaranteed a monopoly of authority up until the first free presidential elections since the end of the Second World War, in 1990. Lech Wałęsa took over the post of president after Jaruzelski, and in the parliamentary elections the following year 29 parties entered the Sejm. The political situation was characterised by rapid political upheavals and instability, with constant changes of prime minister during

the first post-communist years (Raciborski 2003). Lena Kolarska-Bobińska (2003: 91–8) has described this period as a time when new coalitions, parties, and political leaders replace each other in a rapid stream, and democracy was more imaginary than real. It is also in this political context that the formulation of the new post-state socialist research policy took place, that is, in a political landscape characterised by the transformation process's first, and largely chaotic, phase. Whereas they initially ensured a relative distance from state policy events as a result of the requirement for autonomy during the roundtable negotiations, the action plan at the start of the 1990s was oriented around the fulfilment of the first strategic research policy document prepared by KBN, "Principles for the Acts of Legislation Concerning the Field of Science, Higher Education, and Research and Development Activities", which went into force 1991 and was published in 1993 (hereafter called *Principles*).

However, it soon became necessary to define in greater detail the somewhat vague guidelines in this document. Another strategy document was therefore compiled by KBN on behalf of the new left-leaning government, *Założenia Polityki Naukowej i Naukowo Technicznej Państwa* (The Basis for the National Science and Technology Policy, hereafter called *Basis*). The document was drawn up by a group of experts within KBN, and the text stated that the research policy should result in the short term in making social and economic development in the country easier, and in the long term ensure financial growth and social development, through these areas being given as much as possible of the resources set aside for research. Here the two overall tasks of research are also described as to "acquire unique and important results from the most attractive research fields in the world" and to "acquire unique and important technologies and exploit their use in technical collaboration within Poland and between Poland and the rest of the world" (*Basis* 1993: 68–9).

The total scientific freedom, which in *Principles* had an almost utopian nature, both for applied research and basic research, thus began in the practical context of the reforms to be renegotiated, and the demarcations surrounding science were reworked. This primarily affected applied research, which in the document is ascribed a need for increased management towards a social benefit-oriented context (through getting closer to state policy and the business world). Science is ascribed other values, partly through the introduction of *Basis*, and the most urgent task for research policy is described as renewing and changing legal regulations for applied research so that it matches the country's economic development. This

becomes even more significant in a clarification of the priorities, which states,

(a) that research in Poland must be on a high level, comparable with a global standard; (b) that the results of research must have a crucial importance and a meaningful effect on other research areas; (c) that it must apply to fields that have an indisputable significance for civilisation and the culture of society and the country; (d) that there must be a measurable likelihood that the results will be useful and that they will form the basis for adapted or new technology (*Basis* 1993: 66).

Although the positions in *Basis* differ considerably in terms of scientific autonomy from what people had originally seen ahead of them when *Solidarność's* scientific faction sat down to negotiate with the communist party about research policy in democratic Poland, it is clear how careful KBN's group of experts was about defined frameworks for what science is to devote itself to. The discussions concerning the boundaries between science and politics in this phase are thus to a great extent still about maintaining a continued separation of spheres in line with the ideals of the roundtable discussions, although the beginnings of a relaxation can be discerned. An inclosure to the document also states that research area priorities should be updated regularly with regard to research that is essential for the country's administration to function, living standards to be raised, the development of the economy and competitiveness of goods and services, and the strengthening of democracy and the "social acceptance of a free market economy" (*Basis* 1993: 70). Thus a certain displacement with regard to ideas and expectations of, and requirements for, the role of science is brewing in the reforms, where more benefit-oriented ideas get a foothold in the document.

Apart from this inclosure, two kinds of prioritised programmes are also written into the document. The first of these, *Strategic Government Programmes* (SPR), involved prioritising research of which the result was important for the country and the other, *Special Programmes and Research Equipment* (SPUB), was a research programme that formed part of international programmes, and where equipment costs were high. These programmes hurried development on towards more comprehensive negotiations and reinterpretations of the autonomous research policy model. However, this only applies to applied research, which was now clearly defined as the engineering and architectural sciences, the chemical and technical sciences, electricity and power measurement studies, and transport studies (which had their home in KBN's subcommission on applied

research). Basic research, which was classified as the humanities, jurisprudence, mathematics, physics and astronomy, the biological and environmental sciences, medical sciences and agricultural and forestry research, was thus still outside the priority framework.

This distinction, which had previously not been as significant, was a milestone for the continued development of Polish research policy. There was still a surprising amount of freedom in science's relationship with politics, as well as with the business world, while at the same time the renegotiations concerning applied research began to take off. Applied research was seen more and more as being in need of politicisation, and thus clearly distinct from basic research, which was still given a freer rein. The total state budget for research during the first part of the 1990s was between 0.57 and 0.76 per cent of GNP, in relation to 1.3 per cent in 1989, and the non-state portion of the funding was still very low. In the budget of 1993 about 45 per cent of the funds were used for the statutory activity of research institutions, 18 per cent for grants, 13 per cent for targeted projects, and the rest for miscellaneous items. Of the statutory funding, 60 per cent was expended by the Committee for Applied Research and 40 per cent by the Committee for Basic Research (Jabłeczka 2009: 84–5).

However, the research policy scenario for basic research and its as yet unmanaged nature soon came under pressure, in connection with the ever stronger political demands for international cooperation, especially in consideration of the Polish government's ambitions in regard to European integration.

Increased international cooperation

In the mid to late 1990s political development in Poland rested largely on adaptations with a view to membership of the EC (EU) and NATO, which created conditions for an increasing retreat from the initially prepared research policy model in *Principles*. Back in 1990 the EC parliament had adopted a resolution on cooperation with the CEEC with regard to R&D, and the EC's *Third Framework Programme* opened up the possibility of funding new networks between its member states and these countries (Framework 3C). Adjustments needed to be made before these changes, which became clear fairly soon after publication of *Basis*. The almost utopian approach to scientific freedom was renegotiated and reinterpreted in the reforms. The public investigation in connection with the issue of EU membership and research policy ordered by KBN and the government's

European integration group (prepared by KBN-active academics and published in the series *White Paper, Poland – The European Union*) states, for example, that,

For developed countries, a typical strategy is to concentrate on high-tech production or even on information processing technologies to maintain the dominant role on increasingly globalized markets; such a concentration is possible only if the level of education increases in the society. Thus science, education and technology become vital elements of development strategies at the beginning of the 21st century; these elements will decide who will join highly developed countries and which countries will be left on the periphery (Wierzbicki 1997: 2).

Thus here the comparison with the Western way of running research policy is realised, and in consideration of the measures demanded, the concept was articulated in relation to a new kind of view as to how the spheres of science and politics in particular should relate to one another. During the round-table discussions, the striving to be like the ‘West’, or the desire to be absorbed into the ‘core’, was actually only a kind of symbolic opposition to state socialism models. Instead of in relation to the ideal of freedom and the idea of a self-governing intelligentsia, the West was now loaded with values associated with more control and strategic prioritisation of research, that is, a less clear demarcation between science and other spheres. This type of approach to the ‘West’ in Polish research policy after 1989 was a highly important element in the assertion of epistemic authority and crucial for the results of the associated boundary-work. This is the most important component in the repertoire that constitutes resources for the actors taking part in the boundary-work.

Preparation in various social areas in a bid for EU membership, which often required scientific expertise, meant that a number of state programmes for prioritised research were initiated. In relation to integration into the EU, *Basis* was therefore not by a long stretch a sufficiently clear document for directives on research policy strategies and efforts. Instead, therefore, the document *Dodatkowe Założenia polityki naukowej i naukowo-technicznej państwa* (The Supplement to The Basis for the National Science and Technology Policy, hereafter called *Supplement*) was produced to remedy the deficiencies in *Basis*. In concrete terms *Supplement* meant that a greater and more clearly defined focus on research and research orientations that concerned innovations within the country’s economic sphere were to be adopted (*Supplement* 1997: 2). The introduction to the document

states that the starting point for choosing prioritised orientations for research has been,

- development of the economy, particularly the increase of innovativeness and competitiveness of products and services, as well as their adaptation to international standards, especially to those obligatory in the European Union,
- increase of well-being and security of people, as well as the increase of environmental protection, maintenance and bringing up to date information connected with the technological security,
- correct functioning of the State (its institutions and authorities, as well as civil services (ibid. 2–4).

In this way the prioritised research areas now became clear, and compared with *Basis*, where they were still open to interpretation, far better defined. Each prioritised field was specified and explained, and rather than suggesting there was one kind of science with uniform activity characterised by ‘scientific freedom’ a clear boundary between applied research and basic research was drawn. The role of science was interpreted as a means of social development and state benefit. *Supplement* was in this way also a turning point for the ideas and expectations of, and requirements for, science in the continuing reforms of Polish research policy.

Research policy discussion

In parallel with the reforms and the associated renegotiation and reinterpretation of demarcations surrounding science, throughout that period there was a research policy discussion in the journal *Sprawy Nauki* (Science Issues, during the initial period *Bulletyn Komitetu Badań Naukowych*, Bulletin of the State Committee for Scientific Research), which in line with what was described in *Principles* was to become an important element of the new, transparent research policy activities within KBN. This would feature detailed reports of research policy initiatives, decisions, proposed programmes, and any other information that could conceivably be produced from activities within KBN, alongside discussions on development, in which academics, politicians, and other stakeholders would be able to have their say. It is therefore also in this journal that the first discussions concerning a renegotiation and reinterpretation of the demarcation that preceded the reforms in post-state socialist Poland came to be held.

As early as in the first few issues, it is clear that the journal played a major role in the discussions on the organisation of the new research policy. These discussions were conducted in connection with workshops, conferences, and meetings led by KBN and were characterised by a Humboldtian approach to the issue, in terms of autonomy and scientific freedom from interference from political or commercial interests. It became important to position oneself in the discussions in relation to the state socialist regime's outlook on science, and ideas concerning a closer relationship between science and politics were presented with great caution.

The boundary-work's linguistic representations thus dealt with a clear distinction primarily between science and politics, and a defence of what had been established during the roundtable discussions. A telling example of this in *Sprawy Nauki* was when Prime Minister Jan Krzysztof Bielecki, together with members of the Sejm and Senate, were invited to attempt, together with KBN's academics, to define a continued line for research policy based on *Principles*. In a speech that was published in the journal, Bielecki stressed the importance of maintaining a dialogue between politics and science with regard to both applied and basic research, with the emphasis on the fact that academics should almost be allowed to themselves determine the future of research policy regarding the relationship between science and politics,

We want to participate in our development as an at least partially [*srednio*] industrialised country. Western countries have developed quickly through investing at a medium level in both improvement [*przetworzenia*] and research. I assume that these issues ought to interest research. I, being responsible for the government, should have asked you long before this for a dialogue and a formulation of questions such as this. It is extremely important for there to be a bridge between those who hold political power and those who have to set the best basic policy conditions. I do not know if we can do anything about that, or if everything has already been done, and that it is simply the case that we have not had time to achieve a consensus on these issues? Communication has not been at its best. Not least, this is about securing broad and active participation from scientists in Poland's transformation process (Bielicki 1991: 16).

In this statement science becomes a sphere whose right to self-determination seems inviolable, and it seems almost as if there hardly existed any communication between politicians and politically-active academics within

KBN during the first years of the transformation. At the same time Bielicki's statement can be interpreted as a hint of the importance of maintaining trust between academics and politicians and not sticking firmly to the autonomous position of the roundtable discussions, in order to be able to get closer to the industrialised core.

The caution expressed by Bielicki did, however, soon become increasingly rare in the discussions. This development was initiated by the meeting between the new research policy and the practical circumstances in the form of a national economic crisis and, as a consequence, the fact that the funds initially promised by the government for KBN's use were cut drastically. It is also in connection with this that the tone of the journal changed and actors who expressed themselves there to an increasing extent began to devote themselves to arguing for a renegotiation of the earlier demarcations surrounding science. The research funding system demanded, perhaps more than anything else in the formulation of the first framework of the new research policy model, a meeting between politics and science. Soon also the advertising of research funds according to the model created in the light of the roundtable discussions' maxim on total scientific freedom marked the start of the more critical discussions surrounding the idea of independent intellectual and autonomous thought. This criticism originated in the requirements for greater efficiency when the ideas of free applications came to nothing as a result of advertising funds where there were no instructions as to what research should be focused on. A chaotic situation (not unlike the general political situation) broke out when no practical options were found for performing the work of checking the thousands of applications that came streaming in. According to historian Antoni Kukliński (1992: 10), at that time a newly-appointed KBN member, the first application processes were characterised by the fact that,

The procedure was very important, intensively discussed and difficult to prepare in document. It was to introduce principles of competition in a community, which hardly knew the idea of competitiveness. Moreover, the idea of financing of individual scientists had to be incorporated into the system which for decades served as an instrument of constraint of individual entrepreneurship. It had to be expected that numerous traps would show up in the process of the first research grants competition – from organizational and administrative problems to various conflicts of interest, which could easily undermine credibility of the results.

Thus the striving for scientific autonomy suddenly collided with such things as economic requirements, and the newly-won academic freedom ran into obstacles. The shortage of computers, inability to employ a large number of administrators, or simply the lack of copying equipment, paper, faxes, etcetera also quickly became an acute problem, which contributed to the gap between idea and reality. Kukliński (1992: 14–15) continues,

One week before deadline there were only few hundreds of applications received. However, during the last days they were delivered literally on trucks and piled high up in three rooms. Finally 9524 applications were received in 48000 copies. The Committee had not had enough office cabinets [...] finally the committee received around 16000 reviews (average 1.7 reviews per project).

This situation gave rise to a more critical discussion in *Sprawy Nauki* concerning possibilities for realising the sought-after autonomy. It is also in this context that the documents that came to replace *Principles* were drawn up, and the continuing discussion and work on the boundaries surrounding science took place. In *Sprawy Nauki* it now becomes clear that a greater acceptance of politicisation, primarily in terms of drawing up strategies and prioritising fields (mainly for applied research), begins to take off. The roundtable discussion model was cautiously questioned (initially), and one of the participants in the discussion, economics professor Cezary Ambroziak (1992: 6), who was appointed to head the international cooperative effort on behalf of KBN, gave his opinion in an article that is representative of this type of argument,

I would not turn my back to problems of scientific policy. One of the tasks is to find the answer to the question, whether the state, providing funds for scientific activity, should define priorities and if so where they should be introduced. Right now I will say I opt for priorities although I know that many would speak against them. I should like to emphasize, however, that in my understanding of this question priorities do not mean dispositions who should do what. There are not only topical priorities, but also others, for example structural priorities which mean preference given to some forms of cooperation between scientists, research establishments and users of results of scientific research. There are priorities at different levels – strategic, political, and operational.

This quotation illustrates how a re-evaluation and reinterpretation of how to pursue and talk about research policy and views on demarcations sur-

rounding science were in the making, although Ambroziak discusses the prioritised research fields in rather vague terms. A cautious rhetoric aimed at dismantling the roundtable discussions' autonomous ideal can thus be discerned, although the statement implies that there is still support for the requirement to maintain the boundaries between science and politics in particular, in line with the roundtable discussions' demarcations. This type of argument becomes even more significant when Ambroziak goes on to state:

I am aware that defining priorities is a very complicated, difficult and sensitive matter. However no government, especially the one operating in the time of economic crisis, can afford distribution of money, even for scientific research without at least an attempt to define in which areas the technological, social and economic progress is most desirable. Having limited financial resources at our disposal we would make serious mistake if we had not indicated priorities. Even the richest government of the United States has limited resources compared to the possible scope and range of research (Space Programme, AIDS prevention, SSA). No matter if we want it or not, the real setting of priorities begins in the phase of general distribution of the total amount allocated for research: for domestic research, for international scientific co-operation, building investment and so on. Often those distributions and proportions have been and are set up arbitrarily and mechanically (Ambroziak 1992: 6).

Here Ambroziak uses arguments concerning the handling of research policy in the Western world to defend politicisation of the research funding issue. He also makes it clear how the politicisation and coupling together of social benefit and science suddenly, and in contrast to the initial approach KBN took to the relationship between politics and science, becomes part of what is regarded as free, the Western, or American way of pursuing research policy with implications for boundary-work. When Ambroziak (1992: 7) continues, this becomes even clearer:

In Poland at present, besides the idea of privatization of industry, the Government has no other clear policy regarding selection of priorities in industry and agriculture, being the main basis for economic development and the source of national income. Unless having no policy is the policy. However this is not a secret that in highly developed countries among priorities there are alternative energy sources, energy preservation, microelectronics, new materials and biotechnology. All of them, more or less, should be developed in Poland. At present the problem of priorities is being discussed in depth within KBN bodies and

before the next contest for research grants the priorities will be announced.

Pointing out what is the norm in highly developed countries becomes in Ambroziak's text yet another method for equating political control of science with a sensible way of pursuing research policy. That the Western, developed way had previously been at least partially equated with autonomy and scientific self-governance then lost currency, through the statement that Poland was attempting,

to follow the model (or rather one of the models) of research financing that has proven its efficiency in the Western countries. In the West, however, each foundation defines precisely its policy and topical preferences while in our case we have committed a sin of childhood advertising the contest in which everyone could present any application for research grant, without any limitations and priorities being set up (Ambroziak 1992: 7–8).

It is clear that Ambroziak considers East to be a category not worth striving for. He thus himself reproduces Poland's position in the semiperiphery, and the West as the core. Equality between the concepts of development and a Western research policy model with greater political control of science, as well as the characterisation of the current Polish system as childish, also indicate that the struggle for credibility on the view of the boundaries between science and politics is now present in the discussion. The boundary-work Ambroziak performs is thus part of this struggle, with clear signs of attempts to both assert epistemic authority through the argument about the West, and discredit the former demarcations.

A number of articles from this period make similar arguments as Ambroziak's, and it becomes ever clearer how the change in tenor with regard to values ascribed to the West is gaining ground. In the boundary-work, the spatial concept thus functions as a tool for argument rather than as a static idea. On the one hand, the West can thus be interpreted as only synonymous with a break from state socialism, and characterised by anti-statism, and in that sense used by advocates of an ideal that lies closer to the roundtable discussions. On the other, the West is equated with greater control in the research policy context and becomes part of the argument for modernisation, and the dismantling of the roundtable discussions' demarcations. The invoking of the West thus also functions, whatever the stand-

point, as a way of reproducing the notion of the East's semiperipheral position.

During 1992 the struggle for credibility in the boundary-work that takes place among the actors becomes ever clearer. The issue of scientific freedom and autonomy in relation to political control is discussed with emphasis in *Sprawy Nauki*, and almost every text in the journal relates to the issue of demarcations between science and politics. Despite the criticisms described above, cautiously formulated by Ambroziak and others against the roundtable discussions' ideas, the latter still come up to a relatively large extent, although it is possible to discern a certain shift in the arguments. One of several examples is when professor of history Henryk Samsonowicz (1992: 8), who had just been appointed chairperson of the commission's basic research section, responded to the question of how he sees the research policy and scientific reform process so far:

I am satisfied that the system proposed by the scientific community a long time ago has finally been put into operation. This was one of the demands expressed by scientific societies during debates at the 'round table' and even earlier. Administering the science by not always competent officers and not by scientists themselves has always been causing a lot of controversies, as far as the structure of science is concerned. Personally, being in favor of the idea of scientists administrating science, I have always thought that we should at least try to make this idea alive. The most difficult problem we are facing is connected with troubles shared by the whole country, i.e. with very limited financial capabilities.

The wording Samsonowicz uses indicates a somewhat more subdued hope that a research policy in the sense people saw before them during the roundtable discussions would be realised. In the debate it is far from obvious that the state, or the economy for that matter, would be able to control the research community and the orientation of research. Samsonowicz (1992: 9) points this out by explaining,

The fate of science in Poland in this difficult period stays in hands of the members of the Committee and its groups – elected representatives of the scientific community, hundreds of members of branch sections and few thousand reviewers. The best Polish scientists, including members of Scientific Committees of the Polish Academy of Sciences are among them. Science is a elitarian profession, where the best have the right. It's true, we all have the same size stomachs, but it does not apply to our heads. Even a favourable budget for science will not permit rational

financing of more than half of our scientific base. It's a duty of the State Committee for Scientific Research to exercise all possibilities to assure that this better and more needed half will be preserved.

It is remarkable how autonomous Polish research policy still was, and how utopian it seemed in relation to research policy in Western Europe during this period. This becomes clear in a characteristic article published by Krzysztof Frąckowiak, in which he brings up the need to introduce regulation of funding to an increasing extent, but at the same time calls for caution when the demarcations surrounding science begin to change:

Financing, and not administration is an instrument of the scientific policy of the Committee. However a large part of the scientific community expect more detailed recommendations than a simple statement that the basic research should have high standards, and the applied research should be justified by prospective users of their results. Some clearly demand that areas of concentration of research should be determined, although very few seem to be aware that they might find themselves beyond such areas. [...] We can only suggest, that when reductions of the scientific potential are unavoidable, it's better to select directions of research than to apply so-called 'horizontal cuts' [...] I wish to warn clearly against sometimes observed misled interpretation of reiterated principles adopted by the Committee (Frąckowiak 1992: 17).

Advancing positions

Soon, however, the more cautious tone, primarily on the issue of drawing up strategies and prioritised research fields, began to disappear. This discussion was then, in terms of time, in line with the framing of *Basis*. A defence of greater regulation and the necessity for it gained ground. As a result of this, international cooperation and comparisons with research policy guidelines of EU countries also became something discussed to an increasing extent in *Sprawy Nauki*. The whole time, however, the issue of scientific self-governance and autonomy emerged as a constant theme, often in references to informal debates, which illustrates the struggle for credibility in the boundary-work between actors during the period. One of several such examples is an article in which professor of biochemistry Stefan Nawiakowski (1993: 6) asserts that the closer relationships between science, politics, and the business community are problematic:

Often cooperation between research and industry falls between two stools when it comes to scientific checks, and is instead checked by administrators and lawyers. We must remember the difficulties of recruiting doctoral students in a situation where educational levels are constantly sinking.

The implementation of *Basis* did not, however, lead to any comprehensive critical discussion, and the cautious deviation from the roundtable discussions' demarcations surrounding science was soon subject to less and less comment. This is remarkable, particularly when the free competition that at the start had been so promising now became limited through the government's prioritised programmes. At the same time, the reforms drawn up were completely in line with a scientific common sense, according to which applied research should primarily serve the interests of society. There was thus often a considerable consensus among the actors during the late 1990s, and the dismantling of the demarcations in the reforms during that period was in general met with cautious confidence.

One of many telling examples of this is the ideas of chemist Marek Borowiak in his article *Nauka jako biznes* ("Science as business"). He suggested that the trend toward increased investment in, and control of, applied research, and inclusion of market forces in the scientific world, was in the interest of both the country and science, since more funds could be obtained from private sources, thus strengthening the Polish scientific sphere in terms of knowledge, while at the same time the state won competition points on the international market. In his argument, the new approach thus became by extension an asset for all academics, including those from the sphere of basic research, which in the article's summing up resulted in a desire for "scientific business" to be managed macropolitically as a resource, and thus invested in further (Borowiak 1993: 14–15). Ascribing to science a utility value rather than, as before, an intrinsic value, was thus now almost universal, and constituted a tool in the dismantling of the roundtable discussions' demarcations.

The turn in the discussion towards prioritised investments and control, technical innovations, and the use of concepts such as social benefit and closer relationships between science, politics, and the business world were also often described by authors of articles as almost a natural stage of development. Nevertheless in *Sprawy Nauki* the invocation of the need for scientific freedom was also set in relation to the impossible in a research policy based on a kind of apolitical scientific republic. It was claimed that

anyone who wants to be modern cannot persist with autonomy. In this way the rhetoric was characterised by avoiding being part of the semiperiphery and wishing to be accepted into the Western core. Now, in connection with the political strivings to become a member of the EU, the significance of what this West was began to shift away from meaning some kind of whole that included late-capitalist countries in general, to Western Europe.

This argument was also clear in texts in a short series of publications entitled *KBN – Science and Government Series*, in which active KBN members and academics who were not linked to the political ruling process documented the ongoing trend. Among other things, this became clear when Kukliński (1991: 1) in his foreword to the first issue started by writing about how important it is to defend autonomy, to then continue with the following argument:

The autonomy of the scientific community should not accept the ivory tower approaches. The development of science takes place in the changing environment of political, social, economic, and cultural needs of the society which, *inter alia*, are more or less efficiently and correctly expressed by the government and its agencies. In turn, the majority of governments in modern countries recognize that there is no development without important contributions generated by innovative science [...] The science policy must be formulated in the pragmatic field situated between the Scylla of irrational and overextended governmental intervention and the Charybdis of the XIX-century *laissez faire* approaches.

As scientific autonomy has been such a sensitive issue in Poland, it had to be mentioned and handled cautiously by all parties concerned. Pointing out the social representativity of the state, or even of the political sphere, opened up the possibility of a more politicisation-friendly approach, and an argument consistent with the dismantling work. Here the state and its political agenda became an inevitable requirement for the practice of good research policy, with the best interests of society in mind. The boundary-work was now based to an increasing extent on the spheres becoming closer rather than on separation, with the help of arguments that the duty of science now also encompassed social development and social benefit.

The work of dismantling the demarcations surrounding science becomes clearer the closer we come to the initial preparations for Polish membership of the EU, and the creation of the document known as *Supplement*. Prior to implementation of the new strategies set out in this, the boundary-work of

the increasingly large group of dismantling-friendly actors became, in the discussion, argumentatively focused on emphasising the need for internationalisation (often referred to as modernisation) of research policy, according to the maxim ‘if you want to be able to compete with Western European countries and become valid EU members’. The striving to be accepted into the core was in this way still predominant, and also became a rhetorical tool that aimed to convince the government to make major economic investments in research generally. One example of this is when professor of computer science, Kazimierz Kowalski (1995: 10) wrote that,

The changes in Polish science seem to be moving in the right direction, although distressingly slowly. If we will be able to become more open to the world than we are now and will succeed in traducing a policy ensuring competition and elimination of inefficient teams, then the financial means which must be found for science will be used to full advantage and only then we will enter the road leading us to the European Science.

Another example is KBN member and science historian Jan Kozłowski’s thoughts on the extent to which effective competition in relation to the Western world is today due to higher technological skills. According to him, a lack of focus in these areas concerning applied research in terms of state investment and prioritisation would become apparent in the future, and investment in research should not be seen as anything other than an investment. Research policy investments should therefore aim at the creation of “scientific islands of high-tech research” (Kozłowski 1995: 54). He concluded his argument by summarising, in two points, which science policy targets prior to entry into the EU ought to apply, namely knowledge development that links firms, scientific institutions, and state laboratories, and encouragement of innovations in society. Now the cautious line had moved forward somewhat, and increasingly close relationships between primarily science, politics, and the business community were asserted by the actors to be worth striving for. Yet another clear example of this was when Kozłowski (2000: 111) wrote a few years later that the EU and OECD countries “have reached the stage of social and economic development where omnipresence of innovations together with their R&D components is the key driver of their civilization advancement”. Political control of primarily applied research can, according to his argument, be interpreted as an element of modernisation and the good Western Europeanisation of research policy, a political control that just a few years previously was, on

the contrary, part of a state socialist, criticised view of science. A dismantling of the boundaries is thus again, but in a somewhat sharper argument, given credibility through reference to “best practices” (ibid.) of modern developed countries.

Conclusions

The general political trend in Poland in the early 1990s was strongly characterised by the almost chaotic context arising from the initial phase of the transformation process. For the research policy sphere, this period particularly involved major reorganisations, restructuring and a ‘detox’ from the country’s state socialist heritage. The boundaries between state, industry, and academia were in the research policy spotlight, and the clear emphasis on autonomy that had been the guiding principle during the roundtable negotiations, had a significant impact on how research policy was organised.

Soon, however, there began a renegotiation and reinterpretation of the roundtable discussions’ demarcations regarding science, partly as an effect of the rapid awakening following the ‘shock therapy’ for the country’s economy, when the need for public resources for building up the market economy made itself felt. The earlier, almost utopian attitude in accordance with the Humboldtian research ideal of the Polish intelligentsia was increasingly called into question, and ambiguity arose. One of the areas where this process became clear was the discussion on research policy in *Sprawy Nauki*. The boundary-work done there was characterised by the will to modify the distinct demarcation between the scientific and political sphere that had been established in connection with the roundtable discussion. The visions promoted leaned towards a social needs-oriented formulation of priorities and strategies for the Polish research policy. It is obvious that the rhetorical tools these actors used to promote the change of the roundtable ideals were based on the attractiveness of the symbolic West. The dichotomy between East and West runs right through the discussions, where a ‘Western European’ orientation stood for what was worth striving for, and an ‘Eastern European’ orientation for what was to be abandoned. The West did not represent any static value, but it was used, depending on the actors’ aims for the boundary-work, to improve the impact of different arguments.

With the help of this rhetorical tool the advocates of the approach seeking to dismantle the autonomy of science were able to renegotiate and

reinterpret the demarcations regarding science in discussions on Polish research policy in *Sprawy Nauki*. As the discussants also were the ones in charge of research policy, their framing had impact on the formulation of innovation-oriented strategic programmes, a closer relationship between industry and research in policy formulations, and increasing focus on applicable research in steering documents. This is evident in connection with the publication of *Basis* and *Supplement* with their increasingly emphasised distinction of applied research and basic research, two fields that were previously clumped together as one kind of research demanding freedom and autonomy.

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