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Why Do Bureaucrats Cooperate? International Inter-Agency Networks in the Global South

> The primary source of the superiority of bureaucratic administration lies in the role of technical knowledge which, through the development of modern technology and business methods in the production of goods, has become completely indispensable.
>
> Max Weber, *Types of Legitimate Domination*, 1922

No skills, no cooperation. That is the core finding of this book, which seeks to explain international inter-agency cooperation in the Global South. Policymaking has become more complex in the information age, more international and interdependent in a globalized world, and more pressed by the urgency of the problems it attempts to address. Much of international cooperation is unthinkable without a large body of expert bureaucrats greasing and turning the wheels of the government machine. In other words, policymaking has become both more skill dependent and transnational. Yet, while high-level diplomacy and multilateral treaties receive the bulk of scholarly attention, the "behind-the-scene" legwork that expert bureaucrats do on a regular basis has not been properly studied.

Partnerships among bureaucrats can yield extraordinary outcomes. The Kyoto Protocol would not have been possible without the preceding coordinated efforts of state climatologists around the world; the Non Proliferation Treaty (NPT) and the Comprehensive Test Ban Treaty (CTBT) would not have been realized if it had not been for the prior work by nuclear bureaucrats from both nuclear and non-nuclear powers; and world summits on wide-ranging issues, like sustainable development, AIDS, and trade, rest on the pooling of expertise from state agencies

and the deployment of scientists on government payrolls. In all of these cases, expert bureaucrats have been the drivers of policy change, rather than mere translators of the preferences of voters and politicians. Expert bureaucrats have raised the salience of policy issues about which they care deeply and have used their know-how as leverage to advance broad policy agendas across borders. More importantly, they have done so together, as expert communities, cooperating with like-minded bureaucrats and professional colleagues embedded in a myriad of peer institutions.

For several decades, expert bureaucrats have been moving regularly across borders, from their home institutions to specialized international organizations, and in the process, forging collaborative networks with peers. While links between bureaucrats and expertise have been well noted by students of bureaucracy (from Weber onward), what has gone surprisingly unnoticed is how inter-agency cooperation has become a critical source of skill upgrading and policy innovation for bureaucrats in the developing world. The purpose of this book is to explain the international cooperative behavior of state experts, who increasingly go outside their national agencies and work with foreign peers on technical projects and programs.

I argue that international inter-agency cooperation results from the need of expert bureaucrats to invest in skill formation and skill upgrading when governments fail to provide sufficient funding for training and Research and Development (R&D). Cooperation increases when governments fail to invest in the skills of their workforce. When the state withdraws, I posit, expert bureaucrats take skill investment in their own hands and cooperate with peers to upgrade their skillset, because career advancement is contingent on maintaining their technical expertise current. Bureaucrats from developing countries, with limited state resources and chronically underfunded and understaffed technical agencies, go outside their national borders to access new resources.

From my theory I derive three testable hypotheses, which will be discussed in greater detail in the following pages. Briefly, I expect the strategy of inter-agency cooperation to be contingent on the bureaucrats' relative expertise (skill level), the level of similarity in program development among partnering agencies (skill homophily), and state investment in the expertise of its workforce (access to domestic resources). The key finding of this book, which carries significant policy implications, is that variations in prior levels of skills across cohorts of expert bureaucrats, state agencies, and countries explain international cooperation by bureaucrats in NEST and environmental protection. Bureaucrats with high skills

cooperate more and more effectively as they tend to work with foreign peers at similar levels of development. In contrast, state experts with low levels of skills cooperate less and less effectively, as they pair up with bureaucrats from countries that are similarly poorly endowed and have fewer resources to share.

Skill Updating through Partnerships: An Example

The true dimensions of "El Guaraní," one of the world's largest aquifer systems and reservoirs of fresh water, remained unknown and unmeasured to the voters and policymakers of Argentina, Brazil, Paraguay, and Uruguay, the four Mercosur[1] countries under which it exists. With growing populations and unrelenting demands for water to satisfy agricultural production in the region, stakeholders were increasingly concerned with the potential overuse and the likely contamination of the Guaraní Aquifer System (SAG). As a result, by the early 2000s, state experts from local water agencies faced clear demands to find out how feasible, reliable, and cost-effective the Guaraní was as a sustainable source of drinking water. The race to measure, map, and regulate the access and use of "El Guaraní" thus began. Within a few years, expert bureaucrats would draft timetables, budgets, set operational priorities, and devise government procedures to innovate in the area of environmental policy and water management in all four countries. To deal with such complex environmental policy, bureaucrats endowed with scientific and technical training were required. These skilled civil servants brought to the table research agendas, expert teams, professional goals, as well as a variety of policy interests of their own.

Confronted with major cuts in government spending – triggered in part by the 2001 economic collapse in Argentina – and chronic disinvestment in environmental protection, expert bureaucrats in all four Aquifer countries had few resources to retool their skills, to hire new personnel, to invest in new technology, or to outsource a comprehensive water survey to the private sector. Consequently, answering new environmental demands required creativity to develop new goals within existing budgets. These experts were interested not only in measuring *El Guaraní* but

[1] The Common Market of the South (Mercosur) is an economic and political free trade agreement signed between the countries of Argentina, Brazil, Paraguay, and Uruguay in 1991. It was created with the goals of facilitating free movement of capital, goods, and people among signing partners. Recently, Venezuela also became a full member of Mercosur.

also in increasing the scientific and technical training that would allow them to conduct similar assessments in the future. Skilled bureaucrats are interested not only in achieving policy goals but also in advancing their professional careers.

The solution was to design a cross-national scientific project with the objective of uncovering the technical specifications of *El Guaraní*. Expert bureaucrats from the water agencies of the four countries drafted a proposal, coordinated their policy goals, and jointly applied for a multi-million-dollar grant from the Global Environment Facility (GEF), with the World Bank as implementing agency. Local and state agencies covered half of the total project cost of 27 USD, while the remaining 13.5 million came from international donors, primarily the GEF.

Within a few years, the "Environmental Protection and Sustainable Integrated Management of the Guaraní Aquifer" project provided hard data on the depth and length of the SAG and set the foundation for a 2010 international agreement among the governments of Argentina, Brazil, Paraguay, and Uruguay on a legal framework for co-management. One of the greatest technical challenges of the project was the measurement of the Guaraní in Argentina and Uruguay where the SAG is at its deepest. Experts from these two countries had to dig wells up to 1,000 meters deep (about 3,280 feet). Lacking the skills and technology to do so, Argentine hydrologists called on colleagues at the formerly state-owned national oil company, who lent their drilling machinery and expertise. Argentine expert bureaucrats successfully completed their part of the project and transferred that technology to their neighbors in Uruguay. Thus the project was as much about training as it was about surveying the aquifer. One participant stated that the biggest accomplishment had been the learning process involved throughout the cycle of the project.[2]

The SAG project exemplifies a growing trend in the Global South: experts from state agencies work with foreign peers on large, complex projects in order to address common policy problems. International inter-agency cooperation has become more technical and demanding of local bureaucracies and is thriving in critical policy areas such as environmental protection, nuclear development, and public health.[3] For several

[2] Senior water expert, coordinator of the Guaraní Aquifer System (SAG) project. Interview with the author. City of Paraná, Argentina, July 2013.

[3] In this book, I focus solely on *international* inter-agency cooperation – also known as transgovernmentalism – yet I will posit that my theory of the expert bureaucrat also helps explain domestic inter-agency cooperation and offers theoretical traction to public sector analysts and bureaucracy scholars. Transgovernmental cooperation is defined as

decades now, state agencies from Africa, Asia, and Latin America have collaborated – both intra- and inter-regionally – on climate change, water security, agricultural sustainability, and the fight against AIDS as well as on other epidemics, to mention just a few of jointly tackled problems. Cooperation in these policy arenas is predominantly project based, which means state experts must cross national borders in order to negotiate and implement common goals, assign tasks, and agree on a feasible division of labor. When they choose to participate, bureaucrats and their agencies must commit to share with foreigners scarce and costly resources such as personnel, funding, and skills. These large-scale projects have been described as "more complex and varied than national projects, often involving a great number of actors and composed of many regional and cross-border initiatives on the ground" (Stephenson & Baharani, 2012: 270).

The new cooperative behavior of expert bureaucrats does not fit traditional definitions of public servants. According to the literature, bureaucrats are generally reluctant to share resources and have a documented tendency to be inward oriented (Blais & Dion, 1990; Hoffer, 2013). They are expected to take full advantage of their autonomy from politicians (Huber & Shipan, 2006). Their main goal is to maximize their budgets (Niskanen, 2007)[4] and the only tie that truly matters is the one they forge with their political principal (Bendor & Meirowitz, 2004; Gailmard, 2002; Huber & Shipan, 2002, 2006). As a result, we should expect bureaucrats to resist if agency-appropriated funds are executed outside of their organizations – especially in the developing world, where state research agencies tend to be chronically underfunded and understaffed to begin with (Campion & Shrum, 2004; Schwartzman, 1994; Solingen, 1994). Thus, this kind of cooperation is costly to expert bureaucrats, even if projects are partly funded by external donors such as the Organisation for Economic Co-operation and Development (OECD), or international organizations (IOs) with technical specialization, like the Global Environment Facility (GEF), the World Health Organization (WHO), and the International Atomic Energy Agency (IAEA). Despite the costs, again and again state experts have created partnerships across national and

a set of relations formed by the cross-border "interactions among sub-units of different governments that are not controlled or closely guided by the policies of the cabinets or chief executives of those governments" (Keohane & Nye, 1974: 43).

[4] Bureaucrats' sole focus on the budget has been described as the "treadmill phenomenon, inducing bureaucrats to strive for increased budgets until they can turn over the management burdens of a stable higher budget to a new bureaucrat" (Niskanen, 2007: 38).

even regional borders. Over time, these partnerships have forged international networks through which bureaucrats and politicians coordinate policy and agree on solutions to common problems, as exemplified by the international agreement on the Guaraní Aquifer System by Argentina, Brazil, Paraguay, and Uruguay.

Despite the prevalence and policy impact of inter-agency cooperation, and how much it conflicts with standard conceptualizations of bureaucratic behavior, little scholarship has explained its origins or described its implications for achieving common governance goals.[5] This book remedies this oversight by addressing the puzzle of the international behavior of state experts in the Global South. It proposes a demand driven theory of international cooperation, resulting from incentives created in part by shared policy bottlenecks and fiscal scarcity, rather than explicit planning by well-financed government agencies. It offers a new direction in research on the protection of the environment and NEST development as it shines a light on the international sources of state expertise. At its heart, this book is about a rising type of government agent in the Global South as well as in OECD countries – i.e., the expert bureaucrat – with incentives to acquire high skills and invest in her own training when the state does not and who sees professional advantages in the forging of transnational networks.[6]

Question and Argument

What explains the rise of international inter-agency cooperation in areas as diverse as nuclear energy, science, and technology (NEST) and the protection of the global environment – the two policy fields that this book examines? Why do bureaucrats in developing countries, embedded in chronically underfunded domestic institutions and accountable to local

[5] Important exceptions include Raustiala (2002), Slaughter (2004), and Bach and Newman (2014). Furthermore, the literature on Epistemic Communities has also examined the link between state experts and international cooperation. Haas (1989, 1992a, 1992b), Adler (2008), Evangelista (1993, 2002), and Kapstein (1992) are some of the most seminal works in epistemic causality.

[6] While many of the propositions of my theory should be applicable to agencies in the industrial North, the cases that I study in this book are in the Global South. I explain the focus on the developing world in greater detail further in this chapter and the next. For now, suffice it to say that fluctuations in government spending and other potential external shocks to states' investment in bureaucrats' skills are frequent enough in developing countries for state experts to anticipate them and forge strategies to compensate for them.

politicians, collaborate with foreign peers? I argue that bureaucrats in the Global South, accustomed to insufficient and irregular funding, anticipate government spending cuts and develop strategies to compensate for the lack of resources at home. Similar to well-documented market failures in the allocation of skills in the private workforce (Booth & Snower, 1996; Estevez-Abe, Iversen, & Soskice, 2001; Ulph, 1996), the state as an employer also may fail to invest in human capital. When the state withdraws, I argue, bureaucrats in technology-based agencies who depend on their expertise to do their job take skill investment in their own hands.

One way to access new skills and help ensure the survival of research programs and institutional knowledge is to cooperate with foreign peers in cross-national technical projects. Through these projects state experts not only pool resources and share research costs, *critically* they upgrade their existing skillsets. Most bureaucracies have certification processes by which outside training and acquired qualifications are recognized and count toward promotion and raises.[7] Politicians in impoverished states often welcome these external sources of training as inexpensive solutions to the problem of outdated expertise. The rationale of certifying international cooperation as an instance of professional development is explained by a senior director of the National Institute of Public Administration (INAP) of Argentina:

> During the 2001 crisis, due to the budgetary restrictions, the INAP allowed communities of practice[8] as a training tool. Because we have had drainage of resources, we allowed the certification of any number of activities to be considered as contributions to the development of technical and professional competence. These [activities] could be courses within INAP, but if by your own initiative you did them outside you could get them recognized by INAP. The system also accepts participation in working teams and international projects.[9]

International technical cooperation not only sharpens skills, but also increases the professional reputation of participants at home. Cross-national partnerships are highly desirable to bureaucrats because they

[7] Recognition of externally certified training, such as participation in international workshops or projects, is carried out by the National System of the Administrative Profession (SINAPA) in Argentina; the National Institute of Public Administration (INAP) in the Dominican Republic; and the South African Department of Public Service and Administration, to name a few.

[8] The interviewee defined "communities of practice" as "somewhat informal and often virtual professional networks to advance knowledge and innovation." Senior official at INAP. Interview with the author in Buenos Aires, Argentina, January 2014.

[9] Senior official at INAP. Interview with the author in Buenos Aires, Argentina, January 2014.

help expand the size of their professional networks and make them more marketable (Heclo, 1978; Sabatier & Jenkins Smith, 1999; Carpenter 2001; Campion & Shrum, 2004). In state agencies of the Global South, where funding for training and professional development tends to be extremely scarce, international cooperation can have significant impact on a bureaucrat's career (Campion & Shrum, 2004; Herrera, 2010; Slaughter, 2004). Training and renewed proficiencies have an impact on wages and career promotions (Green & Sakamoto, 2001; O'Connell & Jungblut, 2008).[10] Consequently, as I will argue, the search for alternative venues to update skills in order to advance in their professional careers explains the emergence of collaborative international networks of expert bureaucrats.

In this book, I define *skills* as the learned capacities and know-how that bureaucrats use to carry out day-to-day tasks and solve concrete policy problems (Ericsson, 2006). The overall level of skills of bureaucrats constitutes *state expertise* or the knowledge that is acquired within the state by "making costly investments in information" (Gailmard & Patty, 2013: 6) and is critical to sound policy adoption. All bureaucrats in technical agencies are sensitive to skill disparity. For example, professionals working in nuclear policy need to have updated skills in radiation safety, regardless of whether they work in a high-skill agency that manages nuclear power plants, like the South African Nuclear Energy Corporation SOC Limited (NECSA), or a small one, with a narrow focus on nuclear medicine, like the Nicaraguan Laboratory of Physics, Radiation, and Metrology (LAF-RAM), at the National Autonomous University of Managua (UNAN-Managua).[11] Without sharp skills, state experts cannot respond to the demands of common citizens as well as those of local and national politicians. Consequently, bureaucrats have an incentive not only to keep their skills current to advance their careers and long-term professional goals, but also to maintain their market value – often at the intersection of the private, semi-public, and public sectors (Campion & Shrum, 2004; Teodoro, 2011).

[10] There is a strong consensus among labor and skills scholars that "continuing job-related training is also believed to be highly influential in determining both corporate or organizational performance as well as individual earnings and career development" (O'Connell and Jungblut, 2008: 109).

[11] These are the state agencies with national jurisdiction over nuclear policy in South Africa and Nicaragua, respectively. Bureaucrats from these agencies represent their country in cross-national projects in NEST. See www.iaea.org/technicalcooperation/Partnerships/Reg-Coop-Agreements.html.

Increasingly, state experts are members of academic networks or have developed academic careers, in which they forged ties to private sector peers, performed research and teaching responsibilities at public and private universities, and disseminated their work in disciplinary journals (Herrera, 2010; Pielke, 2007). Who are these bureaucrats at the heart of this book? The subject of my theory falls within Daniel Carpenter's definition of "mezzo level" state administrators. That is, the state official who typically serves as "bureau or division chiefs, program planners, and monitors" (Carpenter 2001: 19) as well as scientists, technical personnel, and project managers employed by state agencies. These state actors represent an increasing fraction of the state employee not only in the Global South but in the world at large. They are the life force of agencies like the Environmental Protection Agency (EPA) and the National Aeronautics and Space Administration (NASA) in the United States, the Brazilian Development Bank and the Bureau of Statistics (IBGE), the European Organization for Nuclear Research (CERN), or the National Bureau of Statistics and Geography in Mexico (INEGI). They also make up most of the senior personnel in key ministries of Africa, Asia, and Latin America, such as those of economy, labor, science and technology, and health among others.

While recognizing and controlling for the diversity of bureaucratic institutions in the Global South, the argument of this book is based on a common problem: state funds for research and training are vulnerable to budget cuts, and consequently, fluctuate a great deal (Sarkar, 2012; Schwartzman, 1994; Solingen, 1994). Irregular government funding generates uncertainty throughout the bureaucracy, but it can be particularly disruptive to well-established agencies given that their programs are contingent on the continued ability of the state to hire and train skilled personnel.[12] This is exacerbated by the wave of spending cuts in the aftermath of the foreign debt crisis in the early 1980s and in the wake of

[12] Since the 2008 Great Recession, government spending in R&D and training of state professionals in OECD countries has experienced major cuts too. For example, the termination of the US Space Shuttle Program in 2011 due to the economic crisis led NASA experts to collaborate with their Russian peers for space transportation. Recently, the head of the National Institutes of Health linked recession-triggered budget cuts to the lack of any progress in Ebola virus research. See www.washingtonpost.com/blogs/federal-eye/wp/2014/10/13/nih-director-ebola-vaccine-could-be-ready-if-not-for-budget-austerity/. Nevertheless, bureaucracies in developing countries have a much longer (and less exceptional) history with economic crises triggering austerity measures that directly target funding to science and technology in the state.

the neoliberal reforms implemented in the 1990s throughout the Global South (Frieden, 1991; Harvey, 2005; Huber & Solt, 2004; Kurtz, 2004; Murillo, 2009). For example, in Brazil – a wealthy developing country with a significant science and technology public sector – IMF recommended policies led to "major cuts to the country's science budget – including a block on all new fellowships and research grants" in the late 1990s, with new rounds of cuts in 2011 and 2012 leading to "a 22 percent reduction in the science budget."[13] The adverse effect of fluctuating state funding on skilled civil servants has only worsened in the information age.[14] In fact, over the past two decades, career bureaucrats (and the state agencies they populate) have been caught between two opposing forces that challenge the manner in which policy is carried out. On the one hand, as described above, recurrent economic crisis and ensuing budget cuts lead to fewer available resources and diminished state capacity.[15] On the other, the information age has placed a large premium on highly skilled labor both inside and outside of the bureaucracy (Brown, Green, & Lauder, 2005; Machin, 1996). Indeed, the demand for skilled labor has grown radically over the past few decades, owing to a global "'skill-biased technical change' in the way goods and services are produced in the economy" (Bresnahan, Brynjolfsson, & Hitt, 1999: 1). The need for sharp technical expertise is intensely felt in the state (Danziger & Andersen, 2002).

As a result, bureaucrats are expected to have the necessary expertise to resolve complex problems – such as water pollution, the negative effects of climate change on agricultural production, and energy crises – even under tight budgets. The expectation to deliver comes from political principals, to whom bureaucrats are directly accountable, and civil society, which increasingly demands from its experts solutions to pressing problems. The more demanding social role of expert bureaucrats is not in a vacuum, as:

[13] See, respectively, "Brazil forced to cut back science funding" (Kauffman-Zeh, 1998) and "Brazil takes a knife to science funding again" in Royal Society of Chemistry 2014 accessed at www.rsc.org/chemistryworld/News/2012/March/brazil-science-technology-budget-cuts-third.asp.

[14] The *Information* or *Knowledge Society* is seen "most obviously in . . . the rapid and accelerating permeation of computerized technologies throughout society, in the increased provision and take-up of education in most social systems, and in the growth of occupations that deal, for the most part, with information (clerks, professionals, instructors and so on). Experiencing such developments, it is not surprising that many observers have come to describe our age in terms of one of its most palpable features: hence, logically, the information society (Webster, 2006: 444).

[15] There is a burgeoning literature on how globalization and neoliberalism affects governments' room to maneuver (Alcañiz & Hellwig, 2011; Hellwig, 2014).