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*Challenges in Global Policy Making: The 'Practice Turn' in the New
Diplomacy*

Title of the paper

*Emerging Practices of Diplomacy for Science in Europe: Tensions
and Potentials?*

Author(s)

*Nicolas V. Rüffin, WZB Berlin Social Science Center, Germany,
nicolas.rueffin@wzb.eu*

*Ulrich Schreiterer, WZB Berlin Social Science Center, Germany,
uli.schreiterer@wzb.eu*

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Abstract¹

We are witnessing a stellar rise of science diplomacy as a branch of public policy. Yet there are but very few sound empirical studies on the structure of the field and on how SD impacts, and fits into, international public policy. Our paper is meant to alleviate that lack of research by investigating the current status of SD in Europe. We focus on power games between different stakeholders, particularly highlighting the role of the European Commission in relation to the member states, building on an analytical framework that derives from Bourdieu's social theory.

Keywords: Science Diplomacy, Field Theory, European Union, Science and Technology, Foreign Affairs, Research Policy

Introduction

When looking at the term science diplomacy (SD), one might think of the bon mot that Hermann Ebbinghaus once used to describe the emerging discipline of psychology which “*has a long past, yet its real history is short*” (Ebbinghaus, 1908, p. 3). That same statement seems to perfectly fit the field of SD. While explicit use of the term did not emerge until the first decade of the 21st century, advocates of the concept claim that the practice of SD already started in the 1960s (Turekian & Neureiter, 2012). Yet while these historical references mostly center on singular events or anecdotal evidence, we are witnessing a stellar rise of SD as a branch of foreign policy and a specialized endeavor of research and innovation policy in recent years. Today, there is a widespread interest and use of the concept throughout the world. The term was coined in the US, but subsequently picked up by several other countries like the UK, France, Germany, and Japan (Flink & Schreiterer, 2010).

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Right from the beginning, SD—in particular in the US—has been understood as an integrating term which links at least two different spheres of society, foreign affairs and science policy, and points to a general trend towards a diversification of diplomatic activities. The concept integrates a large variety of diverging interests, goals and practical approaches governmental as well as non-governmental organizations are engaged in. Yet the widespread use of the term SD is at odds with the perception that the concept “*remains relatively obscure and is widely ignored*” (Copeland, 2016, p. 628). There are but very few sound empirical studies on the structure of the field and on how SD impacts, and fits into, international public policy. The amazing diffusion of the concept across the world has met only little scholarly reflection so far. This is particularly true for the complex environment of the European setting. While the European Commission (EC) has taken to the term SD only recently (Moedas, 2016), EU member states like the UK, France, Finland, and Germany, have embraced it for more than a decade already and may count, together with Japan and Switzerland, among the trailblazers in the field.

One reason for this puzzling situation and the—at least partially—“floating” relevance and range of SD is the absence of rigorous analytical, theory-driven frameworks and clear-cut concepts. In terms of classification, the British Royal Society and the American Association for the Advancement of Science (AAAS) have put forward some ideas. A seminal report, the two institutions published in 2010, distinguishing three different types of SD: *science in diplomacy*, *diplomacy for science*, and *science for diplomacy* (Royal Society, 2010). *Science in Diplomacy* refers to scientific advice to governments and their foreign services which we will not discuss in detail. *Science for Diplomacy* comprises all kinds of activities that may help improve, or even build or buttress relationships between states by means of scientific exchange and collaborative projects. Finally, *diplomacy for science* describes political activities that aim at facilitating scientific work across borders, that is research collaboration, sharing

resources, the exchange of students and scholars, or to market the national science base. However, this classificatory scheme falls short of a scientific reflection of the topic. While the three categories might be useful to distinguish different means-to-end relations, they are but little more than heuristic tools to classify activities; yet they leave many important questions unanswered. For instance, it remains unclear who is part of the field, what characterizes its agency and arena, and where exactly are its boundaries. The definition of SD provides little more than a hint to the various interests and actions of different participants, or their links and intersections between one another. Hence it does not help to illuminate the obscure space where SD takes place. We argue that drawing on insights from the social sciences might help to describe the field of SD more systematically and thoroughly.

In a nutshell, we will be after two desiderata for research on SD; the weakness or even lack of theory first, and the absence of empirical studies in that field second. In particular, we are going to address these shortcomings by investigating the current status of SD activities in the European Union against the backdrop of the theoretical framework of Bourdieu's field theory.

The paper is divided into five parts. Firstly, we look into the setting for SD in the European Union, whose rules and governance in place yield different tensions and potentials for agents of SD. Secondly we introduce our theoretical framework that makes use of concepts from Bourdieu's social theory. In the third part, we briefly describe our empirical data and method of analysis. Fourthly, we present empirical findings from our investigation that shed some light on already ongoing activities of the EC and major member states. Fifth and finally, we elaborate on the future prospects of SD in Europe in a multi-layered context that engages many different types of stakeholders, agents, and interests.

1. Science policy and foreign affairs in the European setting

The European setting is worth looking at because of the interplay of its extraordinarily rich layers of intergovernmental, national, and supranational institutions. Previous research highlighted the role of states with a strong science base that have both the capacity and willingness to perform SD-activities on their own (Flink & Schreiterer, 2010). In the European case, traditional state-driven policy-making is complemented by the engagement of the EC and its executive body. While in some policy fields the competencies of the Commission even replace national sovereignty, this is generally not the case in matters of science policy and foreign affairs.

Even though some member countries have come to explicitly adapt the concept of SD pretty early on, the Commission did not recognize its potential until recently. In 2008, it published a communication regarding a strategic approach towards international science and technology cooperation that should foster “*stability, security and prosperity in the world*” (EC, 2008, p. 2). Although the general content of this communication matches the topics of SD, e.g. facilitating “*access to knowledge, resources and markets worldwide*” while also promoting “*freedom of expression*” (EC, 2008, p. 3), the term itself was not mentioned. This changed with the Commission’s communication from 2012 “*Enhancing and focusing EU international cooperation in research and innovation: A strategic approach*” which gave an outline of the then imminent 8th Framework Programme under the name of Horizon 2020:

“**‘Science diplomacy’** will use international cooperation in research and innovation as an instrument of soft power and a mechanism for improving relations with key countries and regions. Good international relations may, in turn, facilitate effective cooperation in research and innovation.” (EC, 2012, p. 4)

This quote directly refers to the Royal Society's concepts of science for diplomacy and diplomacy for science. In 2016, the Commissioner of Research, Science, and Innovation, Carlos Moedas, stressed SD to be a vital element of his "strategy of the three Os" – *open science*, *open innovation*, and *open to the world* (Moedas, 2016). The European External Action Service (EEAS) readily picked up both the term and the claim and viewed it one of "*more creative approaches to diplomacy*" in the EU's Global Strategy for foreign and security policy (EU, 2016, p. 31). A recurrent topic of EC communications and semantics is the rationale of competitiveness. In fact, it is at the very heart of the EU enterprise. The famous Lisbon Agenda of 2000 was meant to turn Europe in "the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion."² With regard to the global scene, the EU constantly refers to the US, Japan, and the BRICS states as main competitors. It seems like they provided the stage for the Commission's strategies and activities.

Ultimately, all this illustrates the EC's rising attention towards, and awareness to engage with the concept of SD. Yet the EC has to take into account the unique European setting with its multi-layered policy fields and manifold stakeholders: Both the fields of science policy and of foreign affairs are characterized by a shared responsibility of the Commission and the member states.

Foreign policy-making remains a prime responsibility of the member countries. The treaty of Lisbon, signed in 2007, created the position of a High Representative of the European Union for Foreign Affairs and Security Policy, currently held by Federica Mogherini, and the European External Action Service as instruments of a unified foreign policy of the Union. The member states are meant to coordinate their positions with the High Representative and

² Presidency Conclusions of the Lisbon European Council 23 And 24 March 2000, http://www.europarl.europa.eu/summits/lis1_en.htm, last access 07.06.17.

EEAS acting as a facilitator. The latter is a unique institution, situated between the Commission and the Council, and staffed by a mix of national representatives and personnel from the EC, that should provide a one-of-a-kind setting for the conduct of diplomatic activities. However, the pursuit of foreign policy-making and the competencies and responsibilities still need to be clarified incrementally. Within the EEAS, we see diverging interests and cultural idiosyncrasies clash during this process of forming and stabilizing a new institution (Adler-Nissen, 2014; Lequesne, 2015).

A similar setting dominates the field of science policy. The organization and funding of research belongs to the core competencies of the member states, in particular when it comes to basic research. The rationale for any strategies, programs, and policies pursued by the Commission in that field is that of safeguarding economic development and competitiveness. The establishment of the European Research Area (ERA), the Framework Programmes, and the European Research Council (ERC) had to meet these rationale and legitimation (Flink, 2016).

While the restrictions for both supra- and transnational programs of the EU are well-known, it is still unclear how SD fits into the picture. As yet, the ties between member states' activities and the EC's engagement in SD remains ill-defined, ephemeral, sensitive, or even contested and embattled.

2. The analytic framework for the investigation

Any inquiry into the dynamics of SD needs a theoretical framework that would allow to integrate and interpret empirical data. This holds especially true considering the often times arbitrary use of the term as a kind of “garbage can” and its interrelation with various diverging practices.

The openness of the notion of SD and a prevalent lack of empirical studies allow scholars to take to a large variety of theoretical approaches to deal with the topic. Among others, Bourdieu's theory of practice seems a promising starting point for research on SD. It has already proven useful for matters of international relations (IR) in the past (cf. Adler-Nissen, 2013; Leander, 2011). Yet all these studies focused issues of 'track 1-diplomacy', encompassing classical, well-established diplomatic routines, but ignored 'track-2 diplomacy' has more to do with soft power approaches. When it comes to SD, Bourdieu's approach may have several advantages. First and foremost, it provides us with a set of clearly defined, interrelated concepts like field, doxa, and different sorts of capital that helps us interpret empirical findings.

Fields

The concept of 'field' is commonly used for various items and carries quite different meanings.³ Bourdieu conceptualized social life as situated in a social space in which social interaction is structured by various fields. For example, within a given state, there is an economic field, a field of science, one of education, and several more. These fields co-exist next to one another and are closely connected. The fields of education and science, for instance, share a common venue in the university. In addition, Bourdieu's conceptualization of fields as incorporated allows for studying their development on different levels. Even though he himself did not specify the configuration and connection of different fields in general, authors like Fligstein and McAdam (2012) have carried it further to the of concept of *nested fields* that combine multi-level perspectives with the idea of fields. Thereby the notion of fields has come to be more productive and promising than the familiar model of distinct layers undergirding multi-level governance approaches (Bueger & Gadinger, 2014).

³ For a recent and extensive review of field concepts, see Zietsma et al. (2017).

Fields are formed and develop according to the position different actors take in relation to one another. Within a field, the distribution of power produces a distinct pattern of dominating forces on the one hand and suppressed actors on the other (Bueger & Gadinger, 2014). Yet the fields' boundaries and their internal structure are maintained and challenged at the same time since different agents keep trying to improve their respective position (Adler-Nissen, 2014; Zietsma et al., 2017). The dynamics and power struggles that are constitutive for each and every field call for sober analysis of what is going on there with respect to the population, positions and moves of agents, and the boundaries of the field (Pouliot & Mérand, 2013). Neither the position and number of agents nor the field's boundaries are fixed. Even though they change constantly, fields may become stabilized in each of these regards. The concepts of *capital*, *habitus*, and *doxa* are designed to account for both the dynamics and stability in a given field.

Capital

According to Bourdieu we need to tell apart different types of resources, or, in his terminology, capital (cf. Bourdieu, 1984; Navarro, 2006). In his view, resources become relevant capital if they are essential or at least contribute to an agent's position in the field, in other words, they classify as significant if they can be exploited in power games. Bourdieu differentiates between economic, social, cultural, and symbolic capital. Social fields include and reflect different configurations of capital meaning that they value, and rest upon, different types of capital.

Even though according to Bourdieu a translation of different sorts of capital between one field and another is possible, the respective rates of exchange rest upon—more often implicit than explicit—negotiations. When it comes to the emerging SD field, we need to ask which sort of capital may be useful in this context. Yet to participate in power games, agents need to understand the respective rules of the game. In order to explain how agents accumu-

late capital in the first place, and how the rules of ‘investment’ are set, Bourdieu puts forward the idea of prevailing doxa.

Doxa

Doxa borrows heavily from *habitus*, another concept from Bourdieu’s theoretical toolkit. Different forms of habitus emerge as patterns of practice performed by members of society in different areas, but at the same time they also affect these very members of society and help mediating between the concepts of agency and structure (cf. Bourdieu, 1989; Navarro, 2006). Thus, social fields keep shaping individual behavior and the expectation of as to what behavior or attitude should count as appropriate and what rules newcomers to the field need to pick-up and observe by way of habitus and doxa,

Stabilized fields are dominated by doxa, self-evident or rather taken-for-granted rules of behavior, and shared perceptions of the social world. They provide a framework to decide which activities and capital count as legitimate or not (Bueger & Gadinger, 2014), setting different social fields apart from one another. Likewise, domination in a field needs to be accepted as legitimate by the participating agents (Adler-Nissen, 2014).

Field theory and SD

SD emerges in a context of “*fields that overlap, interpenetrate, mutually determine each other, and within which different logics intersect*” (Pouliot & Mérand, 2012, p. 34). It is exactly this intersecting character of SD that generates the many different uses of the term we observe in various contexts. Conversely, protagonists and agents of SD enter the arena from different backgrounds depending on their socialization in another field. SD resides at the intersection of societal fields, in particular those of politics, science, and economics, and requires a great deal of boundary-work to turn into a stabilized social field on its own right.

While Bourdieu himself in his studies mostly focused on a domestic sphere (cf. Bigo & Madsen, 2011), some scholars tried to develop a transnational field perspective, transcending national boundaries, and integrating these data in a common framework. The European Union represents a case in point for a linkage of different functional fields and levels of governance that affects the scope for SD activities in various respects. Thus, the EU serves as a hotbed for a great many of different practices that count as SD. We conceptualize the European setting for SD as a nested field (Fligstein & McAdam, 2012) that constantly refers to other fields outside of Europe yet remains strongly tied to European affairs like for instance the US and Japan.

Drawing on Bourdieu's theoretical approach, we are going to localize the population of the European field, the position of the agents within it, and its boundaries: Who are the main (European) agents engaged in science diplomacy? Who is seen a dominant force and spearheading developments? What kind and range of political activities are labelled SD and which ones would not pass for it? Considering the current state of affairs with SD as an emerging practice, our data and findings of course cannot be but provisional. Which agent may seize a dominating—and in particular legitimate—position in the field cannot be taken for granted but remains to be seen further down the road. More likely than not, different agents, priorities, and contested boundaries may lead to a clash of doxa and tensions between various kinds of capital.

3. Methods and sample

We draw on a mixture of qualitative methods to capture and interpret the hidden rules and operating principles of European SD as an emerging field. To catch how doxa, capital, and field frame, shape or determine the SD activities both of the Commission and the EU member states, we chose a sample of four countries and looked into their respective programs and ac-

tions under the label of SD: Denmark, France, Germany, and the United Kingdom. We picked these countries because they all have a strong science base and have seized on the idea of SD to establish specific organizational units to deal with these topics in their foreign services or international relations. We suppose that striking differences between them in terms of size and governance of the science system, resources involved, and strategic priorities will allow for identifying and comparing widely diverging settings.

We supplemented our analysis of the member states' SD by a study of different stakeholders within the EC, particularly the Directorate General for Research and Innovation (DG RTD) and the EEAS but also other Directorates General. In addition, we tried to contrast and spice up the EU perspective by an external point of reference, that is the U.S. as major science and political power. In terms of data, our analysis rests upon oral and written information we gathered in the second half of 2016 and the first half of 2017.

Based on a semi-structured manual, we conducted 36 interviews with policy makers, members of research organizations and ministries from these countries and the Commission. In addition, we interviewed science counselors deployed at embassies in Europe and in the U.S.. Essentially, we tried to grasp the interviewees' understanding of the term SD, the practical work they are pursuing, and how they observe, and rate, the activities of other national or international stakeholders, particularly the EC. Written information was gathered in the form of official documents like policy papers, national strategies, press releases, and other types of 'grey literature'. We took these different actors' statements as empirical reflections of the emerging field that would allow to track and map its rationale, capital and inconsistencies from different angles. To illustrate this point: We took explicit references to a political agenda as an indicator that SD is tied to this field, meaning that the habitus, capital, and doxa of foreign affairs will be of particular importance to the emerging field of SD. If an interview partner brought up organizations engaged in SD, their background, mission, and operating princi-

ple were taken into consideration to capture the involved fields. A dominant doxa—if there were such a thing at all— we tried to grasp by gathering and comparing the actors’ definitions and understandings of the field in question. Dismissive comments on specific tasks and activities we took to be negative definitions of SD. To assess relevant sorts of capital, we carefully trawled the statements for power relations, deployed resources, both in terms of personnel and funding, and activities or programs labelled legitimate.

4. Results and empirical snapshots

Our empirical findings touch on two topics. As a first upshot, we will provide an overview of current SD activities in our sample. In doing so, we focus on the fields that show close links to SD, on items that could be interpreted as emergence of a doxa, and on types of capital deployed.

Secondly, we examined the relation between different stakeholders in the European Union, in particular member states or international organizations, and the EC. Drawing on our prevalent conception of the field’s doxa, we tried to sketch out a set of actions or politics that apparently goes for legitimate by the field’s stakeholders. On this basis, we are finally up to highlight potentials and tensions of SD in Europe.

Step 1: Overview of ongoing SD activities

Unsurprisingly, we found but very skimpy indicators for something like a shared, or even converging, understanding of SD: So far, the field has not yet settled. The integration of a SD portfolio in IR has let member states and the Commission reach for very different approaches. We found strikingly distinct understandings of SD, different strategic priorities, idiosyncratic politics, and programs to serve these objectives. Their variety is so large that an exhaustive mapping of the field would go way beyond the scope of this paper. Still, our theoretical ap-

proach focusing on fields, capital, and doxa, allows for comparing developments across countries, (research) organizations, and the EC.

The fields of science policy, foreign affairs, and economics are closely coupled

Our desk research and interviews all point to a close interplay of science policy, foreign affairs, and of economy as a common denominator for our cases. Yet empirical configurations may vary widely across the sample and so do priorities.

Looking at the interview data, the often times tense or stressful interaction between agents from the field of science policy and that of foreign affairs could have been expected, as the two branches of policy-making lie at the heart of SD. However, the configurations differ. Looking at the personnel deployed to embassies and representations abroad to deal with SD, most of the German science counselors are seconded by the Federal Ministry for Research and Higher Education while about one third of the staff, charged with all kinds of SD, comes from the Foreign Office. Both groups have to be German citizens. The British government has packaged its activities in a *Science and Innovation Network* (SIN) since 2000, builds on a broad mix of locally employed personnel, career diplomats from the Foreign and Commonwealth Office, and staff from the Ministry for Business, Innovation, and Skills. In French embassies, representatives from the Ministry for Foreign Affairs responsible for SD in some cases are supported by experts from major research organizations like the Centre National de la Recherche Scientifique or from the Institut national de la santé et de la recherche médicale. In addition, we have seen involvement of agents from the economic field. One interview partner put it that way: “science diplomacy accompanies economic diplomacy rather than foreign policy”. This tight entanglement between scientific and economic rationales becomes very evident, and explicit, in organizations like the *SIN*, the Swiss organization *SWISSNEX*, or the *Innovation Centre Denmark* (ICD). All three share a strong mission to foster national eco-

conomic competitiveness, to market national research and innovation prowess, to tap into new markets to enhance “*growth and exports*”⁴, and to sell a distinct brand abroad, as it were.

The hybridization of fields becomes also clear from the documents. As a case in point, the inter-departmentally binding Strategy for Internationalization (*Internationalisierungsstrategie*, BMBF, 2017) passed by the German Federal Government addresses scientific as well as economic and political objectives. In a similar way, French and British policy papers routinely underscore the importance of all three fields and the need to coordinate them (BIS, 2011; MAE, 2013). Other fields also play a certain role. While the German strategy touches upon the field of international higher education, France stresses developmental cooperation and science for development.

With respect to the EC, we also notice largely diverging interests and backgrounds. While the EEAS has recently flagged SD as a priority⁵, the EU’s Global Strategy (EU, 2016) has not put much emphasis on it. The guess that SD would be considered a tool which may partially attract, and deserve, attention from the EEAs, but does not yet fully belong to its core business was clearly supported by our interviews. While the DG RTD and the Joint Research Center were very eager, as prepared, to frame their work as SD, the EEAS seems not to have warmed up to it yet. Main references for our interview partners were the field of science (research excellence) and economy (creating jobs) as key concerns for SD activities, whereas its role in foreign affairs was rarely mentioned and seemed to be way less important.

Agents’ backgrounds account for utilizing different types of capital

Bourdieu suggested that different fields may be distinguished by how they value specific sorts of capital. Accordingly, we found different types of capital due to the fields involved in SD.

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https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/604011/SIN_Strategy_Mar_2017.docx, last access 31.05.2017.

⁵ https://eeas.europa.eu/headquarters/headquarters-homepage/410/science-diplomacy_en, last access 31.05.2017.

Both the distribution and the value of capital varied across and within countries and organizations.

The countries of our sample widely differ in their size of population, organization of the science sector, and political priorities. Still, all seemed to subscribed to a strong engagement with international science police, and SD in particular, even though they possess different resources of economic, social, and cultural capital. In absolute terms, Germany, France, and the UK command the largest science sectors in Europe (OECD, 2017). While this provides them with certain advantages when it comes to resources and their respective attractiveness for foreign scientists, it also carries challenges for the coordination and proper allocation of these capitals. In comparison, smaller countries like Denmark might be worse off in economic terms or social capital as they lack the networks larger countries can build on but can capitalize on far better target-oriented, coordinated activities.

Second, different types of organization prefer and deal with different sorts of capital. Representatives from research organizations and funding organizations considered excellent research a vital priority, which would turn SD into an instrument to foster cultural, scientific capital. Even though they recognize that it may be converted into economic or social capital as well, this seems of secondary importance to them. In the scientific field, cultural capital remains the most valuable resource. To representatives from ministries for foreign affairs on the other hand, economic and symbolic capital count most since they are considered vital to gain a dominant position in the field of politics, IR and economy. This understanding of SD taps into the notion of *soft power* (Nye, 1990; Nye 2017) that was mentioned in several interviews and written sources as well. Likewise, representatives affiliated with the economic field took SD to be a vehicle for innovation and priming new business opportunities. Consequently, organizations like SIN, ICD, and SWISSNEX describe their mission as “building networks”

to foster, enhance and better utilize scientific and economic capabilities both at home and abroad.

In summary, we see rationales for the deployment of all sorts of capital at place in SD. Still, the specific rates at which different capitals can be converted in the field to achieve a better position remain obscure, meaning that there is no clear criterion, let alone metric, to measure the impact of SD activities. Due to the fact that there is no common doxa in the field which defined the most valuable resources, this does not come as a surprise.

There is no common doxa but a great many of different understandings

When asking what exactly SD means, we found a large variety of understandings. Several of our interview partners pointed to the definition which the Royal Society and the AAAS had come up with in 2010. Nonetheless, the differentiation between diplomacy for science and science for diplomacy seems to be no linchpin neither for policy making or for SD at work. Far more often, SD was related to economic diplomacy, developmental cooperation, and education. Sometimes we even found that the whole idea of SD was strongly contested. For instance, a spread of the term that it could also encompass developmental cooperation was met with reservation, if not to say resistance. In one case, for example, the interview partner declined any responsibility for this endeavor from the side of science since it would be better looked after by agencies for developmental cooperation by stating that *“there are other institutions [...] that have a different kind of mission”*.

At the bottom line, our data show that as of now there is no shared understanding of the field of SD, let alone a common doxa in Bourdieu’s terms. At present, it would be more appropriate to think of different communities in the field of SD that have their specific understandings. As a consequence, it is still impossible to clearly identify heterodox behavior or views. Interestingly enough, this applies even within the boundaries of a single state as differ-

ent stakeholders in Germany, France, or the Commission do not share a common understanding of SD.

Step 2: The relation between the EC and the member states

Our account of ongoing activities and different approaches in the field of SD provides a venue to a more detailed analysis of the relation, or interplay, between the EU member states and the Commission. Interestingly enough, they all closely monitor each other's activities but come to very different conclusions. Above all, this reflects the heterogeneity of involved fields, capitals, and agents. In a situation like that, Bourdieu had claimed that symbolic capital would gain more importance since it were crucial for the assignment of positions in the field and the definition of the 'rates of exchange' between different sorts of capital (Navarro, 2006).

In our field study, we found that symbolic capitals mainly draws from, and interacts, with a) legal arguments, b) economic considerations and c) social capital. Looking at interview statements which deal with legitimate activities in the field of SD, all interviewees kept referring to the European legal framework, with different emphases according to their respective background. Representatives of member countries stressed that research funding and policy fall under the jurisdiction of every single state in the first place. Hence, SD should remain a matter and business of individual member states, while the Commission had no mandate to coordinate, let alone guide their SD activities. From the point of view of the member states, the delegation of what they consider to be core responsibilities to the EU should be strictly limited to a small number of issues agreed upon *ex ante*. Even if the member states' representatives acknowledged the existence of EU-delegations abroad and sometimes thought highly of their officers to promote EU science and technology, the interaction between national science diplomats and EU-representatives seems mostly characterized by arbitrary, ad-hoc arrangements. The notion, or rather the belief, that the EU's activities were mostly incidental and at best subsidiary in relation to the member states' foreign and science policy was

supported in our interviews with representatives from institutions in the U.S.. They all strongly tended to dismiss the Commission's joint initiatives as insignificant, overcomplicated, and burdened with lots of red tape.

Still, we also came across a whole number of ideas how to best leverage the EU's position in the field of SD, in particular with respect to the resources the Commission has available under the Framework Programme Horizon 2020 and some seemingly attractive features of institutional science and technology cooperation like the ERA, COST, or the European Neighborhood Policy. The member countries and the protagonists from the Commission's agencies agreed that the Horizon 2020 budget could be used for appropriations under a SD agenda, such as the support of international collaborations or of capacity building activities in conflict ridden zones (cf. Arnold et al., 2011). This clearly points to the importance of economic capital to help an institutional agent get a leg up and reach a better position in the field. Moreover, the EC's representatives also referred to the legal framework, yet in a different way than their colleagues from the member states. More implicitly than explicitly they elaborated on a blank spot in the EU-legislation, that, under the heading of strengthening the EU's economic competitiveness, would allow the Commission to act on its own behalf if and so far the activity or program could or would serve that very end. EU representatives all stress the importance of SD to retain a leading role for the Union in global markets for goods and services. This strategy to frame and legitimize an ever increasing range of the Commission's activities has already proven effective and successful in the EU's science and innovation policy, with the establishment of the ERC (Flink, 2016) as a prime example.

When it comes to social capital, the situation is somewhat different. To representatives from national institutions, it is clear that SD activities should build on, strengthen, and use networks between scientists at home and scholars from other countries to establish sustainable communities of experts, trusted links to the civil society of other countries that may not be

preferred international partners, and some kind of soft power or influence beyond economic cooperation or traditional diplomacy. The Commission's main goal is very different from that in that it is looking to strengthen the ERA and to promote the EU as a paragon for peace and cooperation. Again, these widely diverging perspectives illustrate strong disagreements about ownership of social capital within Europe.

Legal, economic, and social capital constitute the resources agents may use to improve their position in the field of SD. It seems—for the time being at least—that the member states are better positioned than the EC. When it comes to science, research and international relations, or foreign affairs, they are legally entitled to act on their own behalf and do not need to consult the Commission. At the same time, they are also independent to spend economic and invest social capital to pursue their objectives.

If the Commission goes for garnering more power in the field, it has to harness and capitalize on its existing resources. By default, however, it has no legally supported leading position. Thus the EC needs to point out an added value of its activities when compared to those of the member states, to spend its economic capital strategically, and to pitch the idea of a splendid community of European science with highest capabilities in order to incrementally strengthen its position. How this is going to work out needs to be seen. It is very unlikely that the member states will approve of a stronger role of the EC in the field and comply to her guidelines. Right now, we can think of only a few items that could provide the EC with a stronger ticket for enhanced competencies. From our interviews it looks as if the EC's representatives are pretty well aware of that. The discourse of global, or grand, challenges offers then an excellent opportunity to legitimize a claim for a much stronger role of the EC in managing international science and technology collaboration, foreign affairs, and SD that would complement, exceed, and ramp up the member states' activities. Challenges like climate change and migration, sustainable development and renewable energies, food security and

pandemics, to name but a few, call for effective international collaboration in S&T to address and hopefully alleviate the many problems that come along with them (Stein & Ahmad, 2007). In its own view, the Commission “[...] is well placed to play a leading role in promoting common principles for the conduct of international research and innovation activities in order to create a level playing field in which researchers and innovators from across the globe feel confident to engage with each other” (EC, 2012, p. 9). Claiming a position as a fair broker to promote common standards for excellent research, and to effectively coordinate research capacities to tackle global challenges, may help the Commission to improve its position in the field. But the jury is still out on that. Quite a few of our interview partners from the members states were willing to concede that the EC might also act as a mediator and sales agency for smaller member countries that lack the infrastructure or resources necessary to effectively participate in the field of SD. Unlike smaller EU member states, countries like France or Germany may act on their own right and pursue their own SD. Yet for the former, harnessing the EU might be a smart option to become more visible in global science and innovation spaces. Conversely, acting as a guardian or booster for less potent or powerful member states provides the Commission with a convenient opportunity to deploy its vast economic capital in an efficient way.⁶

As for the question of social capital—related to the workings and dominant narratives of science and scientists as European vis-à-vis national—the Commission could stress the claims incorporated in programs like Horizon 2020 and ERA even more that underline the relevance and common points of reference and collaboration of a shared identity (EC, 2017; Stein & Ahmed, 2007). Hence activities such as the ERA-Net initiatives⁷ can be seen as steps in such a direction (cf. Edler, 2010). By emphasizing its role as a broker and promotor of such initiatives and framing them as SD, the Commission puts the idea of a unified European space

⁶ Given the precarious situation for S&T funding in quite a few EU-member states, the Commission might also occupy a dominant position in bilateral R&I-negotiations.

⁷ http://ec.europa.eu/research/era/era-net-in-horizon-2020_en.html, last access 31.05.2017.

for research forward in day-to-day practice, and tries to install itself as central protagonist and player in European SD.

5. Conclusion

In our research, we explored the current status of SD in the European Union as pursued by both some member states and the EC. To analyze interviews and documents from four countries and the EC with respect to SD activities and objectives, we borrowed from Bourdieu's social theory to compare different settings and their relation to one another.

Our findings clearly point to swift dynamics in the SD field. So far, though, we cannot see any common ground, let alone an ongoing convergence of approaches and activities. National SD shows strong path-dependencies, lots of diverging interests, and different national modes of governance of science. Rationales for the promotion of SD attend to the field of politics, science, and economy. Their respective manifestations depend on national trajectories and idiosyncratic organizational features. As of now, there is no such a thing like a fixed doxa of ST at place, meaning no shared definition or agreed-upon best practices in the field. A great many different stakeholders struggle for a dominant position by spending economic, social, and symbolic capital. The relation between the member states of the EU and the EC mirrors the underlying disputes about the legal rights of the Commission. While all activities linked to research or to foreign affairs are nominally outside its exclusive reference, the Commission seeks to actually improve its position in the field by drawing on its economic resources on the one hand and stressing its vital role in the coordination of cross-European SD activities to create added value beyond national boundaries or capacities by utilizing its symbolic capital on the other. So far, however, we found no indication whatsoever that the member states might be prepared to relinquish their prerogative of defining the terms and pace of SD-development. In addition to that, the Commission is at odds with itself. Apart from the fact that it entrances from different forms of expertise in its organizations and ranks, it also

has to compromise diverging interests with regard to SD. The EC's organizational complexity poses a major challenge for her ambitions to come up with a strong, unified approach towards SD. Thus, a change towards a more active and powerful stance of the EC in this field more likely than not will be incremental and contingent upon day-to-day activities in the EU's embassies, representations, and other institutions in the field. A modification of the EU's legal rights or obligations in S&T policy, for the time being at least, looks very unlikely.

Yet SD is a highly dynamic and contested field whose sets of actors, priorities, features and conflicts change rapidly. Geopolitical shifts, new international lines of conflict, as well as developments in the domestic sphere pose ever new challenges to national policies that can hardly be foreseen. Thus the stellar career of the SD field may sooner rather than later come to an end. This would not necessarily set an end to activities that today are taken for SD; it simply means that new trends and fashions might change the label but could incorporate similar objectives, tasks, and practices in the future.

Last, but not least, we need to issue a caveat regarding our theoretical approach. Resorting to Bourdieu's terminology, we examined the status of SD under an angle of ongoing power games. Yet this might not be appropriate to categorize, let alone explain, every activity in the emergent field of SD. Alternatively, we could have stressed the collaborative side of EC-member state interaction, dismissing ongoing struggles for power. Still, the concepts of field, doxa, and capital provide a valuable starting point for an interpretative framing and understanding of the new phenomenon of SD. To test their scope and benefit, further research is needed.

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