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## 8 Meeting expectations

### On the challenges of collaborative research through European funding

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The development of large international research projects that gather diverse academics and researchers over a significant period of time is a relatively new phenomenon. Precisely what is new is not the fact of collaboration as such: it is rather the fact that collaboration is increasingly being incentivized (funded) and governed (controlled), through policy programmes, funding agencies and so on (Papatsiba 2013). This evolution has resulted in a double outcome. While the governing of research becomes apparent through the emergence of stringent *policy-related expectations* attached to such projects, the financial incentives have triggered the rise of new forms of organizations: *large, international, temporary organizations* or networks that collaboratively conduct research on precise themes deemed policy-relevant.

In the literature, one finds several attempts to establish whether such collaborative research is more or less productive than solo research. Mauthner and Doucet argue that the social science community has been rather ‘unreflexive and uncritical in its adoption of team-based research models and practices’. According to them there is ‘an unspoken assumption that team research is “better” than solo research’ (Mauthner and Doucet 2008: 972). Our argument in this chapter is that the question one should ask is *not* whether such or such a form of research organization is more or less productive, better or worse, than another. One should rather wonder how a given form of research organization works and responds to its external conditions of possibility. That is, how scientific research handles the expectations raised by its political environment through policy-makers and the like. We are thus particularly interested in the inside and the outside of large EU-funded research projects, which implies understanding the interaction between their internal functioning and the external (policy) demands they are supposed to respond to. Let us begin with a brief outline of the changing environment of research in social science.

#### **External expectations: the European context of research funding in social sciences**

Knowledge, including research-based knowledge, is increasingly conceived of as a key factor in the economy and as a resource for policy. Europe has increasingly



been describing itself and its future as knowledge-intensive. The European Commission has adopted a knowledge-oriented strategy. Renewed expectations about the usefulness of social science have been expressed by policy-makers at different levels (Brown and Lauder 1997; Solesbury 2001). According to the former British Education Secretary, David Blunkett, policy-makers 'need to be able to rely on social science and social scientists to tell [them] what works and why and what types of policy initiatives are likely to be most effective' (Blunkett 2000: 21, quoted in Pons and van Zanten 2007).

The European Commission has produced specific documentation that articulates very clearly what is expected from EU-funded research projects. A central assumption running through this documentation is that research projects must produce knowledge material that is "useful, accessible and meaningful to policy-makers" (European Commission 2008: 7). One of the main concerns of the European Union is to 'maximize the policy-making impact of projects' (European Commission 2008: 7). Project coordinators are therefore encouraged 'to put the policy-usefulness of their research findings to the forefront of their objectives and their work programmes'; 'the subject chosen as well as the scope of the research [must] respond to defined policy-making priority areas'. Their view is clear: research-based knowledge needs to be produced for policy-makers and for policy purposes. They also speak of the need to bridge the 'gap between science and policy' (European Commission 2008: 7).

Several recommendations listed by the European Commission insist on the fact that researchers should learn to 'translate' their work so that it becomes understandable for policy-makers. Researchers should learn, it is argued, how to write short briefings or 'policy briefs'. It is suggested that they should be encouraged 'to present their project results to teachers and students in schools in order to ensure that these are readily understandable by a non-specialist audience' (European Commission 2008: 17).

As has been made clear, when funding a project, the Commission's expectation is not simply that the project will contribute to the construction of the European Research Area; it is also expected that its results can be 'used' so as to have an 'impact'. Member states and the EU institutions, it is argued, 'need to use evidence-based policy and practice to identify which reforms and practices are the most effective, and to implement them most successfully' (European Commission 2007: 3). The view underlying such expectations is that research projects should generate unequivocal, accessible and usable findings that will show what works best (Biesta 2007).

### **Collaborative research within funded projects: internal mechanisms and processes**

Research projects are not all faced with the same expectations. Different types of funding generate different types of opportunities and constraints. EU-funded research projects occupy a specific position within the sub-field of academic research. They gather academics, which makes them attentive to the scientific

rules of the game, and, at the same time, they are funded by – and accountable to – the Commission, which subjects them to the Commission's particular requirements and expectations. Hence, in Luhmann's terms, two kinds of communication are involved (each of which occurs in a distinct system): one that requires communicating with the scientific community and one that requires communicating with the Commission (and the political community).

Our concern in the following pages is to contrast the internal functioning of such projects with the external requirements they are expected to meet. Our argument is that such projects experience a series of tensions between distinct obligations that lead them to live distinct parallel lives: within the timeframe of the project, they must learn to collaborate and they need to learn to manage the ways they appear to their political environment (represented by the EU officials), so as to respond to the often contradictory demands both systems pose.

By turning a contemporary transnational EU-funded research project into an object of analysis, we develop an empirical exploration of these tensions as they emerge through several strategic processes that characterize such projects: the making of consortiums, partner involvement, the organization of research work, internal communication and the research output of the collaboration. Of course, as it is based on a single case study, our examination of these tensions remains exploratory. It is meant to raise new questions for further discussions.

### **The making of consortiums: reputation and trust**

The EU funds 'European' research projects, which increasingly require the formation of large transnational consortiums that gather academics and researchers from different countries across Europe. Different types of (contradictory) external and internal constraints shape the fabrication of consortiums: reputation and trust play a key role. Reputation is used by the Commission as a means for selecting projects. When evaluating the quality of submitted research proposals, the Commission looks at the composition of their consortiums: who is in the consortium thus matters; it affects the chances of success of the submission. Of course, reputation is not the main or only criterion but it matters (a fact that has been criticized by some scholars for the Matthew effect it generates (Papatsiba 2013: 445)). One should note that it is also expected that consortiums include Eastern partners and possibly candidate member states as well.

In contrast with these external constraints, for internal purposes it is important for the leaders of any given project to gather people whom they think/trust can work together and share common interests and competencies. Trust and personal links are often used by project leaders as a means for selecting their partners. Hence consortiums tend both to gather 'well-known people' (for externally oriented purposes – reputation) and 'people we know can work together' (for internal purposes – trust).

In Luhmann's vocabulary, the distinction between reputation and trust primarily refers to two uncertainties (and thus risks) involved in composing a consortium. For funding entities like the European Commission, the main risk



is in deciding on funding a consortium in line with its expectations, while often not being sufficiently familiar with the ongoing developments within the scientific discussion. Reputation reduces the complexity of evaluating scientific activity for the external world. It 'renders visible to the outside [world] what science does' (Luhmann 1990a: 248), by highlighting merits and hiding failures. As such, it offers a quick and appealing option for funding entities and, for grant-seekers, increases the chances of funding.

Scientific reputation offers the same advantage of complexity reduction within the science system, functioning *de facto* as its secondary code next to truth (Luhmann 1990a: 247).<sup>1</sup> It does not, however, necessarily address the risk of assembling a consortium that fails to collaborate. As a means for processing scientific activity, reputation is too much based on measurable achievements (publications, citations, honours, titles, and so on) and takes too little account of (personal) qualities that often matter just as much in collaborative projects, such as motivation, availability or willingness to cooperate. For the scientists in the consortium, 'trust' addresses this risk. Trust is a particular form of expectation where certain possible outcomes are deliberately ignored. Like reputation, trust is primarily a means of complexity reduction. When trust is in play, one decides to act as if the unknown were actually known: the quality of a partner's future involvement within the project, for example, is judged favourably, even when there is no way of knowing the final outcome. The development of trust is usually based on local milieu and personal experience (Luhmann 1988: 103), which explains its decisive importance at the moment of composing the consortium and the lesser role it plays (or is allowed to play) during funding decisions.

Concretely, the fabrication of large consortiums articulates the two criteria of trust and reputation. During the process of forming the KNOW&POL consortium, the project leaders had initially gathered a first circle of partners. They were people the leaders knew and had worked with in the past. The circle needed to be widened so as to reach the kind of size expected by the Commission. Finding new partners to complete the consortium required networking. Those partners already involved in the first circle were asked whether they could suggest others partners. Of course the selection of partners included an examination/evaluation of their work and reputation. But it was also based on an implicit (interpersonal) evaluation of their willingness and aptitude to collaborate. Our Hungarian partners brought new – Romanian and German – partners into the consortium, while other partners – the French – suggested involving Norwegian and Scottish partners, who, in turn, suggested yet another Scottish partner. The consortium was differentiated from the start: there were systems within the system. It is important to note that the making of large consortiums often involves including partners who have in some cases never worked together prior to starting the project. There can be no certainty about how well they will collaborate.

The consortium that we have turned into an object of analysis was not a simple reflection of the dominant, interconnected circles of academics and journals. It was genuinely diverse. It included participants belonging to different research traditions, with diverse research potentials and experiences, publishing their works

in distinct segments of the literature and in different languages, experiencing sometimes quite distinct working conditions and organizational settings at home (some of them were bureaucratic and hierarchical, some were little connected to international research activities, while others were much more networked and dominant). In addition, researchers involved in the project also differed in the way they conceived of research and interacted with policy-makers and other actors in their various contexts. More generally it can be argued that our project brought together a diversity of knowledge cultures.

### **Involving participants**

Projects are temporary organizations: they are meant to end at a point in time (and this, of course, is known in advance by all participants). Hence projects cannot ignore the fact that they must function in an environment made of more permanent systems and structures. One must thus always keep in mind that individual project participants take part both in the project as a (temporary) organization, possibly in other projects, and in the more permanent structures of their home institution (their university, their faculty, their colleagues at home, their students). These more permanent – institutional – structures usually matter a great deal to individuals. They existed prior to and will remain after the termination of the project, and, more often than not, institutional structures play a key role in the future of each participant. These two systems (the temporary organization of the project and the more permanent home institution) do not necessarily generate converging constraints and motives. People ‘may see projects as ways of making career-moves, of escaping their usual work-setting or improving their job satisfaction’ (Packendorff 1995: 326). In some contexts projects may be used by academics so as to modify power relations at home; others use projects to ‘buy themselves out of teaching’ and hence pursue their own research agenda; and, more generally, they can be used for pre-existing purposes that do not always match the project’s goals. From the point of view of the project management, these multiple home-related elements always remain largely invisible and/or appear out of reach. They operate as external, more or less hidden, constraints that may orient individual choices and preferences in the project.

### **Structuring the project, dividing the work**

The KNOW&POL project was interested in ‘the role of knowledge in the construction and regulation of health and education policy in Europe’. The general theme of the research project was the knowledge–policy relationship. Twelve research teams specializing in the analysis of sector-based policies addressed these issues directly in respect of two fields, education and health. The project was both multinational and multilevel, in that it was designed to look at knowledge and governance problems across eight different countries and in local, national and international domains. As a European project bringing together



a diversity of traditions, we soon came to see the stakes and issues faced by the consortium regarding its 'internal knowledge work' and its relationships with the policy community as quasi-identical to the very problems we were studying, resulting in the already mentioned 'strange loop' between the two.

The project involved a large number of participants. Each of the twelve teams included from four to six participants. At any given point in time the project thus involved about sixty or seventy participants. Owing to turnover in research staff, over a five-year period of time, the project involved over 100 participants. The issues at stake in such large projects cannot be compared with problems of collaboration in smaller and more stable teams such as those described by several anthropologists (Kennedy 1995). As we will argue below, the size of the project is a key issue, as it has considerable consequences on the social and epistemological dimensions of the enterprise.

Participants were divided into country-based teams. Each team could thus be identified as dealing with both a specific sector (education or health) and a national context (Belgium, France, Portugal, Scotland, Hungary, Romania, Germany, Norway). In line with EU expectations, the project was drawn up on the basis of a pre-established work breakdown structure (WBS). The WBS is meant to divide the work into different activities (or work packages) that have to be performed in a certain order. The KNOW&POL project was divided into three main orientations, each of which was in turn divided into sub-projects and work packages. The project was organized such that all teams would pursue the same research tasks in, or from the point of view of, their respective context. During Orientation 1, for example, all teams were due to map the knowledge available to policy-makers and the links between policy-makers and knowledge producers in their sector and national context; during Orientation 2, all teams were to develop case studies related to specific policies relevant in their context and sector, paying special attention to the way information and understanding are deployed and learning takes place at different stages; during Orientation 3 all teams were to study the construction and reception of international instruments (PISA in the education sector and several specific WHO reports in the health sector), which entailed the production and dissemination of information, studying their conception, reception and reappropriation by the decision-makers for whom they are intended. The key principle that we want to emphasize here is that all teams were to perform the same tasks in their specific context: they would work in parallel and meet and communicate regularly. Communication within the project was quite intense and occurred through international meetings (twice a year), daily email communication and the inter-team circulation of researchers (young researchers were offered the opportunity to visit other teams and work with them at several points in time).

### **Project meetings and internal communication**

What is being communicated (information) and how it is being communicated and responded to (understanding) depend on how individuals perceive the

environment in which communication takes place. International research projects provide researchers with specific environments. Hence they may have a sense of how they are expected to act and communicate in such contexts. They may use culturally available 'frames' to determine what they think is expected of them or tend to 'engage in impression management in order to convey a certain image to others' (Fuhse 2009: 61).

Expectations guide possibilities of communications, which in turn confirm or modify initial expectations. Roles, in turn, 'are bundles of expectations directed to incumbents of positions, or even to specific individuals' (Fuhse 2009: 61–2). But in situations that bring together a large diversity of people, even if they are all academics and researchers, the participants may not all conceive their role as such in the same way; they do not necessarily all share the same expectations. Expectations are tested and modified according to actual interactions. In situations where roles and expectations are heterogeneous, uncertainty about what one should do may increase significantly. This, in turn, may incline people to retrench into formal, 'safe' behaviours. International research projects have indeed often been described as rather formal, organized, conventionalized settings (Ozga 2013).

Several meetings organized by the KNOW&POL project could indeed be described as rather formal and choreographed, as has been emphasized by Ozga (2013) (although less formal discussions in smaller groups and subgroups could also take place). Obviously discussions in large groups are complicated. People must take turns. If one wants to react to what has just been said, one may have to wait a while before one is given a possibility to speak. By then the course of the discussion may have taken a different direction. This, of course, is problematic because a conversation is a temporalized process. Any action is based on the previous action and forms the background of further possibilities. Who speaks first, whose voice is being heard or kept silent, makes a difference for further developments. What has been said cannot be erased. A conversation is a temporalized system that has a life of its own. An important element that played a role in the meetings and more generally in internal discussions and communication is language. Participants in the project came from various linguistic backgrounds. Most participants (including Hungarians, Portuguese, Belgian and French) would have felt more comfortable in French, but English ended up as the only common denominator. This orientation impacts communications among participants: those less comfortable with the English language were naturally less likely to make a difference in the discussions.

The group of participants in the KNOW&POL project was not simply a group of individuals. There were teams involved. Most teams were made of individuals who had known each other – and had often been working together – for a significant period of time before the project. While considering the individual participants is necessary in order to have a sense of the organizational and practical parameters involved in the progress of our (large) meetings, looking at the project as an association of teams seems more relevant for understanding the intellectual dynamic of the project. As teams existed prior to the project, to



a certain extent each had its own way of thinking about the key problems of the project. Different teams were interested in different key concepts. As one would expect, each team was eager to push forward its specific ideas. Each team was interested in developing the specific case studies that it thought relevant in their context. At the same time structurally equivalent positions in distinct teams of the KNOW&POL project were also likely to construct specific links among themselves. Young researchers from distinct teams learned to know each other better than other more senior figures. The same goes for team leaders, who interacted more frequently among themselves than they did with the younger researchers of the project. Boundaries were, however, far from being closed, and in several cases intense interactions also developed between team leaders and researchers from distinct teams.

### **Working together**

The KNOW&POL project was, in one sense, extremely productive. By the end of the project, participants had produced about 400 publications and 500 communications. A significant number of publications and communications took place after the end of the project, which means that the figures above in fact underestimate the global productivity of the project. Thus it can be argued that the project was quite productive. At the same time, it cannot be argued that the project produced one shared and unified description of its object of analysis. It did not produce a final concluding statement to which all participants would subscribe. What it produced is best understood as an irreducible series of observations. Hence one could argue that it did not meet the expectations of delivering shared unequivocal knowledge that is directly useful, accessible and meaningful to policy-makers. In the coming pages, we will argue that this situation is normal: in a sense, projects of this size cannot reach a conclusion (unless they standardize their means of observation and leave them unquestioned and/or make use of non-scientific means of communication such as authority, symbolic violence or charisma and/or oversimplify their observations).

In order to recapitulate the above paragraphs, we contrast the internal functioning of collaborative research projects with the external requirements that they are expected to meet. Such projects are multi-faced. Their internal face reveals the social and epistemological issues at stake in their work while their external face displays another version of who they are – a sort of disguise – conceived as a ‘performance’ meant to communicate and respond to external, policy-oriented, impact-focused expectations. We will return to the key notion of performance in the section before last.

#### **Internal functioning**

heterogeneous  
complex  
situated

#### **External requirements**

homogeneous  
simple  
universal

|                                     |                                |
|-------------------------------------|--------------------------------|
| diverse, multi-vocal                | unequivocal                    |
| continuously reordering itself      | well ordered                   |
| people who know one another (trust) | well-known people (reputation) |
| disputed                            | indisputable                   |
| knowledge as a process              | knowledge as a product         |

### **Observing reality: social and epistemological issues in collaborative research**

So far we have tried to establish the difficulties involved in large-scale research projects by pointing towards the internal processes and mechanisms that make a project what it is. A simple glance at the comparisons instantly reveals how this internal functioning of scientific collaboration is orthogonally opposed to the expectations of the outside world. Adhering to these external expectations is therefore not a simple task, sometimes simply impossible, and often implies a continuous effort from the research teams involved.

Having a large number of people working together investigating the same research problem may appear at first as a numerical advantage: there are 'more hands and more minds' in such large enterprises (Papatsiba 2013: 443) than in solo research projects; the work can be divided; things, it is assumed, may go faster; more workload can be undertaken and achieved. All such assumptions, which emphasize the supposed advantages of collaboration, fail to take account of the fact that collaborative research projects must handle an additional problem: that of collaboration itself. One could see this problem simply in terms of costs (time, energy, money) – the collaboration costs – that one must pay in order to solve the problem (Katz and Martin 1997). But this again would be misleading, as it underestimates the complex of social and epistemological stakes and risks that are involved in funded collaborative work. It fails to allow for the fact that this type of situation changes the social and epistemological conditions of research. Collaborative research should not be considered as the same as solo research, with only the numerical difference of the workforce, or only the (quantifiable) difference of the costs of collaboration: 'what we know about how individuals conduct research cannot simply be transferred to what groups do' (Wasser and Bresler 1996: 8).

In the following paragraphs we will try to single out two factors that might explain these difficulties in more detail. One reason points to the social character of collaborative research. Every research project is, of course, embedded in a social context, be it carried out by a single researcher or a group. In collaborative projects, we will indicate, this given can, however, be the source of difficulties. The other reason adds an epistemological layer to the social character of doing research collectively. We will argue that the reality of research changes when there are several observers observing the same reality, and point to a strategy devised during the KNOW&POL project to cope with this epistemological difficulty.



## **Consortiums as fields**

An international project that gathers distinct (in some cases well-known) academics inevitably functions as a social field (Hilgers and Mangez 2014) – that is, a social space where individuals struggle for their intellectual existence and recognition (Bourdieu 1988). It is a space marked by a tension between similarity and distinction, between connection and differentiation, as it gathers individuals who have something in common – an interest in the field's central matter – and who simultaneously need to distinguish (differentiate) themselves from one another (Bourdieu 1996).

The participant's needs for distinction within a scientific field are actualized through their position-taking in favour of these or those concepts, methods or hypotheses. One of the axioms of the theory of fields is that naming and classifying operations always play a partisan role in the unending struggle to impose the social order of the field (Bourdieu 1977). The implications of this for the coordination of collective research are often neglected: if a field is made of elements that need to distinguish themselves from one another, how are they to be coordinated? If a consortium is made of distinct parties in need of differentiation, how can a common goal be pursued? How is such an association of distinct systems to be coordinated?

One can imagine two scenarios. The first scenario consists in implementing common specifications, methodologies and framework across all teams despite the inevitable forces towards distinction present in any social field. It thus requires exerting forces that will run against (counterbalance) the inclination towards differentiation that govern social fields. One must impose restrictions on reflexivity. The second possibility is more organic: instead of all participants trying to develop the same research tasks, the idea lies in having them all do what they are most inclined to do, within certain limits defined by the project. Governing the project then amounts to steering different autonomous systems and subsystems through feedbacks. The obvious problem that such a scenario generates is the problem of comparison. In practice, the KNOW&POL project slightly moved from the first to the second scenario during its life course. The issue, however, is not solely social. The plurality of observers involved in a consortium raises an essential epistemological difficulty.

## **The plurality of observers**

To grasp this difficulty one needs a theory of observation. We will make use of the epistemological backbone of Niklas Luhmann's theory of systems.<sup>2</sup> According to Luhmann, any observation is based on a selection. In order to observe reality, at any given point in time, one needs to select, among all possible ways of observing, one way of observing. In order to understand a given reality, among all possible ways of understanding it, one needs to select (construct) one way (and exclude all others).

Luhmann then distinguishes between first-order and second-order observations. First-order observations are acts of observing that are not aware of being

selective (one could also say 'productive' as a substitute for 'selective', in the sense that 'observing reality' amounts to 'producing reality'). First-order observations are thus observations that operate under the illusion of observing 'the world as it is'. Second-order observations amount to observing the observers. At the level of second-order observation, which is a form of self-observation, it becomes impossible to work as if observations were observations of 'the world as it is'. At the level of second-order observations, it becomes obvious that different people, different actors, different researchers observe the world in different ways. One has no access to reality 'as it is'. Reality can only be observed, and any observation is a contingent construction of reality. In addition, one cannot forget that, while individual systems observe, their observations are produced internally and cannot be shared with others without being further observed by others, hence selected and transformed once more. One can easily understand that a system such as a large research project, which gathers a diversity of people, profiles and disciplines, and which is expected to speak unequivocally about the world, is likely to face the problem of wondering whether there is actually something out there that all participants can actually look at and observe together at once. All collective research projects face this problem. It is, however, probably more likely to surface when consortiums are made of distinct traditions and disciplines.

We argue that it is difficult to discipline different observers (different observing systems) into becoming one (collective) observer. The problem of the 'plurality of observers' (Luhmann 2012: 103) can be avoided if observers make first-order observations only. Paraphrasing Luhmann, researchers can then work under the illusion of having direct contact with reality 'at least as long as they only observe what they observe and do not observe how they observe' (Luhmann 2012: 50). This type of functioning is likely to facilitate collaboration, for it keeps those collaborating from questioning their own and each other's ways of accessing/constructing reality. This did not correspond to the route taken by the KNOW&POL project. In the KNOW&POL project, even a relatively discrete object such as the Programme for International Student Assessment (PISA) appeared to be different things when observed by different observers. Indeed, despite the fact that the project participants had all defined a common framework for investigating (observing) PISA, the fact remains that they 'saw' the instrument in different ways. Some saw it as a 'platform to make durable connections with and between the worlds of politics and knowledge, by taking into account the differences between these and by creating products able to feed their different interests and dispositions . . .' (Carvalho 2014: 68). Others argued that PISA played the role of third-party evaluator, transforming the relationship between state and civil society by putting the elites under the watchful eye of civil society (Mangez and Cattonar 2009, 2010), while also decreasing the autonomy of science (Mangez and Hilgers 2012); others considered PISA as a technology that increases both international visibility and interdependence (Grek 2012), and so on.<sup>3</sup> These distinct views were not opposed to one another or contradictory. They were observations made by distinct observers, relying on different distinctions.



Various observations by various observers can be coordinated at the level of second-order observations. This is because each observation uses a distinction that draws as it were a line between what it can and cannot see. Second-order observations render visible what has been excluded in the first order. They make apparent the contingency of each act of observation, excluding their own, and open up the selectivity of observation for discussion. Observations become choices and choices become attributable to observers, which in their turn become accountable for their selectivity.

The notion of 'comparison zones', which we developed during the KNOW&POL project, is illustrative of our efforts to construct a discursive space where multiple viewpoints can be expressed and gathered, so as to be reflected upon (and in a way 'looked at'): a space where second-order observation can take place. The notion of the 'zone' was meant as an open space, a white page, an area or arena of reflection. A dozen such zones were created, each conceived as a prompt to explore a given question, and each prompt was an invitation rather than a prescription, explicitly including the possibility of questioning the question, interrogating the interrogation, reflecting on its relevance for each particular case (Freeman and Mangez 2013). It was meant as a place where we could test whether we were (all) looking at the same object without a priori assuming that it was, could be or needed to be the case. It was a place where first-order observations could be gathered and (become) observed: a place for the observation of our observations. The reason why we felt we needed such place is because we had – more or less consciously – come to the conclusion that it was simply not possible to assume that we could (all) observe (the same) reality. Our observations were – and all observations are – selective and selectively constructed by the means of observation (distinctions) being used, which inevitably include one's intellectual traditions and research experiences as well as one's theoretical (implicit and explicit) background. The internal diversity of the consortium made this palpable. Hence we could not all observe the same 'thing'; we could not all use the same distinctions; we could not all make strictly comparable (first-order) observations. Comparison becomes possible only at the level of second-order observation where ways of observing are made visible. The object of investigation can then no longer be the world as such, but only ways of observing the world.

### **Speaking truth to power?**

Collaborative research is only one of the several forms in which the contemporary relationship between science and policy becomes apparent. Like other forms (think tanks, government-led study centres, advisory boards, ad hoc expertise and so on), it rests, however, on the same, more general expectation that the best criteria for sound political decision-making are those distilled from scientific knowledge. This expectation conforms strongly to the self-descriptions of the political world, as emphasized in the first section of this chapter, but often much less so to the sociological reality of its decision-making process. What sociological

reality then illustrates is that scientific expertise often merely functions as a 'brain bank' (Boffey 1975) whose authority can be borrowed politically in order to ensure the legitimacy of decisions.

What is more of interest here, though, is the very specific assumption hidden in this expectation – namely, that *scientific knowledge can be transferred into politics*. Considered from the viewpoint of Luhmannian systems theory, especially since its autopoietical turn, the idea of a simple transfer of knowledge from one system to another is, however, a plain impossibility.<sup>4</sup> When reflecting on our observations during the KNOW&POL project, it appeared that none of the case studies we had conducted would actually provide evidence of processes of transfer of knowledge from research to politics. The two systems operate following strictly different logics. For science, the difference between power and lack thereof simply does not constitute a 'difference that makes a difference' (Bateson 1972: 315): it holds no informative value whatsoever to judge the truthfulness of a scientific statement. The binding character of political decisions is dependent not on the truth of what has been decided, but only on the power that corresponds to the position of the decision-maker. What the operative closure of functions systems like science and politics then really means is that those systems realize themselves through a very specific logic and meaning-making process by a selective linking of their own elements. Precisely this *modus operandi* excludes the possibility of exchanging knowledge between them.

This does not imply that policy-aimed research or the quest for scientific expertise are hopeless endeavours; at least, not in the sense that the operative closure of science and politics inevitably paralyses the functioning of both. It certainly may cause frustrations and a general sense of unhappiness on both sides (Luhmann 2013c: 114). But the *operativity* of both systems is not affected: both systems can continue doing what they do, despite the lack of communicability between them. Frustration with the results of funded research, for example, will typically lead to the articulation of more stringent expectations or even the reform of funding programmes: that is, to even more political decisions. Conversely, the difficulty that scientists experience in their relationship with policy-makers can be turned into an object of research (as in the current chapter). In this sense, the lack of communicative possibilities between the two systems is indeed irritating, but these irritations are put to work within each system respectively. They stimulate further operativity and do not bring the system to a halt. For both science and the political system, the expectation of knowledge-based policy offers a *point of orientation that allows both to continue operating*. The real question here, therefore, is how both can operate smoothly, simultaneously and next to each other, knowing that there is no chance for communication between them.

Luhmann's theory of systems offers the notion of 'performance' as a first answer to this question. Luhmann understands performances as a specific form of reference. Generally speaking, function systems (like politics or science) can establish three distinct forms of reference (Luhmann 1997: 757). When the operation of a function system (say decisions, in the case of politics) refers to society as a



whole and thus to the system of which it is a differentiated part, it realizes its *function*. That is: it refers to the problem by which it differentiates itself from other societal realms. Politics then distinguishes itself from science, art or law by its ability to guarantee collectively binding decisions. When a function system refers to its own operations, a form of self-reference is established that Luhmann calls *reflection*. One can think of political decisions that explicitly thematize earlier political decisions, in this case. Lastly, a function system can refer to another function system in its environment. When that is the case, it realizes a *performance* for that function system. Policy-makers asking for scientific advice are asking for a performance, in Luhmannian terms. It is important to note that the selection of one type of reference does not exclude the system from realizing its function. Even when reflecting on its earlier decisions, politics cannot evade the necessity of offering a binding decision on the matter.

From the perspective of the performing system, performing involves managing the ways one is seen by others, thus making oneself observable and acceptable from the viewpoint of another functional system. Performances<sup>5</sup> rely on a very specific self-stylization of communication. For communication to succeed as a performance, it has to disguise itself as it were – thus tying in with the more common understanding of the word as an ‘act’, a ‘show’. First, it has to understand its difference from its environment as a double boundary for input and output. Scientific policy advice understands itself not only as science, and as such, different from the actual decision-making. It simultaneously employs this difference to claim its output as a valuable input source for the decision process. The difference between science and policy thus appears as a zone of boundary-crossing or transfers, with clearly distinct and asymmetrical roles for each of the systems: one performs (output), the other accepts (input). Remarkably, performances not only use, but simultaneously try to break, their closed character by presenting their communications as *actions*, able to reach outside their own system boundaries. In this sense, performant communication operates under the illusion of environmental contact: although it cannot escape its own autopoiesis and cannot operate outside its own boundaries, it presents itself as if it could. In the same sense, the idea of scientific advice designates more than merely the *scientific* character of what is advised. It includes the conviction of the ability to *advise* in the political decision-making.

In order for the performance to succeed and this self-presentation thus effectively to convince, both systems, the performing and the observing system, need to respect certain conditions. Put into Luhmann’s vocabulary: they need to respect – or even reflect, as it were – each other’s code and programming. In our case this means that policy-oriented science may need to incorporate viewpoints and consider goals that are not *per se* usual in scientific praxis. It also means: that science needs to practise a certain sensitivity to the expectations put forward by policy-makers, such as those included in the first paragraphs of this chapter however difficult or even impossible that may be. Conversely, it implies that politics needs to organize its own decision-making (through the creation of specific positions, like expert commissions, for example), so that scientific performance

can be aligned with political goals. What appears then as transfer of knowledge is from this viewpoint ultimately a mutual fine-tuning of observational perspectives and its impact on the level of political and scientific programming. The result is then not a transfer of knowledge based on interaction, but an adaptation, through mutual observation, of both systems, to the sensitivities and requirements of the other system. In that sense, both politics and science actively use their own closed character to develop new observational perspectives in order to pursue their own operativity.

### Knowledge-based governing forms

Throughout this chapter, we have tried to explore the impossible relationship of science and politics by means of Niklas Luhmann's social systems theory. We have first explained the difficulties in projects confronting external expectations with their inner dynamics. We have tried to offer some perspective on why these difficulties arise. We have also attempted to model the relationship theoretically in order to underline the many limitations involved in speaking truth to power. In this last section, we would like to look at the political system once more. The development of performances is not the only solution to the problem of (in)communicability between science and politics. Another possibility is for the political system to develop new ways of handling its (increasingly knowledge-intensive) environment.

The project of a knowledge-intensive Europe has increased the complexity of the political environment. The urge to develop knowledge-based policy-making has made policy-makers all the more sensitive to knowledge claims in their environment. But we know from systems theory that a system can never include or comprehend its environment: the knowledge-intensive political environment cannot enter (or be communicated into, or understood by) the political system: *as an environment*, it can only irritate (or else remain ignored by) the system (Luhmann 2013d: 121–5). Hence, the more knowledge that is produced in the environment of policy-makers, the greater the risk that irritation will increase at the boundaries of the political system. The idea that more knowledge will mechanically lead to better decision-making must therefore be opposed. More knowledge means more doubts, more possibilities and more questions. While doubts can be handled in the scientific system (one could even say that doubts are necessary for the science system to continue its autopoiesis), they risk creating (environmental) irritations (frustrations) for the political system.

The risks related to increased irritation (from the environment) are those of increased complexity (in the system). Such risks may be reduced or dealt with through various means. One possibility lies in crafting new internal arrangements within the political system. The creation of specific units dedicated to observing scientific developments<sup>6</sup> and the formulation of explicit expectations like those that we have described in the first section of the chapter can be considered examples of specific arrangements by means of which the political system attempts to deal with its environment. Another possibility for the political system is to narrow



down its interests in its (knowledge-intensive) environment (and, correlatively, increase its indifference (exclusion) towards it). The political system may thus select in its (irritating) knowledge-intensive environment specific knowledge forms that will enter the system and support the governing process. The key issue then is selecting (one must remember that a selection is a form of production) knowledge forms suitable to function as meaningful communications in the policy system. Of course, selecting (including) specific knowledge forms also means rejecting (excluding) others. One must then ask what sort of knowledge forms can become selected so as to function as governing forms.

Our argument here is that depending on the type of communication (that is, the mode of governing) that prevails in the political system, the system will select distinct events (information, knowledge, and so on) from its environment.<sup>7</sup> The KNOW&POL project has distinguished bureaucratic governing from post-bureaucratic governance. Bureaucratic governing is typically about introducing a new rule – that is, an input that is expected to generate a specific output (compliance with the rule). Post-bureaucratic policy is more subtle. It can, for example, be about introducing a new type of information (or knowledge) into the system in the hope of generating further differences through learning. Evaluation policy is an example of post-bureaucratic governance: by providing teachers with feedback on how well they perform (Simons 2014), it is expected that they will (autopoietically) reflect on the feedback and learn how to do what they do better, which will improve their performance, which will in turn be reflected in the next evaluation and will show in further feedbacks, which will encourage them to amplify their efforts further, and so on. No simple direct input–output schema is involved. It is rather expected, as in a loop, that those being governed will process the information autonomously and adjust their practice as a function of this process (Carvalho 2011). Post-bureaucratic modes of governance consist in attempting to turn the actors' autonomy and reflexivity into a means for governing. We suggest using the notion of 'knowledge-based governing form' to designate policy instruments that work through the diffusion of knowledge. Of course, not any kind of knowledge can become a governing instrument of this sort. The knowledge that plays a governing role is of a special kind. It is often a simplified version of more complex statements and more complex data; it is normative and presented as factual; it is often comparative (using standardized indicators and numbers) and/or made up of best practices. These are knowledge forms that can play a (post-bureaucratic) role in the political system.

## Notes

- 1 As scientists cannot read all publications and judge all works on the basis of their scientific value (truthfulness), they too use reputation as a secondary means of reducing complexity within the science system.
- 2 More precisely, we will rely on his appropriation of what is generally known as second-order cybernetics. This theoretical orientation stretches back to Heinz von Foerster's

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distinction (1981) between first- and second-order observations and tries to formulate a theory of the observation of observations. In Luhmann's observation theory this difference is reworked by coupling it to some basic intuitions from the formal logic of George Spencer Brown (1969). Within this logic, as we will briefly explain, observing becomes synonymous with the indicative use of two-sided distinctions. Still in line with Spencer Brown's calculus of forms, Luhmann simultaneously adds an operational character to the act of observation by combining the very notion of observation with his general theory of social systems. At least, since Luhmann's 'autopoietic turn', system formation coincides with operations and operations imply observations. In that sense, it is useful to remark that we are certainly dealing with a constructivist theory – but one that refuses a naive radical constructivism in favour of a more self-conscious operative constructivism that not only distinguishes between object and observers, but opens up the complexity of their relationship, by adding both the observation and the observation of observations to the equation (cf. Esposito 1996).

An excellent and accessible introduction to Luhmann's theory of systems can be found in the posthumously published *Introduction to Systems Theory* (2013d). *Social Systems* (1995) and the two-part *Theory of Society* (2012, 2013c) offer a more robust overview, while still accessible to non-German readers. Other works in English are thematically driven and include: *Political Theory in the Welfare State* (1990b), *Risk: A Sociological Theory* (1993), *Art as a Social System* (2000a), *Problems of Reflection in the System of Education* (with K.-E. Schorr, 2000), *The Reality of the Mass Media* (2000b), *Law as a Social System* (2004), *Love: A Sketch* (2010), *A Sociological Theory of Law* (2013a) and *A Systems Theory of Religion* (2013b).

- 3 These different views were geared to the level of second-order observations through the publication of special issues. In the case of PISA, a special issue was published in the *European Educational Research Journal* (Carvalho 2012; Grek 2012; Mangez and Hilgers 2012; Neumann et al. 2012; Ozga 2012; Pons 2012).
- 4 Function systems, like politics or science, lack valid addressees, and any possibility of interaction between each other is therefore excluded (cf. Luhmann 1997: 834). Who could claim the authority to speak for all of science – or even merely social science? Unlike organizations, whose hierarchical structure based on decision power allows for 'spokespersons' to represent their unity, function systems lack the ability to communicate in unison with their environment. Furthermore, the operative closure of systems can hardly be reconciled with the exchange of elements, processes or structures.
- 5 Performance (*Leistung*, in German), as understood by systems theory, refers to the operativity of two heterarchically positioned systems, whereby the operations of one system are considered an event that strengthens the selectivity of the other's operativity (cf. Fuchs 1992: 101–2). It allows one to distinguish between what a certain event (the publication of scientific advice, for example) produces in term of consequences for the selectivity of the performing system and the other system. For science, this may imply increased attention to policy-related issues, for example, relegating less 'fundable' research topics to the background. For policy, it may simplify the decision process, by lessening the importance of other, non-scientific (for example, religious, economic or even personal) decision factors.
- 6 The European Commission has for example decided to try to promote 'easy access to research findings', by means of what it has called 'a one-stop shop for all projects' (EC 2008: 21).
- 7 Governing is always about introducing a difference into a system in the hope that it will bring about changes. A difference can be introduced so as to produce effects that generate and amplify differences in a certain direction. A difference can also be introduced in the hope of reducing an existing difference (as is the case with positive discrimination, for example). Policies may also generate unexpected effects in the system (or they may generate a chain of effects that neutralize the initial difference).

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