Joint PhD

ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

doctoral program in
Science, Technology and Humanities
cycle XXIV

Settore Concorsuale: 14/C2
Settore Scientifico-Disciplinare: SPS/08

UNIVERSITEIT GENT

doctoral program in
Political Sciences

IWETO Discipline Codes: S195, S211, S220
IWETO Application Codes: 890, 260, 870

Development Aid to Water Management in Mali

The Actors, 'Global' Paradigms, and 'Local' Translations

Jan L.H. Cherlet

Supervisor	**Coordinator**	**Supervisor**
Università di Bologna	Università di Bologna	Ghent University
Prof. Dr. Roberto Scazzieri	Prof. Dr. Giuliano Pancaldi	Prof. Dr. Koen Vlassenroot

Final Exam 2012

Development Aid to Water Management in Mali

The Actors, 'Global' Paradigms, and 'Local' Translations

Contents

List of Figures

List of Tables

Preface

Development aid has always been a controversial *practice* as well as a value-laden *research subject*. Conceived after World War II most probably as a vaccine against the creeping influence of communism, disdained by many for never achieving the objectives, accused of perpetuating the North's colonial-like hegemony, believed to smother any burgeoning self-reliance of the Global South, one time labeled as a bottomless pit, another time as a hopelessly under-financed commitment, development aid seems to elude unbiased analyses. My research will *not* embroider on these themes, nor judge whether development is 'good' or 'bad'. My research takes the practices of development aid *in themselves* as object of research. Indeed, before anything, development aid is realized through a complex ensemble of social interactions that involve actors of extreme diversity—and although these interactions happen to have important impacts in many parts of the world, rigorous empirical descriptions of these interactions remain unduly overshadowed by ideological discussions about the 'desirability' or 'effectiveness' of development.

All research stems from a sensation of amazement, and mine is no exception. There is, on the one hand, the observation that development aid brings together extremely heterogeneous actors, such as multilateral donors, development professionals from the Global North and South, the private sector from the North and from the South, government employees, village chiefs, farmers. These actors are incredibly diverse in terms of financial resources, outreach, interests, cultural background and world view. On the other hand, when it comes to delivering development aid and implementing projects, they all seem to speak the same development jargon and to display congruence and commensurability; this congruence seems to extend from the donor, over the development professional, to the village chief. And although the ideas about what counts as 'good' and 'bad' aid have constantly changed over time —with new concepts, theories, and policies sprouting every few years— the *apparent congruence* amongst actors more or less remains.

The questions that I posed myself were then: How can the congruence between actors be explained against the background of heterogeneity and the constantly changing ideas? When a new idea emerges, where does it come from and how does it gain support? Is this support really homogeneous amongst all actors or is it just an appearance?

At first sight the answer to these questions seems simple: the man with the money has the power to align all minds; everyone dances to his tunes. My observations, however,

revealed that things are *not* as simple as that. Indeed, in order to get an answer to my questions, I tried to observe development aid from the vantage point of different actors, by establishing some long-term physical presence at different point in the development aid network. To limit the scope of the research I focused on development aid in water management (including access to drinking water). The three standpoints that I occupied were those of (i) an intergovernmental organization that advocates an integrated management of water resources, (ii) a non-governmental development organization (NGO) specialized in water projects in Africa and Latin America, and (iii) a number of rural villages in a wetland area in Mali.

The dissertation is organized in four parts. Part I sketches the context of the research. In particular, chapter 1 sets the scene, introduces the actors in global development aid, describes the dimensions of the global water crisis, and highlights the principal development organizations involved in the water sector. Chapter 2 rephrases my previously introduced research questions in more scholarly terms and describes the state-of-art in the field. Chapter 3 describes in detail the three sites where data was collected. Part I ends with a motivation of my research from a more ethical perspective.

Parts II and III collect six original articles —respectively four empirical and two theoretical articles— that report my own research. They were written to be published in journals, so each of the chapters in these two parts can be read independently.[1]

The four empirical articles of Part II focus on two paradigms that seem to be hegemonic in contemporary development aid: *Capacity Building (CB)* and *Integrated Water Resources Management (IWRM)*. The first is used by development actors to emphasize that they focus on the skills and competences of water managers, rather than on technical solutions. The latter paradigm advocates a cross-sectoral management of water. Chapter 5 explores the genealogy of the Capacity Building paradigm, and links it to the perennial tendency of development aid to invoke technological determinism. Chapter 6 describes how the Capacity Building paradigm is interpreted differently by the different actors involved in a development project in Mali. Chapter 7 compares the implementation of IWRM-inspired water policy reforms in Burkina-Faso and Mali, and scrutinizes the role of individuals in this process. Chapter 8 describes the emergence of IWRM in the sphere of intergovernmental organizations and the deployment of IWRM in Mali. The chapters 6 and 8 use Actor-Network Theory, partially or entirely, to describe the processes that sustain the translations and deployments of the paradigms.

The first theoretical essay of Part III demonstrates that ethnographic data is inevitably conditioned by theoretical assumptions at the onset of the research (chapter 9).

[1]This means that there is some repetition in the articles. The advantage is that the articles can be read independent from each other and in any order.

The second article reflects on the adequacy of combining multi-sited ethnography as data collection tool with Actor-Network Theory as data description tool (chapter 10).

Part IV summarizes the conclusions from the six articles. This is done in two steps. First, I respond in scholarly terms to my initial research questions as they were formulated in chapter 2. In a second step I translate the academic and highly context-specific conclusions into some practical implications that hopefully make sense to the development practitioners themselves.

Whichever the background of the reader, this dissertation will be challenging and require an open mind, since it floats between different disciplinary fields and research subjects. Nevertheless, I am not sure whether this research could be called *interdisciplinary*. I have always wondered what interdisciplinarity actually means, especially if one does not want to economize on methodological rigor.

From theoretical point of view, my research largely inscribes itself in a discipline that could be broadly defined as social anthropology, with a particular conceptual grounding on the subfield of 'science and technology studies', and to a some extent also on 'political ecology'.

The research methodology is unequivocally qualitative and typical of social anthropology; data was collected through participant observations, focus group discussions, interviews, and to a minor extent from policy documents and reports.

The subject of the research is also clearly circumscribed; the research is concerned with the *social interactions* that compose the act of *doing development aid*. Development aid takes many forms and is active in many fields, therefore I chose to focus on one sector in particular: the water sector.

The conclusion is that I did not combine different research methodologies from different disciplines, nor did I fit together diverse theoretical concepts in a gaudy patchwork. I can think of only two reason why my research could be termed 'interdisciplinary'. First, it applies theoretical concepts (such as Actor-Network Theory) that are typical of one discipline (Science and Technology Studies) to subjects that are not readily analyzed by that concept or discipline. Second, it employed participant observation as data collection tool in settings that are unaccustomed to being observed in that manner.

Acknowledgements

This research was a particularly ambitious one, in multiple senses. At organizational level, it aimed to be a Joint PhD research project of two universities in two different countries. In intellectual terms, it forced a dialogue between disciplines that do not converse very often. In methodological terms, it aimed at the collection of data from three completely different sites of inquiry.

Yes, the organization could easily have slipped into chaos; the conversation between disciplines could have turned into a Tower of Babel; or the data could have been too fragmented. Instead, this PhD project turned out to be a great success (in my opinion) and this would not have been possible without the pro-active help of many, many people.

In the first place I need to thank three professors: Giuliano Pancaldi, Roberto Scazzieri and Koen Vlassenroot. Each in their own way, they have guided me in my PhD journey—in the intellectual explorations and in the practical organization. Not at the least they have offered their absolutely unconditional help in all practical matters of my ambitious research.

Obviously, many other people have also helped to improve the intellectual and methodological set-up of my research and the interpretation of the data. I am very grateful to the help and comments I have received from Anna Guagnini, Anna-Maria Gentili, Armando Caracheo, Daniela Crocetti, Enrico Petracca, Francesco Martini, Giuditta Parolini, Ivan Severi, Marta Cavazza, Massimo Riccottilli, Matteo Serafini, Raffaella Campaner, Rupsha Banerjee, Tommaso Panajoli and the many other colleagues connected to the doctoral program in *Science, Technology and Humanities* and/or the University of Bologna; from Christopher Parker, Els Lecoutere, Haidari Misafi, Jeroen Adam, Jeroen Cuvelier, Karen Büscher, Koenraad Bogaert and the many other colleagues at the *Centre of Third World Studies at Ghent University*; from the participants of Track 40 at the 2010 EASST conference; from the participants of the DIMEDEV workshop in Jena; from Saurabh Arora, Yuti Ariani, and the participants of the TIS seminar at the Technical University of Eindhoven; from the faculty and students of the 2011 BIARI institute; from my like-minded colleague Jean-Philippe Venot at IWMI.

I acknowledge that my research was supported by a doctoral scholarship from the Italian Ministry of Education, Universities and Research (MIUR), and co-funding from the

Special Research Fund (BOF) of Ghent University. A special word of thanks is directed to the administrative personnel of the University of Bologna and Ghent University for their impeccable reliability, and for having handled without much trouble the *joint* set-up of my PhD: Angela Maritato, Doreen Rogier, Francesca Cottone, Hilde Van Peteghem, Kim Vlaminck, Koen Vanrumste, Kris De Pue, Lien Bertrem, Mara Caputo, Silvia Rodolosi, Torsten Dhondt, and the many other people that work behind the stage and that I did not meet in person.

It goes without saying that this research would have been impossible without the help of many people in the field, who were so kind to tolerate my unrelenting presence and to share their knowledge with me. I warmly thank all the people of my favorite NGO: Carine, Dirk, Huub, Johan, Johan, Kristien, Marc, Peter, Stef, Tomas, and colleagues. In particular, a very heartfelt word of thanks goes to Johan S for mentoring me and sharing his many insights. I am also profoundly in debt with the following people in the wonderful country Mali: Amadou, Cheick, Edy, Harouna, Moussa, Ousmane. Edy, your helpfulness knows no bounds. Finally, I stand in awe of the hospitality with which I was welcomed in sunny Stockholm. Sincere thanks go to: Alex, Ania, Aurélie, Danka, Helena, Helene, Jacques, John, Karin, Kenge, Steven, Suzanna and all other colleagues at the Global Water Partnership. Aurélie, I wish all PhD students could have a tutor as supportive as you. Of course I also thank the many other informants in the field who were so kind to share their knowledge with me.

There are no words to express the profound gratitude I feel for the unconditional and persistent love and support of my family: Rosa, Patrick, Sofie, Hans. Liefste Sofie en Hans, al goed dat een zwervende ziel als ik altijd onderdak en genegenheid kan vinden bij jullie. Bedankt om mijn eeuwige rots in de Gentse branding te zijn! Liefste ouders, zonder jullie onvoorwaardelijke liefde en jullie onaflatend vertrouwen in mijn capaciteiten zouden de vreemde bokkesprongen die in ik in mijn leven gemaakt heb mij nooit gebracht hebben tot het mooie punt waar ik nu sta. Bedankt voor de —ondertussen— dertigjarige liefde en steun!

And finally I thank Sara, my partner in life, to whom I dedicate this dissertation, for her inexhaustible love and support. Cara Sara, una dedica in una tesi non basta per esprimere quanto tu significhi per me. Ma rimarrà per sempre un fatto che senza di te questa tesi semplicemente non esisterebbe. Giorno dopo giorno mi hai appoggiato, da vicino o da lontano, e mi hai dato la tua energia. Sei il mio sole e senza di te non fiorisco.

Ghent, 4 June 2012

Jan Cherlet

Acronyms and abbreviations

ABFN	*Agence du Bassin du Fleuve Niger*, Niger River Basin Agency (in Mali)
ACAST	UN Advisory Committee on Science and Technology for Development
AfDB	African Development Bank
AFD	*Agence Française pour le Développement*, French Development Agency
AMCOW	African Ministers' Council on Water
ANICT	*Agence Nationale d'Investissement des Collectivités Territoriales National Investment*, Agency for Investments of the Local Governments (in Mali)
ANT	Actor-Network Theory
AQMI	*Al-Qa'ida au Maghreb Islamique*, Al-Qa'ida in the Islamic Maghreb
BMU	*Bundesministeriums für Umwelt*, Federal Ministry for the Environment (in Germany)
BMZ	*Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung*, Federal Ministry for Economic Co-operation and Development (in Germany)
BOAD	*Banque Ouest Africaine de Développement*, West-African Development Bank
BTC	Belgian Technical Cooperation
CB	Capacity Building (or Capacity Development)
CIDA	Canadian International Development Agency
CWP	Country Water Partnership
DAC	Development Assistance Committee (of OECD)
Danida	Danish International Development Agency

DGD Directorate-General for Development (in Belgium)

DGH *Direction Générale de l'Hydraulique*, General Directorate of Hydraulics (in Burkina Faso), renamed as DGRIH, then DGRE

DGRE *Direction Générale des Ressources en Eau*, General Directorate of Water Resources (in Burkina Faso)

DGRIH *Direction Générale de l'Inventaire des Ressources en Eau*, General Directorate of the Inventory of Water Resources (in Burkina Faso), later renamed as DGRE

DHI Danish Hydraulic Institute

DNACPN *Direction Nationale de l'Assainissement et du Contrôle des Pollution et des Nuisances*, National Directorate of Sanitation and of Pollution and Nuisance Control (in Mali)

DNH *Direction Nationale de l'Hydraulique*, National Water Directorate (in Mali)

DRHE *Direction Régionale de l'Hydraulique et de l'Energie*, Regional Directorate for Water and Energy (in Mali)

DSE *Deutsche Stiftung für internationale Entwicklung*, German Foundation for International Development

ECOWAS Economic Community of West African States

EU-WF EU Water Facility

EU-WFD EU Water Framework Directive

EU-WI EU Water Initiative

FAO Food and Agriculture Organization of the United Nations

FCFA West African CFA Franc (1000 FCFA = 1.52449 EUR, fixed)

GDP Gross Domestic Product

GEF Global Environment Fund

GHENIS *Gestion Hydro-Ecologique du Niger Supérieur*, Hydro-Ecological Management of the Upper Niger (project in Mali)

GIRENS *Gestion Intégrée des Ressources en Eau du Niger Supérieur*, Integrated Management of the Upper Niger Water Resources (project in Mali)

GIZ	*Deutsche Gesellschaft für Internationale Zusammenarbeit*, German Society for International Cooperation, previously GTZ
GTM	Grounded Theory Method
GTZ	*Deutsche Gesellschaft für Technische Zusammenarbeit*, German Society for Technical Cooperation, renamed as GIZ
GWI	Global Water Initiative
GWP	Global Water Partnership
ICT4D	Information and Communication Technologies for Development
ICWE	International Conference on Water and Environment, in Dublin, 1992
IDWSSD	International Drinking Water and Sanitation Supply Decade
IFAD	International Fund for Agricultural Development (of the United Nations)
IMF	International Monetary Fund
IND	Inner Niger Delta (in Mali)
IUCN	International Union for Conservation of Nature
IWRA	International Water Resources Association
IWRM	Integrated Water Resources Management
IWRMIND	Integrated Water Resources Management in the Inner Niger Delta (project of WaNGO)
KfW	*Kreditanstalt für Wiederaufbau*, German Development Bank
K&T	Knowledge and Technology
MAHRH	*Ministère de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques*, Ministry of Agriculture, Hydraulics and Fishery Resources (in Burkina Faso)
MDGs	Millennium Development Goals
MdO	*Maîtrise d'Ouvrage*, Ownership of works and infrastructure
MEA	*Ministère de l'Environnement et de l'Assainissement*, Ministry of Environment and Sanitation (in Mali)

MMEE *Ministère des Mines, de l'Energie et de l'Eau*, Ministry of Mines, Energy and Water (in Mali)

MNLA *Mouvement National pour la Libération de l'Azawad*, National Movement for the Liberation of Azawad

NBA Niger Basin Authority (transnational)

NFI Nordic Freshwater Initiative

NGO Non-Governmental Organization

ODA Official Development Aid

OECD Organisation for Economic Co-operation and Development

PACR *Projet d'Appui aux Communes Rurales*, Project of Support to the Rural Municipalities (project of UNDP in Mali)

PAGIRE *Plan d'Action National de Gestion Intégrée des Ressources en Eau*, National Action Plan for Integrated Water Resources Management (in Mali)

PANA *Programme d'Action National d'Adaptation aux Changements Climatiques*, National Action Plan for Adaptation to Climate Change (in Mali)

PAWD Partnership for Africa's Water Development (project of GWP)

PD-DDIN *Programme de Développement Durable dans le Delta Intérieur du Niger*, Program for Sustainable Development in the IND (Dutch project in Mali)

PDSEC *Plan de Développement Social, Economique, et Culturel*, Plan for Social, Economic and Cultural Development (at municipal level in Mali)

PNE-Mali *Partenariat National de l'Eau*, National Water Partnership (in Mali)

PNIR *Programme National d'Infrastructures Rurales*, National Program for Rural Infrastructure (project of the World Bank in Mali

PPP Purchasing Power Parity

PROSEA *Programme Sectoriel Eau et Assainissement*, Sectoral Program for Water and Sanitation (in Mali)

RWP Regional Water Partnership

SEI	Stockholm Environmental Institute
SEODC	Special Evaluation Office Development Cooperation (in Belgium)
SIDA	Swedish International Development Agency
SI-NGO	Non-Governmental Organization for Social Intermediation
SIWI	Stockholm International Water Institute
SP-PAGIRE	*Secrétariat Permanent du Plan d'Action pour la Gestion Intégrée des Ressources en Eau*, Permanent Secretariat for the IWRM Action Plan (in Burkina Faso)
SSA	Sub-Saharan Africa
S&T	Science and Technology
SWS	Stockholm Water Symposium
SWWW	Stockholm World Water Week
TA	Technical Assistance
TFPs	Technical and Financial Partners
UN	United Nations
UNCED	United Nations Conference on Environment and Development, in Rio de Janeiro, 1992
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Changes
VREO	*Valorisation des Ressources en Eau de l'Ouest*, Development of Water Resources in the West (project in Burkina Faso)
WACDEP	Water, Climate, and Development Programme (project of GWP)
WaSH	drinking Water, Sanitation, and Hygiene
WFD	Water Framework Directive (in the European Union)
WSS	Water Supply and Sanitation
WSSD	World Summit on Sustainable Development, in Johannesburg, 2002

WSSCC Water Supply and Sanitation Collaborative Council

WATAC West African Technical Advisory Committee (of GWP)

WWC World Water Council

WWF World Water Forum

Part I

Context and design of the research

Chapter 1

Setting the scene

> *For the first time in my life I encountered myself in front of a vast expanse of water. In those days the abundance of water at the confluence of the two rivers was such that one could barely discern the other bank.*
>
> Amadou Hampâté Bâ — Amkoullel, l'enfant Peul

In the middle of the Sahel, about five hundred kilometers northeast of Bamako —the fast growing capital of Mali— the Niger river and the Bani river merge and they give shape to an immense wetland area whose size surpasses that of Sicily or Belgium. In this fertile wetland, known as the Inner Niger Delta, around one million people make a living of agriculture, fishing, and animal husbandry. The river regulates all aspects of their lives. In the months during and after the annual rainy season, that extends from June to September, the water level rises four to six meter and floods the entire Inner Niger Delta. The rural villages that were surrounded by a barren and dusty landscape in May, become small islands by September. For some months most villages are only accessible by *pirogue*. Ingenious, century-old water control infrastructure retains the flood water in perimeters and ponds for agriculture and fishing. Pastoralists and their herds leave the Delta before the rainy season starts, and return towards the end of November when the water has started retreating again and pastures in the Delta are full of fresh *bourgou* grass. However, although the Inner Delta is one of the most abundantly irrigated areas in West Africa —sometimes promoted as the 'bread basket' of West Africa— less than *half* of the population in this area has access to safe drinking water. Waterborne and water-related diseases cause 14.6% of the total disease burden in Mali,[1] compared to a global average of 6.2%, and this number is even much higher in the Inner Niger Delta.[2]

[1] Mainly caused by diarrhea and malaria.

[2] It is estimated that 4% of the global disease burden derives from a lack of access to safe drinking water or improved sanitation, and 2.2% is caused by malaria (WHO, 2008).

Figure 1.1: Mali and its neighboring countries in West Africa

Mopti, the capital city of the region that encompasses the Inner Niger Delta, is a major hub for boat transport along the Niger river. Constructed on three interlinked islands, this lively port city is strategically located right at the confluence of the Niger river and Bani river. The principal land highway that connects Bamako in the tropical South with the ancient trade cities Gao and Timbuktu in the arid North, circumvents the Inner Niger Delta and passes some ten kilometers east of Mopti. Right there, on the dry eastern 'bank' of the Inner Niger Delta, at the crossroad through which all the road traffic from Bamako to Mopti, Gao or Bandiagara must pass, the orderly town Sévaré emerged. Sévaré is a popular location for foreign aid organizations to install a regional office.[3] Organizations such as USAID, Care, Save the Children, Plan International, World Vision, or IUCN are all present in Sévaré. It must be the town with the highest concentration of white pickup cars[4] in Mali. Also regional governmental entities prefer to have their offices in Sévaré rather than in Mopti, and France even has a military base near Sévaré.

In late September 2010, in the largest hotel of Séveré, that is situated right along the main road to Bamako, I attended a one day conference concerning the 'municipal ownership' (or *maîtrise d'ouvrage communale*) of water infrastructure. The conference was attended by representatives of non-governmental organizations (NGOs) that are active in Mali's water sector (water management and/or drinking water supply), by government delegates, national and Western consultants, and the mayors of some rural villages in the Inner Niger Delta. The purpose of the meeting was to discuss how governmental and non-governmental development actors should help the rural municipalities in assuming their responsibility of planning the construction of water infrastructure (including drinking water supply infrastructure) in their territory, effectively monitoring and controlling the construction of the infrastructure, and managing the exploitation of the water infrastructure. According to the Malian law, the municipality is the only competent decision-making body in these matter. However, most external interveners consider the rural municipal councils to lack the adequate human resources to assume this role. This conference was invoked to discuss this problem, which is very prominent in the rural parts of the Inner Niger Delta.

After all represented organizations had presented (in fluent French) their viewpoints during the morning sessions, the spokesman of the regional government —who was chair of the conference— finally addressed the few mayors themselves in the afternoon and asked: "What is needed, according to you, so that the municipalities can more effectively assume their responsibilities as *maître d'ouvrage*?" The first to answer was a timid, elderly mayor whose hesitant and very soft spoken answer was incomprehensible to the majority

[3]The situation has drastically changed, first, because of more frequent kidnappings by al-Qa'ida in the Islamic Maghreb (AQMI) since late 2010, and second, because of the military insurgence of the National Movement for the Liberation of Azawad (MNLA) and Ansar Dine in early 2012. Most aid organizations have withdrawn their international personnel from Sévaré and Mopti to Bamako in 2011.

[4]The favorite car of international aid organizations.

of the conference attendees. There was some squabbling in the group and finally some participants suggested, with a tone somewhere between compassion and irritation, that the mayor could answer the question in Bambara, the *lingua franca* of the Malian population.[5] The spokesman of the regional government intervened and indulgently stated: "There is no need to speak in Bambara. The mayor speaks French well. I could clearly understand that according to him the municipalities *lack the capacities* to assume their legal responsibilities."

That the rural municipal councils "lack the capacities to fully assume their legal responsibilities" would not be a surprising answer, were it not that the concept 'capacity' has a very specific meaning in the context of development aid. 'Capacity building' or 'capacity development' is a paradigm that is nowadays widely cited by aid organizations to distance their work from old-fashioned 'technical assistance'. Capacity building is about improving the capabilities and skills of the beneficiaries. Technical assistance, instead, merely relied on *Western* technology and *Western* technical experts without building *local* capacities. Technical assistance was 'flawed', capacity building is the 'correct' way.

Earlier in 2010, I had spent some time at the headquarters of an international NGO that was also present at the Sévaré conference in September. During the participant observation at their headquarters, I witnessed that the Belgian Directorate for Development Cooperation, one of the principal donors of the NGO, obliged the NGO to state more clearly in their project proposals how the NGO intended 'to build the capacities' of their partners in the Global South. One of the NGO employees was then charged with the task to devise an operational strategy on 'capacity building'—for this purpose he frequented some of the many workshops that were being organized by private consultants and public network organizations on 'capacity building'. This sudden 'capacity' buzz was not surprising at all, as the entire Belgian NGO sector had been subjected, during the winter of 2009-2010, to an independent evaluation of the modes and effectiveness of the NGOs' capacity building activities in the Global South. It was, however, surprising to notice that capacity building had a prominent role, not only in the discourse of the NGO, the donor, and development consultants, but also in the discourse of the mayor of a rural Malian municipality who hardly spoke French.

By means of this Sévaré scene I have introduced an apparent contradiction in development aid. On the one hand, development aid is carried by a very complex network of actors: donors, multilateral agencies, development professionals from the Global North and South, the private sector from the North and from the South, governmental administrations, village chiefs, grassroots NGOs, farmers, and so on and so forth. These actors are incredibly diverse in terms of interests, cultural background and values, world view,

[5]French is the official language of the Malian government and, hence, it is the language used by all development actors. It is estimated, however, that only 15% of the population speaks French (Konaté *et al.*, 2010). The language that is most spoken by the population is Bambara (or Bamanankan for the speakers themselves); 80% speaks Bambara as first or second language.

level of education, financial resources, and outreach. On the other hand, when it comes to delivering development aid and implementing projects, all actors speak the same development jargon and seem to display congruence and commensurability. This congruence seems to extend from the donor over the development professional to the mayors and the village chiefs. And although the ideas about what counts as 'good' and 'bad' aid have significantly changed over time —the idea of 'capacity building' replacing the idea of 'technical assistance'— the *apparent congruence* amongst actors more or less remains.

The questions that I asked myself were then: How come that all the actors involved in development aid apparently think in the same way? Is it merely a strategy to get into the pocket of the donor, or are the social dynamics in development aid more complex? Where do the new concepts and theories, such as 'capacity building', come from and how do they gain support? Do all these actors interpret a new development concept or theory, such as 'capacity building', in the same way?

To answer these questions I observed development aid in the water sector, from different standpoints. One of my standpoints was the above described Inner Niger Delta in Mali. Other standpoints were the headquarters of a multilateral organization in Stockholm and the headquarters of a development NGO in Belgium.

In the rest of this first chapter I first introduce the setting of development aid and the principal actors in this setting. Then I explain the dimensions of the global water crises and describe the general outline of development aid in the water sector.

1.1 The global development aid machinery

The origins of development aid are usually situated at the end of World War II, when the Western countries recognized the need of collaboration in order to reconstruct war-torn Europe and to secure world peace. In July 1944 the financial ministers of 44 countries met in Bretton Woods and created the International Monetary Fund (IMF) and the Bank for Reconstruction and Development, commonly known as the World Bank. First deployed to implement the Marshall Plan in Europe, the Bretton Woods institutions were soon active in other (re-)emerging parts of the world as well (Nolan, 2002).

The United Nations system (UN) was created in 1945 to replace the preceding but flawed League of Nations (Nolan, 2002). The UN Economic Affairs Department soon started experimenting with 'technical assistance' to the 'underdeveloped countries'. In 1949, under impetus of the United States, an 'Expanded Program of Technical Assistance' was created under the UN umbrella (Owen, 1950). In 1965 this became the United Nations Development Programme (UNDP).

Since the 1950s until today, the global aid industry has grown considerably (Degnbol-Martinussen and Engberg-Pedersen, 2003; Burall and Maxwell, 2006). In 1992, in Rio de Janeiro, at the United Nations Conference on Environment and Development (UNCED),

the signatories of *Agenda 21* agreed to allocate 0.7% of their gross national income (GNI) to development aid. To date, only the Scandinavian countries, Luxembourg and the Netherlands have attained this percentage. The United States, who never adopted this goal, are the largest governmental donor of the world in absolute terms, but in relative terms they rank only 19^{th} of 23 (OECD, 2011). In 2010 the members of the Development Assistance Committee (OECD-DAC) —the club of donors from the Global North— spent on average 0.32% of their GNI on aid. Or in other words, global aid amounted to one quarter percent of the global economy (OECD, 2011).[6]

The different categories of actors. Development aid involves a plethora of organizations, agencies, and special purpose vehicles. The complexity of the network grows faster than the volume of aid itself (Burall and Maxwell, 2006). We can roughly distinguish four different categories of organizations (see Figure 1.2). First, the largest portion of aid flows through bilateral channels, which directly connect governmental organizations from the Global North with governmental organizations in the South.

The governments of the Global North also finance a set of multilateral organizations —the second category— such as the UN, the European Union, or the World Bank. The multilateral organizations handle around one-third of the official global aid. The once indisputable power of the World Bank has gradually been declining in favor of regional development banks such as the African Development Bank (AfDB) and other multilateral financing schemes such as the International Fund for Agricultural Development (IFAD) or the Global Environmental Facility (GEF) (Lele *et al.*, 2010).

Non-governmental organizations (NGOs) form the third category. Existing already since colonial times, the number of NGOs has increased explosively over the second half of the twentieth century, both in the Global North and the Global South. In this category I also place the private philanthropic organizations, such as the historical Ford and Rockefeller foundations, the very recent Bill & Melinda Gates foundation, as well as the (in the West largely unknown) Aga Khan foundation. The NGOs and foundations claim an added value with respect to the governmental and multilateral organizations, for being rooted in the ground level, being more flexible, representing the interests of peoples rather than governments, and for swiftlier catching the real problems of people living in the poor countries (Rottenburg, 2009). Most scholars do indeed concur that NGOs and foundations can complement the large-scale programs of governmental and multilateral organizations (Fisher, 1997).

The fourth category is the private sector. Not only does the aid sector rely on thou-

[6]It goes without saying that, although the West has spent over $2.3 trillion on development aid since the early 1950s, this figure is by far outstripped by the sums that the West has spent to protect the own markets from imports produced in precisely those countries that are the beneficiaries of the development aid, as well as the sums that the aid-receiving countries could earn if international trade barriers were removed (Chang, 2007; Rottenburg, 2009).

sands of private consultants to define or evaluate development policies and projects, the three aforementioned categories also need the private sector from the North and the South to provide the services at the end of the aid assembly line: private companies are contracted to *build* the dam, *dig* the water well, *construct* the pipe network, or *manage* the infrastructure.

Changing ideologies. The development sector is characterized by continuously changing approaches to 'doing development aid' (Cornwall, 2007; Kremer *et al.*, 2009b). These changes largely correlate with the changes in the broader political and intellectual context of each era (this is also the topic of chapter 5).

After World War II, with the defeat of Nazism, communism remained the only threat to world peace—according to the West. Therefore, the development aid of the 1940s-1960s was designed to stem the influence of communism in the recently independent or soon to become independent nations in the Global South (Ross, 2003; De Haan, 2009). Aid was centrally planned (at the UN, the World Bank, or somewhere else in the North), based on capital investments (the 'big push') and technology transfer (the 'tech-fix'), and focused on productive and economic growth. It was believed that national economic growth would 'trickle down' and as such improve the lives of the poor (Nolan, 2002).

The appointment of Robert McNamara as head of the World Bank in 1968 heralded an era of more attention to equity, rural development, and the needs of the very poor. Agriculture started do be seen as a productive sector, rather than a traditional sector antithetic to modernization. This period also witnessed the rise of criticism on development from within the Global South, in particular from the marxist 'Dependency School'.

In the 1980s, the attention swung back to 'growth', propelled by a neo-liberal wind in the multilateral organizations. This new wind was largely motivated by the unsustainable debts accumulated by several developing countries. 'Structural adjustments' were imposed on the aid-receiving economies, in a bid to reduce the state-involvement and to let market forces do the job. It was, nevertheless, also the decade in which the concepts of 'human capital' and 'human development' saw the light (De Haan, 2009).

Poverty reduction was brought back in the policies in the mid 1990s. The 'structural adjustment plans' became 'poverty reduction strategy plans'. In 2000 the world agreed to particularly concentrate the aid on eight Millennium Development Goals, all of them addressing the needs of the poorest. The Paris Declaration of 2005 further pushed the international agenda towards the needs of the people in the South. In Paris, governments agreed that the *ownership* of development needed to rooted in the South, that the governments of North and South should be *mutually accountable*, and that aid needed to better *aligned*, *harmonized*, and focused on *achieving results* in the lives of the poorest. The earlier mentioned 'capacity building' paradigm can be placed in this context of increased attention to ownership (more details in chapters 5 and 6).

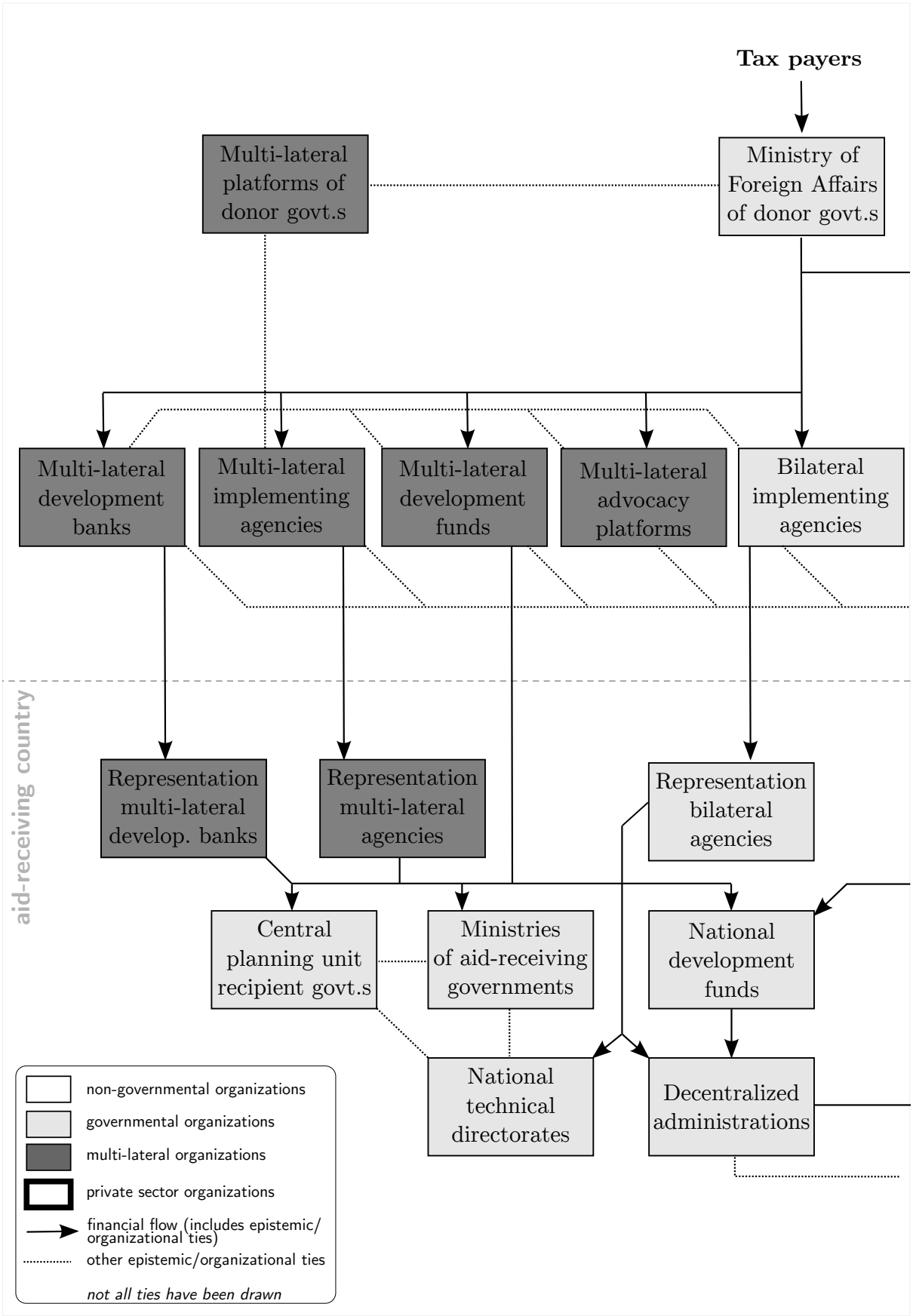
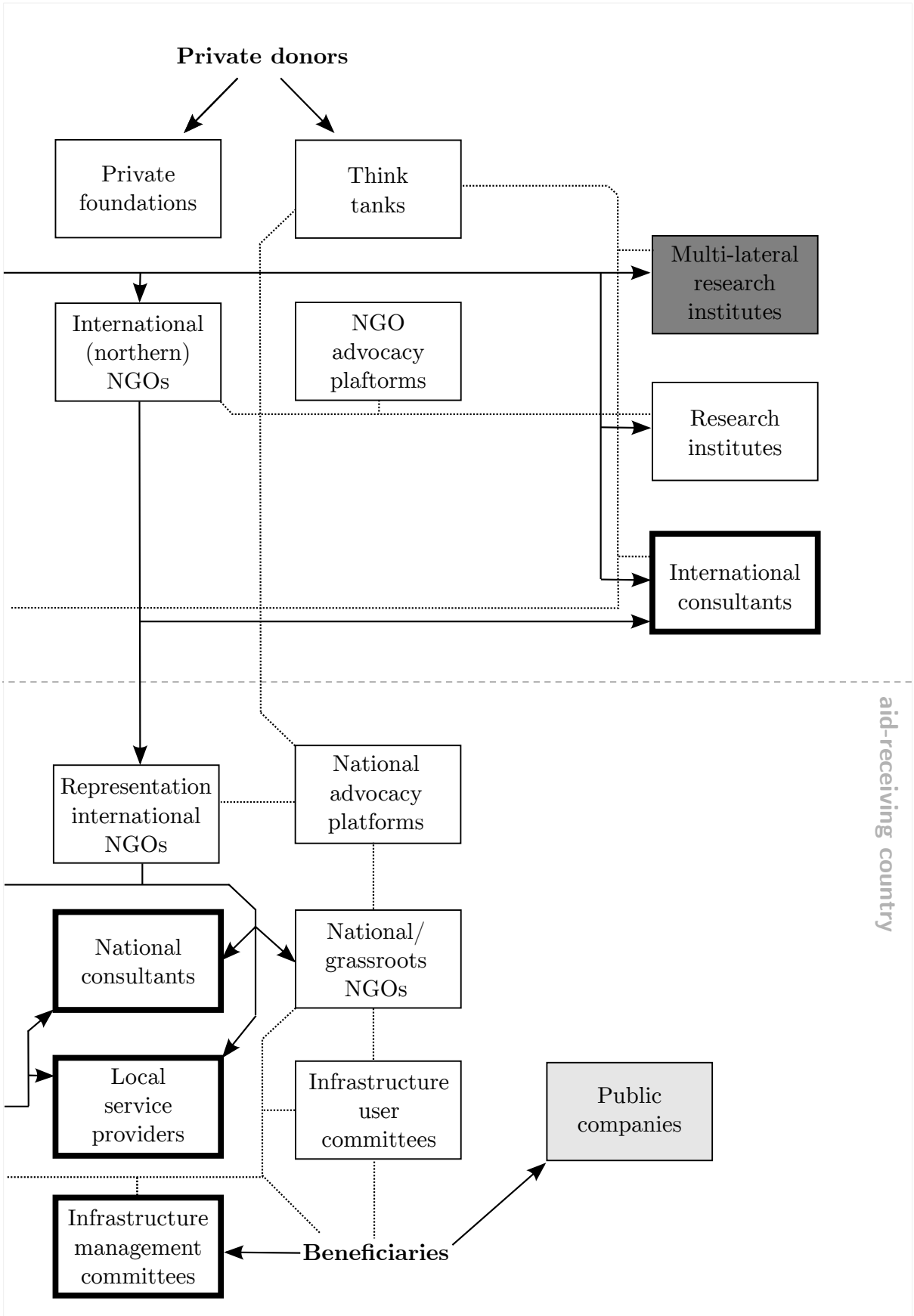


Figure 1.2: Types of development organizations and the links between them.


Private donors
Private foundations
Think tanks
Multi-lateral research institutes
International (northern) NGOs
NGO advocacy plaftorms
Research institutes
International consultants
aid-receiving country
National advocacy platforms
Representation international NGOs
National consultants
National/ grassroots NGOs
Local service providers
Infrastructure user committees
Public companies
Infrastructure management committees
Beneficiaries

1.2 The global water crises

Water is a natural resource that is essential to food production, human health (drinking water, sanitation, food preparation), the environment, as well as industrial and energy production. All human and economic development therefore directly and indirectly depends on water. Moreover, as my brief introduction of the Inner Niger Delta showed, the various uses of water are interconnected. Therefore, in any form of development thinking or planning, water needs to be transversally addressed (UN-Water, 2012). That there is indeed an urgent need to do so, is shown by some macro data.

The macro view. Worldwide between 1.4 and 2.1 billion people live in water-stressed or over-exploited river basins, which means that their withdrawal of water approaches or exceeds the natural replenishment (IPCC, 2008). The much commented land grabbings in Africa are in reality driven by a need for water rather than a need for land, because Africa is the continent with the most unexploited water resources. The 60 million ha bought by foreign investors in Africa since 2009 include 150 billion m^3 of annual freshwater (GWP, 2011; Skinner and Cotula, 2011). In the Inner Niger Delta alone, foreign companies have applied for 870,000 ha of land leases since 2004 (Hertzog *et al.*, 2012).

Moreover, at global level, the spatial and temporal variability of water is increasing. Wet areas are observed to get wetter, dry areas to get drier (IPCC, 2008). The Sahel, for instance, is witnessing a consistent increase in temperature and decrease in precipitation over the past four decades (Zwarts, 2010). Mastering this erratic character of water distribution is necessary to adapt to climate change. In Sub-Saharan Africa, however, only 3% of agricultural land enjoys controlled irrigation (UN-Water, 2012). Increasing this number could increase the food security of this region, where malnutrition affects 30% of the population (FAO/WFP, 2010). In the Inner Niger Delta, 75% is malnourished, despite the fertility of the area. To the contrary, in Asia, a region where 41% of all cultivated land is irrigated, groundwater levels are dwindling due to excessive withdrawals.

A last but not less important crisis is that nearly 800 million people still lack access to safe drinking water. Most of them live in rural Sub-Saharan Africa (WHO-UNICEF, 2012). In some rural municipalities of the Inner Niger Delta, where water is abundant, only 20% of the population has access to a safe source of drinking water.

To conclude, the major challenges in the water sector are to increase the *productive* use of water to cope with the growing needs for food and energy, increase the *efficient* use of water in food, energy and industry, *balance* these different uses, and safeguard *equity*.

The micro view. In fact, these macro numbers *hide large inequalities*. Micro analyses reveal that it are always the poorest and subaltern who lack access to safe drinking water and sanitation, who live in the areas that are most prone to droughts or floods, and who

lack access to water for productive use (Mehta, 2005; UNDP, 2006; Harris *et al.*, 2011).

The various global water crises are above all crises of *governance* and *access*, rather than crises of bio-physical nature (UNDP, 2006). The Millennium Development Goals (MDGs), created in 2000 to address the needs of the poorest, include one goal on water: to halve, by 2015, the proportion of the population without access to safe drinking water and sanitation (Sachs, 2005). Anyhow, water is central to at least five of the eight MDGs.

1.3 Development aid to the water sector

The international aid to the water sector slightly increased in the early 1980s, thanks to the proclamation of an International Drinking Water and Sanitation Supply Decade, and has sharply risen since 2001, thanks to the adoption of the MDGs. In 2009, $8.3 billion, or 7% of all development aid, was directed to the water sector (OECD-DAC, 2012). Following the definition of OECD-DAC (2012), this comprised aid to:

- water supply and use, sanitation and solid waste management, education and training in water supply and sanitation (totaling 86.2% of the water aid);
- water resources policy, planning and programs, water legislation and management, water resources development, water resources protection (13.8% of the water aid).

Remark that the OECD-DAC definition of aid to water excludes the sponsoring of dams, because their construction is counted as aid to the agricultural sector (irrigation) or energy sector (hydropower). However, once considered a crucial development asset, dams have fallen into disfavor with the donors. The total aid to the construction or repair of dams currently equals one-tenth of the total aid to the water sector (OECD-DAC, 2012).

The principal bilateral donors to water and sanitation are, in order of absolute contribution: Japan, Germany, France and Spain (OECD-DAC, 2012). Bilateral donors tend to grow fond of particular aid domains, usually because the donor can rely on domain-specific technical capacity in the home country. Therefore, the Netherlands, Denmark and Sweden, who are small donors in absolute terms, firmly positioned themselves in the water *management* domain. Figure 1.3 gives an overview of the principal actors in the water sector (for easy comprehension the same outline as figure 1.2 was used).

As the definition of OECD-DAC exemplifies, donors continue to address 'water' as a separate sector that includes drinking water supply, sanitation, and some management aspects. Water is not yet fully considered as a transversal, trans-boundary, and cross-sectoral resource that is essential to all forms of human and economic development. The call to manage water in a cross-sectoral fashion is ever sounding louder though, as exemplified by recent UN publications (e.g. UNDP, 2006; UN-Water, 2009, 2012), but this idea is relatively recent, as demonstrated in chapter 8.

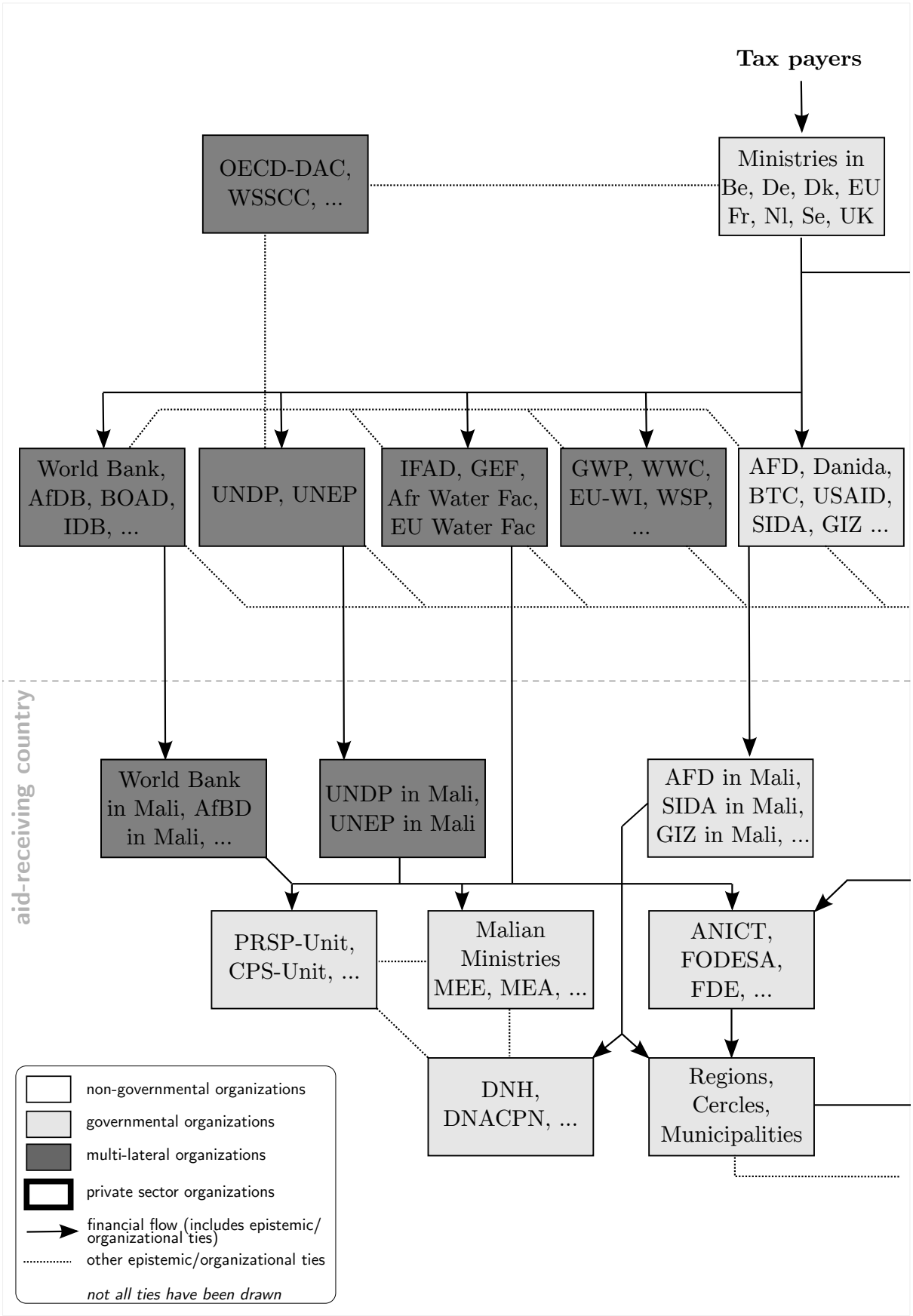
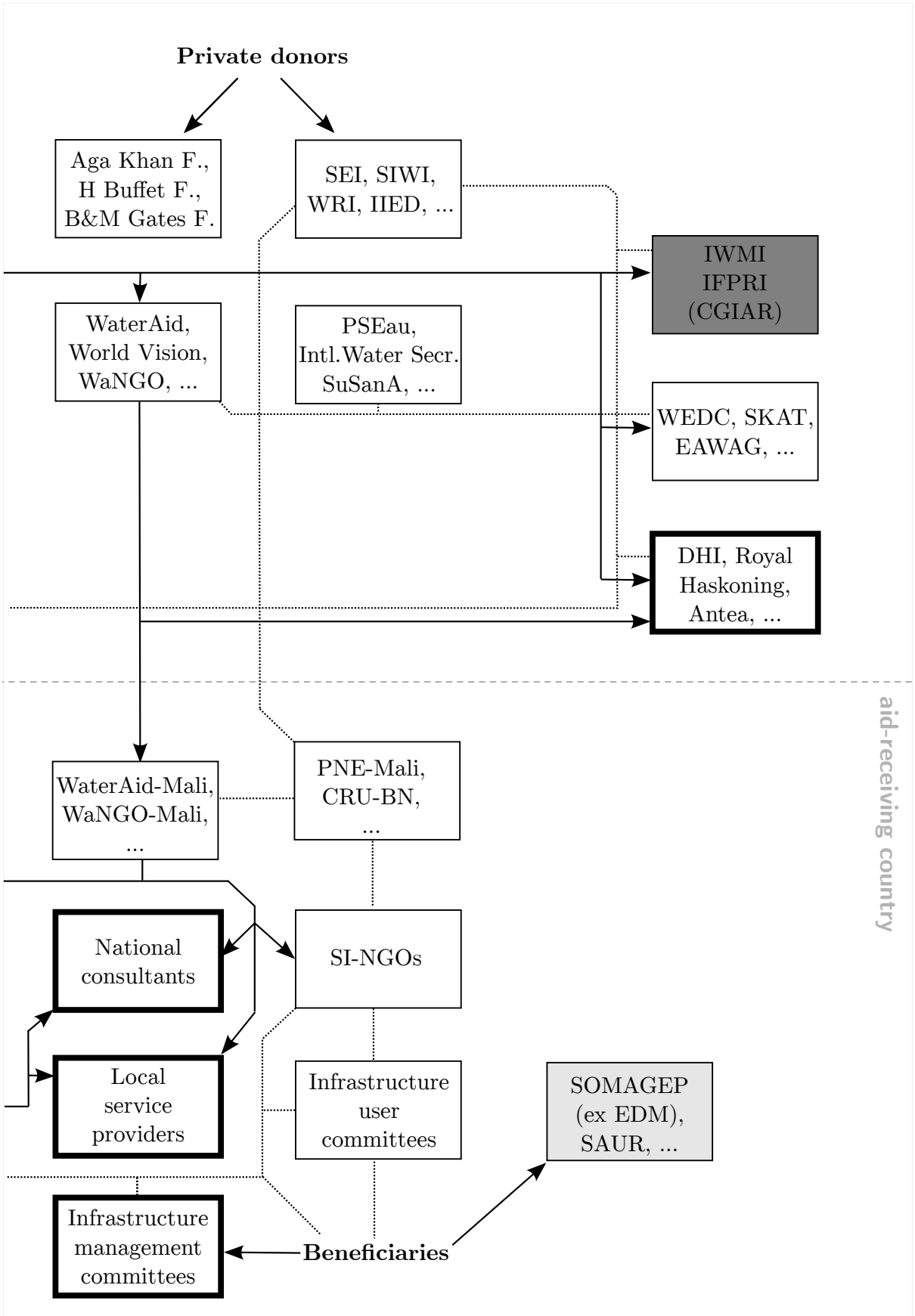


Figure 1.3: Organizations (international and Malian) involved in water development.


Private donors
Aga Khan F.,
H Buffet F.,
B&M Gates F.
SEI, SIWI,
WRI, IIED, ...
IWMI
IFPRI
(CGIAR)
WaterAid,
World Vision,
WaNGO, ...
PSEau,
Intl.Water Secr.
SuSanA, ...
WEDC, SKAT,
EAWAG, ...
DHI, Royal
Haskoning,
Antea, ...
aid-receiving country
WaterAid-Mali,
WaNGO-Mali,
...
PNE-Mali,
CRU-BN,
...
National
consultants
SI-NGOs
Local
service
providers
Infrastructure
user
committees
SOMAGEP
(ex EDM),
SAUR, ...
Infrastructure
management
committees
Beneficiaries

Chapter 2

Research question and outline

Now passing up the strait were we, sore grieving;
For here was Scylla, and there on t' other side
Did dread Charybdis swallow awfully

Homer — The Odyssey

Most major challenges that the world faces today, such as environmental degradation, unsustainable economic development, enduring poverty, chronic hunger, epidemics, or insecurity, have roots in human behavior and social dynamics. As a result, technology alone will not solve them; they need, above all, behavioral and social innovations. The social sciences increasingly engage with these real-world problems, but the portion of social scientists that do so nevertheless remains very small (Van Langenhove, 2012). At the origin of the present dissertation lay the desire to address real-world global problems.

Development 'assistance' (or 'aid', or 'cooperation')[1] was conceived in the 1940s to address some of the global challenges mentioned above. Since its inception it has become a noteworthy global business. In 2010, the global development aid network handled $143 billion, constituting nearly a quarter percent of the gross *global* economy (OECD, 2011).[2] In other word, at least one quarter percent of the global economy is supposedly at work to exclusively address these global challenges. Besides many other imaginable reasons, this makes a scrutiny of development aid more than worthwhile.

[1] Although laden with different connotations, 'development assistance', 'development aid' and 'development cooperation' are used interchangeably in this dissertation.

[2] Putting this number in perspective: The global aid sector is 6.5 times bigger than the global tobacco industry (Shafey *et al.*, 2009), but is only one third of the global arms industry (SIPRI, 2011). Global migrant remittances are estimated to mount to 2.3 times the global official aid (World Bank, 2012).

2.1 The need to observe development aid *per se*

It is useful to distinguish 'development' from 'development aid' as two different —yet intimately related— subjects of anthropological inquiry. The former is *an ideology about* socio-economic change that (loosely) draws inspiration from changes occurring in the Western world. The latter can be defined as *the actual ensemble* of the actors and interactions, the financial and material flows, and the policies and practices, that together aim at achieving this socio-economic change (Gould, 2008).

Ever since its emergence as discipline, anthropology has been in an ambiguous relationship first with the colonial rule (Asad, 1973), then the development assistance machinery (Grillo and Rew, 1985). Often docking itself on these structures, sometimes serving them, and sometimes heavily criticizing them, anthropology has approached 'development' and 'development aid' in a diversity of ways. At one end of the spectrum stand the *applied* anthropologists who are mostly concerned with development *aid* and who put anthropological methods and theory into action —mostly from within development agencies— in order to 'improve' the aid (e.g. Cernea, 1991; Horowitz, 1996). At the other extreme flock the *critical* anthropologists that besiege the development *ideology* —mostly from academic strongholds— to deconstruct it as a hegemonic Western narrative that politically, economically, and epistemologically continues to subdue the ex-colonies (e.g. Apthorpe, 1986; Hobart, 1993; Escobar, 1995; Crush, 1995).

For scholars of both sides of the spectrum it seems difficult to transcend the framework of development thinking itself (Gould, 2008). Therefore, somewhere in the middle of this spectrum lies important anthropological knowledge that is not readily explored, to wit, knowledge about the architecture and functioning of development cooperation *per se*: its actors and interactions, the relation between policy making and practice, the professional strategies of development experts, the strategies of the beneficiaries. Suchlike ethnographies of development aid, called 'aidnographies' by Gould (2004), that are not of an evaluative nor ideological nature, but that are strong in empirical rigor, remain rare.

The present dissertation is the result of such an observation of the complex but real-world *practice of delivering aid*. As explained next, the specific research questions at the basis of the observation stemmed from a sense of contradiction in development aid.

2.2 Research question

In the nearly seven decades that separate us from the inception of development aid, when the Bretton Woods institutions were created in 1944 and the United Nations in 1945, the community of development professionals have adopted a succession of very diverse ideas about *what* development actually *is*, and *how* it should be *implemented* by aid-delivering agencies and aid-receiving governments (Roberts, 2004; Thorbecke, 2007; Kremer *et al.*,

2009b; Nederveen Pieterse, 2010, see also section 1.1).

As Lindauer and Pritchett (2002) notice, the advice that the president of an average Sub-Saharan African country receives from donors and multilateral agencies in the 2000s is *very* different from what he would have been told in the 1950s or even the 1980s.[3] Indeed, each decade or so, the priorities of the development sector have changed to such an extent that some scholars have labeled those changes as genuine 'paradigm shifts' (Fine, 2002; Kremer *et al.*, 2009b) —following Thomas Kuhn's influential description of paradigm shifts in scientific communities (Kuhn, 1962). There are, in fact, many aspects of Kuhn's theory of paradigm shifts that apply strikingly well to the the community of development experts as well.

Writing about the history of science, Kuhn defined a 'paradigm' as the collection of "universally recognized scientific achievements that, for a time, provide model problems and solutions for a community of researchers" (Kuhn, 1962). The paradigm determines *what* the scientists need to observe, which research questions count as *interesting*, how the questions are to be *structured*, and how the results should be *interpreted*. The concept of 'paradigm' can thus easily be transferred to the community of development professionals to indicate the collection of 'model problems and solutions' that exemplify the vision of the community on *what* development is and *how* it is to be achieved. We could, hence, talk about the 'neo-liberal' paradigm of the 1980s (Fine, 2002), the 'ownership' paradigm of the late 1990s and 2000s, or the 'capacity building' paradigm of the 2000s (Kühl, 2009).

In the context of science as well as development, the paradigm stays in place as long as there is a sufficiently large community that sustains the paradigm with archetypal applications —'projects' and 'programs' in the case of development. Evidence that contradicts the paradigm is waived away. In fact, a paradigm not only includes a body of knowledge that is considered as 'received knowledge' by the community, the paradigm also provides a whole meaning-making framework that is incommensurable with that of preceding or competing paradigms. When a new community starts availing itself of the growing catalog of inexplicable evidence in an attempt to challenge the established paradigm, the choice of an individual to commit to the new paradigm is more the result of persuasion (Kuhn, 1962; Fine, 2002) and a switch to the meta-narrative of the other paradigm (Rottenburg, 2009), than of evidence-based conviction.

At least in one important aspect, however, the world of development aid significantly differs from Kuhn's world of scientists. Development aid brings together extremely heterogeneous actors: multilateral donors, development professionals from the Global North and South, the private sector from the North and the South, government administrations, village chiefs, farmers, and more. These actors are heterogeneous, not only in terms of financial resources and interests, but also in ethical values and world view (Long, 1992;

[3]It is safe to use "he" in this sentence, given that the first *female* president on the African continent was only elected in 2005: Ellen Johnson Sirleaf, elected President of Liberia.

Degnbol-Martinussen and Engberg-Pedersen, 2003; Rottenburg, 2009), and in their epistemic conceptions of evidence, causality, relevance, and legitimacy (Rottenburg, 2009).

Nevertheless, it has been noted that basically all actors seem to speak the language of the reigning paradigm —from the donor, over the development professional, to the village chief—and to cooperate in an apparently congruent way (Ferguson, 2007 [1990]; Mosse, 2004; Rottenburg, 2009). And although the development paradigms have frequently shifted, producing new theories, policies, and project approaches every few years, the congruence amongst actors more or less remains unchanged. It is this *contradiction* —the surprising appearance of *congruence and commensurability* throughout the extremely *heterogeneous* network of development actors— that asks for explanation (Mitchell, 2002; Mosse, 2005a). The research question is thus:

> *Given the immense heterogeneity of actors involved in development cooperation, how can their congruent support for a specific development paradigm or paradigm shift be explained?*
>
> This question has been subdivided in three sub-questions:
> *1. Where does a new paradigm (and hence paradigm shift) come from?*
> *2. How does a new paradigm gain support?*
> *3. Is there actually congruence amongst all actors or is this just an appearance?*

It is tempting to intuitively explain this homogeneous support as the effect of unequal power relations in development aid and the unidirectional flows of aid money. If this would be the case, then this needs to be *demonstrated* and *explained*—not assumed. If we want to understand how the development aid architecture *actually works*, we first need to open up the entire construct and scrutinize every link and every interaction, in order to show *how* power is constructed and *how* congruency is achieved.

2.3 State-of-the-art

The study of the epistemic/symbolic interactions between actors in development cooperation have been addressed in different ways. There is a principal opposition of a Foucauldian or discourse-oriented approach, and an actor-oriented approach.

The train of discourse-focused ethnographies of aid is pioneered by James Ferguson's *Anti-Politics Machine* (2007 [1990]). Inspired by Foucault's power/knowledge theories, Ferguson's work is sympathetic to the deconstructionist school, but it draws on a major World Bank project in Lesotho for empirical data. His and other Foucauldian analyses of development aid have provided insights on how, at any given historical moment, specific discursive regimes make certain development practices appropriate and others unthinkable, throughout the entire network.

The Foucauldian approach has been criticized, however, in a number of obvious ways. First, actors are treated as cogwheels in an agency-annihilating machine. No one seems in control, not even the policy makers and development planners themselves. Discourse theory leaves no space to investigate the strategies and negotiations for the control of discourses conducted by differently positioned groups (Rossi, 2004). Second, it assumes an unrealistic institutional homogeneity (Grillo, 1997). Third, Foucauldian analyses ignore the inherent openness of the development discourses, as well as their volatility over time (Gardner and Lewis, 2000; Goldman, 2001). In fact, Foucault's own work was situated within one single spatial and cultural domain, whereas in development aid the discourse analyst faces the interaction of very different cultural contexts into which various exogenous discourses penetrate (Stoler, 1995).

A second approach to the ethnography of aid is called by Olivier de Sardan (2005, p.11-15) the 'entangled social logic approach'. It emerged from an Anglophone pole (e.g. Long and Long, 1992) and Francophone pole (e.g. Bierschenk *et al.*, 2000). Assuming an actor-oriented stance, these accounts describe the continuous negotiations on the interfaces between the many different social worlds. Long and Long (1992) describe development interventions as an "ongoing, socially constructed and negotiated process". This body of literature has demonstrated that there is room for human agency, not only in the sphere of the policy making organizations (de Vries, 1992; Lewis, 1998; Stirrat, 2001; Mosse, 2011a) and in the implementation at field level (Torres, 1997; Arce and Long, 1999; Bierschenk *et al.*, 2000; Rossi, 2006), but at every interface in the network (Long and Long, 1992; Arce *et al.*, 1994; Grillo, 1997; Olivier de Sardan, 2005; Lewis and Mosse, 2006a).

Noteworthy is the body of literature that focuses on two very specific categories of development actors: the mediators and the brokers. Development brokers are individuals or organizations that pertain to the developee community —but usually not the traditional elite— and that implant themselves on the interface between the developer and developee to attract or steer the flow of development aid. They act as social entrepreneurs that swiftly speak the development language and nimbly interact with the international organizations (Bierschenk *et al.*, 2002; Olivier de Sardan, 2005; Lewis and Mosse, 2006a). The development mediators, instead, are the field workers that function as agents of mediation between the different socio-cultural and epistemic realms of meaning. They graft the technical message of the developer organizations onto the system of signification of the developees (Bierschenk *et al.*, 2000; Olivier de Sardan, 2005).

Olivier de Sardan argues that the development mediator plays a triple role. "He or she is the *spokesperson* on behalf of technical-scientific knowledge and the *mediator* between technical-scientific knowledge and popular knowledge" (2005, p.169). The former is the formal role —the one he or she is trained for— while the latter is the actual but hidden role. Apart from these two, the mediator also needs to play a third role, the one of negotiating, defending and securing the own personal interests.

Some ethnographers have tried to reconcile the 'structural' aspects of the Foucauldian approach and the 'agentive' aspects of the actor-oriented approach, by relying on Bourdieu's *habitus* (Rossi, 2004), Giddens' *third way* (Rossi, 2004), or Foucault's *governmentality* (Shore and Wright, 1997; Mosse, 2005a). In these views the actors autonomously use the cultural resources at their disposition to pursue their own projects, but they still incorporate the socio-cultural rules of the game in an unconscious manner.

Recently some ethnographers of aid (Mosse, 2004, 2005a; Lewis and Mosse, 2006b) have signaled the usability of insights of Actor-Network-Theory (ANT) for the description of the architecture and dynamics of aid. ANT originates in science and technology studies, where is was used to describe how scientists, their instruments, and the 'consumers' of the science or technology connect in complex ways so that the scientific experiment or technology *is made to work* (e.g. Callon, 1986; Law, 1986; Latour, 1987, 1988).

The principles of ANT can be extended to any domain of the social sciences (Latour, 2000, 2005). At its most fundamental level, ANT claims that 'the social' needs to be explained as a living assemblage of myriad connections between many heterogeneous actors who possess the agency to forge, maintain, or transform these connections. The connections can be of material, semiotic, economic, legal, linguistic, or other nature; the actors can be human and non-human. ANT scholars do not accept 'society', 'social context', or 'social structure' as a *given* dimension of reality. The social exists only through the action of actors that form connections (Callon and Law, 1982; Callon, 1986; Latour, 2005). Therefore, ANT could provide a way out of the agency-structure quandary.

As I will explain in the next section, and more thoroughly in chapter 9, I did not choose any particular theory from the outset of my research. I had firmly resolved, however, that the data was *not* to be collected at one single site. As argued in Chapter 10, localized ethnographies miss out on some important aspects of the interactions in development aid. To start, there is no convincing argument in privileging specific interfaces nor specific actors in the network (Mosse and Lewis, 2006). In order to grasp the *diffused and differential* agency of the actors, one needs to look at development aid from different perspectives. Second, to understand the interactions at one interface in the network, one has to *understand the entire network*. Following the method of grounded theorizing, my research started at one arbitrary site and developed along surprising paths, towards additional sites, as more data was collected.

2.4 Research methodology

Grounded Theory Method

In order to answer the research questions, I collected *qualitative data* on the dynamics of a number of development paradigms that appeared to be hegemonic in the development

aid network. Data collection and analysis happened by means of the *Grounded Theory Method* (GTM).[4] GTM is very widely used in the social sciences for the collection and analysis of (qualitative) empirical data. As thoroughly explained and analyzed in the first theoretical article of Part III (Chapter 9), the method requires the researcher to enter the field and start collecting data without sticking to any pre-conceived theory or hypothesis. Only the collected empirical data can give way to theorizing about the social processes under scrutiny —not any existing theories— and this theorizing should happen according a systematic and inductive procedure. It is a hallmark of GTM that the theorizing starts as soon as the data start to be collected (Charmaz, 2001). Data collection and analysis are not two separate phases of the research. They happen simultaneously because the data sampling is guided by the requirements of the theorizing, rather than by requirements of completeness.

I applied GTM in the postmodern version of Kathy Charmaz (2006) and Adele Clarke (2005), which takes into consideration the situatedness of the researcher, rather than the original positivist version of Barney Glaser and Anselm Strauss (1967). This is also discussed in chapter 9.

Multi-sited ethnography in the water sector

The research field was reduced to manageable dimensions by focusing the data collection on one specific sector: *development aid in the water sector* (in my definition this includes water management *and* access to drinking water). Since I was especially interested in the connections between actors, and the dynamics of the entire network, I collected the data *at three different (physical) sites* in the network. Some reflections concerning the compatibility of GTM, multi-sited ethnography, and the ethnography of aid, are described and discussed in the second theoretical article of Part III (chapter 10). The qualitative data were collected at three very diverse but interconnected sites:

1. the headquarters of WaNGO,[5] a non-governmental development organization specialized in implementing water projects in Africa and Latin America, one of which in the Inner Niger Delta in Mali;
2. a number of rural villages in the Inner Niger Delta (IND) in Mali;
3. the headquarters of the Global Water Partnership (GWP), an inter-governmental organization founded by the World Bank and UNDP that fosters the integrated management of water resources worldwide, including Mali.

The three sites roughly represent three completely different realities in the field of development cooperation. On the first site I could observe how the headquarters of a

[4] I follow Bryant and Charmaz (2007b) in that the method should be called 'Grounded Theory Method' (GTM), while the outcome of the method is a 'Grounded Theory'.

[5] This is a pseudnym.

Western NGO closely supervise the work in Mali, but also how they interact on a daily basis with donors and consultants. The second site, the IND, offered the possibility to observe the 'implementation' of projects, but is was also the perfect setting to observe the interaction of the many diverse actors, such as international NGOs and national governmental and non-governmental actors. The observation at the headquarters of GWP, the multilateral agency in Stockholm, gave me a window on the interactions of multilateral agencies in international forums. The precise context and characteristics of each of the three sites are described in detail in the following chapter 3.

The first site, the NGO headquarters, was selected as entry point to the field because of its accessibility. The second site, the IND, was chosen on the basis of the data that was collected at the first site. I did not aim at getting a comprehensive and complete overview of the entire network of development actors in the water sector and their support to the hegemonic paradigms. I chose the IND merely to *complement* the observations at the first site, since the paradigms that appeared hegemonic at the first site were also sustained in the IND, but by completely different actors. In grounded theorizing the data sampling does not aim at completeness; instead it looks for diversity, in order to make the theorizing as rich as possible. The selection of the third site, the headquarters of GWP, followed from the observations at the second site.

After the data collection phase was finished, the database of qualitative data consisted of 13 months of participant observation at three different sites, 21 focus group discussions, 47 interviews, and over 50 reports and policy documents. The details of the observations, interviews, and focus discussions (such as data and place) are listed in Appendix D.

Focus on three paradigms

At the start of the data collection phase, the research field had been limited to the water sector, yet no particular sites (but the first) had been selected. From the the first participant observation emerged that the field of inquiry had to be further focused on a small number of concepts, theories, policies, or paradigms. The data collection was eventually concentrated on the following three (apparently) hegemonic paradigms in the water sector:

- 'Integrated Water Resources Management' (IWRM) as best practice;
- 'Capacity Building' as mode of providing the aid;
- 'Adaptation to Climate Change', and its relation with the IWRM paradigm.

At each of the three sites qualitative data was collected with regard to all three paradigms. During the data collection and analysis, however, 'Adaptation to Climate Change' was gradually abandoned as separate paradigm, and was only considered in relation with IWRM. The empirical results presented in Part II of this dissertation try to answer the research question(s) with respect to the chosen paradigms.

2.5 Definition of frequently used concepts

In this dissertation the term ***field*** refers to the ensemble of all physical places where (ethnographic) data is collected or could be collected (Amit, 2000). For the present research the *field* encompasses all places where development aid is practiced. It includes the villages in the Inner Niger Delta, the headquarters of the NGO, the headquarters of GWP, and any other physical place where development actors interact.

The term ***site*** indicates one (arbitrarily) circumscribed physical place where the ethnographer establishes a physical presence for a certain amount of time to collect data. The headquarters of GWP, for instance, constituted one *site* of the multi-sited ethnography. One *site*, however, does not coincide with one actor. Actors from different categories interact at the GWP headquarters. A *site*, one could say, is an entry point to the *field*.

Finally, the term ***ground level*** is used to indicate the (physical) place where the development aid is supposed to be 'delivered', e.g. a rural village in Mali where a water well is constructed. What some would refer to as 'happening at local level', this dissertation refers to as 'happening at the *ground level*'. As argued elsewhere (Chapter 10), the distinction between 'local' and 'global' is in fact difficult to defend.

It is also appropriate to clarify the terms *discourse*, development *paradigm*, *theory*, *policy*, and *project*. This dissertation refers to 'Integrated Water Resources Management', 'Capacity Building' and 'Adaptation to Climate Change' as development ***paradigms*** —the term coined by Thomas Kuhn (1962). To Kuhn the term meant many things at once: an overarching meaning-making framework, a collection of archetypal applications of the meaning-making framework, and the community of experts/practitioners that reproduce the applications. The broad meaning of the term makes it affine to Foucault's term *discourse*. It was opted to use the term *paradigm* instead of *discourse* in this dissertation for the sole reason not to implicitly invoke a reference to Foucauldian theories.

Paradigms acquire concrete shape in ***theories***. The Capacity Building *paradigm* is supported by a vast community, but single organizations tend to develop their own specific *theories*. Examples are the *theories* on Capacity Building developed by UNDP (2009) or the European Centre for Development Policy Management (2008).

These *theories* are further translated into development ***policies***. A donor will rely on a specific *theory* of Capacity Building, that was developed by a specialized agency or think tank, to develop his own context-specific *policy* that makes sense to both to the donor himself and the recipient of the aid.

A development ***project*** is the translation of a development *policy* into a collection of programmed actions that are limited in time and space. Projects constitute the archetypal applications of the *paradigm*.

In a sense, the terms *paradigm*, *theory*, *policy*, and *project* not only refer to different levels of concreteness, but also to different steps in a process of translation.

Chapter 3

The three sites of observation

There are two kinds of people in this world: those who have seen Africa and those who haven't.

Khalid Siddig — personal communication

In order to get an answer to the research questions described in section 2.2, qualitative data were collected from three different sites in the development aid network, via a multi-sited ethnography. From the outset, the research focused on development aid in the water sector (water management *and* access to drinking water). Three different standpoints have been occupied in this sector (see Figure 3.1). They were, in chronological order:

1. the international headquarters of WaNGO, a development NGO specialized in implementing water projects in Africa and Latin America, one of which in the Inner Niger Delta in Mali;
2. six rural villages in the Inner Niger Delta (IND) in Mali;
3. the international headquarters of the Global Water Partnership (GWP), an intergovernmental organization founded by the World Bank and UNDP that fosters the integrated management of water resources worldwide, including in Mali.

The first site of the multi-sited ethnography, the NGO, was selected as entry point to the field because of its accessibility. The second site, the IND, was chosen to complement the first, as in the IND the same paradigms are sustained by different actors in very different contexts. The selection of the third site, the headquarters of GWP, followed from the observation at the second site.

This chapter introduces the background details of each of the three sites. It does not describe the observations themselves.

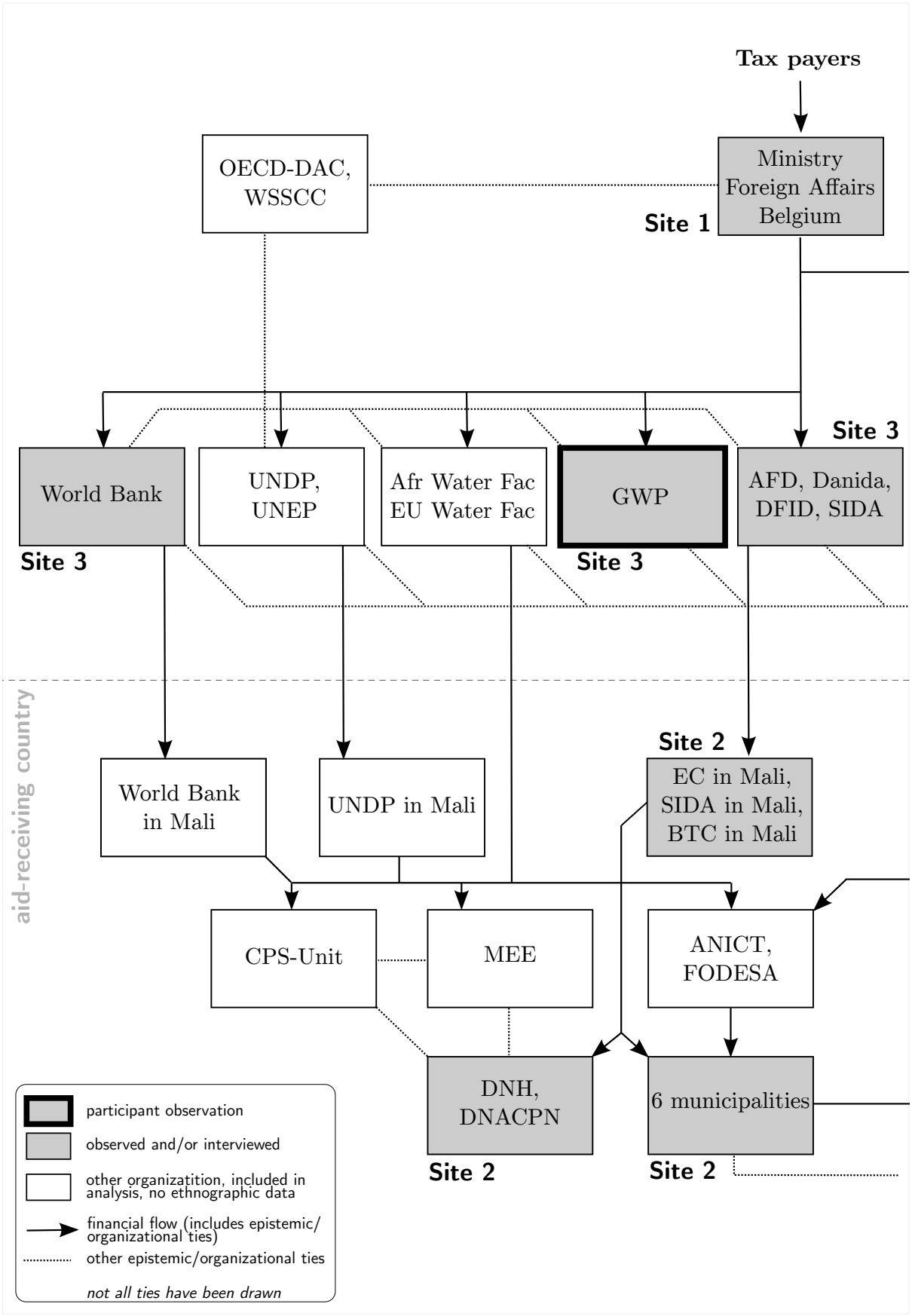
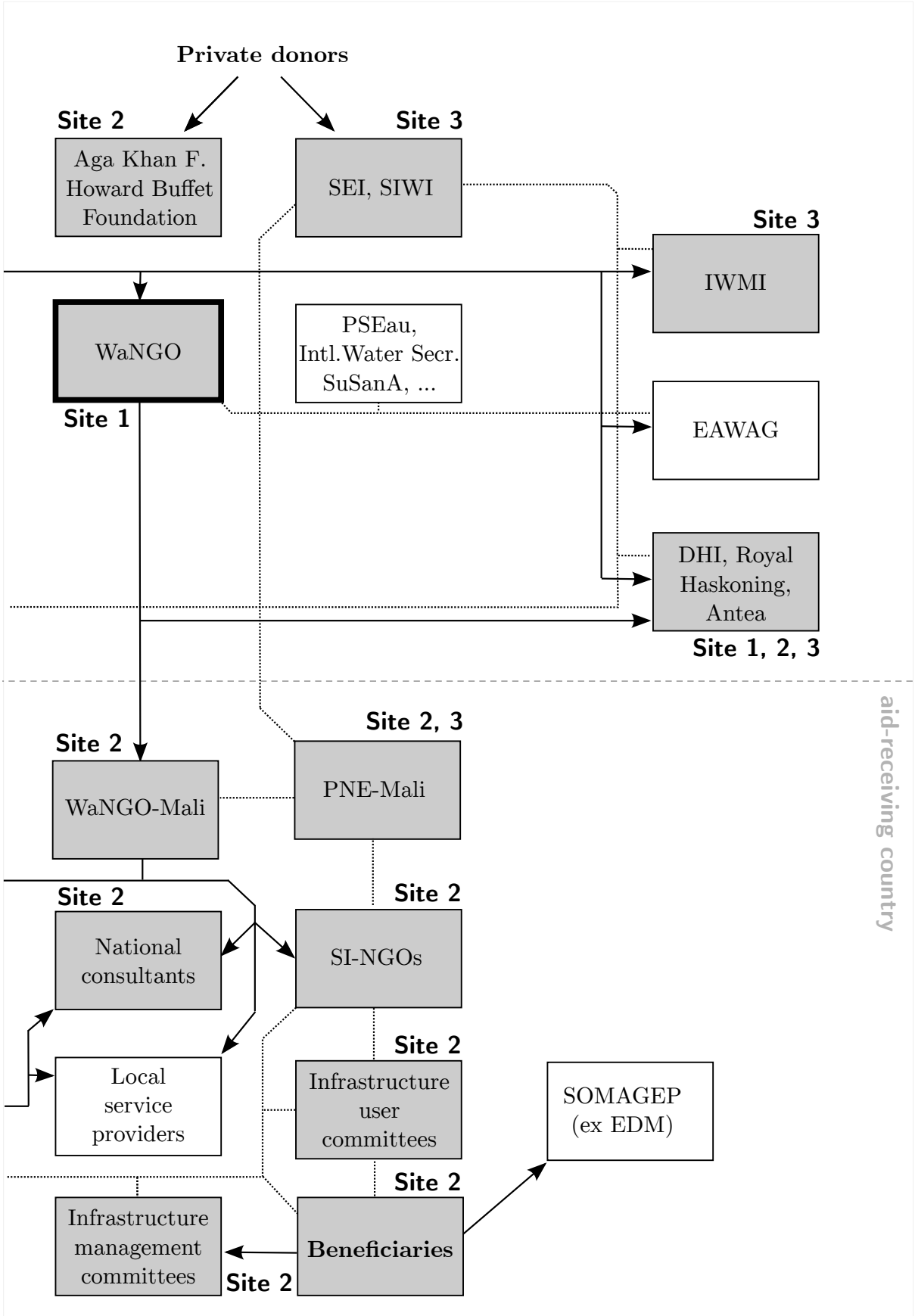


Figure 3.1: Situation of the three sites of inquiry in the global network of actors.


Private donors
Site 2
Aga Khan F.
Howard Buffet
Foundation
Site 3
SEI, SIWI
Site 3
IWMI
WaNGO
Site 1
PSEau,
Intl.Water Secr.
SuSanA, ...
EAWAG
DHI, Royal
Haskoning,
Antea
Site 1, 2, 3
aid-receiving country
Site 2, 3
Site 2
WaNGO-Mali
PNE-Mali
Site 2
Site 2
National
consultants
SI-NGOs
Site 2
Local
service
providers
Infrastructure
user
committees
SOMAGEP
(ex EDM)
Site 2
Infrastructure
management
committees
Site 2
Beneficiaries

3.1 First site: headquarters of a development NGO

The data collection started at the headquarters of a mid-sized, international, non-governmental development organization: WaNGO.[1] As mentioned in section 1.1, the emergence of non-governmental organizations (NGOs) in the Global North and South since the 1960s, and their boom since the 1980s, has reshaped the face of the development sector (Fisher, 1997). The steadily increasing number of NGOs are engaged in a wide range of political or practical activities —ranging from grass-roots and sustainable development, human rights, environmental protection, and many other activities— that are ignored or inadequately addressed by governmental agencies in both the North and the South. According to the critics of international development aid, local or grass-roots NGOs can give voice to alternative development views and practices (Fisher, 1997).

The bilateral and multilateral development community has also embraced NGOs. The Belgian government, for instance, one of the principal supporters of WaNGO, channels 10% of the ODA through non-governmental aid, which is only slightly less than the budget of the direct bilateral technical cooperation (DGD, 2011, see also chapter 6). Strongly rooted in the field at the local level, and flexible in the transfer of aid and skills, NGOs are believed to be complementary to the work of the multilateral and bi-lateral development agencies and to mitigate the failures of state-directed development (Fisher, 1997).

The generic term 'NGO', however, conceals a tremendous diversity of organizations, both in terms of *raison d'être*, ideology, size, and action radius. Not only is the number of NGOs rising, they also forge, in formal and informal ways, innovative and increasingly complex connections amongst each other, with the international development agencies, donors and local actors. These relationships "have profound impacts both on globalization and on local lives" (Fisher, 1997). Networks of NGOs connect the local, national, regional and global level. Varying with their size and outreach, they control in an important way (i) the framing or reformulation of local problems, (ii) the flow of information and ideas between the different levels, (iii) flows of technologies, and (iv) flows of development aid (Jasanoff, 1997).

WaNGO was selected as standpoint in order to observe their (supposed) role as epistemic/discursive mediator between the donors in Brussels (the Belgian government and the European Commission) and the development project implementers in Mali. During 2010 a participant observation was carried out at their headquarters, which are situated in Belgium.

Profile of WaNGO The NGO was founded in the late 1970s by a small number of young, Belgian engineers and agronomists who personally engaged in providing technical assistance in Haiti. The organization decided in 1992 to concentrate its activities in

[1] This is a pseudonym

two sectors: drinking water supply and agriculture. In 2001 the activities were further directed towards the single core theme 'water', embracing the central mission to "promote an equitable, sustainable and participatory management of water both in the Global North and the Global South."[2] In 2005 the organization officially adopted 'Integrated Water Resources Management' as guiding principle for all interventions.

WaNGO earns the label of 'international' organization because, apart from its headquarters in Belgium, it has six branches in the Global South that, although financially and ideologically dependent on the headquarters, constitute administratively independent entities. These branches currently implement development projects in nine African and Latin American countries. One of these branches is WaNGO-Mali, which had its main office near the Inner Niger Delta until 2011. Since 2011 the head office is located in Mali's capital Bamako.

The WaNGO headquarters in Belgium employ around 15 people, who are evenly distributed over an Administrative Department, a Department for Southern Operations, and a Department for Northern operations. The organization sustains another 45-50 employees in the different offices in the Global South. The long term strategic decisions are taken by a board of directors that is composed of 11 professionals from the private sector and from academia, the majority of them having a background in engineering or economics.

The different branches of WaNGO in the Global South are active players in regional and national forums to promote sustainable water use and management in the beneficiary countries and at local level. Notably, in several of the 9 beneficiary countries, WaNGO is an active member[3] of the respective national water partnerships that were founded by GWP. (GWP's headquarters constituted the third site of observation in this research).

Also in Belgium, WaNGO is engaged in various advocacy networks. It is an active member of an NGO-federation and an advocacy network that represent NGOs in negotiations with the home government. It also steers, or is an active member of, three advocacy networks that strive to push sustainable development, climate and water higher on the national political agenda.

The funding In 2010 WaNGO had an annual budget of nearly 9 million euro, of which 90% was destined to support and implement the projects in the 9 African and Latin-American countries. The largest part of the budget is obtained from the typical development donors: the Belgian government (41%), the European Commission (38%), and other public bodies and funds (3%). The remaining 18% is obtained from private donations (mostly companies and individuals).[4]

[2]The current motto of WaNGO.

[3]personal communication of the presidents of 2 national branches of GWP

[4]This data is obtained from WaNGO's 2011 annual report, which describes the situation of 2010.

WaNGO prides itself on working in a highly professional manner[5] and using the highest possible standard of financial accounting[6]. This has led the WaNGO headquarters to enjoying a particular status in the home country: the organization pertains to a group of NGOs that receive unearmarked funding from the home government over a period of 6 years. This funding covers the activities of WaNGO in those countries and sectors that coincide with the home government's aid priorities. This unearmarked flow, however, covers only 37% of WaNGO's budget.

The remaining and thus largest portion of the budget has a more erratic character. It is obtained from other donors by responding to calls-for-proposals (e.g. from the European Commission) and is necessarily linked to specific, precisely defined projects of shorter duration (typically 2-3 years). Project grants are awarded by the donors through periodic calls for proposals. For WaNGO the process of proposal writing is very resource consuming: writing a complete proposal for the European Commission takes 1 to 2 personmonths[7] while the average rate of success is below 15% (European Commission, 2011).

Operational strategies WaNGO has elaborated a number of explicit operational strategies to guide the formulation and implementation of projects. Operational strategies are available for a number of countries, such as Haiti. Other operational strategies focus on specific themes, such as: Integrated Water Resources Management, climate change, local/municipal ownership of water infrastructure, transversal monitoring and evaluation, supply of drinking water.

[5]Personal communications of various WaNGO employees, including head of the Advocacy Department, 3 February 2010.

[6]Personal communication of the head of Administrations of WaNGO, 14 June 2010.

[7]Observed in the occasion of the call for proposals for the EU-ACP Water Facility, deadline 2 June 2010.

3.2 Second site: the Inner Niger Delta in Mali

The second site of observation is less clearly circumscribed than the other two sites. In broad terms it can be defined as the 'Inner Niger Delta', which is the vast wetland area in the middle of the Sahel in the center of Mali.

In more specific terms, however, data collection was concentrated on (i) six rural villages in six different municipalities in the Inner Niger Delta, some of which targeted by a development project run by WaNGO-Mali, and (ii) the actors linked to WaNGO-Mali (whose principal office was located, until 2011, near the Inner Niger Delta).

Since the Inner Niger Delta constituted only *one* of the three site in the multi-sited ethnography, all information about Mali, the Inner Niger Delta, and the villages is deliberately squeezed in one single section. This should make clear that this site had no more or less weight in the research than the other two sites.

The rest of this section will provide the reader with some information concerning

1. Mali: the general context, the situation of the water sector, and the aid in the water sector;
2. the Inner Niger Delta in Mali: the general context, why it is so interesting in terms of water management, and which aid it receives;
3. the six municipalities and six villages in the Inner Niger Delta where qualitative data was collected.

3.2.1 Mali

Mali is a land-locked country in West Africa that stretches from 10°30'N to 25°10'N, and from 12°20'W to 04°20'E (see Figure 1.1). This vast country of 1,240,000 km^2 (this is more than the area of France and the Iberian Peninsula together) accommodates 16 million inhabitants,[8] more than 90% of which are living in the southern half of the country where the capital Bamako is located.

Development With a Gross Domestic Product of PPP $1,123 per capita and a Human Development Index of 0.359, Mali ranks below the Sub-Saharan average and is amongst the poorest countries in the world, both in economic as in human terms (see Table 3.1).[9] The number of households living in extreme poverty is only slightly higher than the

[8]The author's estimation for 2012, based on the census of 2009 and the average population growth rate of 2000-2009.

[9]'PPP' stands for 'Purchasing Power Parity'. It is a correction of the GDP per capita measure that levels out the differences in cost of similar goods or services in different countries, in order to make the comparison of standards of living in different countries closer to reality.

Development indicators	Mali	SSA	Ref. year	Source
Economic				
GDP per capita [PPP $]	1,123	1,966	2011	(UNDP, 2012)
Net ODA received [% of GDP]	17.6	9.2	2010	(UNDP, 2011)
Remittances inflows [% of GDP]	5.6	2.2	2010	(UNDP, 2011)
Income below PPP $1.25 a day [% pop.]	51.4	47.5	2000-2009	(UNDP, 2011)
Human				
Human Development Index [-]	0.359	0.463	2011	(UNDP, 2012)
Life expectancy [years]	51.4	54.4	2011	(UNDP, 2012)
Tot. fertility rate [children/woman]	6.1	4.5	2011	(UNDP, 2012)
Population growth [% per year]	3.0	2.4	2010-2015	(UNDP, 2011)
Adult literacy rate [% population]	26.2	61.6	2005-2010	(UNDP, 2011)

SSA = Sub-Saharan Africa, *ODA* = Official Development Assistance

Table 3.1: Selected indicators of economic and human development in Mali, compared to the rest of Sub-Saharan Africa

Sub-Saharan average, but the literacy rate of the adult population is very low (26.2%) compared to the rest of Sub-Saharan Africa (61.6%).

The high population growth (3.0%), together with internal migration from the poor rural areas to urban centers, makes the capital Bamako one of the fastest growing cities in Africa. The current population of nearly 2 million is expected to increase by 47-50% in the decade 2010-2020 (UNHABITAT, 2010).

Climate Mali's climate ranges from subtropical in the south (or 'Guinean' in the terminology of the Malian Ministry of Environment) to arid in the north ('Saharan' in the terminology of the Malian Ministry of Environment). The Sahara covers approximately half of the country and hence 65% of the country is considered arid or semi-arid. In the entire country rains are concentrated in one rainy season of 6-3 months, which alternates with a dry season of 6-9 months. In the entire country most rainfall is registered in August, whereas zero rainfall is registered in December and January. The amount of rainfall largely ranges from south to north (see Figure 3.2) and is very erratic over the course of years (MEA, 2010; Zwarts, 2010).

The erratic rainfall in the arid and semi-arid areas has led to three prolonged periods of drought during the twentieth century (see Figure 3.3). The first two droughts, from 1900 to 1915 and from 1940 to 1949 were both followed by periods of recovered rainfall. The third drought started in the 1970s and heralded a protracted period of unusually low precipitation. This period is called the Great Drought or *la Grande Sécheresse* (1972-1993). Since the late 1980s rainfall has gradually improved but continues to remains below the average of the XX century. In addition, the Sahel region witnesses a general increase in average temperature since the 1970s, in accordance with —but slightly higher than— the global tendency (Zwarts, 2010).

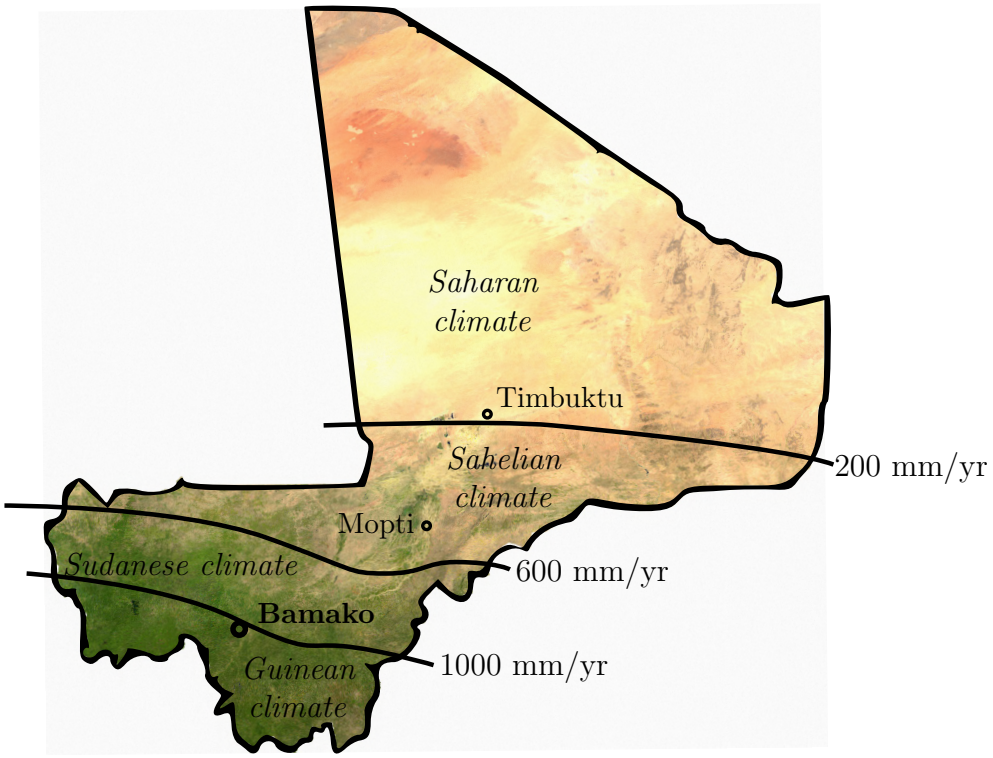


Figure 3.2: The average precipitation (in mm/year) and climatic zones (as defined by the Ministry of Environment) in Mali.

Economy Agricultural activities account for 33% of Mali's GDP and employs 70% of the labor force. Therefore, the erratic climatic conditions in the region and the volatility of international food prices directly affect both the economy and national food security.

The vast majority of agricultural activity is concentrated in the southern half of the country, which is irrigated by the Niger river, Bani river and Senegal river. Contrary to most of the neighboring countries, Mali is self-sufficient in terms of food in most years. The two major export products are gold and cotton. Especially the mining of the former commodity has generated a sustained economic growth in the country over the past few years.

Many households, however, are highly dependent on the remittances of emigrated family members and the government is highly dependent on foreign aid (see Table 3.1). There are about forty bilateral and multilateral donors active in Mali, but their aid is highly variable. The United States, European Commission, World Bank, France, and the Netherlands are (or have been) the most important donors to Mali in the past few years. The total amount of ODA disbursed to Mali varied between $950 million and $2,830 million in the period 2006-2010 (OECD-DAC, 2012). Besides the governmental aid, over 2,000 development NGOs (national and international) are active in Mali (MMEE, 2006).

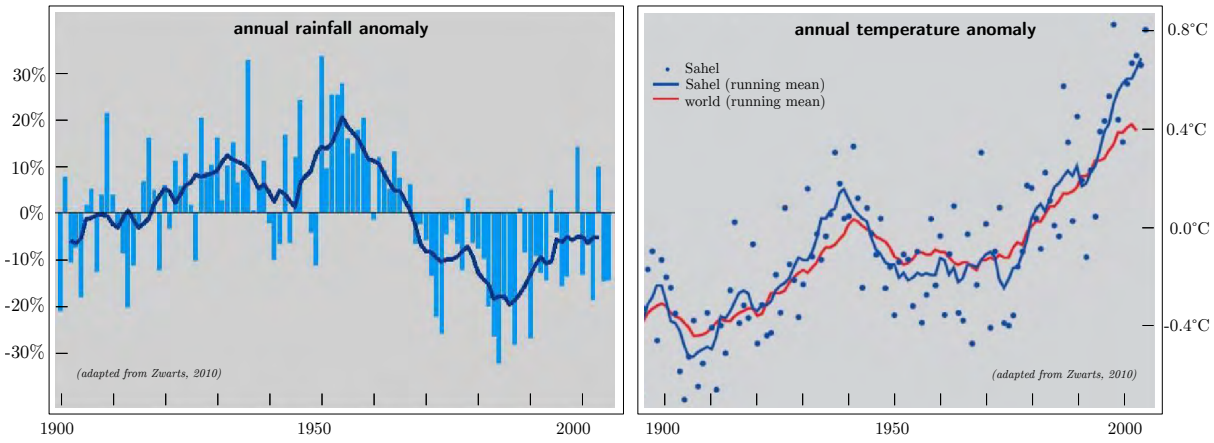


Figure 3.3: Annual precipitation anomalies and temperature anomalies in the Sahel (1900-2005) with respect to the average precipitation and temperature of the 20th century.

History The area that is nowadays denominated as 'Mali' has a very ancient and rich history, as it has been part of the three different West African empires that subsequently controlled the trans-Saharan trade in gold, salt and other precious commodities. The earliest was the Ghana empire (century V—1078), ruled by the Soninké people. The Mali kingdom, ruled by Malinké people, arose in the XIII century. The trading cities Djenné and Timbuktu developed in full splendor during this period. The Songhai empire, that had been developing around the trade city Gao since the XIII century, supplanted the Mali empire in the XV century. The fall of the Songhai empire in 1591 ended the region's control over the trans-Saharan trade.

After the collapse of the Songhai empire at the end of the XVI century, several small kingdoms arose and succeeded each other. One worth mentioning is the Islamic theocratic state *Diina*, established by the Islamic clergyman Seku Amadu (Cheikou Amadou) in 1818. The *Diina* codified and formalized the natural resources management in the Inner Niger Delta in Mali. The customary rules of the *Diina* still have effects in present-day natural resources management (see further in this section). The Toucouleur conquered the *Diina* in 1862.

In 1893, the French defeated the Toucouleur and established the colony of French Sudan in 1895. The French colonial administration nevertheless sustained the principles of common resource management inherited from the *Diina* (Benjaminsen and Ba, 2008).

Mali became independent from France in 1960. After three decades of one-party rule and military dictatorship, a multi-party democracy was eventually installed in 1991. Together with the installment of democracy, a new constitution was adopted and the central government started to delegate ('decentralize') part of its decision-making competencies to the 8 regions (plus one capital district), the 49 provinces (or '*cercles*'), and 703 municipalities (or '*communes*').

In the first half of 2012 the country was rocked by a wave of violence. The sudden advance of the Tuareg rebel movement MNLA and radical Islamist movement Ançar

Water development indicators	Mali	SSA	Ref. year	Source
Health-related				
Access to an improved water source				
total [% of total population]	64	61	2010	(WHO-UNICEF, 2012)
rural [% of rural population]	51	49	2010	(WHO-UNICEF, 2012)
urban [% of urban population]	87	83	2010	(WHO-UNICEF, 2012)
Access to improved sanitation				
total [% of total population]	22	30	2010	(WHO-UNICEF, 2012)
rural [% of rural population]	14	23	2010	(WHO-UNICEF, 2012)
urban [% of urban population]	35	43	2010	(WHO-UNICEF, 2012)
Water-related burden of disease [% of tot.]	14.6	16.8	2004	(WHO, 2008)
Environment and agriculture				
Renewable freshwater [m^3/year/capita]	6,707	4,300	2011	(FAO, 2012a)
Freshwater withdrawal [% of tot. renew.]	6.5	3.2	2002	(UNEP, 2010)
Crop area equipped for irrigation [%]	4.7	3.0	2005	(FAO, 2012a)
Pop. affected by droughts [millions]	1.62	72.6	2005-2011	(UNDP, 2012)
Pop. affected by droughts [% of tot. pop.]	11.1	8.1	2005-2011	(UNDP, 2012)

SSA = Sub-Saharan Africa, *pop.* = population

Table 3.2: Selected indicators of water-related development in Mali, compared to the rest of Sub-Saharan Africa

Dine in the Saharan north of the country had repercussions for the political instability in Bamako. Part of the Malian army, dissatisfied with the course of events in the north and the feeble response of the government, staged a coup in March 2012. Under heavy political and economic pressure of the West African Community (ECOWAS), civil rule was restored in Bamako in April 2012. In the meantime the MNLA had declared the independence of the three northern regions of Mali that they had brought under their control (referring to them as the new country 'Azawad'). At the time of writing, the three northern regions are still under control of MNLA and Ançar Dine. The information provided in this dissertation mostly refers to the situation in Mali before the military coup.

Water in Mali Generally speaking, Mali is a water rich country (see Table 3.2), as it is irrigated by the Niger river, its tributary the Bani river, and the Senegal river. These renewable freshwater resources, however, and the rainfall as well, are very unevenly distributed in space, producing a very lush ecosystem in the south of the country and a very arid landscape in the north (see Figure 3.2).

The water resources are only moderately developed for productive use. The Sélengué dam on the Niger river, south of Bamako, and the Manantali dam on the Senegal river, in the southwest of the country, are the two major hydropower dams in Mali. The Sélengué dam, as it is situated upstream of Bamako, also regulates the water level of the Niger river in Bamako.

Some 300 km downstream of Bamako, i.e. northeast of Bamako, the Markala dam

deviates a portion of the water from the Niger river into a vast, artificially irrigated area of Mali, the *Office du Niger*. This area produces 500,000 tonnes of rice per year, i.e. 60% of the national rice production, and 200,000 tonnes of horticultural products. Located at the southern end of the Inner Niger Delta, the *Office du Niger* was created by the French colonizer to become the 'bread basket' of West Africa. Of the 960,000 ha that were originally *planned* to be included in the *Office du Niger*, today only 96,000 ha are effectively irrigated and cultivated (Hertzog *et al.*, 2012). This means that the irrigation and production potential of the *Office du Niger* is not nearly exhausted. The World Bank and the German bilateral cooperation have put much efforts, since the 1980s until the 2000s, in making the *Office du Niger* economically viable (World Bank, 2005).

In terms of delivering safe drinking water to the population, Mali has made significant progress in the last few years, and will probably attain the Millennium Development Goal. According to the latest data, 64% of the total population has access to safe drinking water. There are huge differences, however, between the rural and urban population (see Table 3.2). In matters of sanitation there is much less progress, as currently only 22% of the total population has access to improved sanitation (see Table 3.2). It is unlikely that the Millennium Goal for sanitation will be attained (WHO-UNICEF, 2012).

Aid to Mali's water sector The progress is made thanks to huge investments by multilateral, bilateral and non-governmental donors in infrastructure (see Table 3.4). Water-related development aid typically addresses three sectors separately:

- drinking water supply and sanitation (WSS), often supplemented with hygienic awareness-raising;
- water resources management, including management of river basins and management of water for energy production;
- water for agriculture and food production, mostly in the form of irrigation.

Traditionally the major bilateral and multilateral donors to WSS in Mali are Germany, France, the World Bank and the Water Facility of the African Development Bank (see Table 3.3). In the sector of water management, important donors are Denmark (at Malian policy making level) and the World Bank (in the entire Niger basin).

The question is to what extent the investments made in WSS infrastructure, as described in Table 3.4, are sustainable. Operation and maintenance of water infrastructure is looked after by the public utility company EDM (in the urban areas) and by small public or private companies —created ad hoc— in the rural areas. These operators need to severely underprice the services (see Table 3.4). As a result, the maintenance of the infrastructure is at risk. In rural areas the breakdown rate of water facilities is estimated at 30% (World Bank, 2011).

Donors	Project	WSS	WRM	Bn FCFA
France (AFD)	Water supply in Nioro and Diéma	y	n	4.2
France (AFD)	WSS in Fana and Sikasso	y	n	9.9
Germany (KfW)	WSS study in Kayes	y	n	22.8
European Development Fund (EDF)	WSS in 5 regions	y	n	6.8
Islamic Development Bank (IDB)	Agricultural water management in Kati and Kangaba	n	y	5.8
Arab Bank for Economic Development in Africa (BADEA)	Small dams in Kayes, Yélimané, Nioro du Sahel	n	y	7.0
BADEA	Water supply in Sikasso	y	n	4.1
Kuwait Fund (KFDEA)	Water supply in 5 regions	y	n	7.1
Netherlands	GIRENS	n	y	1.4
World Bank	WSS in 4 regions	y	n	15.0
African Development Bank (AfDB)	Water supply in Gao and Kidal	y	n	10.7
Denmark (Danida)	PASEPARE	y	y	5.7

WSS=Water Supply and Sanitation, *WRM*=Water Resources Management, *FCFA*=0.0015 EUR
Source: adapted from Danida (2006)

Table 3.3: Snapshot (2005-2006) of multilateral and bilateral aid projects and programs in Mali's water sector

	in Mali	in SSA
Capital investment		
Public sector	0.59	1.70
Private	0.00	1.90
Official development assistance (ODA)	2.90	1.60
Non-OECD aid	0.11	0.22
Total investments	3.60	5.40
Operation & maintenance		
Public sector	2.20	4.20
Underpricing	5.80	2.50

Source: World Bank (2010)

Table 3.4: Expenditure to water supply and sanitation in Mali and Sub-Saharan Africa, in $ per capita and by source of financing (2009)

The governmental actors in Mali's water sector The three typical channels of aid to the water sector (water supply and sanitation; IWRM; agricultural water management) do not coincide with the competences of three distinct ministries. Moreover, in Mali the ministerial competences are often reshuffled —8 times since 2000.

Freshwater management and drinking water supply was a competency, until October 2007, of the Ministry of Mines, Energy and Water (MMEE). From 2007 until the military coup in March 2012, energy and water were placed in one single ministry, the Ministry of Energy and Water (MEE). Since the return to civil rule, in April 2012, water and energy are housed in the Ministry of Energy, Water and Environment. Since 2000, six different ministers have been in charge of the water portfolio.

Where sanitation and water pollution are concerned, they are the competency of the Ministry of Environement, known under that name until May 2004. Since 2004 until the military coup in 2012 the ministry was known as the Ministry of Environment and Sanitation (MEA). Since the restoration of democratic rule in April 2012 the environment is now housed together with water and energy in one ministry.

The Ministry of Agriculture (MA) and the Ministry of Fishery and Livestock —usually together, but separated from May 2004 until March 2012— play only a minor decision-making role in the water sector.

The legislation in matters of water is governed by the Water Code that was adopted in 2002 (law 02-006). It establishes the public ownership of water and describes the priority uses of water—supply of drinking water in the first place. It designates the State as the lead manager and describes the transfer of rights and obligations of the State to the local governments (regions, *cercles*, and municipalities). The Water Code confirms the decentralization of competences (see above, page 36).

Each of the ministries can count on executive bodies or 'directorates' responsible for the follow-up of the legislation and rules, and the implementation of governmental programs. Contrary to the ministries, the outline and mission of these directorates has remained relatively stable over time.

The directorates have developed operational strategies, such as: the National Strategy for the Development of Irrigation, developed in 1999; the National Water Policy, adopted in 2006; the National Sanitation Policy, developed in 2006 and adopted in 2009; the National Strategy for Access to Water, adopted in 2007; and the National Action Plan for Integrated Water Resources Management, adopted in 2008.

Each of these strategies is inscribed in Mali's all-encompassing Strategical Framework for Growth and Poverty Reduction — the principal instrument not only for the alignment of national policies but also for the harmonization of donor aid. The main actors in the water sector in Mali are now described. The description refers to the situation *before* the military coup in 2012.

The ***Ministry of Energy and Water*** (MEE) is the lead institution for the man-

agement of both water resources and public supply of drinking water. It exercises its legal supervision over the water sector through the National Water Directorate (DNH), which is the 'executive arm' of the MEE. The DNH was officially created in 1999 but builds on a series of pre-existing structures that date back to colonial time.

The decentralization process formally transferred the competence of identifying, constructing, and managing water infrastructure (drinking water supply, sanitation, small-scale irrigation) to local governments—municipalities in particular. However, the state continues to control, through the DNH, the water infrastructure in the urban centers of the country. That are the 18 centers where the public utility company SOMAGEP (formerly EDM) delivers water and energy to the consumers. The Urban Hydraulics Division of DNH coordinates and monitors the implementation of investment projects of the state (including those supported by foreign partners) in the urban centers of the country.

The DNH also manages country wide programs of water supply and sanitation in non-urban areas, with the support of foreign technical and financial partners. DNH is a magnet for donors interested in water-related cooperation, and can count with foreign technical assistants (e.g. from the French Development Agency and from the German Technical Cooperation) in its ranks virtually since its creation (Matz, 2010). In principle, in the case of country wide programs managed by DNH, the rural municipalities nevertheless remain the legal owners and managers of the infrastructure.

Due to the fact that DNH historically played the role of owner and manager of all water infrastructure, the composition of DNH staff has always been marked by the near-dominance of technical expertise on water among executives of the organization. Skills in sociology, physical and fiscal planning and monitoring and evaluation are substantially under-represented and in some cases not available.

The DNH is centralized under the national MEE ministry, but has 9 regional offices (Regional Directorates for Water and Energy - DRHE). The DRHEs are supposed to verify the compliance with norms and laws in matters of water supply at local level; collect geological, hydrological and socio-economic data; control the quality and quantity of water resources at local level; provide technical support to the local governments (municipalities, *cercles*, and regions) in the planning and follow up of works and the management of the water infrastructure; support and supervise the tender process of private entities for the construction and management of infrastructure; evaluate projects.

The decentralization of staff and resources from the central DNH to the regional DRHEs has been faltering. One the one hand there is a lack of political will at the central ministerial level to delegate resources and competencies. On the other hand there is a lack of financial and human resources. The total staff of DHN is approximately 220, of which 90 officers work at the national level. At the regional level, 64% of positions are not filled, according to (Danida, 2010). This faltering decentralization seriously hinders the functioning of the regional DRHE units.

Also, since 2001, the DNH together with the National Directorate for Energy controls the two dams on the Niger river in Mali —the Sélingué dam before Bamako, and the Markala dam after Bamako— through the Water Management Commission of the Sélingué Dam. The main duty of this commission is to balance energy production at the Sélingué dam with irrigation downstream of Sélingué and Markala.

The ***Ministry of Environment and Sanitation*** (MEA) is in charge of sanitation, in all its dimensions. The follow up of legislation and norms happens through its 'executive arm', the National Directorate of Sanitation and of Pollution and Nuisance Control (DNACPN). The MEA has developed a National Sanitation Policy, adopted in early 2009. It includes all areas of sanitation (except the air pollution) and hygiene awareness raising.

Since its inception in 1998, the DNACPN has little funding and its experience in managing projects and programs is limited. It has mostly carried out activities in urban areas, such as: the development of strategic plans for sanitation; construction and cleaning of sewers, gutters, lavatories, latrines; the creation of solid waste landfills; the construction of wastewater treatment plants.

DNACPN is represented in every region of the country by the Regional Directorates (DRACPN) and is also represented at sub-regional level. In 2007 the DNACPN had 202 agents, 59 of which at national level and 143 in the regional DRACPN units (Danida, 2010). In line with the national decentralization process, the DRACPN are responsible for: the promotion of individual and communal drainage structures and support to local authorities in waste management; the identification of pollution and nuisances at local level; the dissemination and control of the legislation and norms at the regional level; the development and execution of public awareness campaigns in terms of good hygienic behavior.

Another entity worth mentioning is the Agency of the Niger River Basin, which could be considered the Malian branch of the transnational Niger Basin Authority. Created in 2002 as national answer to the ill-functioning of the transnational Niger Basin Authority, it is dedicated to the preservation of the Niger River, its water resources and banks. It is an entity of the Malian government and reports to the Minister of Environment and Sanitation. It never managed, however, to play an important role in the development of water resources.

The ***Ministry of Agriculture and the Ministry of Livestock and Fisheries***, once together now separate, have little weight in water policy making but they have the competence to plan fish ponds and minor crop irrigation infrastructure in rural areas. They can count on the following national directorates: Agriculture, Rural Engineering, Livestock, and Fisheries. These services are also decentralized to the regions, *cercles* and, sometimes, municipalities.

The ***Regulatory Commission of Water and Electricity*** was created in 2000,

in conjunction with a liberalization of the water and electricity market in urban areas, to play the role of watchdog of the water and energy market. It checks whether the laws and norms are followed up, it defends the interests of users and controls the quality of public service. it approves and controls the prices, and it is an arbiter in disputes. Although its powers extend, by law, to all urban centers, in practice they are limited to the areas where the national utility company EDM is operating.

The ***Cell for Planning and Statistics*** (CPS) of the Water Sector, Environment, and Urban and State Areas was established in 2007. The main tasks assigned to the CPS are: the coordination of national plans, programs and projects; forecasting and monitoring the environment and the economy; keep track of funding and technical cooperation; coordinate the production of statistical information. The CPS has developed the Sectoral Program for Water and Sanitation (PROSEA), which is conceived to be the overarching framework for all donors active in the water and sanitation sector.

The acronym ***TFP (Technical and Financial Partners)*** is commonly used to refer to all external (international) development actors, from donors over multilateral agencies to private consultants. Ninety percent of investment costs in the water sector (water management, drinking water supply, sanitation) are covered by the TFPs (DNH, 2008). Table 3.3 gives an idea of the number of multilateral and bilateral TFPs active in the water sector in Mali. Apart from these organizations, an estimated 200 NGOs are also active in Mali's water sector (MMEE, 2006). Only 35% of the investments in the water sector are channeled through DNH (DNH, 2008).

3.2.2 The Inner Niger Delta in Mali

The Inner Niger Delta (or *Delta Intérieur du Niger* in French), abbreviated as IND, is situated in the middle of Mali's Sahel zone, at the confluence of the Niger river and the Bani river. During and immediately after the rainy season, the two rivers flood a vast landlocked floodplain, giving shape the largest inland wetland in West Africa and the second largest in Africa (after the Okavanga Delta in Botswana). The wetland, composed of small rivers, lakes, floodplains, and islands, extends over 390 km, from Djenné in the south to Timbuktu in the north, with the river port town Mopti in between.

The rainy season in Mali's Sahel zone starts in May and peaks in August. The rise of the water level in the IND is somewhat delayed; it starts in June and peaks in September. In this period, the water level can rise up to 10cm per day. Depending on the amount of rainfall during the wet season, the water levels rise between 4 and 6 m with respect to the water level in the dry season. The flooded area during the wet season can exceed 35,000 km^2 but can also be as little as 8,000 - 10,000 km^2. Around November/December the water level is decreasing already at its fastest pace, around 3-5 cm per day. Towards the end of the dry season, i.e. May, the permanent wet area shrivels to less than 4,000 km^2.

This cyclic expansion and retraction of the river is essential to the ecosystem in the IND as well as to the economic activities of the one million people living here. The natural richness sustains a population density that is much higher than that of the surrounding Sahel. It is not a coincidence that the big West African empires of the V to XVI centuries (the Ghana, Mali, and Songhai empires) emerged around the IND (Benjaminsen and Ba, 2008).

In this area, all uses of water are intimately intertwined. The water in the IND sustains the unique ecosystem and the economic activity of the inhabitants of the IND. The management of water is regulated by different governmental decision making levels as well as the customary rules set by the *Diina*. This equilibrium of balanced uses and intertwined regulatory bodies, however, is put under pressure by population growth, Mali's need for energy (from hydropower), and climatic changes.

Ecosystem After the three lakes Horo, Séri, and Débo had already been separately protected as Ramsar sites[10] in 1987, the entire IND has been designated as Ramsar site in 2004. The area houses an exceptionally high number of unique animal and plant species, many of which are adapted to the seasonal fluctuations of the water level.

The Delta is a habitual stopover for more than 350 different types of migratory birds. Each year more than 1 million birds come from more than 80 countries to use the delta. The Delta is also exceptionally rich of fish. Of the at least 138 different species that have been counted in the Delta, at least 24 are endemic, meaning that their world distribution is limited to the IND itself (MEA, 2010).

People and livelihoods In the collective memory of the IND inhabitants, the different ethnic groups (each with a different culture, language, and traditional livelihood activity, see Table 3.5) have for centuries shared the natural resources in the IND in harmony (Zwarts *et al.*, 2005; Benjaminsen and Ba, 2008). Before the rainy season starts, the semi-nomadic Fula herders leave the Delta with their cattle and move to the northeast and northwest. At the start of the rainy season in May-June, just before the area is covered by the Niger water, the sedentary ethnic groups, such as the Rimaïbé, Marka, Bambara, and Sonrai, plant rice inside their soon-to-be-flooded paddies and plant millet in the non-submersed areas. The Fula herders re-enter the IND with their cattle in November-December, when the water starts to retreat, in order to graze on the green flood-plains, where the semi-nomadic Bozo and Somono fishermen had been fishing for some months. At that time, however, rice is still to be harvested, so the herds follow well established corridors through the Delta. After the harvest is over, many young men of

[10]The international *Convention on Wetlands of International Importance*, commonly known as the *Ramsar Convention*, is an international treaty for the conservation and sustainable utilization of wetlands (Ramsar, 2012). It is named after the town of Ramsar in Iran where the treaty was signed in 1971.

Ethnic groups	**activity**	**sedentary/nomadic**	%
Bozo, Somono	fishermen	semi-nomadic	30%
Rimaïbé, Songhai (or Sonrai), Marka, Bambara	farmers	sedentary	30%
Fula (or Fulani, FulBe, Peul, Pheul)	herders	semi-nomadic	40%

Source: (Zwarts et al.*, 2005)*

Table 3.5: Ethnic groups and traditional economic activities in the IND

the sedentary groups leave their villages to find a seasonal job in the urban centers, while the women continue horticultural activities during the dry season (Zwarts *et al.*, 2005).

In this traditional system the ethnic groups produce complementary elements of the daily diet for the different peoples in the delta. The produce is intensively exchanged through local trade, for example in the port of Mopti.

This traditional scheme is changing. Partially because of the Great Drought in the 1970s and 1980s (see Table 3.3), but also because of population growth and immigration, new mixed professions have emerged, such as agro-pastoralism and agro-fishery (Zwarts *et al.*, 2005).

The Diina The various Fula kingdoms that ruled the Inner Delta for centuries (from the XVII to the XIX century) instituted a system of resource management, of which the Fula are traditionally in charge. Noble sedentary Fula chiefs, called the *jowros*, each controlled a *leyde* or land unit. They conceded parts of the land to *subordinate* ethnic groups for agricultural activities (Cotula and Cissé, 2006; Benjaminsen and Ba, 2008).

In 1818 Fula clergymen conquered the Delta under the leadership of Seku Amadu (Cheikou Amadou) and established an Islamic theocratic state, the *Diina*. The *Diina* formalized the existing natural resources management. The Fula *jowros* were granted authority over the *leyde*; the use of the pastural floodplains was defined; entry routes for the livestock were traced throughout the Delta. The Fula herders that wanted to use the floodplains for grazing were to pay a fee to the *jowros*. The Rimaïbé, a subordinate ethnic group of farmers, obtained the control of the agricultural land, which was conceded to them by the *jowros*. The *jowros* nevertheless remained in charge of the entire *leyde* (Cotula and Cissé, 2006; Benjaminsen and Ba, 2008).

The French maintained the natural resources management of the *Diina*. Some *jowros*, for instance, became *chefs de canton*. After independence in 1960 the State started to build its own centralized administration with technical services. This centralized management weakened the traditional system of *leyde*-based resource management. The process of administrative decentralization, initiated in the early 1990s, which delegates many policy making competences in natural resources management to the lower governmental levels, can be considered as an attempt to integrate the traditional management into

modern legislation. This integration is not without conflicts, between the different ruling bodies and between the different ethnic groups (Benjaminsen and Ba, 2008).

In fact, the power of *jowros* in the IND is increasingly contested and undermined. To some they are still the legitimate, customary managers of pastureland in the IND. To others they are aristocratic profiteers that make impressive amounts of money from nothing more than selling grazing rights. Reconciling the *jowros*' customary power with the newly acquired power of the decentralized governments will be critical for the sustainable and equitable management of natural resources in the IND and the success of the decentralization process (Cotula and Cissé, 2006).

Drinking water and sanitation Despite the abundance of water in the region, many inhabitants of the IND still lack access to safe drinking water. Many rely on surface water as source of drinking water, exposing them to the risks of water-borne or water-related diseases. On average 60% of the IND inhabitants have access to an improved source of drinking water, while in the remote municipalities this number is as low as 20% (MEA, 2010).

The access to improved sanitation (such as latrines) is relatively high in the urban centers, but is estimated to be as low as 5% in the rural municipalities (MEA, 2010). This absence of improved sanitation directly impinges upon the quality of the vast bodies of stagnant water in the IND during and after the rainy season.

In fact, choosing the right type and location of latrines in the IND is not an easy matter, because large parts of the villages are flooded during several months of the year. Moreover, also during the rest of the year the top groundwater layers are very close to the surface, making the risk of groundwater contamination very real.

Pressures The water and natural resources in the IND have come under pressure from various sides. First, the traditional rulers of the common pool resources have been partly replaced by the decentralized governments (such as the municipality). This has the former pushed to vehemently (and legally) fight their customary claims on the resources (Benjaminsen and Ba, 2008), in a context where hybrids of both customary and statutory norms are emerging (Cotula and Cissé, 2006).

Second, the IND has witnessed a considerable influx of people and a power shift from herding to farming interests. This has put more pressure on land ownership, on the repartition of land for pastural purposes and for agricultural purposes, and on the respect of the established livestock corridors throughout the IND (Benjaminsen and Ba, 2008).

Third, the water level (and hence the flooded area) is partially controlled by the Sélengué and Markala dams. In dry years the flood area is 13% lower than the natural area would be, due to the amount of water retained or deviated by the two existing dams

(Zwarts, 2010). The construction of two more dams upstream of the IND is planned: on the Niger river in Fomi, and on the Bani river in Djenné. If also these dams would be constructed, the flooded area would shink by more than 50%, with obviously significant impacts on both the environment and the one million people living in the IND (Zwarts, 2010).

Fourth, since four decades a significant increase in average temperature and decrease in rainfall has been observed (see Figure 3.3). Historical data (from the Great Drought, amongst others) have shown that a decrease of 20% in rainfall in the Sahel region led to a decline of the flood extent in the IND of about 60% (Zwarts, 2010). Hence, increasing temperatures and decreasing rainfall —the general tendency that is being witnessed now— would have severe impacts for the ecosystem and economic activities in the IND.

Aid to the water sector in the IND Despite the abundant natural resources, the rural municipalities of the IND remain amongst the poorest in Mali (MEA, 2010). Numerous TFPs intervene in the water sector in the IND, in order to support the municipalities in the construction of drinking water and sanitation infrastructure: the World Bank (through the National Program for Rural Infrastructure—PNIR), the French Development Agency (AFD), the African Development Bank (AfDB), UNDP (through the Project of Support to the Rural Municipalities—PACR), and the national ANICT fund. International NGOs also support the municipalities in constructing water wells and latrines: World Vision, WaNGO (through the IWRMIND project), Save the Children, and many other smaller initiatives.

Other TFPs support the management of water and natural resources, such as the World Bank (through the Niger River Basin project), the Netherlands (Program for Sustainable Development in the IND—PDD-DIN), or IUCN.

3.2.3 Six municipalities and six villages in the IND

WaNGO intervenes in Mali since 1994 and in the IND since 1997. It started a large-scale program in the IND in 2004, called IWRMIND, to support the municipalities in water management and in the supply of drinking water. The first and second phase of IWRMIND (2004-2007) included 4 municipalities, the third phase (2007-2010) 14 municipalities, and the current fourth phase (2011-2013) targets 18 municipalities.

Six municipalities in the IND were selected for further scrutiny (see Table 3.6). All six were partner in the third phase of WaNGO's IWRMIND project. The municipal councils of the six municipalities were interviewed (5 focus group discussions with 4-7 council members; in 1 case an interview with only the mayor).

Also the villagers of six villages *in* those municipalities—one village per municipality—were interviewed (6 focus group discussions with 4-10 villagers). Three of these villages

were *not* involved in the IWRMIND project, the three other villages *were* involved in IWRMIND (see Table 3.7). The details (date and place) of the focus group discussions are given in Appendix D.

Municipality Ouroubé-Doudé The municipality is located in the north of the Mopti *cercle*, between lake Débo and lake Korientze. Only a small part of the municipality —the part between the Niger river and the 'Koli Koli' arm of the Niger— is flooded during the wet season. The small municipality is home to 12,200 inhabitants, who live in 9 villages. The population is composed of a majority of Fula pastoralists and Rimaïbé farmers, followed by Bozo, Marka and Bambara.

Village Dèra-Sedengué in Ouroubé-Doudé Sitting on the eastern bank of the Niger river, immediately south of lake Débo, the village is completely flooded during the wet season. It has a population of nearly 1,900 people, of which the majority is Bambara or Fula. The village is said to be founded by Bambara settlers, which is very uncommon so far up north in the country. Nearly half of the population makes a living from fishery. Rice cultivation and animal husbandry are the second and third economic activity.

Municipality Konna This municipality in the northeast of the Mopti *cercle*, south of Ouroubé-Doudé, has 34,700 inhabitants in 28 villages. Two-thirds of the municipality is located in the inundated IND. It is the second most important economic center in the Mopti *cercle*, after the town Mopti itself.

Village Takoutala in Konna This small village has a population of 500, principally composed of two ethnic groups: the Fula pastoralists and the subaltern Rimaïbé farmers. The village is situated on the dry eastern bank of the IND, which makes it 100% rain-dependent rather than river-dependent. Around 70% of the revenue of the village derives from animal husbandry, the rest from rain-fed agriculture.

Municipality	**in *cercle***	**targeted by WaNGO**			**activity TFPs water sector**
		2004-6	2006-7	2007-11	
Ouroubé-Doudé	Mopti	no	no	yes	medium
Konna	Mopti	no	no	yes	medium
Socoura	Mopti	yes	yes	yes	high
Soyé	Mopti	yes	yes	yes	high
Togué-Mourrari	Djenné	no	no	yes	high
Kéwa	Djenné	yes	yes	yes	low

TFPs = external Technical and Financial Partners

Table 3.6: The six selected municipalities and some characteristics

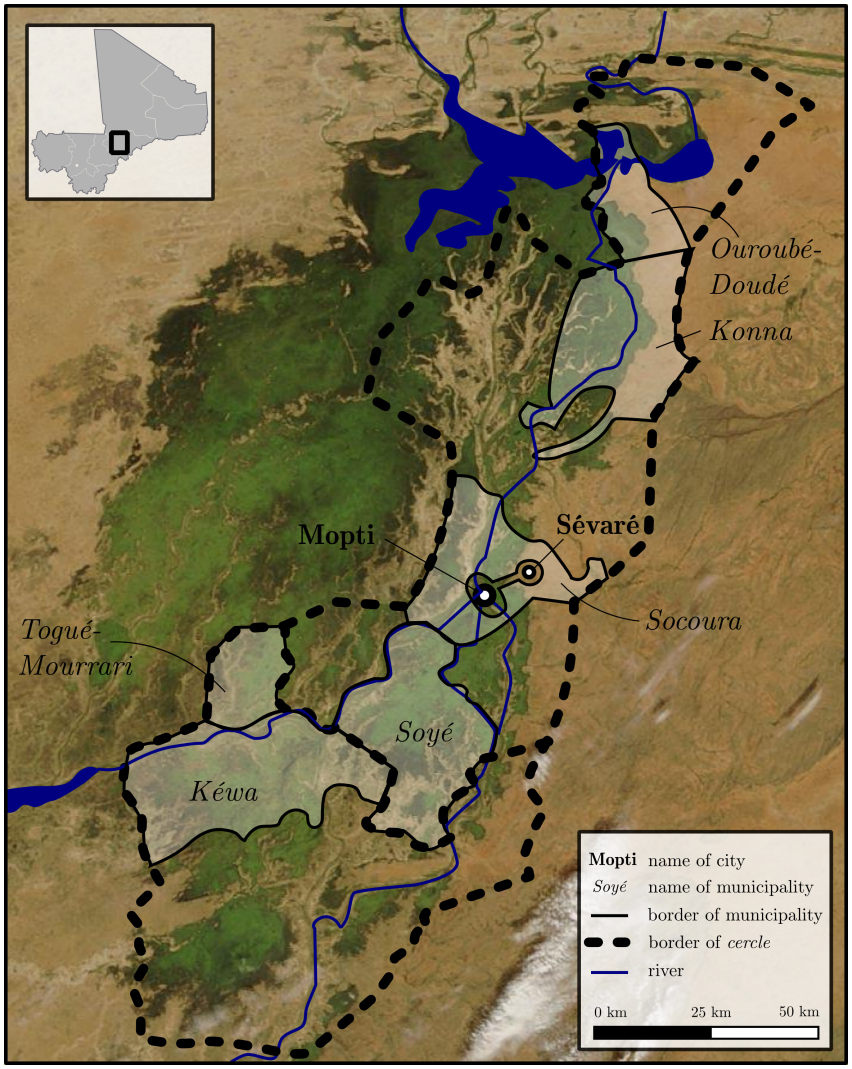


Figure 3.4: The six selected municipalities and their position in the Inner Niger Delta.

Village	in municipality	majority ethnic group(s)	targeted by WaNGO 2006-7	2007-11	activity TFPs water sector
Dèra-Sedengué	Ouroubé-Doudé	Bambara, Fula	no	no	none
Takoutala	Konna	Fula, Rimaïbé	no	no	none
N'Gomi	Socoura	Bozo, Fula	yes	no	none since 2010
Soyé	Soyé	Fula, Rimaïbé	yes	yes	WaNGO
Mourrah	Togué-Mourrari	Fula	no	yes	WaNGO
Para-Bozo	Kéwa	Bozo	no	yes	WaNGO

TFPs = external Technical and Financial Partners

Table 3.7: The selected villages in each of the six municipalities

Municipality Socoura Socoura is the large rural municipality that surrounds Mopti and Sévaré. The latter two cities constitute the urban municipality of Mopti, which is an enclave in the municipality of Socoura (see Figure 3.4). The Socoura municipality houses 45,500 inhabitants in 28 villages. Exactly half of the villages are located on inundated grounds, the other half on dry grounds. Due to the proximity to the large city of Mopti, the population is very heterogeneous, and includes people from Fula, Diawanbé, Rimaïbé, Bozo, Marka, Bambara, Dogon and Bobo descent. The primary economic activities are rice cultivation in the wet areas, horticulture in the dry areas, and animal husbandry. Fishing and forest exploitation are secondary activities.

Village N'Gomi in Socoura The village is located in the south of the municipality, hence south of Mopti, on the bank of the Niger river. It is roughly divided in two neighborhoods: one of the Bozo fishermen and the other of the Fula pastoralists. Both groups are semi-nomadic, with the Bozo trying their luck in lake Débo in the northern part of the IND during the dry season, and the pastoralists moving to drier parts of the IND during the wet season. The principal economic activities of the village are agriculture, fishery and animal husbandry. N'Gomi is relatively well equipped as far as infrastructure is concerned (sanitary and educational centers, small sewerage system, drinking water wells).

Municipality Soyé The municipality is located south of Mopti, between the Niger river and Bani river. It is almost entirely flooded during the wet season, with the villages becoming islands. The *bourgou* grass thrives in the floodplains. Therefore, the soil use in the municipality is dominated by pastures and livestock corridors. It has a population of about 20,700 inhabitants in 26 villages.

Village Soyé in the municipality Soyé The village is the administrative center of the Soyé municipality and counts 2000 inhabitants. It is a cosmopolitan village inhabited by a majority of Fula, but most other ethnic groups of the IND are represented.

Municipality Togué-Mourrari The municipality is located in the extreme northern part of the Djenné cercle, above the Niger river, deep in the IND. Therefore, during six months, this municipality is only accessible over water. This small municipality has around 7,500 inhabitants in 11 villages. The population is composed of Fula pastoralists, Bozo fishermen, as well as Marka farmers. The principal activity, for 70% of the population, is agriculture, mostly rice cultivation.

Village Mourrah in Togué-Mourrari Mourrah is the administrative center of the municipality. The village makes a living of rice cultivation, livestock husbandry, as well

as fishing.

Municipality Kéwa The municipality is located in the northern part of the Djenné *cercle*, between the Niger and Bani rivers. It has over 24,000 inhabitants living in 16 villages. The vast majority of the population makes a living of fishing, as the principal ethnic groups are the Somonos followed by the Bozos. The rest of the population are mostly farmers that cultivate rice.

Village Para-Bozo in Kéwa The village is located in the north of the municipality, deep in the IND, between the Niger and Bani rivers. Like the rest of the municipality, the majority (80%) of the villagers makes a living of fishing.

3.3 Third site: headquarters of a multilateral organization

The third participant observation was conducted at the headquarters (Global Secretariat) of the Global Water Partnership (GWP). GWP is an network organization that advocates IWRM worldwide, through its network of numerous water organizations (governmental, non-governmental, and private). The World Bank, the United Nations Development Programme (UNDP), and the Swedish International Development Agency (SIDA) took the initiative to found GWP in 1996, four years after the Earth Summit in Rio de Janeiro, where the need for Integrated Water Resources Management was explicitly inscribed in the Rio action plan *Agenda 21*.

From 1996 to 2011, over 2500 water organizations in nearly all countries in the world have adhered to the network of GWP, and 80 Country Water Partnerships (CWPs) and 13 Regional Water Partnerships (RWPs) have been created (GWP, 2011). Since the foundation of GWP in 1996, the headquarters have always been housed by SIDA in Stockholm. In the framework of the multi-sited ethnography, a participant observation was carried out during 2011 at the Global Secretariat of GWP in Stockholm.

Identity of GWP Network organizations like GWP are another growing force in the development sector. On the one hand, Perkin and Court (2005) and Ramalingam (2011) remark that network organizations are eagerly embraced by donors and development agencies to deliver aid interventions. On the other hand, NGOs as well as private businesses have discovered the strengths of network organizations for collective advocacy (Hearn and Mendizabal, 2011).

Put simply, the term 'network organization' indicates the formal or informal *organizational structure* that links actors (individuals or organisations) who share a common interest on a specific issue or who share a general set of values (Perkin and Court, 2005). Network organizations have been categorized as semi-structured alternative to (unstructured) markets at one extreme, and (strictly structured) hierarchic organizations at the other extreme (Powell, 1990; Perkin and Court, 2005; Hearn and Mendizabal, 2011).

In effect, the identity of GWP is not unequivocal. Their website states that GWP was founded by the World Bank, UNDP, and SIDA *to foster IWRM* (GWP, 2012). The executive secretary of the Global Secretariat prefers to present GWP as a *knowledge dissemination network*.[11] The different strategic partners and various RWPs and CWPs give weight to other roles. A number of RWPs and CWPs, as well as the World Bank, praise GWP for offering a *discussion forum* at national and regional level where heterogeneous actors can meet to discuss water in a "neutral environment"[12]. The International Water

[11] Stated during the annual conference, 18-19 August 2011
[12] *ibid.*

Management Institute appreciates GWP for its role as "bridge between research and policy making",[13] whereas the International Fund for Agricultural Development considers the CWPs to be "watchdogs" that keep governmental policy making in check.[14]

Structure Although the Global Secretariat in Stockholm contends that the global network is horizontal and not hierarchical, in practice the CWPs almost exclusively interact with their respective RWPs and rarely with the Global Secretariat.[15]

The Global Secretariat is very active in the multilateral sphere. Their everyday interlocutors are the donors, multilateral agencies, and other global network organizations.[16] Although independent from the UN system, GWP is accredited as inter-governmental organization by a number of UN entities (e.g. by the United Nations Framework Convention on Climate Changes—UNFCCC), and acts as such in various international forums. The headquarters are connected to the local level (the CWPs) exclusively through the 13 RWPs, with which they engage at a daily basis.

The RWPs are very present at the regional policy making level (e.g. the 'West African' level or 'Southern African' level) and intensively interact with regional intergovernmental bodies such as regional economic unions (e.g. ECOWAS or SADC) and regional development banks (e.g. AfDB). The regional offices are in close contact with the CWPs.

The national CWPs functions as a forum for all actors active in the national water sector. The national networks manage to influence the national water policies with varying success. Each national CWP office manages its own pool of member organizations.

The day-to-day activities of the global network are managed by the Global Secretariat, but the long-term strategic decisions are taken by a Steering Committee, which is composed of 12 water professionals that are active in other governmental and intergovernmental agencies. Moreover, permanent observers from the World Bank, UNDP, the World Water Council (WWC) and one of the donors also sit in this Steering Committee.

Besides this Steering Committee, GWP can also count on a Technical Committee, composed of 10 renowned water academics and water professionals, for technical assistance. The Technical Committee publishes background papers, policy briefs, technical briefs, and perspective papers to bring scientific knowledge closer to practice and to translate local experiences in global knowledge.

Operational strategies During 2011, the year in which the observations took place, the Global Secretariat was developing operational strategies concerning 'Adaptation to Climate Change' and 'Food Security' for internal use. Strategies on 'Transboundary Cooperation' and 'Urbanization' were also planned.

[13] *ibid.*
[14] *ibid.*
[15] Observed, May 2011 - September 2011
[16] *Ibid.*

Funding Despite its vast network and global outreach, GWP has a relatively small budget. In 2010 the global headquarter received €7.3 million of funding from 9 European governments and the European Commission. Twenty-one percent was designated to specific projects while the remaining 79% was non-earmarked funding. Regionally and locally GWP raised another 1.0 million euro.

This discrepancy between small budget and large outreach can be explained in a number of ways. First, GWP is a knowledge and advocacy organization —it does not finance infrastructure. Second, only the global headquarter and the 13 regional offices are financially supported by this budget. Third, the network receives an inestimable amount of in kind contributions from the 2400 member organizations worldwide, in the form of time and office space.

Chapter 4

Interlude: Research between disappointment and transcendence

In his *Epistemological Explorations*, Jeremy Gould vents his view on the sense and need of conducting ethnographies of development aid—or what he calls 'aidnographies'. Since his authority and eloquence surpass mine by far, I quote him at length (Gould, 2008, p.6-8), as an interlude:

"I, [Jeremy Gould,] try and maintain some belief or hope that our science can contribute to greater social, economic and political justice. This has become increasingly difficult.

Having been actively involved in 'development' for more than 25 years, I must say I am disappointed. I am certainly not alone in this — there is a whole army of scholars, politicians and activists who have made a career of their disappointments in development: in the asymmetries of North South relations; in the way 'development' always seems to privilege the haves over the have-nots, men over women; in the way Southern governments have squandered aid and that Northern governments and the international agencies they command have used aid to further their geo-politically and commercial interests, and so on. I share many of these sentiments; indeed, I find my self increasingly impatient, even angry about the complacency and arrogance with which the captains of the aid industry perpetrate the disappointing institutions and practices of 'development' from one failure to the next: from the failure of technology transfer through the disaster of structural adjustment and onto the imminent implosion of poverty reduction and the MDGs.

But my disappointment is also of a different nature. In a way, it's a self-disappointment; a recognition of our collective intellectual failure to lay bare the essence of 'development' — i.e., to expose the logic underlying this perverse paradox of institutionalised complacency and arrogance in the wake of incessant failure — and to make this knowledge accessible for shared analysis and political contestation. [. . .]

My real disappointment is not about behaving (ir)responsibly, but about our failure

to transcend an 'embedded' perspective on development and to find a means to think consistently outside development. This implies transcending the apparatus' own intrinsic demands to analyze and assess development on the basis of its own self-image, in terms of its own normatively and politically constituted ambitions. To think like a development native, one is incessantly drawn into efforts to make what one does look successful and conducive to incremental improvement.

This problem goes to the heart of the matter. It is incredibly difficult to speak from a rich empirical familiarity of the institutions and practices of development without succumbing to the temptation to engage in debates about how to make it work better. This is, I suspect, because at its core the development apparatus is self-referential. It appears to be about 'developing' external objects (poor economies, deprived actors), but in fact, its basic organizational structure and practices are geared toward ensuring its own self-perpetration."

Part II

Empirical articles

Introducing the empirical articles

The following four chapters report the empirical data of the research. The qualitative data was collected from various sources: three participant observations, interviews, focus group discussions and documents. The data collection and analysis followed the Grounded Theory Method (as in Charmaz, 2006, see also chapter 9). Faithful to this method, the inquiry started with no particular theory nor a clear delineation of the field in mind. From the onset, however, the research focused on development aid *in the water sector*.

As the first participant observation (at the headquarters of WaNGO) proceeded, three paradigms emerged as interesting lines for further inquiry: (i) 'Integrated Water Resources Management' (IWRM) as best practice, (ii) 'Capacity Building' as mode to deliver the aid, (iii) 'Adaptation to Climate Change'. These paradigms were 'followed' into two other but connected sites. During the data collection and analysis, however, 'Adaptation to Climate Change' was gradually abandoned as separate paradigm, and was only considered in relation with IWRM.

'IWRM' is defined by its principal advocate, the Global Water Partnership (GWP), as "a process that promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems" (GWP, 2000a). The paradigm recognizes that water is key to different and often competing goals: human health, food production,economic development, and environmental sustainability. Therefore, the paradigm advocates a cross-sectoral management of water resources as well as a vertical integration of different decision-making levels (GWP, 2000a; Conca, 2006). Numerous scholars have observed that over the past two decades the IWRM paradigm has attained a hegemonic status in water policy making and management worldwide (Conca, 2006; Saravanan *et al.*, 2009; Orlove and Caton, 2010). Over 80% of countries worldwide now have the IWRM principles in their water laws and two thirds have developed a national IWRM plan (UN-Water, 2011).

'Capacity' is defined by OECD-DAC as "the ability of people, organizations and society as a whole to manage their affairs successfully" (2006, p.12). OECD-DAC emphasizes that this definition avoids any judgment on the objectives that the people choose to pursue, and on what counts as successful management. 'Capacity building', then, is "the

process whereby people, organizations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time" (*ibid.*, p.12). UNDP uses a very similar definition (UNDP, 2009, p.5). The capacity building discourse entered the development sector in the early 1990s as an explicit opposition to the technological determinism underlying Technical Assistance (TA) (Berg and Seymour Whitaker, 1993; Fukuda-Parr *et al.*, 2002). By the turn of the millennium the most forward-looking agencies had already raised CB to a priority status (Lafontaine, 2000). Capacity building has now become one of the leading paradigms in current development practice (Kühl, 2009).

Each of the four empirical articles in this Part II engages with one of the selected paradigms, but each article uses slightly different theoretical perspectives for the reporting of the data. These different perspectives mirror the different stages that the data collection and analysis went through (see Table 4.1 below, as well as chapter 9). The first of four empirical articles, chapter 5, takes a genealogical approach and is based on archive data. The subsequent articles (chapters 6, 7, and 8) take an actor-oriented approach and rely on the entire corpus of data, which consisted of 13 months of participant observation at three different sites, 21 focus group discussions, 47 interviews, and over 50 reports and policy documents. The details (such as data and place) of the observations, interviews, and focus discussions are listed in Appendix D.

	CB paradigm	**IWRM paradigm**
Foucaldian	Chapter 5 *Genealogy* (archive data)	
Actor-oriented	Chapter 6 *Translations of interest* (ethnographic)	
		Chapter 7 *Actors, Agency* (interviews, archive data)
		Chapter 8 *Actor-Network Theory* (ethnographic, archive data)

Table 4.1: Theoretical approaches and main data sources of the four empirical chapters.

The different theoretical approaches do not contradict each other, but add richness to the reporting of the data. In fact, the evolution in the four articles reflects the evolution in the grounded theorizing, which was exclusively based on the collected data, and an evolution in the level of articulation. I am not alone in arguing that one social phenomenon

can be explained by means of different theories or theoretical concepts. Stinchcombe (1968), for instance, argues that the social scientist "should be aware of, and capable of applying, several different theoretical perspectives—not just a single one." I elaborate my own view on this in the reflexive chapter 9.

Concretely, the first empirical article (**chapter 5**) probes the origins of a paradigm shift, by having a closer look at the emergence of the 'Capacity Building' paradigm. If this paradigm is interpreted as an opposition to the technological determinism ingrained in traditional Technical Cooperation —as argued by the proponents of Capacity Building themselves— Capacity Building can be considered as the latest offspring of an age-long *genealogy* of discussions on the role of knowledge and technology in development. In fact, chapter 5 shows that the genealogy of these discussions dates back to the Enlightenment. Moreover, at any moment in history, more deterministic and less deterministic interpretations have existed along each other, with the sequence of development paradigms swinging back and forth between both extremes. Capacity Building is, hence, no more than the latest non-deterministic paradigm concerning the role of knowledge and technology in development.

As is the case with Capacity Building, new development paradigms are usually presented as the thaumaturgic successor of a previous failing paradigm —with failure usually being attributed either to the misconception of the previous paradigm, or to a gap between the original paradigm and its practical implementation. In the case of Capacity Building, the failing predecessor was Technical Assistance. This dichotomized image of the paradigm and its implementation as two monolithic and separate entities is untenable. In fact, the ethnographic data adduced in the third article (**chapter 6**) shows how the Capacity Building paradigm is interpreted differently at various points in the development network —from the donor to the rural municipalities in Mali's Inner Niger Delta. The link between the donor and the Malian municipalities exist only by virtue of numerous mediators and intermediaries that, perforce, interpret the paradigm differently. Therefore, it is hard to claim that there exists a 'gap'. Moreover, all actors actively *translate* the new paradigm according to their own interests, in order to reaffirm the own position in the network and in order to reproduce the network. Hence, the paradigm stands or falls with the integrity of the network.

The third empirical article (**chapter 7**) is the first of two articles to have a closer look at the IWRM paradigm. Definitely moving away from the idea that paradigms have an overpowering and disembodied discursive power, this article highlights the *role of individual agency* in the deployment of a paradigm. Taking the introduction of the IWRM paradigm in Burkina Faso (in 1996) and Mali (in 2004) as entry point, the article describes the interplay between national policy entrepreneurs, international organizations,

and structural constraints in the shaping of the IWRM-inspired water policy reforms in the two countries. Despite the apparent uniformity of the IWRM paradigm, the qualitative comparison of the policy change process in the two countries shows that the reforms, as well as the national 'ownership' of these reforms, are significantly distinct. The idiosyncrasies of the reform dynamics and ownership largely depend on the agency displayed by individual policy entrepreneurs.

The last empirical article (**chapter 8**) traces the network of actors that sustained the emergence of the IWRM paradigm in the multilateral sphere two decades ago and the implementation of IWRM in Mali through governmental and non-governmental development aid. The article displays the most advanced level of theorizing in the dissertation, as it found inspiration in *Actor-Network Theory* to describe how actors enroll each other in an alliance that makes the paradigm work. Non-human actors —e.g. the typical aid financing mechanism, the Dublin Principles, the organization GWP, or the Niger river— have proven to be important anchorage points for the alliance. Yet, the alliance that once was so strong, seems to be disintegrating now, and actors are compelled to renegotiate IWRM by drawing in 'climate change'. In resonance with Chapter 6, Actor-Network Theory proves helpful in showing that the 'success' or 'failure' of the paradigm depends on the strength of the alliance, not the strength of the paradigm.

All chapters in Part II were originally conceived as stand-alone articles (some of which are in process of publication), so they can be read independently from the rest of the dissertation.

Chapter 5

Epistemic and technological determinism in development aid discourses

We believe that feelings are immutable, but every sentiment, particularly the noblest and most disinterested, has a history.

Michel Foucault — Nietzsche, Genealogy, History

5.1 Introduction

Point four of president Harry Truman's inaugural address, pronounced on 20 January 1949 in front of the US congress, has been indicated by many scholars as emblematic mile stone in —or even starting point of— international development cooperation.[1] Truman (1949) stated the following:

> we must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas. [...] For the first time in history, humanity possesses the knowledge and skill to relieve suffering of these people.

Nearly half a century later the World Bank published the 1998/1999 World Development Report, entitled *Knowledge for Development*. The report opened with this statement:

> Knowledge is like light. Weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere. Yet billions of people still live in the darkness of poverty unnecessarily. [...] Poor countries —and poor people— differ

[1] Although laden with different connotations, 'development aid' and 'development cooperation' are used interchangeably in this article.

> from rich ones not only because they have less capital but because they have less knowledge. Knowledge is often costly to create, and that is why much of it is created in industrial countries. But developing countries can acquire knowledge overseas as well as create their own at home. (World Bank, 1998, p.1)

Although half a century lies in between the two statements, the similarities are striking. Both quotes display an unconditional trust in Western-like scientific and technological knowledge.

This article does not involve itself in the post-colonial debate about a presumed Western cognitive hegemony (as in Escobar, 1995; Mehta, 2001; Anderson, 2002; Többe Gonalves, 2006). Instead, it scrutinizes the Western idea that 'development' and 'development aid' are related, in some way or another, to 'knowledge' and 'technology'. A brief genealogy lays bare, first, that knowledge and technology (K&T) have always been integrally part of the very idea of 'development', ever since the emergence of this Western concept during Enlightenment. Second, the genealogy shows that the entire history of 'development cooperation' is characterized by a long struggle of trying to find the right role for K&T in development. Many different and conflicting roles have been allotted to knowledge or to technology for the sake of development, with deterministic and less deterministic interpretations often existing along each other.

Before sketching the genealogy in the third section, I first introduce the terms 'technological determinism' and 'technology transfer', and define the new term 'epistemic determinism'. These concepts are used in the fourth section to analyze the genealogy.

5.2 From Technological to Epistemic Determinism

5.2.1 Technological determinism

The widespread idea that technological advances would be a major *driver* of social change is called 'technological determinism'. Scholars agree that a full-blown technological determinism ideology is composed of two different but complementary ideas (Kline, 2001; Wyatt, 2008). The first idea is that technology would evolve independently from society, following its own inherent, uni-linear, incremental logic. The second idea is that this technological change would drive —or *determine*— social change.

Despite its discursive omnipresence, historians and sociologists of science and technology have demonstrated that the ideology of technological determinism does not mirror reality (Bijker, 1995; Oudshoorn and Pinch, 2008). The ideology has been described as "intellectually poor and politically debilitating" (Bijker, 2010, p.71). Indeed, there does not exist a unidirectional causal link between technological change and social change —as technological determinism suggests— nor does technology develop along its own inherent

goal-directed path. Society and technology co-evolve in an intimate, but complex, way (Bijker, 2010).

5.2.2 Technology transfer

If technology intimately evolves with society, and technological change does not produce social change in an unequivocal way, then the *transfer* of technology from one social context —say, the Western world— to a completely different social context —say, a country in the Global South— in order to prompt some kind of social change —say, 'development'— is also very problematic. Again, two sub-ideas underlie the technology transfer ideology. First, it supposes that technology can be detached from its social context and can be re-implemented without much trouble in a new context. Second, it assumes that a technology, implemented in a new social context, will recreate the same social and economic configurations (e.g. 'economic development') as in the original social context.

Again, these assumptions have proven to be unrealistic. The idea that technology can unproblematically be transferred has been criticized in various ways: first, for overlooking the importance of the tacit knowledge component (Rosenberg, 1970; Reber, 1993), second, for underestimating the social, cultural and organizational barriers that hamper the transfer (Argyris and Schön, 1978; Carlile, 2004), and third, for being insensible to social justice (Visvanathan, 2001).

5.2.3 Epistemic determinism

Since *all* knowledge —everyday knowledge, technological knowledge, and even scientific knowledge— is produced and reproduced by humans, social scientists now generally agree that knowledge is necessarily partial and profoundly embedded in its specific social context. This idea was already present in the work of nineteenth century continental philosophers, such as Nietzsche, who rejected the possibility of a non-perspectival knowing subject (Nietzche, 1967 [1887]). After the post-modern turn, Donna Haraway's concept of 'situated knowledge' found most resonance (Haraway, 1988). As a result, claims of universality in knowledge production are now considered naive, and where they do appear, these claims can be deconstructed as strategies that seek to overrule other perspectives (Foucault, 1980; Thompson, 2001).

In analogy with technological determinism, 'epistemic determinism' can be defined as the two-headed ideology that (i) knowledge is an immaterial good that can be detached from the social context, and (ii) that this immaterial good can be transferred, without much effort, to another social context where it will have similar meanings and effects as in the original social reality.

Whereas technological determinism does not acknowledge that technology and society co-evolve, epistemic determinism does not recognize that all knowledge is situated. In the rest of the article, knowledge and technology —and by extension the transfer of knowledge and the transfer of technology— will be treated as two closely related concepts (K&T).

5.3 A genealogy of K&T in development

The following genealogy highlights the principal historical invocations and manipulations of K&T for the sake of development. It is not an account of a continuous evolution towards 'better practices'. Instead, following the Nietzschean-Foucauldian tradition, it pays attention to parallel discourses, overturns in vocabulary, and the external forces at work in these changes (Foucault, 1991b).

Enlightenment

The genealogy of K&T in/for development is closely related to that of the 'development' idea itself. 'Development' seems a universal feature of nature and human nature, and therefore it is believed to be isomorphically applicable to societies and economies. Nothing, however, is further from the truth. The idea of 'development' as socio-economic, uni-linear, cumulative and unlimited phenomenon, is the brainchild of a Western world view that emerged during Enlightenment (Escobar, 1995; Rist, 1996). It is closely related to the enlightened view on 'knowledge'.

Classical philosophers such as Aristotle saw nature as cyclic, developing through the stages of birth, growth, decline and death, without ever reaching the perfect state. Christianity and Saint Augustine linearized growth and added a *telos* to development: everything was believed to develop according God's plan towards the inevitable end of the world (Rist, 1996). However, there was no trace yet of the idea that knowledge, technology and social organization develop in a cumulative manner. The knowledge produced by the classical Greek and Roman thinkers, for instance, preserved an insurmountable status until Enlightenment (Rist, 1996).

Only in the XVI and XVII century, with Bacon, Descartes and Pascal, this insurmountable status of Ancient knowledge was challenged. Descartes stated, around 1628, that "we should not give great credit to the Ancients on account of their antiquity [...] For the world is older now than it was then, and we have a greater experience of things" (Descartes, 1974, p.204). Bernard le Bovier de Fontenelle wrote that "a great, savage mind is, so to speak, composed by all great minds of all preceding centuries; [...] mankind will never degenerate and the sane voices of all the great minds that follow will always add one to another" (Fontanelle, 1752 [1688]). Knowledge started to acquire an accumulative character: every generations can benefit from the body of knowledge that has been built

up, and can add its own bit to it. A decline of knowledge and science was believed to be impossible. According to (Rist, 1996) this enlightened idea of the cumulative character of knowledge is in clear opposition to, on the one hand, the Ancients' aversion of infinity, and, on the other hand, the Augustinian faith in the inevitable end of the world.

The supposed accumulative character of knowledge and its beneficial effects were contested by only a minority of thinkers, such as Jean-Jacques Rousseau, David Hume or Adam Ferguson. Hume wrote that "when the arts and sciences come to perfection in any state, from that moment they naturally, or rather necessarily, decline, and seldom or never revive in that nation where they formerly flourished" (Hume, 1854 [1752], p.146).

Despite the dissident voices, what is left by the end of the eighteenth century is the hegemonic idea of uni-linear progress and infinite growth in our knowledge of the natural world. Smith (1994) argues that the Enlightenment also lodges the cradle of the technological determinism ideology. All streams of thought in the eighteenth and nineteenth century —the enthusiastic as well as the critical— held that science and technology were powerful agents of social change. So, if knowledge was believed to be accumulative, then also the complexity of technology would be accumulative, and so would be the sophistication of socio-economic organization.

The first enlightened voices that called to export the European 'progresses' to the colonies invoked precisely Europe's epistemic superiority as justification. Condorcet, last of the *Encyclopédistes* —and a fervent critic of slavery— wrote in 1793 that:

> The Europeans [...] will disseminate, in Africa and in Asia, the European principles and example of freedom, of the enlightened, and of reason. [...] [The colonies] are just waiting for our help to become civilized, and are waiting to find brothers among the Europeans, in order to become their friends and *pupils*. (Condorcet, 1795 [1793], p.335, translation and emphasis by the author)

Apparently a *teacher-pupil* relationship —with Europe in the role of the teacher— was already part of the progress ideology by the second half of the eighteenth century.

Stages in knowledge, stages in development

The rise of social evolutionism in the nineteenth century molded Western thinking concerning development and development aid in an important way. All societies of this planet were believed to pass through a number of stages of evolution, from savagery to civilization. Moreover, the path was said to be universal, hence identical for all societies, and this created a unifying bond amongst all peoples. This also meant that the savage tribes in the colonies were believed to lead the life that our ancestors had led some millennia ago and that evolution would inevitably transform their society in a society similar to the European.

The successive stages of social evolution were characterized by increasing complexity in social organization, technology and knowledge. In this sense, social evolutionism

added two meanings to K&T in development. First, August Comte argued that human thought "passes successively through three different theoretical conditions: the theological or fictitious; the metaphysical, or abstract; and the scientific, or positive— (Comte, 1975 [1830], p.71). As a consequence, the Western society was presented to have superior knowledge —in an absolute manner— with respect to non-European societies, since Europe was in the utmost advanced stage of evolution. Second, the type of K&T that a society possessed, such as its agricultural techniques, tools, writing system, etc., were a measure of the evolutionary stage it found itself in (as in Morgan, 1974 [1877]).

By the nineteenth century Europe felt a new urge to colonize (the 'Scramble for Africa'), which was justified by the need to find new markets for the expanding European industry (Arndt, 1987). Social evolutionism, disguised as philanthropy, was a helping hand in selling the new colonialism to the broad public. Jules Ferry for instance, French minister of external affairs at the end of the nineteenth century, sustained that "superior races have rights over inferior races, because they also have obligations towards them; they have the obligation to civilize the inferior races" (Ferry, 1885, translation by the author).

It needs to be underlined that the objective of civilizing the 'inferior races' was, at that time, still completely detached from the idea of stimulating their economic development (Arndt, 1987). Economic development was only reserved to the European economies.

Social evolutionism was also reflected in the philosophy behind the League of Nations, founded in 1919. The Covenant of the League of Nations is the first official document that mentions the concept 'development' and the idea that nations and peoples can 'develop' over time. Article 22 of the Covenant, that regulated the Mandatories (i.e. mandated control) of some member nations over others on behalf of the League, defended these Mandatories in terms of the different stages of development that nations found themselves in.

Technical Assistance for economic development

President Harry Truman"s inaugural address of 1949, partly cited in the introduction of the chapter, was a milestone in development cooperation, for distinguishing 'developed' countries from 'underdeveloped' ones (Escobar, 1995) in a more clear-cut way than the League of Nations did. The developed peoples needed to help the underdeveloped in their economic development, Truman stated. The scope: maintaining world peace. The means: the transfer of scientific knowledge and industrial technology.

By proposing such a transfer as trigger of development, Truman merely expressed the Zeitgeist. David Landes recalls the British groundnut scheme, implemented in Tanganyika over the period 1946-54, as "the mother" of all technology transfer projects (1998, p.501). This program had to show what the British government was capable of when it

implemented modern Western technology and expertise in their colonies. Although the peanuts were destined for the British market and not for the African, it was argued that the local farmers would *learn* from the large-scale industrialization in agriculture and successfully copy it. The project turned into a blatant fiasco; in eight years the project had worsened the socio-economic situation of the local farmers —due to bad planning, a lack of local capacities, and adversary ecological conditions (Havinden and Meredith, 1993, p.276-83).

Through 1947 and 1948 the term 'Technical Assistance' (TA) was coined to indicate the official help that was offered by the UN Economic Affairs Department. In 1949, under impetus of Truman's Point Four, an Expanded Program of Technical Assistance was created (which in 1965 became the United Nations Development Programme, UNDP). TA was initially a program of unidirectional knowledge transfer, in the hands of Western experts and coloured by evolutionist thinking. Local knowledge or traditions were seen as obstacles: "rapid economic progress is impossible without painful adjustments. Ancient philosophies have to be scrapped; old social institutions have to disintegrate" (UN, 1951, p.4). The TA program of the UN and loans of the World Bank were aimed at offering 'tech-fix' assistance and giving 'the big push' to underdeveloped countries, mostly in the form of large infrastructure and technology works, in an attempt to start weaving the network of economic activity. Social well-being would follow automatically.

The absolute power of Western science and technology, and the conviction that this scientific knowledge was a global good, still set the tone in 1963 at the first *UN Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas* in Geneva. The conference was taken as a scientific rather than a political meeting. Scientists and technical experts dominated the Geneva conference, 84% of them coming from the developed world (Standke, 2006).

Surprisingly, David Owen, chairman of the UN Technical Assistance Board and generally well aligned with the US government, anticipated already in 1950 much of the criticism on TA that would grow in the 1960s and 1970s (Owen, 1950, p.110, emphases by the author):

> An economic mission from any one of the great industrial powers, no matter how benevolent the intentions, may [...] be met with charges [...] that its purpose is to bring the country under some form of *foreign economic domination* [...] Moreover, even if the good intentions of the mission are fully appreciated, there remains the danger of a one-sided approach to the solution of the technical problems which the mission encounters. It is only natural that technical experts from any one country will be inclined to recommend a duplication of the institutions, organization, and techniques which have proved successful in their own country, though in many cases *these solutions are not necessarily compatible with the social and political structure of the recipient.*

The discussions about TA, anticipated by Owen but growing widespread throughout the 1960s, mostly evolved around the effectiveness of TA. They did not question the

epistemological premises of the unidirectional transfer of K&T from the West to the underdeveloped world.

Technical Assistance for poverty alleviation

Criticism culminated in the late 1960s and early 1970s with the emergence of the Dependency School, a group of critical scholars and policy-makers based in Latin America (e.g. Frank, 1969). They argued that the 'center' of the world (the West) had developed at the expense of the 'periphery' (the ex-colonies). They blamed development aid for perpetuating this unequal relationship, and technology transfer for creating dependency.

The global political context was changing and a less economicist wind started to blow in the World Bank with the appointment of Robert McNamara to its leadership in 1968. Attention started to shift to equity and the needs of the very poor. Although the agencies continued to finance large infrastructure to some extent, the World Bank and UNDP started to be primarily concerned with rural development, poverty alleviation, and the reinforcement of local organizations. The development support was increasingly directed to grassroots development (Nolan, 2002).

One expression of this attention to the poorest was the search for new forms of 'appropriate' or 'alternative' technologies, more adaptable to the local contexts in underdeveloped regions. In the early 1970s, Schumacher (1973) and others elaborated on the idea of 'intermediate technologies' for development: technologies that float somewhere between traditional village techniques and advanced capital intensive technologies of the Western world. The term was soon replaced by 'appropriate technologies', indicating any technology that is small-scale, labor intensive rather than capital intensive, energy efficient, environmentally sustainable, and controlled and maintained by the local community of a developing region (Murphy *et al.*, 2009).

The concept of appropriate technology and some sensibility of local knowledges were gradually adopted in World Bank models of technology transfer (Visvanathan, 2001), in order to improve the technology transfer. There was no attempt yet, within the development agencies, to question the ideology of K&T transfer itself.

It should be noted that the attention to the rural poor was not entirely new. For instance, in the 1940s, the Rockefeller Foundation had founded in Mexico a research center dedicated to develop high yielding wheat and maize varieties for the Mexican market (Ross, 2003). Research in this and in similar research centers triggered the 'Green Revolution' of the 1960s and 1970s. However, this early attention to the poorest —also surfacing in Truman's speech— mostly stemmed from a concern about the rise of communism. Secure food production, it was said, was essential to keep the poor rural populations in developing countries 'happy' and keep them away from communism (Ross, 2003). In any case, until the late 1960s the main scope of development aid was, without doubt, eco-

nomic growth and the production of material goods. Along with economic growth, rural poverty would decline. Only towards the end of the 1960s this relation was revised.

Building Science and Technology Capacities in the South

In the late 1960s and throughout the 1970s the world also witnessed the increasing bargaining power of the developing countries —or 'non-aligned' countries— at the international political stage (Rist, 1996). Along with a 'New International Economic Order', they claimed a better access to science and technology (S&T).

The *World Plan of Action for the Application of Science and Technology for Development*, presented in 1971 by the UN Advisory Committee on Science and Technology for Development (ACAST), reflected this new political climate by proposing the following targets (UN 1971):

- developing countries should increase their domestic S&T output;
- developed countries should intensify their aid to build up the S&T capacities in developing countries;
- a portion of the R&D in developed countries should be focused on the specific needs of developing countries.

The instrumental and deterministic role attributed by ACAST to scientific output was criticized by a group of scholars in the so-called Sussex Manifesto (Singer *et al.*, 1970) — a document that was initially meant to be the introductory chapter of the *World Plan of Action*. The Sussex Group left behind all discourses about 'catch-up' or about 'the troubles in technology transfer.' Instead they sustained that development was about improving the *local capabilities*[2] (Shah, 2009). They contended that development "depends on people with outlook, knowledge, training and equipment to solve the problems posed by their own environment, and thus control their environment rather than be controlled by it" (Singer *et al.*, 1970). It is noteworthy, however, that the radical Manifesto still sustained 'economic production' as ultimate aspiration for the developing countries.

Later during that decade, the UN organized a second *Conference on Science and Technology for Development* in Vienna in 1979. Contrary to the first one in Geneva, this conference was political, rather than technical. The participants were governments, not scientists. Under pressure of the non-aligned countries the discussions were more about the 'equitable access' to S&T rather than about 'technology transfer' (Standke, 2006). Despite this shift in attention, discussions about 'equitable access' still adhered the mainstream philosophy that any injection of S&T would lead to development. Critical voices questioning Western S&T were kept out of the conference (Shah, 2009).

[2]The Sussex Manifesto extensively wields the word 'capability', a concept that became notorious a decade later through the work of Amartya Sen (1985). In the Sussex Manifesto the concept is used only to refer to domestic S&T capabilities.

Whereas until the 1980s the UN has made strong efforts to give the field of S&T a highly visible role in its deliberations, today the UN is no longer seen as a prime actor in this field (Standke, 2006). The World Trade Organisation, founded in 1995, has partly taken over the negotiations about access to technology and scientific knowledge.

The cutback of aid in favor of the market

The 1980s and 1990s witnessed the rise of the neo-liberal ideology in development and a laudation of the beneficial forces of the free market. Towards the turn of the millennium the market was abandoned again in favor of a stronger state and civil society (Nolan, 2002). Poverty alleviation and the poor returned at the center stage. Banners of this battle against poverty are the Poverty Reduction Strategy Papers and the Millennium Development Goals (established in 2000).

Together with this renewed attention to the poor, another, completely new tendency emerged: *knowledge* started to be given an explicit role in development, although many visions spawned on what that role exactly should be.

Developing the Knowledge Economy

Simultaneously with the abandonment of the free market as panacea for underdevelopment, there was a growing interest from scholars and development agencies in the role of knowledge as economic good (for an overview, see King and McGrath, 2002). The observation that knowledge-based activities generate increasingly high returns, has led to the emergence of a 'New Growth Theory'. This theory's primary recommendation for developing countries is to bet on human capital and education, in order to generate growth from knowledge-related activities (Cozzens *et al.*, 2008).

The 1998/1999 World Development report *Knowledge for Development* (World Bank, 1998), whose opening statement was quoted in the introduction of this article, was interwoven with the Knowledge Economy discourse. This discourse is, however, much more explicit in later World Bank publications such as World Bank (2007).

R&D and Innovation for Development

Rooted in another strain of thought, but closely related to the Knowledge Economy paradigm, is the theory of Innovation Systems (amongst others, Freeman, 1982; Edquist, 1997). This theory inscribes the generation of science, technology, innovations, and development, into a networks of interrelated actors: the innovation system. The three typical categories of actors in an innovation system are: research institutions (both public and private), governmental bodies, and private enterprises (Edquist, 1997). The concept reflects an important shift in the understanding of technological production: the linear

chain of invention-innovation-diffusion, has been replaced by a dynamic process of non-linear learning between multiple agents. Development policies that adhere the Innovation System theory seek to identify and promote the political configurations and strategical investments that are needed to initiate or accelerate the process of innovation and technological development in the innovation system at stake.

Innovation Systems have the merit of having drawn the attention to the wider and plural milieu of knowledge production. Whereas TA was still primarily concerned with one-to-one knowledge transfer, Innovation Systems has made clear that the actual dynamic of knowledge production is many-to-many (Wilson, 2007b).

Knowledge Management for Development

When Wolfensohn was appointed president of the World Bank in 1996, he declared that the Bank had to become a 'Knowledge Bank' (Wolfensohn, 1996):

> We have been in the business of research and disseminating the lessons of development for a long time. But the revolution in information technology increased the potential value of these efforts by vastly extending their reach. [...] We need to [...] enhance our ability to gather development information and experience, and share it with our clients. We need to become, in effect, the Knowledge Bank.

The 1998/1999 World Development Report, an immediate product of this new line of thought, mingles elements of 'Knowledge Economy', 'Knowledge Management' and 'ICT for Development'.

Knowledge Management aims to convert the tacit knowledge of individual experts or employees into explicit, manageable knowledge (Evers *et al.*, 2009). King and McGrath (2004) distinguish two tendencies. The first or 'technological' approach is the one that tries to capture, store and distribute by means of ICT the knowledge that already exists among experts in an organisation. The second or 'social' approach focuses more on putting people together in teams, in order to take advantage of their tacit knowledge.

Wolfensohn, by stating that the World Bank had to become a Knowledge Bank, clearly harnessed the technological approach. For this purpose, the World Bank created the Global Development Network. A public web portal, the Global Development Gateway, collects and disseminates development-related knowledge, covering topics as varied as economics, aids, natural resources management, etc. UNDP created a similar system, called SURF (Evers *et al.*, 2009). Other development agencies have supported independent networks such as Eldis or the Open Knowledge Network. This approach to development knowledge diffusion has been criticized for having severe limitations (Mehta, 2001; Evers *et al.*, 2009).

ICT for Development

The Knowledge Management credo places much hope in modern information and telecommunication technologies (ICTs). However, ICTs have been invoked for development in many different ways:

- development-related knowledge can be transferred via the internet or satellite, "at virtually no cost" (World Bank, 1998, 130);
- ICT will bridge the digital divide between the information-rich and the information-poor, in order to instruct the information-poor and empower their civil society;
- ICT as instrument or as economic good in the Knowledge Economy.

The first has been discussed in the Knowledge Management section. The second and third usually constitute the 'ICT for Development' (ICT4D) discourse. The ICT4D sector has an ambiguous relationship with technological determinism. Mansell (2011) sustains that the grand ICT4D theories of the UN and World Bank rely on ICT as an exogenous factor for development. Although the 2001 Human Development Report (UNDP, 2001) states that ICT "enable development" because technological innovation and development are "mutually reinforcing, creating a virtuous circle" (UNDP, 2001, p.28), Avgerou (2003) finds that the report emphasizes by large only one side of that virtuous circle: that ICT innovation will generate development.

The hopes for the ICT4D sector are high, but many projects fail. The literature on ICT in developing countries has accumulated a substantial amount of qualitative data that confirms the situated manner in which ICT4D projects need to take shape (Avgerou, 2003). Practice-based approaches in the field show that ICT can play an endogenous role in development but these grassroots initiatives cannot adequately bridge power inequalities (Mansell, 2011).

Capacity Building

Throughout the 1990s, the Capacity Building discourse emerged as an explicit opposition to the technological determinism in TA and other K&T transfer practices. From the 1940s through the 1970s TA had exclusively relied on the employment of Western experts, and its failure was no longer ignorable by the end of the eighties. Criticism to TA was growing within the major development organizations themselves (for an overview, see Fukuda-Parr *et al.*, 2002). A UNDP assessment report (Berg and Seymour Whitaker, 1993) argued that TA had proven effective in getting the job done, but less effective at developing local institutions or building local capacities. Instead, TA had fostered dependence on foreign experts, and had distorted national priorities.

The concept 'capacity building' was picked up from this report by Edward V.K. Jaycox (1993), the then vice-president of the World Bank's Africa section. Berg and Jaycox's

message was that TA had to rely much more on local expertise, not foreign experts. In this way, TA would stimulate and build up the local capacities.

A subsequent UNDP publication (Fukuda-Parr *et al.*, 2002) was the real trigger for the spread of the capacity discourse in all development agencies. The document completely rejected TA and proposed capacity building as the "new solution to old problems". Fukuda-Parr *et al.* (2002) argued that capacity needs to be developed at three levels: the individual, the organizational, and the societal. In fact, the agency of an individual or organization to apply its capacities depends on the capacities of the society as a whole. In other words, the document explicitly recognized that knowledge is always embedded in a specific social context.

Since the nineties the capacity discourse has gained a hegemonic status within development cooperation (Kühl, 2009). It is not surprising that the concept, which is on the lips of most development actors nowadays, has acquired multiple and often conflicting meanings[3] (Baser and Morgan, 2008; UNDP, 2009).

5.4 Discussion

5.4.1 Disentangling the different discourses

Enlightenment and evolutionism highlighted knowledge, science and technology as *endogenous* characteristics of civilization. Western scientific knowledge was the expression of the most advanced evolutionary stage a society could attain. From Condorcet, over nineteenth century colonizers, to the League of Nations, they all invoked the superiority of Western knowledge and civilization as moral justification to civilize the 'inferior races'.

The role that Truman and TA assigned to K&T was radically different: it had to tackle the economic poverty of the underdeveloped world and harness Western K&T as *exogenous* tool for the generation of economic growth. Industrial technology and large infrastructure would generate economic development. The (scientific) knowledge surrounding these Western technologies was embodied by the Western experts who were sent out for TA. There was a heavy focus on the transfer of technologies but there were no particular efforts to foster knowledge production in the beneficiary society itself. Knowledge as endogenous factor of development seemed to be abandoned in favor of material production as endogenous motor of development.

Since the late 1990s, knowledge has again assumed an *endogenous* role in development, as can be deduced from the rise of the discourses on Knowledge Economy, Innovation Systems or Capacity Building. By extension, other recent discourses, like ICT4D, harness

[3]See also chapter 6 in this dissertation, which shows, drawing on empirical data, that different actors interpret the Capacity Building paradigm in different ways.

Period	Role of K&T in development	Goal of K&T transfer
century XVII	K&T endogenous to Enlightenment	civilize
century XIX	K&T endogenous to evolution	civilize
1940s-1960s	T exogenous tool to development	generate growth
1970s	T exogenous tool to development	alleviate poverty
1990s-2000s	K endogenous to development	empower, generate growth

Table 5.1: Some of the roles allotted to K&T in development, from the Enlightenment until today

technology as an *instrument* in development rather than *goal*, and confirm that the focus is now on *knowledge* as endogenous factor in development.

Moreover, K&T have been invoked for development with varying intentions. In the pre-Truman era, it was invoked for the *civilization* of the colonies. During the 1950s and 1960s it was invoked for *producing goods and economic growth*. In the 1970s the role of K&T was *alleviating poverty*. Nowadays, K&T is said to *empower* the people and to reinforce their capacities, while others see it as the motor in a *Knowledge Economy*.

It is important to emphasize that different discourses about K&T for development have existed along each other. Some of these discourses are mutually supportive while others defend completely opposite messages. This is especially true in the first decade of the twentieth century. When scrutinizing the credo 'Knowledge for Development', brought forward by the 1998/1999 World Development Report (World Bank, 1998), we note that this flag covers a number of different cargoes. It includes elements of the Knowledge Economy, Innovation Systems, Knowledge Management and ICT4D paradigms. UNDP, from its side, also supports ICT4D and online Knowledge Management initiatives, but it is also a strong promoter of Capacity Building. Finally, the genealogy of section 5.3 shows that at any point in history the reigning paradigm was always contested, to some minor or larger extent, from inside or outside the authoritative organizations.

5.4.2 Epistemic and technological determinism

As explained earlier, the technological determinism ideology ignores the intense co-evolution of technology and society, whereas the epistemic determinism ideology ignores that all knowledge is situated and embedded in its particular social context. Apart from the different roles that have been assigned to K&T in/for development, the degree of epistemic and technological determinism in the interpretations has also varied widely. Some discourses are particularly prone to epistemic and technological determinism, such as Technical Assistance, the ICT4D, Knowledge Management, and Knowledge Economy paradigm. That does not mean that they are imperatively deterministic. More and less deterministic views exist along each other.

Figures 5.1 and 5.2 sketch the rise and fall of the main discourses on K&T in development [4]. In addition, each discourse is measured against two scales. The first scale (the vertical scale in the grids of figures 5.1 and 5.2) measures the degree of technological/-epistemic determinism:

1. K&T presented as completely independent from the social context (indicated as 'INDEP');
2. K&T presented as independent from social context, but some adaptation to the local context will favour their effectiveness ;
3. K&T presented as embedded in the social context, but the discourse still relies on the idea that one party learns from the other;
4. K&T presented as completely embedded in the social context; no transfers, as learning and innovation must happen in the social context (indicated as 'EMB').

The scale focuses on only one of the two underlying ideas of technological and epistemic determinism: the one that undergirds the conviction that K&T can be transferred.

The second scale (the horizontal scale in the grids of figures 5.1 and 5.2) evaluates what K&T are invoked for; it measures the degree of 'economic determinism' in the discourse:

1. K&T exclusively invoked for social development, or for the empowerment of the people (indicated as 'SOC')
2. K&T invoked for social development; the social development will also lead to a more productive society
3. K&T invoked for economic development; this economic development will also lead to social development
4. K&T exclusively invoked for economic development (indicated as 'ECON').

[4] All timelines in figures 1 and 2 are retrieved from the Google Books database (Michel *et al.*, 2011). The timeline of 'Capacity Building', for instance, shows for each year from 1940 until 2005 the relative occurrence of the 2-gram 'Capacity Building' among all possible 2-grams in the books published in that particular year. The graphs have been smoothed by floating ±1 averages and splines. The timelines are included in this article to show relative tendencies, not absolute values. The author judged that the four n-grams of figure 5.1 have very precise meanings and can be confronted in one single graph. The n-grams of figure 5.2 have broad meanings and it is senseless to compare their timelines.

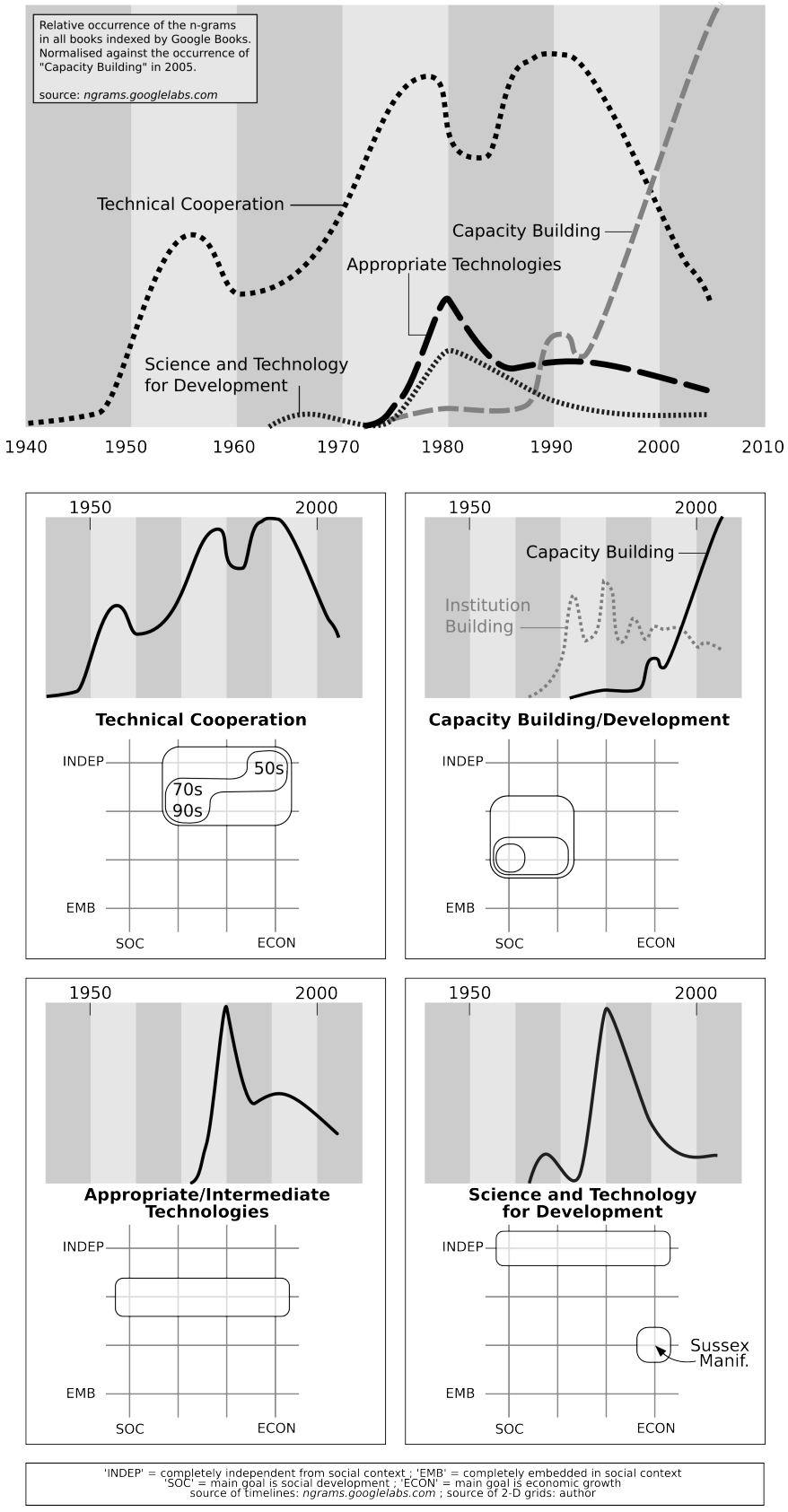


Figure 5.1: The rise and fall of K&T discourses, and their characteristics.

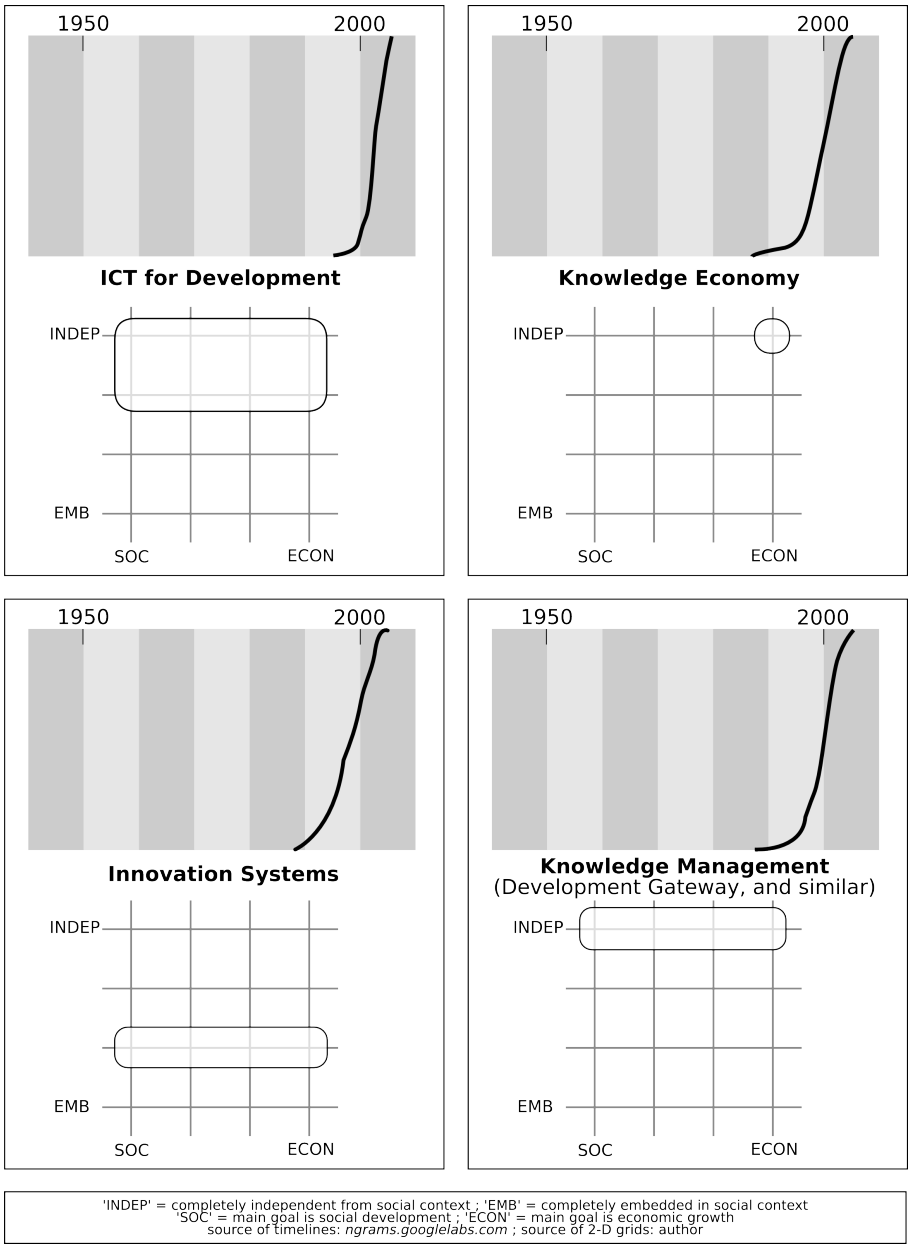


Figure 5.2: The rise and fall of K&T discourses, and their characteristics (continued)

5.4.3 Beyond capacity building

Few has been said about *whose* K&T counts. All K&T discourses described in the genealogy favor Western knowledge. Capacity Building does try to harness local expertise in order to build up local capacities but Wilson (2007b) remarks that Capacity Building —like TA— still focuses on "learning things that are already known by one of the actors."

Wilson distinguishes 'learning from' and 'learning with'. The former still reigns development aid, while there is a need to focus more on the latter. The 'learning with' is inspired by Habermas' 'ideal speech situation,' where different knowledges are equally valued as possible source of creative learning and new knowledge production (Wilson, 2007b). 'Learning with' would be a mode of cooperation that fully transcends epistemic

determinism.

As far as indigenous knowledge is concerned, there is some increasing attention from scholars, especially in natural resources management and conservation (e.g. Dove, 2006; Berkes, 2009), but this has had little resonance in the major development agencies.

5.5 Conclusion

The genealogy sketched in section 5.3 shows that discussions on the role of K&T in/for development have an age-long line of descent. The ideas that K&T are cumulative and that they underpin development emerged during Enlightenment. Since Enlightenment until today, many different roles have been allotted to K&T in development: once exogenous to development, then endogenous; once the instrument, then the goal. They are also invoked for different purposes: for *civilizing* the 'inferior races', as motor of *economic* development, for *poverty* alleviation, for *empowerment*, etc.

The genealogy reveals two transversal constants. First, each discourse emerged from a different intellectual and political background; it includes certain values and conveys specific views on the organization of social and economic life. In sum, none of these discourses is neutral. Each is based on a specific world view and a specific idea about the role that K&T play in this world.

Second, although more deterministic and less deterministic views on K&T have always existed along each other, the genealogy has shown that at any moment in history the one or the other extreme prevailed. Capacity Building, for instance, the currently hegemonic discourse in development cooperation, is no more than the latest non-deterministic discourse concerning K&T in development.

Chapter 6

Implementing the Capacity Building paradigm: a matter of translations

Bolokòni kelen te se ka bèlè tà.
One single finger cannot pick up a stone.
Bambara proverb

6.1 Introduction

Throughout the history of development aid,[1] the expert communities have displayed a continuous effort to 'get the development policy right', thereby unceasingly promoting new concepts and theories to adjust preceding policies that failed to deliver (Mosse, 2004; Thorbecke, 2007; Kremer *et al.*, 2009b; Nederveen Pieterse, 2010). Failure to deliver is invariably attributed either to the misconception of the previous policy, or to an unintended gap between policy formulation and implementation (Strang and Macy, 2001; Mosse, 2004; Kühl, 2009).

'Capacity building' (CB) —also indicated as 'capacity development'— is such a currently prominent theory (Eade, 2005; Kühl, 2009; Clarke and Oswald, 2010), concerned with 'getting the aid right'. It claims that traditional 'technical assistance' failed, and argues that development policies need to focus on the improvement of the knowledge, skills and capabilities of the aid-receiving individuals, organizations, and governments (Fukuda-Parr *et al.*, 2002). The United Nations Development Programme (UNDP), a prominent promoter of CB, believes that "there is now emerging agreement in the development community that capacity development is the engine of human development" (UNDP, 2009, p.5) — it even claims that "capacity *is* development" (*ibid.*, p.6).

[1] Although laden with different connotations, 'development aid' and 'development cooperation' are used interchangeably in this article.

The idea that the failure of a policy derives from the misconception of the previous policy, or from an unintended gap between policy formulation and implementation, stems from an instrumentalist view on the policy process. The classic 'stagist' view on policy making (Easton, 1965; Jenkins, 1978), as well as the more recent 'evidence-based' approach to policy making (Nutley *et al.*, 2000; Sanderson, 2002), both assume that the policy process goes through a number of sequential stages: a problem emerges; a policy is created to cope with the problem; the policy is implemented; impact is measured; the policy is evaluated. Whereas both approaches assume that the realm of policy making is independent from the realm of implementation, the evidence-based approach also assumes that objective measurements are possible in the realm of implementation, and that they can feed back into the realm of policy making. Both assumptions are highly problematic, not in the least because development is a multi-dimensional phenomenon whose measurement is always indeterminate (Rottenburg, 2009). However, the continuous quest for better policies that permeates development aid continues to rely on these two instrumentalist views on policy making (Kremer *et al.*, 2009a).

I challenge the idea of unidirectional links between separate realms, as well as the existence of a gap between those realms, and contend that the link between a policy and its implementation exists only *by virtue of* numerous mediators and intermediaries, that, perforce, 'translate' the abstract concepts and policies into something that makes sense in the context of their position in the network. Without the intention to propose an alternative theory of the policy process, this article employs the concept of 'translation', borrowed from Actor-Network Theory (Callon and Law, 1982; Callon, 1986), to describe that actors embed their own interests in their interpretation of a new policy or paradigm, in order to reaffirm themselves —their knowledge and their position in the network— as essential to the interest of the other actors and the network.

To demonstrate my thesis, I observed various development actors and their interpretations of CB. The actors under scrutiny were: the Belgian Ministry of Foreign Affairs (the donor), the headquarters of the Belgian non-governmental development organization WaNGO,[2] the field office of WaNGO in Mali, six Malian municipalities that are partner of WaNGO, and two Malian grassroots organizations that are contracted by the municipalities. These actors are all connected in a direct manner and endorse CB in one way or another. Most actors are exclusively active in the water sector, hence, the CB described in this chapter mostly refers to the capacity to effectively manage water. For a more complete methodological discussion of this multi-sited ethnography, see chapter 10. The data consisted of eight months of participant observations (in 2010), interviews with key individuals (in 2010-2012), focus group discussions (in 2010-2011), and official policy documents and reports.

The six municipalities of the study are located in Mali's Inner Niger Delta (IND). The

[2]This is a pseudonym.

IND is a landlocked wetland in the Malian Sahel where the Niger river annually floods an area up to 35 000 km^2. Around 1 million people make a living in this fertile area, from agriculture, fishing and animal husbandry (Zwarts, 2010). Since 2004, WaNGO assists a number of municipalities in the IND in developing their capacities to manage water (drinking water, water for agriculture, sanitation).

The outline of this chapter is as follows. In the next section I describe alternative, anthropological views on the policy process and I introduce the concept of 'translation', before describing the CB paradigm in the third section. In the fourth section I report the data of the multi-sited ethnography, describing what the interests of each of the five actors are in water management and what their interpretation of CB is. I end with a discussion of the data, in which I formulate three statements about the implementation of the CB paradigm.

6.2 Theories of the policy process

The 'instrumentalist' or 'stagist' view conceptualizes policy making as a process of rational problem solving that is staged in a series of sequential phases (Easton, 1965; Jenkins, 1978). Problems emerging from the field are first dressed in a scientific-technical vocabulary, then "brought to the [policy maker] for solution; the [policy making] institutions formulate alternatives and select policy solutions; and those solutions get implemented, evaluated, and revised" (Sabatier, 2007a, p.3). This view is based on two positivist assumptions. First, it takes for granted the duality of a policy making realm and a realm of implementation. Second, it assumes a unidirectional link between both realms, or at best a unidirectional cycle.

'Evidence-based policy making' is a variant of this instrumental view that is on the rise in the development sector. Evidence-based policy making supposes that the effects and impacts of a new policy can be 'measured' and that these measurements can provide objective feedback to the policy makers. The approach is not new but it became the official policy making strategy of the UK government in the late 1990s (Young and Mendizabal, 2009). Unlike the previously mentioned 'stagist view', the evidence-based approach acknowledges that the policy process is not linear (Young and Mendizabal, 2009). However, this approach, too, assumes the duality of a policy making realm and an implementation realm. Moreover, it supposes that science and objective impact measurements can inform the policy making in an objective and independent fashion. This is again a problematic assumption (Forsyth, 2003; Latour, 2004).

Building on the assumed disconnection of the realms, the instrumentalist view upholds that it is possible to steadily work towards ever better policies, based on ever better evidence from the field (Kremer *et al.*, 2009a). This pursuit of the 'best' policy characterizes development aid since its inception after World War II. Arguebly, development organiza-

tions are gearing up this rationalization and scientification of development policy making (for recent examples, see Carden, 2009; Nallari *et al.*, 2011), nurturing the boom of the evaluation industry as well (Leeuw, 2009).

A number of policy theorists have added constructionist nuances to these instrumental views on the policy process, by describing the roles of advocacy coalitions, discourse coalitions, or epistemic communities (Sabatier, 2007b), but the realms of policy making and implementation principally remain separate. Actually, the policy making organizations discursively widen and exploit the distance between the two realms. They typically base their proposal of a new policy on the alleged gap between the actual state of affairs —cast in a language of failure— and the desired state of affairs —whose success is guaranteed by the new policy (Mosse, 2004; Rap, 2006).

A considerable counterflow from anthropology —and in particular from the 'anthropology of policy' (Shore and Wright, 1997)— challenges these deterministic, instrumental views, and promotes a constructionist, actor-oriented view on the policy-practice process. A first problem with the instrumental views, numerous critics argue, is the positivist epistemology (Chambers, 1997; Crewe and Harrison, 1998; Bryld, 2000; Cooke, 2004; Kothari, 2005; Wilson, 2007a,b). The instrumental views imply that progress in development can be *measured* by confronting an objective set of data with an unbiased set of policy objectives. Rottenburg (2009) believes, following Luhmann, that the mere act of setting a development objective already conceptually orders the reality according the one specific mental framework in which the observer stands — and so does the collection of evidence. For Roe, an adherent of literary theory, policies are above all narratives. Even when confronted with contradicting empirical data, the narrative does not yield, as it "continue[s] to underwrite and stabilize the assumptions" of the policy maker, undeterred by uncertainty, complexity, and polarization (1994, p.2). Policy-informing evidence is therefore often self-validating, first because the evidence is set in the same mental framework as the one in which the policy itself is set (Rottenburg, 2009), and second, because it can be bent by the narrative in any sense (Roe, 1994). In effect, the narrative can always avail of the gap between policy making and implementation: "higher water prices, more trees, or more training would have done the job but unfortunate circumstances limited the full realization of the intended or expected benefits" (Molle, 2008).

The second observation directly derives from the previous point: it is very hard to determine whether a project or a policy has failed, or whether it is succeeding. Of course, there exists a huge and still growing evaluation industry that produces measurements of the 'efficiency', 'effectiveness' or 'sustainability' of each development project and each program, but the data collection is inevitably set in the same framework of thinking as the project itself (Rottenburg, 2009). Therefore, an increasing number of scholars sustains that the success (or failure) of a project or program is determined by the support and validation (or lack of it) by the wider network of actors involved, rather than by objective

measurements (Mosse, 2004; Rap, 2006). As a result, a new policy does not emerge from the accumulation of disillusioning measurements from the field —the evidence will support the policy as long as the actors support the policy— but from the reluctance of actors to continue their support for the preceding policy or project (Mosse, 2004; Rap, 2006).

The last problem with the instrumentalist view are the deterministic links between the different phases. A development intervention designed in an office is never *verbatim* implemented by field professionals. Instead, a development intervention is staged by a vast and complex network of heterogeneous actors with very diverse interests that enacts the intervention as an "ongoing, socially constructed and negotiated process" (Long and Long, 1992), at a number of geographically distant but politically interconnected stages. Negotiation and maneuvering prevail not only at the stage of the policy making organizations (de Vries, 1992; Lewis, 1998; Stirrat, 2001; Lewis *et al.*, 2003; Lewis and Mosse, 2006a; Mosse, 2011a), and the implementation stage (Torres, 1997; Arce and Long, 1999; Bierschenk *et al.*, 2000; Rossi, 2006), but they reign *every connection* in the network (Long and Long, 1992; Arce *et al.*, 1994; Grillo and Stirrat, 1997; Olivier de Sardan, 2005).

Recently, a number of ethnographers of aid (notably Mosse, 2004, 2005a; Lewis and Mosse, 2006b) have signaled the usability of Actor-Network-Theory (ANT) for the description of the aid architecture and its dynamics. In this article I use the idea of 'translation', taken from ANT in the version of Callon and Law (1982) and Callon (1986), to describe how actors need to negotiate each link with each other, by 'translating' their own interests into something that is acceptable and useful to the other actors. It are these translations that construct and maintain the entire network.

Without the intention to substitute the instrumental view on the policy process by an ANT view, I found the concept of 'translation' a very powerful metaphor to describe my observations at the different points in the network. The concept of 'translation' is central to understand how the 'promoters' of a development policy connect with the 'implementers' and the 'consumers'.

In my description of the data I reserve the term 'interpretation' for the *discourse* that each actor actually utters in support of the new policy, and the term 'translation' for the actual *coupling* of the own interest to the interests of the other actors by means of a well-targeted 'interpretation'. It is important to note that according to Law and Callon's view on 'translations' neither the interests nor the position of the actors in the network are static —they constitute each other reciprocally and are negotiable.

6.3 Capacity Building

OECD defines capacity as "the ability of people, organizations and society as a whole to manage their affairs successfully" (2006, p.12). OECD-DAC emphasizes that their

definition avoids any judgment on the objectives that the people choose to pursue, and on what counts as successful management. Capacity development, then, is "the process whereby people, organizations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time" (*ibid.*, p.12). UNDP's definition is very similar (UNDP, 2009, p.5). Both organizations prefers the term capacity *development* over capacity *building*, as the former term suggests that capacities are already present, and that capacities can be developed without the involvement of external 'builders'. I use the CB acronym to indicate both.

CB is a curious concept: although omnipresent in contemporary development practice and in the *gray* literature of development agencies and consultancies (Eade, 2005; Baser and Morgan, 2008; UNDP, 2009), the *scholarly* development literature remains remarkably silent —with some exceptions such as the special issue of the *IDS Bulletin* (Clarke and Oswald, 2010)— when it comes to critically analyzing the CB models and the CB concept *in itself*. Moreover, despite their omnipresence, the descent of the capacity and CB concepts remains unclear.

Descent

I detected three lineages whose cross-fertilization led to the advent of CB in development aid in the early 1990s, and to its hegemony in the 2000s. First, according to the development agencies themselves, CB is the successor of the 'New Institutionalism' approach in the 1980s, 'Human Resources Development' in the 1970s, 'Institution Development' in the 1960s, and 'Institution Building' in the 1950s (OECD-DAC, 1999; Lafontaine, 2000). CB is thus presented as the ultimate solution that combines all preceding approaches in one coherent framework, interlinking interventions at the societal, organizational and human resource levels (Kühl, 2009).

The CB concept did not appear suddenly in the development sphere. A review of the managerial and public administration sciences —the second lineage— shows that the term CB was already coined in the 1970s (e.g. Burgess, 1975) and eagerly picked up by public administrations. The US Bureau of Community Health Services invoked "capacity building" (*sic*) already in the early 1970s as strategy to improve the health service quality in under-served areas in the US (Wilson and Myers, 1972; Tolbert, 1977). Targeting seven areas —such as 'financing', 'developing consumer knowledge' and 'procedures for the evaluation of objectives and outcomes'— the Bureau's CB strategy bore already much resemblance to the CB models that are used nowadays in development aid.

Third, CB has profited from the lexical and semiotic resemblance with the concept of 'capability'. Proposed in the late 1960s by science policy researchers at the University of Sussex, the capabilities literature insisted that the *local* science and technology capabilities, *in* the poor countries themselves, had to be developed. A simple *transfer* of

science and technology would not ignite economic development (Singer *et al.*, 1970). The concept of capabilities was further expanded in the 1980s towards welfare economics in general, most famously through the work of Amartya Sen (1985; 1999). He elucidated the crucial role of 'freedom' and 'entitlements' in people's livelihoods. The capabilities approach has had a concrete application in international development in the form of the Human Development Index (Anand and Sen, 1994).

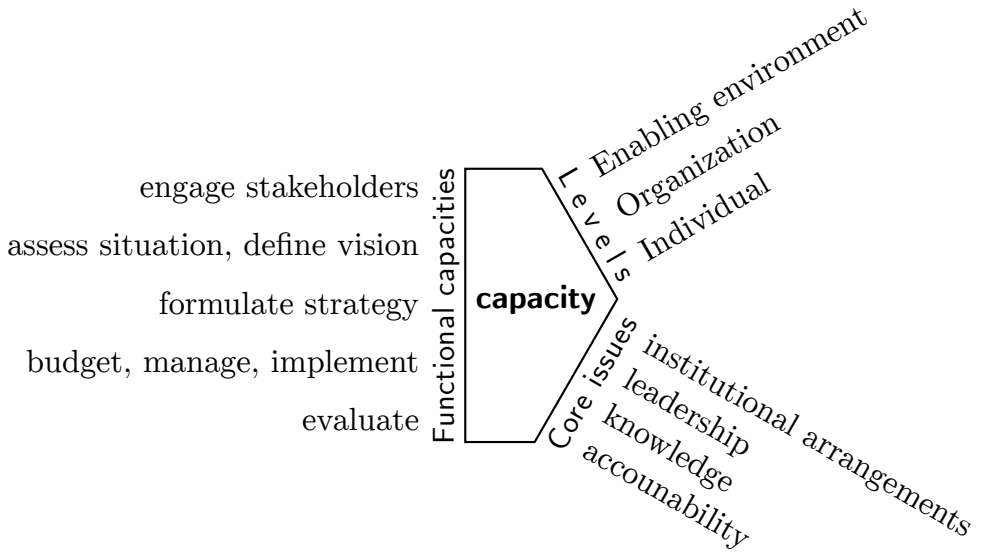
By non-economists the confusion of capacity with capability was easily made. A report by the National Academy of Sciences —requested by US president Ford in the aftermath of the first World Food Conference in Rome in 1974— willingly or unwillingly hitched the concept of capacity to that of capability: "Although it is clear that international cooperation of many kinds is required to solve global nutrition problems, each country ultimately must develop the institutional *capability* to deal with its own nutrition problems including policy and planning *capacity*, monitoring and surveillance, research and training [...], and program and operational skills" (Handler, 1977, p.14). Nowadays, many CB models by leading consultancies and agencies consider 'capacity' to be the hypernym, or overarching idea, and 'capabilities' to be the functional building blocks.

Whatever the exact descent, the CB discourse definitely entered the development sector in the early 1990s as an explicit opposition to the technological determinism underlying Technical Assistance (TA) (see also chapter 5). By that time, criticism to TA had already cumulated within the major development organizations themselves (for an overview see Fukuda-Parr *et al.*, 2002). A UNDP assessment report (Berg and Seymour Whitaker, 1993) argued that TA had proven effective in "getting the job done," but less effective at developing local institutions or building local capacities. To the contrary, TA had fostered dependence on foreign experts, and had distorted priorities in the aid-receiving countries. The concept 'capacity building' was picked up from this report by Edward V.K. Jaycox (1993), the then vice-president of the World Bank Africa section. By the turn of the millennium the most forward-looking agencies had already raised CB to a priority status (Lafontaine, 2000).

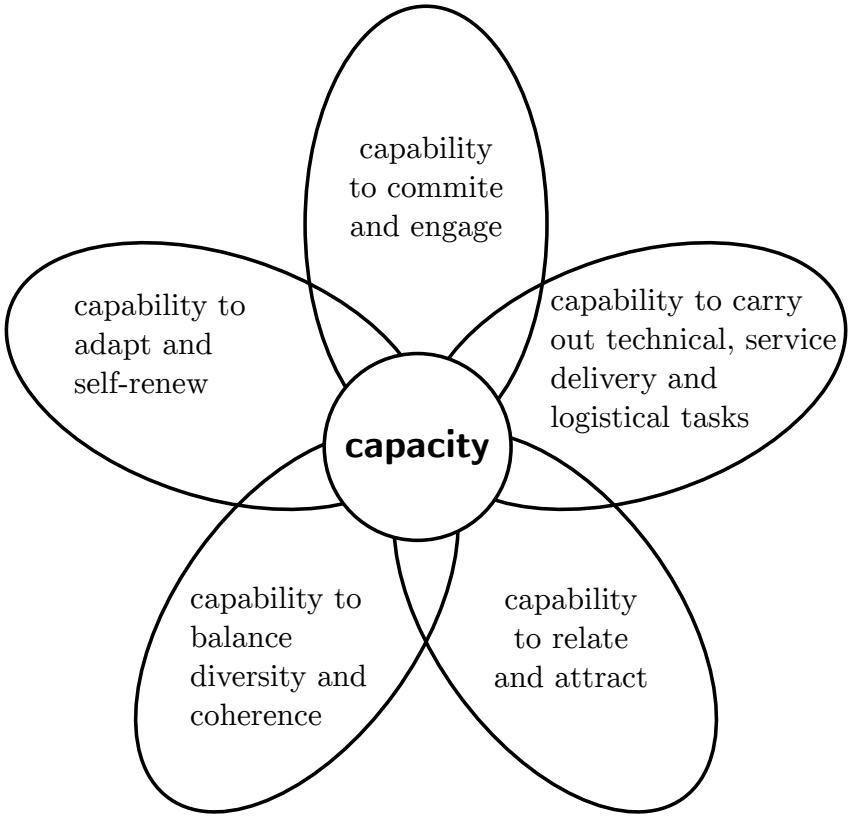
Another UNDP publication (Fukuda-Parr *et al.*, 2002) was the real trigger for the spread of the CB approach in the 2000s: it *completely* rejected TA and proposed capacity building as the "new solution to old problems." Capacity building has now become one of the leading paradigms in current development practice. Donors and agencies have developed policies concerning CB; implementing agencies and partners are specifically screened for their performance in CB; and beneficiaries state that they need more of it.

Models

The number of theories and models for CB in development seems to have grown along with the popularity of the concept. The most influential models, such as Kaplan (2003),



(a) The UNDP model (2009)



(b) The ECDPM model (Baser and Morgan, 2008)

Figure 6.1: Two theoretical models of capacity

Lipson and Hunt (2008), Baser and Morgan (2008), or UNDP (2009), are published in the gray literature of development agencies, consultancies and think tanks (the latter two models are shown in Figure 6.1). Despite their proliferation, the many CB models do share a number of consistent similarities.

First, most models concur that capacity is spread over *different levels*: the individual, the organizational, and the societal. In fact, the agency of an individual or organization to apply its capacities depends on the capacities of the society as a whole. In other words, the CB theories acknowledge the social dimension of capacities.

Second, all theories agree that capacity is about the successful *functioning* in the own environment. To achieve that, a number of functional capacities need to be developed at individual and organizational level: the capacity to engage with other actors, the capacity to assess a situation and define a vision, the capacity to develop a strategy, the capacity to manage and implement the strategy, and the capacity to evaluate (Baser and Morgan, 2008; UNDP, 2009).

And third, capacity is *relational*; it is about the individual relating with others within the fertile environment of a well-functioning organization, and about the organization relating with others in a fully transparent multi-actor setting.

6.4 The network of translations

Considering CB to be a currently hegemonic paradigm in development cooperation, I approach it as a broad common discourse adopted by a group of actors to give meaning to their own actions and to achieve organizational legitimacy, rather than as a concrete managerial guiding principle that is based on one specific CB model or theory (as in Shore and Wright, 1997; Brunsson, 2003; Kühl, 2009). In the following five sections I describe, for each of the observed actors, (i) the position in network and the related interests, and (ii) how the actor translates his or her interest by means of a position-specific interpretation of CB.

6.4.1 The donor's interests and translation

In 2010 the official development aid (ODA) disbursed by Belgium amounted to 0.64% of its gross national income, making it the sixth most generous OECD donor in relative terms (OECD-DAC, 2012). The distribution of the ODA over the different aid channels (table 6.1) shows that the support of the Belgian government to national non-governmental development initiatives almost equals the direct bilateral cooperation. The Belgian development NGO sector is one of the largest in Europe, ranking third after Germany and France in terms of total number of employees (OECD-DAC, 2010b). Moreover, the Belgian development NGOs appear to be highly dependent on governmental co-funding:

Budget line	**% of total**
Bilateral governmental cooperation	15.4%
Bilateral debt cancellations	18.4%
Multilateral contributions *(incl. European Commission)*	20.2%
Multilateral debt cancellations	12.4%
Co-funding of non-governmental cooperation	10.5%
Co-funding of private sector investments	5.2%
Other *(incl. emergency aid, refugee aid, administration costs)*	17.9%

Source: adapted from DGD (2011)

Table 6.1: Distribution of the Belgian Official Development Aid in 2010

53% of their combined budget derives from governmental sources, while this portion is 38% in France and 32% in Germany (OECD-DAC, 2010b). The governmental co-funding of NGOs is administered by the Directorate-General for Development (DGD), which is part of the Belgian Ministry of Foreign Affairs.

In addition to the volume, Belgian non-governmental aid is highly fragmented and scarcely aligned with the direct governmental aid (Molenaers *et al.*, 2011b). On the one hand, there is 'internal' fragmentation because the government supports a large number of development NGOs that significantly differ in approach, focus and size — half of the supported NGOs manages a total budget of less than €2 million, whereas the largest NGO operates on an annual budget of €200 million (NGO-Federatie, 2012). On the other hand, this motley of NGOs operates in over 92 countries, only 18 of which are official partners of the direct governmental cooperation. As a result of this 'external' fragmentation, an NGO spends on average only €360,000 per recipient country (Molenaers *et al.*, 2011b).

Not surprisingly, government officials and the NGO federations often lament the lack of harmony and the high transaction costs in the NGO sector (Molenaers *et al.*, 2011b). Various halfhearted reforms in the funding schemes have tried to align and harmonize the fragmented Belgian aid. In 1991 the government decided to provide the largest and most professional NGOs with programmatic (non project-based) funding[3] for activities in those countries[4] and sectors that are also addressed by the official bilateral cooperation. Since the last reform in 2008, half of all NGOs receive programmatic funding, but the administrative burden for the NGOs to preserve that funding remains very high.

The governmental development institutions —the minister of development cooperation, the DGD, and the Belgian Technical Cooperation (BTC)— are pressed to improve the coherence and effectiveness of the Belgian aid from various sides. They are, first, held accountable by the national parliament and national media. It is telling that, despite the adverse global financial climate and despite some reductions in aid expenditure, the current Minister of Development Cooperation was careful *not to reduce* the spending on

[3]In the period 1991-2007 the programmatic funding covered periods of 5 years. Since 2008 the programmatic funding covers blocks of 6 years, but subject to yearly evaluation and mid-term reformulation.

[4]Currently 18 countries, including Mali.

public communication concerning development aid, given that "polls show that also the Belgian public opinion is becoming more critical of development cooperation" (Magnette, 2011).

Since 2003 the accountability to the parliament has taken a very formal shape, with the creation of the completely independent 'Special Evaluation Office Development Cooperation' (SEODC). Each year this office evaluates a different aspect or channel of the Belgian development aid, and it reports the findings directly to the parliament. In 2010 the SEODC examined the extent to which the Belgian NGOs pay attention to CB.

The heaviest pressure on the Belgian federal development institutions, however, comes from the multilateral level.[5] This pressure is transmitted through multilateral agreements such as the Paris Declaration or the Accra Agenda (OECD-DAC, 2005/2008),[6] through efforts of the European Commission to harmonize the aid of the European member states (European Commission, 2007), through independent rankings of aid effectiveness such as CGD (2011), and not in the least through the periodic evaluations conducted by the Development Assistance Committee (DAC) of the OECD.

These 5-yearly evaluations have recurrently highlighted the lack of coherence in the Belgian aid over time and over the different aid channels (OECD-DAC, 2005). The latest evaluation of DAC, however, acknowledges the presence of a new momentum for reform in the Belgian aid, driven by international commitments and a process of self-reflection (OECD-DAC, 2010a). Indeed, the policy notes of the past two ministers (Michel, 2008; Magnette, 2011) strongly pressed on increasing the price/quality ratio of Belgian aid and therefore committed to two major international initiatives: alignment with the Millennium Development Goals and implementation of the Paris Declaration.

Interpretation of CB Molenaers *et al.* (2011a) concur with the latest OECD-DAC evaluation that the Belgian development aid is decisively turning towards the 'new aid approach' promoted by the Paris Declaration and the Accra Agenda for Action (OECD-DAC, 2005/2008). The Accra Agenda for Action encourages (i) the transfer of aid ownership to the South, (ii) inclusive partnerships that put donors, countries from the South, and civil society together, and (iii) a focus on results. The development of capacities is put forward as crucial in each of the three actions (OECD-DAC, 2005/2008). The increased attention of the Belgian government to CB needs to be inscribed in this global trend that is propelled by the Paris Declaration and Accra Agenda. In 2008 the minister's policy note stated (Michel, 2008):

[5]Interview with the director and an employee of the Special Evaluation Office Development Cooperation (SEODC), 26 April 2012.

[6]In February 2005 more than 100 signatories —from donor and aid-receiving governments, multilateral agencies, and regional development banks— endorsed the Paris Declaration on Aid Effectiveness. The five core principles of the declaration are: ownership, alignment, harmonization, managing for results, and mutual accountability. The follow-up meeting of 2008 in Accra took stock of the progress and translated the Paris Declaration into a concrete Accra Agenda for Action.

> The lack of sufficient national capacities is one of the key elements to take into account in trying to achieve the Millennium Development Goals. Indeed, the efforts deployed in numerous developing countries will only have effect if a sustainable development of the capacities receives more attention.

In other words, since a couple of years the Ministry and the DGD equate 'sustainability of ODA' with 'development of capacities' in the South, and with the 'transfer of ownership' to the South.

The 'new aid approach' presses also the Belgian NGO sector to shift the focus to CB. The minister and the NGO sector agreed in 2009 that NGOs would increase their CB and advocacy operations, and reduce the delivery of services. The delivery of services —in other words, a *Belgian* NGO directly providing services in the aid-receiving country— was to be limited to exceptional circumstances only: (i) when the target community is extremely weak and no local service providers are available, (ii) in fragile states, and (iii) in emergency aid.

However, resistance amongst NGOs to follow this new approach remains high, for two reasons. First, due to the various halfhearted reforms from the past, the federal government and the DGD in particular do not enjoy much credibility amongst NGOs as catalysts of change (Molenaers *et al.*, 2011a). Second, many NGOs (mostly small ones) prefer to continue focusing on the delivery of services in the Global South rather than on CB, as this gives them more visibility to the broad public in Belgium (Molenaers *et al.*, 2011a).

In 2008, before the agreement between the minister and the NGO sector, SEODC had taken already the initiative to evaluate the Belgian NGO sector with respect to their CB activities. As explained earlier, SEODC is a completely independent entity, and hence, the decision to evaluate the CB activities of the Belgian NGOs was also taken in complete independence by the SEODC director. The decision was motivated by the rise of the CB concept at the international level, on the one hand, and by the desire to understand what this concept meant to the NGOs, on the other hand.[7] The evaluation showed that only one third of the larger NGOs were endowed with operational strategies for CB (SEODC, 2010). DGD, which manages the governmental co-funding of the NGOs and evaluates their funding eligibility, declared after the SEODC study that the DGD's selection criteria were not to be adjusted, given that they took already CB into account (SEODC, 2010). The reality, however, was different, as explained in the next paragraph.

6.4.2 The NGO's interests and translation

WaNGO is a mid-sized development NGO with headquarters in Belgium and water development projects in 9 countries in Africa and Latin America. It is one of the 58 NGOs

[7]Interview with the director of SEODC, 26 April 2012.

Funding source	% of total
Governmental co-funding	82%
European Commission, project-based funding	*38%*
Federal government, programmatic funding	*37%*
Federal government, project-based funding	*4%*
Regional government, project-based funding	*3%*
Non-governmental funding	18%

Source: WaNGO Annual Report 2010

Table 6.2: Funding sources of WaNGO in 2010

selected to receive programmatic funding from the Belgian government—which covers 37% of WaNGO's total budget (table 6.2). In total 82% of WaNGO's €9 million budget derives from a range of governmental sources and only 18% from private donations. The latter constitute the obligatory matching funds required by both the Belgian government and the European Commission—and 18% is very close to the imposed minimum. As a result, the NGO belongs to the top quintile of most government-dependent NGOs in Belgium (NGO-Federatie, 2012). Moreover, 45% of WaNGO's budget was obtained by responding to calls-for-proposals that were issued by the Belgian government and the European Commission. Calls-for-proposals can unlock substantial funding but are very demanding: writing a complete proposal for the European Commission, for instance, takes up to 2 personmonths,[8] while the rate of acceptance is lower than 15% (European Commission, 2011).

In the competition to obtain governmental funding (both from the national government as the European Commission) it is important to show the added value of the NGO to the donor.[9] Therefore, WaNGO attaches great importance to its status of professional and highly specialized NGO.[10] Indeed, in an attempt to secure this added value, the NGO decided in 2001 to exclusively concentrate on water (drinking water supply, sanitation, small scale irrigation, small scale river basin management). This strategic decision, and the subsequent idea to mainstream the principle of 'Integrated Water Resources Management' (IWRM) in all its projects, have endowed WaNGO, according to some employees, with a "comparative advantage over other NGOs—definitely at the national but to some extent also at the European level."[11] The strategic choices to focus on water and IWRM have been rewarding, seeing that WaNGO's budget and number of personnel have *tripled* over the past decade.

The construction of a professional and specialized profile requires the organization, amongst other things, to formalize and make explicit the field intervention procedures. By 2010, WaNGO had developed explicit operational strategies on: IWRM, the 'articulation

[8] Observed in the occasion of the European Water Facility call of 2010.
[9] Interview ex executive director of WaNGO, 17 Apr 2012.
[10] Personal communication of several WaNGO employees, February - July 2010.
[11] Interview with the IWRM focal point of WaNGO, 30 June 2010.

of actors' in the countries of intervention, the 'municipal ownership of works' (in French: '*Maîtrise d'Ouvrage Communale*', MdO), and a number of country-specific operational strategies. The professionalization drive also requires the organization to keep up with the latest evolutions in development. Although development professionals themselves readily mock the overpowering but transitory attraction of bandwagon concepts in international development, and the necessity to "speak the right language at the right time" [12] it is commonly accepted that by carefully adhering new theories or concepts an organization can anticipate criticism and position itself as avant-garde (Brunsson, 2003; Kühl, 2009). Whether transitory or not, the increasing focus on CB is such an important evolution in development.

Since CB was already transversally —but implicitly— part of WaNGO's operational strategies concerning the 'articulation of actors' and MdO, the organization was reluctant to develop a separate operational strategy on CB. In 2010, however, two events coincided: first, the NGOs receiving programmatic funding from DGD had to submit an updated 3-year planning, and second, SEODC published its sector-wide evaluation of the CB practices by Belgian NGOs. SEODC had positively evaluated the *implicit* CB activities of WaNGO, but DGD nevertheless made clear to WaNGO, via official way and in informal audiences, that it expected WaNGO to describe its capacity building strategy more *explicitly* in the updated 3-year planning. "The situation has become dramatic," one independent consultant stated, "the term *has* to appear on every page [of the proposal]."[13] Besides complying with this request to make CB more explicit, WaNGO also started developing a complete operational strategy on CB, which forcibly had to included many elements of the existing operational strategies on IWRM, on the 'articulation of actors', and on MdO.

Interpretation of CB WaNGO anyhow remains hesitant to use the term CB, as the employees consider it to be very 'workshop-oriented' and to include a paternalistic view on knowledge transfer.[14] Therefore, WaNGO never considered itself to be a 'capacity builder'.[15] Until the late 1990s, WaNGO usually implemented its projects in the Global South by selecting one apt local NGO partner and offering it technical assistance in the planning, execution, financing and maintenance of infrastructure and services. Only in the late 1990s WaNGO developed a more articulate view concerning the roles of the many actors active in the field. In the current approach WaNGO inscribes itself into the *official* institutional structures of the country —this happens for instance in Benin and Mali— and focuses on assisting the different decentralized administrative bodies in assuming their

[12] Uttered in various occasions by external consultants, governmental officials, NGO employees.
[13] Interview with independent Belgian consultant, 17 April 2012.
[14] Interview with one of the WaNGO directors, on 29 June 2010, and interview with the ex managing director of WaNGO, 17 April 2012.
[15] Answer of WaNGO to the SEODC questionnaire about CB, end 2009.

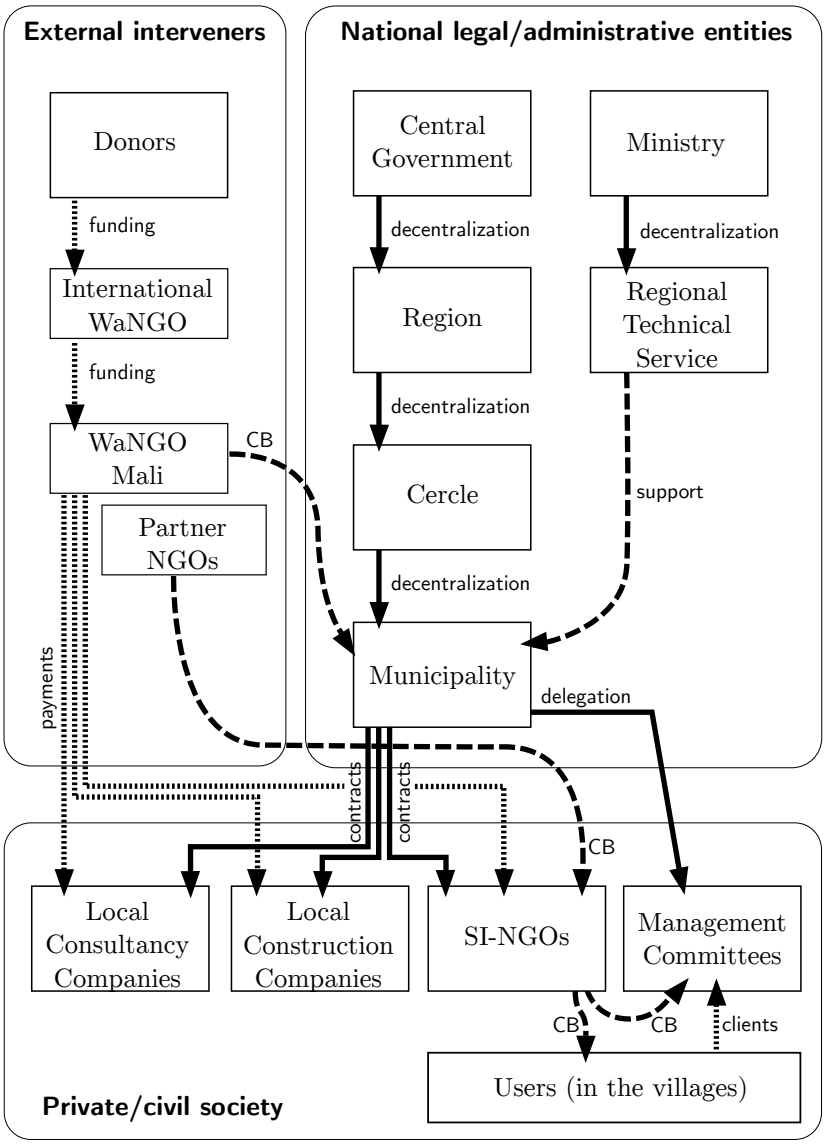


Figure 6.2: The ideal 'articulation of actors' in Mali, according to WaNGO.

legal responsibilities. This approach, which WaNGO calls the 'articulation of actors' at 'meso' level, reduces WaNGO's own role to that of 'catalyst of change', and raises the role of the municipality to that of 'contractor and owner of works and infrastructure' (in French: '*Maître d'Ouvrage Communale*'). The key word in this 'articulation of actors' is not 'capacity' but the French word '*compétence*'. This word conveys the idea that the actors not only need 'skills' but also the 'legal competence' to be able to play their role.

Although WaNGO remains reluctant to define their approach as CB, their way of working suits the donors' preoccupation very well: the transfer of responsibilities and ownership to the official structures in the aid-receiving countries.

WaNGO's advanced scheme of interaction strips the local NGOs —the former *direct* partners— of their pivotal role and exclusively ascribes them a role of 'social intermediation' (SI-NGOs). They assist WaNGO in building the capacities of the municipalities, as

well as the capacities of the water management committees and water user committees at the village (or 'micro') level.

Of course the views on CB of the WaNGO empolyees are not uniform. Within the organization, personal interpretations of CB range from a materialistic extreme —"we only develop the capacities of the municipalities because our final aim is to deliver infrastructure that *works*"— to the processual extreme —"WaNGO supports the local actors in playing their role; the quality of infrastructure is secondary to the learning process."[16]

Despite this divergence, all employees agreed during focus group discussions that CB has an important role in the operations of WaNGO, and agreed that their CB activities should remain confined to the water sector only.[17] They also agreed that, like in the theoretical CB models (see page 87), WaNGO intervenes at three different levels: WaNGO calls them 'micro, meso, macro' instead of 'individual, organizational, societal'.

WaNGO equally affirms that they are concerned with the development of the functional capacities of the municipalities —those functional capacities that embody the municipal MdO— such as long-term planning, publishing and managing tenders, monitoring and evaluating the construction of water infrastructure, delegating the management of water infrastructure, accounting, etc. The WaNGO headquarters still have no clear idea, however, which steps they actually take in building those functional capacities, and hence their CB efforts remain under the radar. In the current state of affairs WaNGO is only able to monitor and evaluate the *results* of their CB activities.[18]

6.4.3 The field office's interests and translation

WaNGO intervenes in Mali since 1994. In the first years it assisted 2 local NGOs in improving irrigation infrastructure and drinking water supply. In 2002-3 the WaNGO headquarters started planning an innovative and long-term program in the IND, that would unify existing and new interventions under the IWRM principle, and that would abandon the local NGOs as principal partners in favor of the municipalities. A permanent WaNGO-Mali office was created in the IND in 2004 and the IWRMIND program[19] took off in 4 IND municipalities. The program gradually expanded, and the fourth phase (2011-2013) now covers 18 municipalities. The first three phases drew on project-based funding from the Belgian government and the European Water Facility. By the time the fourth phase started, the IWRMIND program was inscribed in the DGD-sponsored programmatic budget line of WaMGO (cf. section 6.4.2).

As put forward by WaNGO's operational strategies on the 'articulation of actors' and

[16] Focus group discussion, 5 May 2010.
[17] *Ibid.*
[18] Focus group discussion, 5 May 2010, and interview with the director of Southern Operations, 29 June 2010.
[19] This is a pseudonym.

MdO, WaNGO supports the decentralization process in Mali. Indeed, initiated by the decree 93/08 of 1993, the Malian central government has been delegating policy making competences and public ownership to the lower administrative levels (the 8 regions, 49 *cercles*, 1 capital district, and 703 municipalities). In matters of water infrastructure, the Malian law (Malian decree 95-401/P-RM) identifies the municipality as the exclusive decision-making body, as well as the contractor and the owner of the infrastructure (i.e. the MdO). The 2002 Water Code (law 02-006) confirmed this. Mayors and municipal councils were elected for the first time in 1999.

According to the National Investment Agency of Local Governments (ANICT, 2005), municipal MdO implies that the municipality (i) hears the needs of the population and plans all interventions in their territory in a communal Plan for Social, Economic and Cultural Development (PDSEC); (ii) publishes public invitations to tender for the design and construction of the infrastructure; (iii) follows up and evaluates the works; (iv) manages the infrastructure or delegates the management to other legal entities.

Besides decision-making and public ownership, the decentralization process also foresees a transfer of the technical services[20] of the various ministries to the regional and *cercle* level. The National Water Directorate (DNH) —technical service of the Ministry of Energy and Water— officially transferred (Law 99-023) part of its competences to the 8 Regional Water and Energy Directorates (DRHEs). One of the duties of the DRHE units is to deliver technical support to the municipalities in terms of planning and design of the infrastructure and evaluation of the outsourced works.

The CB activities of WaNGO-Mali need to be read against the background of this complex network of decentralized actors (as in figure 6.2), in which WaNGO-Mali tries to be a catalyst that stimulates all actors "to play their roles."[21] There is, however, a discrepancy between, on the one hand, what is *stated* by WaNGO in the Logical Framework (logframe),[22] and on the other hand, what WaNGO-Mali *actually does*.

Interpretation of CB All activities of WaNGO-Mali in the IND are, in the first place, determined and constrained by the IWRMIND logframe (and the related planning and budget), exactly as it was formulated by the WaNGO headquarters and approved

[20]In francophone Africa, the term '*décentralisation*' is reserved for the transfer of *decision-making* competencies from the national to lower levels, whereas '*déconcentration*' is used to indicate the transfer of the *technical services* (part of ministries) from the national to regional or lower levels. In English this distinction is not made.

[21]The wording used by the WaNGO personnel to refer to the 'articulation of actors'.

[22]The Logical Framework (logframe) is a format used to describe the layout of a project and to facilitate the monitoring and evaluation of it. Central in the logframe is the envisaged *outcome* of the project. The logframe breaks up the project in a large number of autonomous *activities*, that lead to a small number of *results*. All results together culminate in the one project *outcome*, which contributes to a long-term *impact*. The logframe was first used by USAID in the early 1970s. Soon after, the logframe was required by most donors for the formulation of development projects. The European Union and the Belgian government are no exception.

by the donor. In the logframe all CB activities are programmed under 'Result 1', which annunciates that "the different actors are capable of assuming their respective role that is conferred to them by the legal dispositions of the Malian decentralization." Still according to the logframe, Result 1 will be attained through 11 activities, but WaNGO-Mali is only in charge of those that directly involve the municipality. All CB activities involving subjects other than the municipalities, are, according to the logframe, delegated: the CB of user committees and management committees of the infrastructure is outsourced by the municipality to local SI-NGOs, and the CB of the SI-NGOs is left to other international organizations. The decentralized DRHE and the *cercle* authorities get implicated in meetings and are encouraged to "play their role," but they do not receive CB support.

As various scholars observed, the enforcement of the fixed logframe format easily leads to the rigidification of activities and indicators, with a focus on countable results (Gasper, 2000). Particularly in CB, a dimension of aid that aims at altering relational agency rather than producing countable results, the activities and indicators programmed in the logframe pose *in se* a barrier to CB (James, 2010; Ortiz Aragón, 2010; Woodhill, 2010). Indicators of CB progress in the IWRMIND logframe are equally output-oriented and stated in quantified terms: "all municipalities have autonomously managed at least 5 steps of the MdO,"or "80% of the management committees respect the delegation contract with the municipality."[23]

In practice, these quantified indicators and outputs seem out of touch of the CB *activities* of WaNGO-Mali, which are continuous, gradual and process-oriented rather than output-oriented. As the capacities of the rural municipalities are generally considered to be very low (see section 6.4.4), the CB strategy consists of continuous and close support in each step of the MdO process —"we check every call-for-tenders, and sometimes need to write them"[24]— and *ad hoc* trainings. Nor does WaNGO-Mali exclusively focus on the municipalities, although they do constitute "an entry point [...] to articulate and sensitize all actors."[25] WaNGO is the binding glue of all actors in the program and omnipresent in the network. The SI-NGOs for instance, grassroots NGOs with respectable capacities, work under the close guidance of WaGNO-Mali, while on paper they are contracted by the municipalities.

Nevertheless, compliance with the logframe —the timely delivery of reports, infrastructure, and disbursements— formally remains the field office's most compelling worry. The inability to disburse payments due to delays in the execution of works, for instance, is counterintuitively of greater concern to WaNGO-Mali than a hypothetical inability to disburse due to a lack of liquidity. Therefore, WaNGO-Mali heavily weighs in on all links in the network and all steps in the projects —"the opinion of WaNGO-Mali is al-

[23]Stated in the logframe of IWRMIND-3.
[24]Interview with former project manager of IWRMIND, 30 June 2010.
[25]Interview with IWRMIND-3 manager, 19 September 2010.

ways preponderant"[26]— in order to produce the verifiable output that was stated in the logframe.

WaNGO's field employees are aware of the discrepancy between the *actual* CB activities of WaNGO-Mali and what WaNGO *states* in the logframe as output:[27]

> The [immaterial] results are never as nice as what you write in the project proposal. That's simply a characteristic of development cooperation. It is also a matter of obtaining funding: you have to aim high [...] I saw the new proposal of IWRMIND-4 and it was just a copy of IWRMIND-3 —which I had written— because half of it was not achieved. Well, probably the number of wells was achieved, but not the IWRM and CB objectives. You simply don't know *when* you will achieve the objectives, because you are in the treadmill of project after project after project.

6.4.4 The municipalities' interests and translation

Many actors —national and international— are active in the water supply and sanitation sector in the IND.[28] In 2010 the governmental DNHE agency was constructing water supply and sanitation infrastructure in 18 municipalities of the IND, with French bilateral aid. However, the number of wells constructed in the IND by non-governmental organizations was many times higher than the number of wells constructed by DNHE. According to the decentralization law, the municipality remains the privileged interlocutor for all these interventions—whether governmental or not.[29]

The municipal development plan (PDSEC), which the municipalities are supposed to develop each 5 years with the involvement of the population, should be the central tool in coordinating the actions of the different interveners in the municipal territory (Law 95-034), as it should define the needs of the municipality in different sectors and make a budget estimation of the required interventions. The respect of the various external partners for the PDSEC, however, varies significantly. One large American NGO-consortium, for instance, active in 26 municipalities in the Mopti region, was heavily criticized by other interveners for choosing the location of new wells according its own criteria, regardless the planning in the PDSEC.[30] "Some interveners impose their program," or "sometimes they do not even inform the municipality, or only very late."[31] Also the governmental program in 18 IND municipalities suffered from the same ills. As wells were used as currency in a horse trade of political favors, a conflict rose between the French and the Malian consultancy companies about the selection of the most 'needy' municipalities and villages.[32]

[26] Personal communication independent consultant, 24 September 2010.
[27] Interview with former project manager of IWRMIND, 30 June 2010.
[28] In 2010 there were two governmental and six non-governmental programs at work that *each* invested at least €500,000 in the water supply and sanitation sector in the Mopti region.
[29] Focus group discussion, 24 September 2010.
[30] *Ibid.*
[31] *Ibid.*
[32] Observed, September 2010.

All parties, including the municipalities themselves, agree that the municipalities are too weak to manage or steer this diversity of actors intervening in their territory. The external actors see three important reasons for this.[33] First, as Mali is weighed down by an average illiteracy rate of 75% (which is even higher in the rural IND and higher amongst adults than youngsters) there is very little technical capacity available (at individual level) amongst the municipal council members and the mayors. "The municipalities simply don't master the propositions made by external interveners."[34] In some rural municipalities all MdO capacities of the municipality are concentrated in one person. Second, with each new election —municipal elections have been held in 1999, 2004 and 2009— there is a high renewal of council members, and the effects of the trainings and other CB efforts get significantly reduced. "Basically you need to repeat each kind of training at least every 5 years."[35] Third, due to a lack of political will within the central ministry to *really* decentralize the technical services to the regional DRHE units,[36] the latter lack the financial and human resources to provide the municipalities with technical assistance.

The lack of capacity at municipal level is experienced by the external interveners —WaNGO as well as others— as a "waiting attitude" on the part of the municpalities. "The municipalities or the DRHE rarely claim their legal role *vis-à-vis* the external interveners." As a result "the identification of needs is done by the interveners instead of the municipalities."[37] This "waiting attitude," however, is observed at any level in the administration and society. Designated as a symptom of deeply rooted aid-dependency, foreign aid professionals claim that the "waiting attitude" towards the donors is particularly strong in Mali, stronger than in any neighboring country.[38] In practice, the municipalities welcome virtually any external intervener in their territory with open arms, and accept any imposition from them. When needed, the municipality adapts the PDSEC *ex post facto*, according the wishes of the intervener.[39]

Interpretation of CB In closed focus group discussions,[40] the municipal council members invariably invoke the need for more interventions in their territory, and the need for

[33]Evaluation by the European Commission, January 2010; focus group discussion, 24 September 2010; various personal communications.

[34]Focus group discussion, 24 September 2010.

[35]Personal communication of IWRMIND-3 manager, 20 September 2011.

[36]Uttered by numerous foreign development professionals and consultants in Mali, as well as a high-ranked Malian employee of the Belgian embassy in Mali, 16 September 2010.

[37]Focus group discussion, 24 September 2010.

[38]Stated by a French technical assistant with over 25 years of experience in West Africa, 20 Sept 2010; stated by the WaNGO-Mali head, 16 Sept 2010; stated by a Belgian technical assistant with over 25 years of experience in West Africa, 24 Apr 2012; also stated in Dante *et al.* (2002) and Bergamaschi (2009).

[39]Focus group discussion, 24 September 2010.

[40]Six different focus group discussions, held in September 2010 and in October-November 2011, in six municipalities that were partner in the IWRMIND-3 project.

more and improved infrastructure, such as "more water wells with hand pump, the deepening of the channels, more dykes, the deepening of the individual and collective fishing ponds."[41] Any of these infrastructures is usually financed for 90% by the intervener, 5% by the municipality, and 5% by the villagers through the delivery of labor.

The municipalities always rely on external organizations, both governmental and non-governmental, to take the initiative to construct this infrastructure. "The technical services and the NGOs have done much already to construct infrastructure and build the capacities in Soyé. But there is still a water supply network to be constructed, as well as dykes, water level regulators, the deepening of the ponds [...]."[42]

The municipalities are aware that they show little initiative in constructing the needed infrastructure and that they hardly take up their role as MdO in the water sector. "We lack the capacities to play our role as MdO."[43] "We are poor and we need, above all, guidance."[44] Moreover, given that the Malian law obliges all interveners to cooperate with the municipality, the municipality cannot cope with the high flux: "we don"t manage to canalize all interventions in our territory."[45]

They believe that this lack of capacity can be coped with in two ways. One the one hand, they ask more training from the intervening NGOs. According to the council members of virtually all municipalities, capacity building is indeed a synonym of trainings and workshops. On the other hand, they also ask a more significant involvement of the technical services, which have remained achingly absent: "We don't know DRH, we don't know who they are, we have never seen them."[46] In principle, assisting the municipalities in the technical matters of MdO is one of the tasks of DRH—but they rarely assist rural municipalities.

6.4.5 Intermediating NGOs

The municipalities can contractually delegate the management of drinking water infrastructure to "any physical or moral person, public or private" without renouncing to the legal ownership of the infrastructure (Water Code, Law 02-006). Usually the management of a well or any other small-scale infrastructure is delegated to a management committee created *ad hoc* at village level. In the articulation of actors envisaged by WaNGO, the SI-NGOs are charged with (i) assisting the management committees of a well, latrine, or a sewerage systems, in managing the infrastructure and collecting payments, (ii) assisting the user committees of the infrastructure, (iii) sensitizing the population on hygienic practices and on the correct use of the infrastructure.

[41] Focus group discussion with the council members of Kéwa, 27 Oct 2011.
[42] 21 Oct 2011
[43] Focus group discussion, 24 September 2010.
[44] Focus group discussion with the council members of Togué-Mourrari, 26 Oct 2011.
[45] Focus group discussion, 24 September 2010.
[46] Focus group discussion, 26 October 2011.

The SI-NGOs are contracted because they are well-anchored in the local context —their work radius is usually limited to a small number of municipalities— and because their employees are educated to such a level that they can translate the 'technical-scientific' world view (and francophone concepts) of the external development actors into the world view (and language) of the local populations (Olivier de Sardan, 2005). They do not exclusively collaborate with WaNGO-Mali, but are usually involved in various projects and programs.

In the current state of play, WaNGO-Mali assists the municipalities in recruiting SI-NGOs through an open call for tenders, at the beginning of each new phase of IWRMIND. Obviously, thanks to their highly specialized experience, the three SI-NGOs selected in phase 1 and 2 were reselected in phase 3. During IWRMIND-3, six SI-NGOs operated in the 14 municipalities. Given that phase 3 of IWRMIND foresaw 98,000 people to benefit from drinking water infrastructure, and 50,000 from improved sanitation, these six SI-NGOs had a huge task to accomplish.

The organizations labeled by WaNGO as 'SI-NGOs' are, however, not necessarily specialized capacity builders, but rather versatile grassroots NGOs. In fact, during the planning phase of IWRMIND-1, back in 2002-2003, WaNGO had resolved to directly assist seven grassroots NGOs in 4 municipalities, according the habitual approach (cf. the period 1994-2003). Eventually WaNGO decided to partner the 4 municipalities themselves rather than the local NGOs—this was actually more in line with the Malian decentralization process and with WaNGO's new 'articulation of actors' approach. The NGO partners in the field, to the contrary, experienced this change in strategy at the advent of the IWRMIND program as "a turn of 90 degrees."[47] While the 4 municipalities "were the winners"[48] of the new approach, there was "high uncertainty amongst the losing NGOs" about their employment, despite WaNGO having promised them a role as social mediators.[49]

Interpretation of CB According to the SI-NGOs,[50] their CB activities aim at the "improvement of the quality of services in the field."[51] They believe that *knowledge* is the crucial element to achieve a higher quality: the public needs to *know* about correct hygienic practices, the villagers need to *know* how to set up and elect a management committee for the new infrastructure, the management committee needs to *know* how to

[47]Interview with the head of Southern Operations, 29 June 2010

[48]Interview project manager of IWRMIND-1, 4 November 2011.

[49]*Ibid.*

[50]The data reported in this section derives from focus group discussions with two SI-NGOs that were contracted during all phases of IWRMIND. The first, a Malian NGO etablished in 1980 with a technical profile, used to be one of WaNGO's two privileged partners in Mali, in the early years before the existence of the IWRMIND program (the period 1997-2004). The other, a Malian NGO established in 2001 with a focus on natural resources management in the Sahel, entered the scene at the start of IWRMIND-1.

[51]Focus group discussion, 21 September 2010

keep account of the payments, etc. "CB is about expanding the basic knowledge that is already present."[52]

The SI-NGOs therefore employ sensitization campaigns ('*animations*') to inform the public, organize trainings for the management committees, and closely follow up on the committees by means of regular visits. According to them, their work has been successful when (i) people use the infrastructure in a correct and hygienic manner, (ii) the infrastructure is working and well maintained, and (iii) the management committee meetings and service payments are duly documented in the books ('*cahiers*').

The view of WaNGO-Mali on the CB tasks of the SI-NGOs does slightly differ from that of the SI-NGOs themselves. WaNGO-Mali spurs the SI-NGOs to focus more on *processes* —such as the election and voting procedures in the committees, the relation of the committees with the users, the villagers' readiness to pay for the service, etc.— rather than to concentrate on what is actually written in the *cahiers*. The diverging use of the word 'tool' (or '*outil*' in French) is telling. WaNGO-Mali considers the election procedure of the committee, or the contract between the committee and the municipality, important 'tools', whereas the SI-NGOs use the word 'tool' in a more material sense, in particular to indicate the *cahiers*.[53] In a large number of rural villages the high illiteracy rate impedes the management committee to duly update the *cahiers* —for the SI-NGOs an indicator of low capacity— but it does *not* impede the committee to organize regular committee meetings—for WaNGO-Mali an indicator that the committee does possess some capacities.[54]

The fact remains, however, that the donor conveniently evaluates the effective functioning of the management committees by checking the status of the *cahiers* rather than the frequency or quality of non-registered meetings. A critical mid-term evaluation of IWRMIND-3 by the European Commission in 2010 exemplified this.

6.5 Discussion

Since the turn of the millennium the CB concept is a top priority to virtually all development organizations, at the multilateral, bilateral, and non-governmental level (Eade, 2005; Kühl, 2009; Clarke and Oswald, 2010), but despite the hegemonic usage of the term, the exact meaning remains unclear. As argued above, the influential models share important features, and so do the policies of the donors and multilateral agencies, but the interpretations by the many other actors in the network —that links the policy makers with the field professionals, and the donors with the rural villages— differ significantly. From the data described in previous section, I have derived three statements concern-

[52] Focus group discussion, 21 September 2010
[53] *Ibid.*
[54] WaNGO-Mali employee, 21 September 2010.

Actor	Interests	Interpretations of 'capacity'	Interpretations of 'capacity building'
Donor	account to multilateral organizations, account to the national media and the parliament	Southern partners get responsibility	implement Paris Declaration
WaNGO	show level of professionalism and specialization, show that donor's desires can be fulfilled, secure funding	*Maîtrise d'Ouvrage Communale*	articulate actors, make all actors "play their role"
WaNGO-Mali	comply with planning of logframe and disbursements	municipality can plan, can publish calls-for-tenders, can delegate management	trainings, 1-on-1 support in each step of MdO, with focus on *skills*
Municipalities	secure more and better infrastructure	channel and overview all interventions in the territory	trainings, more support from decentralized services
SI-NGOs	win contracts from external interveners	improved quality of service in the field, through correct utilization, maintenance, and management	trainings, sensitization campaigns, 1-on-1 support, with focus on *outputs*

MdO = *Maîtrise d'Ouvrage Communale* = Ownership of works and infrastructure

Table 6.3: Interests of the actors, and their interpretations of capacity and CB

ing the network of actors that links —or spans the 'gap' between— policy making and implementation in CB.

First, *each actor's interpretation of CB is unavoidably a translation of the own interests, and therefore, through his or her interpretation of CB, the actor reaffirms the relevance of the own position in the network* (see Table 6.3). This statement does not pretend to uncover an alleged opportunism amongst the actors, yet claims the *constructed* character of the network of actors that sustains the paradigm.

The network of actors described in section 6.4 has a long history: WaNGO receives funding from the Belgian government since the late 1970s; the organization is present in Mali since 1994; it started supporting two local NGOs in the IND in 1997; and the municipalities, officially created in 1993, were included in WaNGO's IWRMIND program from 2004 on. Rapid reconfigurations of this vast, multi-continental network are unlikely, as actors usually have more interests in maintaining the configuration than in changing it. Moreover, the formal competencies and highly situated but complementary knowledge that each actors in the network possesses are essential for the network as a whole to achieve the goals.

The donor, pressed to harmonize the ODA spending from different sides —by multilateral engagements, the parliament, the national media, and the Belgian NGO sector itself— eagerly calls upon CB as the paradigm *par excellence* to comply with the Paris

Declaration, and thrusts this paradigm on the NGO sector.

WaNGO, a mid-sized NGO that almost entirely relies on governmental funding, carefully presents itself to the donors as a professional and specialized NGO that supports the 'articulation' of decentralized actors, with a particular focus on the municipal ownership or '*MdO communale*' of water infrastructure. Although CB was already implicitly present in the operational strategies, and although there is a certain reluctance to label the own actions as CB, WaNGO started elaborating an explicit CB strategy at the time that it needed to present an updated 3-year planning to DGD in 2010.

The executive branch of WaNGO in Mali tries to operationalize the 'articulation of actors' and MdO through the close follow-up of all actors, especially the municipality, focusing on skills and processes such as planning and the management of calls-for-tenders. The logframe, however, forces WaNGO-Mali to ultimately shift the focus from processes to countable outcomes (such as the number of trainings and meetings organized, or the number of tenders successfully managed), given that the logframe is also used by the donors as evaluation basis.

The municipalities' principal interest is to have external partners constructing infrastructure (wells, dams, channels, ponds) in their territory. There is no lack of external interveners—to the contrary, the municipalities admit that they lack the capacities to channel and overview all interventions. They believe that regular trainings of the municipal council members and a better support from the (not very well) decentralized technical services can improve this lack of capacities at municipal level.

And finally, the grassroots NGOs in the IND, which were 'degraded' by WaNGO from privileged partners to service provider, are now contracted in the capacity of SI-NGOs to assist the management committees at village level. The SI-NGOs usually work in a small number of municipalities and collaborate with different international organizations at the same time in their territory. They set themselves up as crucial to make the connection with the local populations. In the case of IWRMIND, the SI-NGOs heavily focus their work on outputs, such as: correct hygienic manners, or *cahiers* that are kept up to date.

Each of these actors, from donor over NGO to the municipalities, employs the CB vocabulary in abundance, without being tackled about their interpretation of it. Indeed, rather than a precise policy, CB supplies the actors with a *lingua franca* to display their highly situated knowledge *of* the situation and their highly situated role *in* the situation. Or as Mosse (2004, p.651) observed, "development interventions are driven not by policy but by the exigencies of organizations and the need to maintain relationships."

The second conclusion is that *there is no gap between policy making and policy-implementation, since neither policy making nor policy-implementation exist as self-contained realms.* One can hardly sustain that one of the donors acted as a authoritarian policy maker that imposed a specific CB vision. Various theoretical CB models have been discretionarily adopted by different donors, agencies and NGOs. The Belgian

government, for instance, has never selected a particular CB model as the 'correct' one. Also SEODC, although it used the Baser and Morgan (2008) model as benchmark for the 2010 evaluation, positively evaluated a plethora of different CB approaches.

Shifting the focus to the NGO, there is no reason to believe that the CB paradigm was 'imposed' on WaNGO by one single policy making body. The CB paradigm entered the organization steadily,[55] in the first place through the calls-for-proposals published by the European Water Facility[56] ("the calls-for-proposals of the European Commission influence us more than the [Belgian] DGD"[57]), later in a more explicit way through the SEODC evaluation and the pressure exerted by DGD. On the other hand, WaNGO is also convinced that they themselves have been influential to some extent in steering DGD's policies —concerning MdO in particular— given that WaNGO personnel has been contracted a number of times by the DGD and the Belgian Technical Cooperation (BTC) to outline BTC interventions in the field.[58]

In brief, there does not exist a policy making realm separated from a policy-implementation realm, nor does there exist a gap between both. That the Minister of Development Cooperation inscribes CB in the framework of the Paris Declaration, and that the SI-NGO interprets it in terms of updated *cahiers*, does not mean that there is a gap between policy making and policy-implementation. Quite the contrary, there *need* to be numerous but sufficiently small translations from one actor to another, as each actor needs to bridge the small gap in interests and knowledge that exist between him or herself and the closest ally, by means of a mutually intelligible translation. Policy making and implementation are supported by the *same* network of actors—but of those actors, no one controls the *entire* network.

Finally, *interests and interpretations mutually constitute each other and are subject to constant renegotiation; this is how the network manages to support new paradigms.* That the new paradigm is eagerly adopted by actors to redress the own discourse with new vocables, and to re-translate the own interests, does not mean that a new paradigm cannot *change* anything. The trend to shift the focus from infrastructure to capacities, and from partnering local NGOs to developing the administrative bodies in the country, is coming through since at least a decade. Although actors do control their interpretation of new paradigms and the translations of their interests, they are nevertheless "on a wave"[59] that carries them in a certain direction. For instance, the decentralization process and the CB paradigm—they are hard to tear apart in Mali— *did* change WaNGO's approach

[55] A manual on MdO, published by WaNGO in 2011, mentioned "capacity" 15 times per 100 pages, whereas a similar manual on MdO in Mali, dating from 2007, used the term only 2 times per 100 pages.

[56] The call guidelines of the European Water Facility (first call in November 2004, second call in March 2006) listed capacity building actions as 1 of 3 fundable types of intervention.

[57] Interview with a former IWRMIND manager, 30 June 2010.

[58] Interview with one WaNGO director, 29 Jun 2010, and interview with ex executive director, 17 Apr 2012.

[59] Interview with a former IWRMIND manager, 30 June 2010.

in the field: the municipalities were promoted to the status of principal partner, at the expense of the local NGOs.

Chapter 7

Water policy changes in West Africa, between structure and agency

To exist is to differ
Gabriel Tarde

7.1 Introduction

The extent to which donors have implicitly or explicitly used official development assistance to promote donor-aligned policy changes in recipient countries has varied considerably during the history of development aid (Crawford, 2001; Pronk, 2003). The gradual shift from structural adjustment programs in the 1990s to poverty reduction strategies was presented as a renunciation to donor-driven aid conditionality in favor of the ownership of aid and development. In the 2000s, the ownership agenda was further formalized by the Paris Declaration and the Accra Agenda for Action at a global level, and related Poverty Reduction Strategies or Growth and Sustainable Development Strategies at national level.

Nevertheless, many scholars cast doubts on the ownership discourse's veracity (Whitfield and Fraser, 2009; Booth, 2011). Whitfield and Fraser (2010) for example, demonstrate that a government's degree of ownership of reforms and projects correlates with geopolitical and macro-economic conditions, independently from international agreements such as the Paris Declaration. Indeed, the cases adduced by Whitfield show that highly aid-dependent African governments are more likely to write proposals that align with the ideas of donors. Moreover, although most Least Developed Countries (LDCs) have their own national development strategies, donors still have a long way to go to actually align their aid to these plans (Wood *et al.*, 2011). A survey of Clay *et al.* (2009) confirms that 'ownership' is indeed perceived differently by different actors; where donors declare their

aid as untied, recipient governments still perceive the largest portion of the incoming aid as tied.

In this chapter[1] we take the discussion of ownership of policy reforms to a more fundamental level, as we claim that this question can be linked to the century-old quandary of agency versus structure. Comparing water policy reforms in two neighboring West African countries, Burkina Faso and Mali, we demonstrate how the dynamics of the reforms and the levels of ownership result from a complex interplay between individual agency —displayed by policy entrepreneurs in the national sphere as well as in the sphere of the donors and international organizations— and structuring forces —embodied by institutions and hegemonic discourses.

Integrated Water Resources Management (IWRM) constitutes our entry point for the description of water policy changes of in both countries. IWRM is defined by its principal global advocate, the Global Water Partnership (GWP), as "a process that promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems" (GWP, 2000a). In practice, the implementation of IWRM supposes a cross-sectoral management of water resources as well as a vertical integration of different decision-making levels (GWP, 2000a; Conca, 2006).

IWRM became the hegemonic paradigm for water managers worldwide in the early 1990s, when it started being promoted by the United Nations (Conca, 2006). *Agenda 21* —the influential action plan that was the outcome of the Earth Summit in Rio de Janeiro in 1992— invited all nations in the world to develop national IWRM plans (UN, 1992a). This call was repeated in 2002 at the follow-up summit in Johannesburg.

Despite the fact that, today, nearly two thirds of all countries in the world have national IWRM plans (UN-Water, 2012), and despite the omnipresence of IWRM in water-related development literature, there is little understanding of how these IWRM plans actually come into being in highly aid-dependent countries. Given the paramount attention to ownership, what is the relative weight of international development actors and of national decision makers in their creation? This chapter contributes to filling this gap through a case study of two West African countries, Burkina Faso and Mali.

Burkina Faso and Mali have IWRM plans in place since 2003 and 2008, respectively. In both cases the IWRM-inspired water policy reforms were promoted through high-profile national-level programs that received financial and technical support from international

[1]This chapter is based on an article co-authored by Jean-Philippe Venot of IWMI-Burkina Faso (see Appendix G). Jan Cherlet provided the data to describe the global and regional level, and to describe the Malian case; Jean-Philippe Venot provided (most of) the data concerning Burkina Faso. Around 80% of the entire article was originally written by Jan Cherlet. Both authors contributed to revising and editing the entire article.

aid agencies.[2] However, although the two neighboring countries evince many systemic similarities (amongst the 15 least developed countries of the world, heavy reliance on external aid, a large bureaucracy constituting the backbone of public action and authority, and little developed water resources), the water policy reforms are characterized by very distinct dynamics, levels of ownership, and outcomes. The two countries thus provide for an interesting and complementary inquiry into water policy making in West Africa.

The following section provides the analytical framework of the study. We draw from the fields of political science and anthropology of development to shed light on the equilibrium between structure and agency that characterizes the interactions between donors and national governments at times of policy change. The third section describes the emergence of IWRM at the international level. In the fourth section we provide a detailed account of the emergence and implementation of IWRM plans in Burkina Faso and Mali. After describing the commonalities and differences between the two cases in the fifth section, the conclusion infers implications for future policy changes in water and natural resources management in African LDCs.

7.2 Structure and agency in development processes

In accordance with contemporary social thought, we subscribe to individual agency and social structure as being two ontological dimensions that reciprocally constitute each other (King, 2004). Our use of the word 'structure', however, transcends particular theories and corresponds in broad terms with the set of rules that is imposed upon individuals and that ensures social order. In the case of development aid these rules are embedded in institutions (such as bureaucracies), in the politico-economic relations between actors (including the donor-recipient relationship), in hegemonic discourses, and they are embodied by the individuals themselves as *governmentality* or *habitus*. 'Agency', in turn, refers to the capability of actors to navigate these structuring rules, generate social change despite the structuring rules, and rewrite the rules.

The development literature has agonized over this agency-structure duality with different schools of thought emphasizing one or the other side of the duality. Some political science scholars who give priority to the structural dimensions of development in their analyses have shown how, at different points in time, the community of development professionals have framed development problems in different terms. Hence, at different historical moments, the development community backed different "blueprint" solutions or "panacea" (Roberts, 2004; Thorbecke, 2007; Ostrom *et al.*, 2007). Still at the structural end of the spectrum, anthropologists of development that are inspired by Foucauldian

[2]It is estimated that more than 80% of all investments in the Burkinabé water sector during 1996-2001 were funded by external actors (Gouvernement du Burkina Faso, 2003). In Mali, this percentage amounts to nearly 90% (DNH, 2008).

discourse theory analogously claim that, at any given historical moment, specific discursive regimes make certain development practices appropriate and others unthinkable. Ferguson, for example, believed that the structural power of development discourses even curbs the agency of central policy makers such as the World Bank: "the thoughts and actions of 'development' bureaucrats are powerfully shaped by the world of acceptable statements and utterances within which they live" (Ferguson, 2007 [1990], p.18).

This vision, which gives the primacy to development models and discourses in explaining development processes, has informed a critical body of literature in the water sector (e.g. Meinzen-Dick, 2007; Molle, 2008; Barnes, 2009; Gupta, 2009; Ingram, 2011). These scholars notably highlight that technical answers have simply given way to a socio-engineering approach whereby a series of institutional arrangements, underpinned by discourses that emerge from the outside, have been presented as tools to change society in a deterministic fashion. Gupta, for instance, believes that development cooperation has been "a driving factor in changing [water] policies and policy frameworks in the developing world" (Gupta, 2009, p.52), first in promoting large infrastructure works and irrigation schemes, then by experimenting with different forms of local governance and privatization.

At the agency end of the spectrum, other scholars from political sciences and anthropology of development pay tribute to the role of individuals in triggering or steering development processes. Models of individual policy agents implicitly rely on the idea of boundedly rational individuals (Schlager, 2007). Different scholars have theorized that individuals can trigger or sustain policy change, when multiple interests converge in the form of an 'advocacy coalition' (Sabatier and Jenkins-Smith, 1993) or 'discourse coalition' (Hajer, 1995), when a 'punctuated equilibrium' is destabilized (Baumgartner and Jones, 1991), by exploiting a 'window of opportunity' (Kingdon, 1984), or by knitting 'policy networks' (Atkinson and Coleman, 1989; Kriesi, 1994) (see Table 7.1). In the field of anthropology, the Foucauldian approach has been criticized for reducing individual actors to cogwheels in an agency-annihilating machine (Rossi, 2004). Therefore, ethnographers have tried to describe development policy making and implementation as a concatenation of continuous negotiations between different social worlds. Agency in the development policy process is not limited to the 'rule makers'. It appears at any interface where different social worlds interact (Long and Long, 1992) and is embodied by development 'brokers' or 'intermediaries' at those interfaces (Bierschenk *et al.*, 2000; Lewis and Mosse, 2006a).

That individuals play a crucial role in water policy change has been demonstrated in many instances. Scheumann *et al.* (2010) collected numerous cases of supposedly donor-driven policy-reforms that were seized upon by powerful local actors to serve their own interests. Rap (2006) describes the role of a national technocratic network in making the World Bank driven irrigation management transfer policy a success in Mexico. Drawing

Individual strategies	Underlying theories of policy change
Promoting ideas	Punctuated equilibrium (Baumgartner and Jones, 1991) Discourse coalitions (Hajer, 1995) Multiple streams (Kingdon, 1984)
Building coalitions	Advocacy coalitions (Sabatier and Jenkins-Smith, 1993) Discourse coalitions (Hajer, 1995) Policy networks (Atkinson and Coleman, 1989; Kriesi, 1994)
Recognizing and exploiting windows of opportunity	Multiple streams (Kingdon, 1984)
Shopping for venues	Punctuated equilibrium (Baumgartner and Jones, 1991) Policy networks (Atkinson and Coleman, 1989; Kriesi, 1994)
Orchestrating networks	Policy networks (Atkinson and Coleman, 1989; Kriesi, 1994)

Adapted from Huitema et al. *(2011)*

Table 7.1: Strategies of water policy entrepreneurs and the classic policy change theories that underpin their strategies

on qualitative data concerning radical water policy change in 15 countries worldwide, Huitema *et al.* (2011) identified five strategies that are commonly harnessed by "water policy entrepreneurs" and that echo the policy change theories described earlier (cf. Table 7.1). The five strategies are: promoting new ideas, building coalitions, recognizing and exploiting windows of opportunity (i.e. the leverage of external events to open up a policy void and to promote new policy ideas), shopping various venues (different governmental levels and ministries, media, international networks and forums, multiple donors), and orchestrating a wider network of formal and informal actors involved in the policy domain.

The above literature review shows that structural conditions such as development discourses and institutions condition the behavior of individual actors. Notwithstanding, individual actors have been able to generate social change in numerous occasions, including in the water sector. Grasping the balance between individual choices and structural determinants and the relative importance of national and international policy entrepreneurs appears key to the understanding of how water policy changes come into being. This is what this chapter intends to do with regards to IWRM, first at the global level, then in the two neighboring countries of Burkina Faso and Mali.

7.3 Emergence of IWRM in the multi-lateral sphere

Until the 1990s, international and national donor agencies largely ignored the need for water resources management, as their financial and technical support to the water sector was focused on the provision of drinking water and sanitation (Conca, 2006). Indeed, the first United Nations Water Conference, held in 1977 in Mar del Plata, largely focused on drinking water supply and laid the ground for the International Drinking Water Supply and Sanitation Decade (IDWSSD) in 1980-1990. Towards the end of the 1980s, uneasiness

grew in the community of water professionals and academics notably within the International Water Resources Association (IWRA)—on the ground that the cross-sectoral dimension of water was being ignored in most development interventions.

Building on their first-hand experience that IDWSSD projects were severely limited by their sectoral approach, a number of senior water advisors of the Danish International Development Agency (Danida), which had been an important sponsor of IDWSDD, suggested Danida to establish a Nordic Freshwater Initiative (NFI).[3] The NFI had the explicit objective to feed operational guidelines for integrated water resources planning and management to the forthcoming United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 (Jønch-Clausen, 1992). Thanks to two key events —the first Stockholm Water Symposium of 1991 and a subsequent informal consultation with high-level water professionals from multi-lateral agencies in Copenhagen— a small cluster of Nordic IWRA professionals, united in the NFI, managed to inject into the Rio process a *Copenhagen Statement* and *Report* that advocated two core principles for good water management: (i) water needs to be managed at the "lowest appropriate" decision-making level, and (ii) it needs to be managed as "a finite resource with an economic value" (NFI, 1992). The Copenhagen Report is the first document known to use the phrase "integrated water resources management" (NFI, 1992).

In January 1992, 28 UN agencies and 58 other organizations met in Dublin for the International Conference on Water and Environment (ICWE) —the last preparatory meeting UNCED in Rio the Janeiro— and agreed on the so-called Dublin Principles, which directly followed from the Copenhagen Statement. At UNCED later that year water did not attract the high-level regime-building negotiations that surrounded climate, forest and biodiversity (Conca, 2006), but the action plan that was published afterwards, *Agenda 21*, dedicated an entire chapter to water. *Agenda 21* is the first inter-governmental policy document to use the phrase "integrated water resources management". Explicitly endorsing IWRM, *Agenda 21* suggests that all states "could [have] designed and initiated costed and targeted national action programmes [...] and appropriate institutional structures [for IWRM] by the year 2000" (UN, 1992a).

Danida perceived UNCED as a major success and renewed its engagement in water-related development for reasons clearly articulated by one of our key informants: "the Danish government was very happy with the Copenhagen and Dublin Statements and with the impact they had [in Rio], because that is what governments and donors care about: to have a strong footprint. So, Danida got very keen on this IWRM".[4] An earlier presence in Uganda and the involvement of senior Ugandan decision makers in the NFI prompted Danida to choose this country as a pilot case for the development of a national Water Action Plan (1993-1994). This plan can be considered the first African IWRM

[3] Interview with senior Danida advisor, 4 January 2012
[4] *Ibid.*

plan *avant la lettre*. The Danish Hydraulic Institute (DHI), a not-for-profit research foundation that was and still is the long-standing partner of Danida in water affairs, and whose Water & Environment division was led by the former NFI chair, proved pivotal in the development of this plan.

The vision that UNCED and *Agenda 21* constituted a success was not shared by all water professionals, some of whom highlighted, first, a shift away from the more technicist approach of the Dublin principle towards a more developmentalist agenda and, second, the fact that *Agenda 21* constituted "a long list of unreachable and unfundable targets, with no fewer than 184 activities advocated in the [water] chapter alone" (Briscoe and Garn, 1994, p.29). In that context, the Dublin Principles, not *Agenda 21*, continued to inspire the World Bank, OECD, and the French and Nordic bilateral agencies in water matters (Briscoe and Garn, 1994). This partly explains why the global call for elaborating IWRM plans did not find the hearing that was hoped for.

The Danida/DHI tandem engaged in replicating the Ugandan experience in Central America (1997-99) and Burkina Faso (1998-2001), and co-organized with the Burkinabé government a regional IWRM conference (in Ouagadougou in 1998) where 11 West-African heads of state marked their commitment to the development of a regional and national IWRM plans. At the global level, the institutionalization of IWRM continued with the establishment of a World Water Council (WWC) and a Global Water Partnership (GWP).

GWP was created upon the initiative of the World Bank, the United Nations Development Programme (UNDP), and the Swedish International Development Agency (SIDA) in 1996. It is a global network organization, with relays at regional and national levels, which advocates the implementation of IWRM plans and institutions around the world. Upon its creation, GWP was closely linked to Danida and DHI. The same Danida water professional who had led the NFI became the first chair of the GWP's technical committee, and DHI became GWP's technical secretariat. Also in 1996, the World Water Council (WWC) was created, jointly by IWRA and the French utility company Suez-Lyonnaise des Eaux. It is a membership organization for private companies, government and development agencies, whose main activity is the organization of the triennial, highly influential World Water Forum (WWF). This forum has been repeatedly used to advance the IWRM agenda at global level, as was the case in 2000, when GWP presented a Framework for Action that again spurred the world to have comprehensive policies and strategies for IWRM in process of implementation in 75% of countries by 2005 and in all countries by 2015 (GWP, 2000b).

IWRM reached its pinnacle at global level at the World Summit on Sustainable Development, held in Johannesburg in 2002, ten years after Rio. Effective lobbying of Denmark, Sweden and Germany through the European Commission and of GWP through its highly

ramified network put IWRM on the Johannesburg agenda.[5] Governments were urged, once more, to develop national IWRM plans.

The insistent call rallied new organizations and donors in support of IWRM. On the one hand, the United Nations Environmental Programme (UNEP) created the so-called *IWRM 2005 Programme* to support IWRM planning in over 60 countries and 10 regions of the world between 2005 and 2008. Danida was the main sponsor, and the UNEP-DHI Centre for Water and Environment was in charge of the implementation. GWP, on the other hand, attracted sponsorship from the Canadian International Development Agency (CIDA) for its new *Partnership for Africa's Water Development* (PAWD), which aimed at developing IWRM plans in five African countries, including Mali.

7.4 IWRM-inspired water policy changes in Burkina Faso and Mali

This section gives a detailed account of the formulation and implementation of a set of water policy reforms inspired by IWRM in Burkina Faso and Mali since the mid-1990s.

Burkina Faso: Local entrepreneurship in a precursor country

Burkina Faso formulated its first national policy after the great drought of 1973-74, with the support of international donors and notably the French cooperation. The policy laid the ground for state-led infrastructure development programs and was revised twice during the 1980s but did not change in essence (Gouvernement du Burkina Faso, 1998; van der Schaaf, 2001). In 1992, under the Structural Adjustment Program, a major adjustment was made to the policy in order to reduce the involvement of the State in the water sector and to increase the responsibility of the users.

The next significant policy shift in the Burkinabé water sector took place in the mid-1990s, posing Burkina Faso as a precursor in the promotion and adoption of IWRM principles in the West African region. According to the head of the then General Directorate of Hydraulics (DGH), which oversaw the water sector at that time, several concomitant conditions can explain such a shift.[6] First, there was a growing disenchantment, at national level, with the IDWSSD approach that was focused on infrastructure. Second, the merger of the Water Ministry and Environment Ministry (in 1995) brought the issue of water management to the fore in addition to that of water development. Third, the international and national water communities were looking for a practical

[5]Interview GWP employee, 22 August 2012, and interview with senior advisor to Danida, 4 January 2012.

[6]Interview key Burkinabé water policy maker, 19 April 2012

translation to *Agenda 21*. Fourth, the Burkinabé government and Danida shared an interest in expanding their long-standing cooperation in the water sector.

Leaving aside structural explanations, the shift was actually shouldered by a small team of committed individuals. As one of the key informants stated, "[the reform] boils down to individuals [...] I found a small group of people who were keen at the idea of change and could defend it *vis-à-vis* the [minister's] advisors who do not like change much."[7] Alongside this small team of Burkinabé individuals, key members of Danida and DHI (who had been very active at the international level; see previous section) were very supportive of the change. Together they engaged in a review of the water sector which led to the formulation, in 1998, of the Water Policy and Strategies and the first IWRM Program (cf. Table 7.2). The implementation of the latter started in 1999, under the authority of the DGH with the Nakambè pilot project as its flagship.

The revision of the legal and policy framework continued and led to the adoption of a new water law in 2001 (the Water Framework Law). In the meantime, the first IWRM program laid the basis for the development of a national IWRM action plan (PAGIRE)—still with Danida funding. The PAGIRE was approved in 2003 and provided an overarching planning framework for the water sector at the horizon of 2015, in two main phases. A permanent secretariat (SP-PAGIRE) was set up to monitor and evaluate its implementation. Concomitantly with the development of the PAGIRE, in 2002, a ministerial reorganization resulted in the creation of a super ministry of Agriculture, Water and Fisheries (the MAHRH) under the authority of an influential minister. A new General Director (of DGRIH, which replaced the DGH and would become the DGRE in 2006) was appointed and proved influential in shaping the next steps of the policy reform, as the SP-PAGIRE was put under his direct authority. Although new individuals appeared on the stage for the development and implementation phase of the PAGIRE, the few policy entrepreneurs who had initiated the reform process in the mid-1990s remained highly influential, both at national and regional level. Until 2004, the former Director General of DGH acted as the chair of the West African Technical Advisory Committee (WATAC), a regional satellite of GWP that guided the development of the West African Water Vision in the run-up to the second World Water Forum. That one of his close collaborators became the director (at interim) of the Water Resources Coordination Unit of ECOWAS in 2008 further illustrates the influence of Burkinabé policy entrepreneurs at regional level. Others former policy entrepreneurs have become highly influential private consultants, as highlighted by several key informants.[8]

[7] *Ibid.*

[8] Interview with senior technical consultant, 23 April 2012; interview with senior foreign technical assistant, 24 April 2012.

Year	West Africa (ECOWAS)	Burkina Faso	Mali
1995			GHENIS project starts (1995-2002, funded by the Netherlands).
1996		Start formulation of the Programme GIRE (agreement with Denmark).	
1998	West-African IWRM conference, Ouagadougou (organized by Danida and Government of Burkina Faso).	Enactment of the Water Policy and Strategies.	First concertation workshop Water Code (initiative of AFD and UNDP).
1999	Creation of West-African Technical Committee of GWP (WATAC). Creation of SISCOA-GIRE, regional secretariat to monitor the implementation of the 1998 Ouagadougou agreement.	IWRM Program starts (1999-2001, funded by Danida). Start of the Nakamb pilot project (1999-2003, funded by Danida).	
2000	ECOWAS countries adopt Regional IWRM plan.		
2001		Adoption of Water Framework Law. Formulation of PAGIRE starts	PNIR project starts (2001-2008, funded by World Bank).
2002	Creation of GWP West Africa.	Ministerial reorganization, water is included in a ministry of Agriculture, Water and Fisheries; Environment moves to a separate ministry. VREO project starts (2002-2008).	Creation of Malian Niger River Basin Agency (funded by AFD). Adoption of Water Code.
2003	Regional IWRM conference COAGIRE+5.	PAGIRE ready and adopted. PAGIRE Phase 1 starts. Creation of SP/PAGIRE for the monitoring of PAGIRE implementation.	Creation of Malian Niger River Basin Agency (funded by AFD). GWP, PNE-Mali and DNH sign PAWD agreement.

2004	Creation of the WRCU (Water Resources Coordination Unit) under the ECOWAS.	Creation of the Water Technical Committee (cooperation platform). Start setting up Local Water Committees (CLE).	GIRENS project starts, creation of CLEs (2004-2010, funded by the Netherlands). Elaboration of PAGIRE starts (2004-2007, supported by GWP and CIDA).
2006		26 CLEs are set up by the DGRE (funded by Danida, SIDA, AFD).	National Water Policy adopted (in the framework of PAWD).
2007	Creation of Volta Basin Agency World Bank starts Niger Basin project, incl. strengthening of NBA.	Creation of the Nakamb Basin Agency.	PAGIRE ready.
2008	IWRM-based Regional Water Policy.		PAGIRE adopted. Creation of inter-ministerial CPS and PROSEA (supported by Danida).
2009		The PAGIRE enters 2nd phase (2009-2015).	Donor round-table to collect funding for the PAGIRE implementation.
2010		Expanded SP/PAGIRE put under the General secretariat of the MAHRH (transversal organization). MCA support implementation of PAGIRE in Mouhoun river basin. Creation of Mouhoun Basin Agency.	PROSEA (2010-2014) takes off, incl. implementation of PAGIRE.

Table 7.2: Selected steps in the process of water reforms in Burkina Faso and Mali, and at the regional level

Shouldered by key policy entrepreneurs, the PAGIRE attracted the commitment of other development partners. Swedish SIDA notably began contributing to the PAGIRE in 2005. Organizationally speaking, the development and implementation of Phase 1 of the PAGIRE (2003-2008) was dominated by the DGRIH (later the DGRE). This Phase 1 was riddled by a polarized debate whether the SP-PAGIRE should continue reporting to the DGRE or be instituted as a transversal organization directly under the general secretary of the ministry. The latter option, favored by the donors, won the case, precipitating the departure of the Director General of DGRE.[9]

The first phase of the PAGIRE centered on institutional building at the national level and on pilot activities in the Nakambè Basin. Simultaneously, from 2002 onwards, the European Union funded the VREO project under the MAHRH as a follow-up to the preceding RESO program (1993-1999). The VREO became the main conduit through which the PAGIRE was be implemented in the West of the country but not without some friction. Indeed, the VREO was a decentralized project, with a separate management team in Bobo-Dioulasso and was strongly owned by a few individuals who saw the PAGIRE as yet another framework imposed to them from Ouagadougou.[10] It operated rather independently from the DGRE, notably because "of the human nature of individuals [and of] donor agencies that are all looking for visibility."[11] The VREO team eventually became the technical wing of the Mouhoun Basin Agency.

Describing the processes of policy formulation at the national level and the interplay between donors and several government departments or ministries only gives a partial picture of the policy process. Local actors (such as policy entrepreneurs, independent consultants and small scale consulting companies) significantly weighed on the shaping of policy, especially in the setup of new organizations such as Local Water Committees (CLE) and river basin agencies. In principle, the task of setting up CLEs was the responsibility of the DGRE. The guiding principles, however, had been conceived by a few national consultants — the same individuals who had driven the reform process in the mid-1990s. CLEs were initially devised to manage water at watershed level but eventually CLEs were mostly set up to manage the productive exploitation of well circumscribed water bodies (e.g. by means of irrigation) — a key objective of the MAHRH. This illustrates how an international water policy model (IWRM) was *de facto* adjusted to the national priorities embodied by a specific government department. In the case of the CLEs, local consulting companies contracted by the DGRE, or the deconcentrated structures of the MAHRH themselves, had a tremendous impact on the unfolding and operationalization of IWRM.

[9]The Director General of DGRE joined the African Development Bank in 2008. He argued that the creation of an SP-PAGIRE under the authority of the secretary general was a wrong move, as it would "remove the teeth" of a program already criticized for its lack of practical outcomes in the field.

[10]Interview key Burkinabé water policy maker, 19 April 2012

[11]*Ibid.*

Mali: donor-driven reforms, highly owned by very few nationals

In Mali, cabinets are often reshuffled and ministerial competences redistributed — eight times between 2000 and 2012. This is also the case in the water sector. Since 2000, six different ministers have held the water portfolio, first, as part of a broader mandate in the Ministry of Mines, Energy and Water (until 2009), then within the Ministry of Energy and Water (2009-2012), and now under the Ministry of Environment (since April 2012).

In practice, as was the case in Burkina Faso, strategic planning and project implementation are carried out by 'directorates' —the executive arms of ministries— whose delineations have remained relatively stable over time. The National Hydraulic Directorate (DNH), which reports to the minister in charge of the Water and Energy portfolio, is responsible for the planning and management of water supply and IWRM projects. Heir of a similar structure from the colonial era, the DNH was officially created in 1999. It is the main entry point for donors interested in water-related cooperation and can count with a number of permanent Western technical assistants in its ranks virtually since its creation (Matz, 2010). The National Directorate of Sanitation and of Pollution and Nuisance Control (DNACPN), under the jurisdiction of the Minister of Environment and Sanitation (now Minister of Environment), has an important secondary role in water supply and sanitation projects, but cannot rely on the same technical and managerial experience as the DNH (Danida, 2010).

Until 1991 the predecessor of DNH was the sole responsible for the planning, construction and management of water infrastructure in Mali. After the installment of a multi-party democracy and since the adoption of decentralization laws in the mid-1990s, municipalities have been entrusted with the ownership and responsibility of water infrastructure development and management. Concurrently, the technical directorates of the Ministries have also been deconcentrated in the view of providing technical assistance to municipalities. The water legislation, however, was lagging behind the decentralization laws and, in 1998, the French Development Agency (AFD) in collaboration with UNDP supported the Malian government in the elaboration of a national Water Code (cf. Table 7.2). Adopted in 2002, the Water Code confirmed the decentralized ownership of water supply and irrigation infrastructures, and instituted basin agencies (*Agences de bassin*) and local water committees (CLEs) as the appropriate structures for water management on the basis of hydrological boundaries.

AFD, which was very keen to promote the 'French model' to water management, also promoted the creation of a Malian Niger River Basin Agency (ABFN), which was put under the direct jurisdiction of the Minister of Environment in 2002. This move threatened the position of DNH as the main interlocutor of development partners in the water management sector (Matz, 2010). Following a regional conference on IWRM in Ouagadougou (COA-GIRE+5) in 2003, and with the support of the World Bank

sponsored National Rural Infrastructure Project (PNIR, 2001-2007), the DNH replicated in setting up an IWRM unit.[12] A senior hydrologist, who had been acting as the DNH focal point to the Niger Basin Authority and who was one of the promoters of the IWRM unit, was appointed as its new head. Already known to GWP as the Malian focal point for the elaboration of the West African Water Vision, the same person became the chair of the Malian Country Water Partnership (PNE-Mali) set up by GWP in 2003. Highly regarded by donors,[13] he became the central pivot for IWRM projects in Mali. ABFN, to the contrary, has never attracted water management projects of the same level.[14]

Between 2004 and 2007, GWP guided Mali through the process of developing a national IWRM plan within the context of its *Partnership for African Water Development* (PAWD). CIDA, which had agreed to sponsor PAWD, heavily influenced the outline of the partnership, handpicking the 5 African beneficiaries —one was Mali— and turning PAWD into a project-like intervention with limited duration.[15] GWP identified DNH and PNE-Mali as lead organizations for the implementation of the PAWD project in Mali. PAWD took off in 2004 with the development of a road map for IWRM planning that was owned by a broad section of water stakeholders thanks to the involvement of PNE-Mali (Patterson, 2008). After a quick diagnosis of the water sector, this road map yielded a National Water Policy in 2005 and a national IWRM plan (PAGIRE) in 2007.

Although many stakeholders considered the process as more inclusive than those adopted in other projects (especially with respect to the World Bank PNIR project), the finalization of the PAGIRE was centralized within the IWRM unit of DNH (Patterson, 2008), under the impetus of its director who also chaired PNE-Mali. The double mandate held by this single policy maker also meant that local stakeholders had difficulties in distinguishing PNE-Mali from the governmental IWRM Unit. This hindered PNE-Mali in playing the role of independent watchdog. Therefore, the ownership of PAGIRE was eventually limited to a few people in DNH, whose sense of ownership was very high.[16]

Concurrently with the PAWD project, which sustained national policy change in a direct manner, the Dutch government ran an applied IWRM program in the Upper Niger basin (GIRENS), from 2004 to 2010. Building on an earlier project on integrated environmental management in the same region (GHENIS, 1995-2002), the practical GIRENS project included a component for the creation of basin and sub-basin agencies as well as local water committees. For historical reasons the GIRENS program was not managed by

[12]Interview with senior foreign technical assistant, 24 April 2012

[13]Interview with former GWP employee, 29 February 2012; interview with senior private consultant, 23 April 2012; interview with senior foreign technical assistant, 24 April 2012.

[14]Interview with senior foreign technical assistant, 24 April 2012.

[15]Interview with former GWP employee, 29 February 2012.

[16]Interview with senior private consultant, 23 April 2012; interview with senior foreign technical assistant, 24 April 2012.

the IWRM unit of DNH, but by its Hydrology Division.[17] When the PAGIRE was being developed, the two units competed one with another, partly because of antagonisms of a personal nature but also because of the lack of collaboration between donors.[18] The rivalry appeased towards the end of the PAGIRE process and most of the GIRENS action plan was eventually included in the PAGIRE, mostly as practical recommendations on the development of CLEs and sub-basin agencies.

The PAGIRE plan was officially adopted in April 2008 but the *implementation* of the plan —the *actual* work— was not guaranteed by any donor. However, the aid landscape of Mali's water sector had started changing with the arrival of Denmark as a new donor in 2006, which triggered the donors to negotiate a new but deliberate division of tasks. In line with the Paris Declaration, Denmark chose to support the embryonic attempt of DNH and DNACPN to develop a program for sectoral budget support to water and sanitation (PROSEA). Danida supported the creation of an inter-ministerial Cell for Planning and Statistics (CPS) in 2008. This cell has gradually assumed the authority over PROSEA but heavily depends, to date, on Danish technical support. At a donor round-table organized by the head of the IWRM Unit of DNH and the senior technical assistant of GIRENS in February 2009, Denmark, Sweden and the African Development Bank pledged to support PROSEA. The PROSEA finally took off in 2010 and identified the implementation of PAGIRE as one of its four objectives. The program partly succeeded in aligning the strategies of international development partners and multiple governmental structures.[19]

7.5 Discussing water policy reforms

Structural context

Policy reforms in Burkina Faso and Mali went through comparable stages. Before the development of a national IWRM action plan started, donors first focused on broad institutional and policy reforms that lasted between 4 to 6 years and that led to the Water Framework Law (2001) and to the Water Code in Mali (2002). This initial period was also characterized by tentative IWRM activities such as the IWRM program in Burkina Faso and the creation of a Malian Niger River Basin Agency. In a second phase, national IWRM action plans (PAGIRE) were developed. This lasted 2 years in Burkina Faso (2001-2003) and 4 years in Mali (2004-2007). The third phase —the implementation of the national IWRM action plans— started in 2003 in Burkina Faso and in 2010 in Mali.

[17] Now called the Division for Water Resources Monitoring and Management.

[18] Interview with senior foreign technical assistant, 24 April 2012.

[19] Interview key Malian policy maker, 21 August 2011; interview senior foreign technical assistant, 24 April 2012.

Other structural resemblances are due to a similar administrative culture and habitus in both countries. First, the water policy reforms have been dominated by the technical directorate of the ministry in charge of water (DGRE in Burkina Faso and DNH in Mali), despite the participation of wide national stakeholder platform in the process. Second, a similar organizational change has taken place in both countries with the PAGIRE now being under the authority of a directorate-independent cell (the SP-PAGIRE in Burkina Faso and the CPS in Mali) even though the historical directorate remains very much involved in the implementation of the PAGIRE. This move echoes broader calls for, and support to, a programmatic approach to development aid and marks the recognition that IWRM is cross-sectoral in nature.

One important structural difference stems from the different relations between the national governments and their respective donors. The Burkinabé story shows much more continuity than the Malian. The reforms in Burkina Faso started in the mid-1990s with funding from Danida, which was already a long standing donor to the Burkinabé water sector and, since then, consistently supported the elaboration and implementation of the PAGIRE. In Mali, on the contrary, the early donors in water management (AFD, the Netherlands, the World Bank, CIDA) adopted a project rather than a sectoral approach and have steered the process of reform according to their own and sometimes conflicting visions of IWRM. While there is currently an attempt to harmonize approaches within the framework of the sectoral PROSEA program, with the support of SIDA and Danida, the director of DNH in Mali still laments that too many foreign consultants are coming in, each of them bringing their own ideas.[20] This lack of continuity on the donor side in Mali was mimicked by frequent ministerial changes, whereas in Burkina Faso the one single influential minister oversaw most of the reform process between 1996 and 2008.

The role of individual policy entrepreneurs

Despite structural similarities, our accounts have shown that individual policy entrepreneurs played a central role at all levels and all phases. For one thing, IWRM did not become the hegemonic paradigm worldwide in a disembodied or deterministic fashion. The prominence of the IWRM paradigm in the sphere of multi-lateral organizations and development agencies is the result of the unrelenting work of a small number of dedicated water professionals and organizations. In correspondence with the concepts adduced in Table 7.1, a small group of individuals took advantage of the 'window of opportunity' at the end of the IDWSSD decade when a 'problem stream' (the overly sectoral approach of IDWSSD) joined a 'solution stream' (in the form of IWRM) and a 'policy stream' (in the form of the Rio and Johannesburg conferences). In order to advocate IWRM they also 'shopped for numerous venues' in the international sphere and 'knit a very tight

[20]Interview with key Malian policy maker, 21 August 2011.

network' of IWRM-inspired organizations including GWP, WWC, IWRA, Danida, DHI, DHI-UNEP, and many others.

At national level, too, the IWRM-inspired reforms were embodied in individual policy entre-preneurs, who assumed different types, forms and levels of engagement, hence yielding distinct reform dynamics and outcomes. In Burkina Faso, the head of DGRE played a pivotal role, which explains the paramount importance of this technical directorate in shouldering the reform process (even though there had been a long debate on instituting the SP-PAGIRE as a cross-sectoral independent entity). Beyond the centrality of DGRE, many individuals (Burkinabé and Danish) have played a pivotal role in 'promoting new ideas' at different points in time. Their key position in the Burkinabé water bureaucracy allowed them to 'orchestrate a policy network', which make them, still today, highly influential both at national and regional level. Indeed, the Burkinabé IWRM network can count on a large pool of competent national consultants,[21] who often are former civil servants. These consultants are an integrally part of this 'policy network'; they are pivotal in shaping the practice of policy as they are regularly contracted by governments and regional organizations to draft terms of reference of studies and projects, and policy implementation guidelines. Furthermore, Burkinabé decision makers 'shopped regional and international venues' provided by the Danish cooperation and international networks such as GWP. They notably 'orchestrated a regional network', in order to influence water reform processes at the regional level. This was deemed key to ensure that ECOWAS would promote an approach to water management similar to the one adopted in Burkina Faso[22] Such pro-active engagement at international forums has not been observed in Mali

In Mali, the strong appropriation of the IWRM process by the technical DNH directorate was the result of an organizational and personal rivalry. In 2003, one year after AFD had supported the creation of a Malian Niger river basin authority and had linked it to the Minister of Environment, DNH created its own IWRM unit. This was possible because a few DNH water professionals recognized a window of opportunity when the 'problem stream' (the non-existence of a water resources unit at DNH) encountered a 'funding stream' (the World Bank PNIR project and the upcoming PAWD project). Another 'window of opportunity' appeared when Danida entered the scene and was willing to sponsor the sectoral budget support program (PROSEA). The high visibility of the IWRM unit and its head impeded the ABFN to play any noteworthy role in the water sector.

[21]Interview with senior private consultant, 23 April 2012; interview with senior foreign technical assistant, 24 April 2012.

[22]Interview with key Burkinabé water policy maker, 19 April 2012.

Qualitative differences in ownership

The long-standing Danish-Burkinabé partnership appears to be the result of a continuously renegotiated 'coalition', which tied together Burkinabé decision makers (civil servants and independent senior consultant alike) with their counterparts in the Danish cooperation. Rooted in this coalition, a small number of individuals in different organizations managed to orchestrate a policy network that nowadays extends to the regional and international level. This network is both the expression and warrant of a broad Burkinabé ownership of the water policy reforms.

Malian policy makers, on the contrary, are regularly criticized for *not* assuming ownership, but for awaiting assistance and for "accepting all external aid that is being offered" (Bergamaschi, 2009). The story told in this chapter showed that this interpretation is too easy. In a structural context of weak ministerial leadership and highly fragmented sponsorship, a few policy entrepreneurs effectively employed a pro-active strategy of drawing together the streams of donor support. The ownership of water policy reforms in Mali is narrowly vested, but in a cardinal manner, in a small number of water policy makers at DNH (and a few long-serving Western and Malian technical assistants).

7.6 Conclusion

The commitment to work towards higher development ownership in the South, made by donors and aid agencies in Paris and Accra, tacitly assumed that aid recipients in the South possess enough agency to assimilate the 'ownership' of their development (Booth, 2011). This chapter engaged with this tacit assumption and tries to open up the ownership black-box by framing it as the product of an interplay between agency and structure.

To do so, the chapter adduced empirical data concerning the emergence of the IWRM paradigm and policies at the global level and in the neighboring countries Burkina Faso and Mali. Although some critics have described IWRM as just another "nirvana concept" (Molle, 2008), we showed that this "hegemonic paradigm" (Conca, 2006) has been shaped by the relentless work of individuals and has acquired different realities in Burkina Faso and Mali. The differences are, in the first place, due to differing structural determinants such as bureaucratic layouts and idiosyncrasies, the relationships between the government and international donors, and the cultures or *habitus* of national policy makers in engaging with these donors. Within these different structural contexts, water policy entrepreneurs have also displayed dissimilar forms of agency. In Burkina Faso they mostly engaged in knitting a broad water policy network that extends to the regional level, while in Mali they mainly took advantage of windows of opportunity when the donor stream connected to the national problem stream.

If donors and aid agencies really want to contribute to an increased ownership of

development in the South, they will first need to reflect upon the fact that their own actions —e.g. the choice to engage with one policy entrepreneur rather than another— and structural conditions —e.g. the history of their own relation with the recipient— have direct repercussions on the form and level of ownership that the recipient can and will assume.

Chapter 8

Describing the emergence of IWRM with Actor-Network Theory

what to the local tribes of the originating place is ordinary sorcery, practised by men, becomes, when looked at from a great distance, and from an alien tribe, a non-human agency, endowed with such super-normal powers
Bronisław Malinowski—Argonauts of the Western Pacific

8.1 Introduction

Since the inception of development aid after World War II, the development expert communities have displayed a continuous effort to 'get the development policy right', thereby unceasingly promoting new concepts and theories to adjust preceding policies that allegedly failed to deliver (Mosse, 2004; Thorbecke, 2007; Kremer *et al.*, 2009b; Nederveen Pieterse, 2010). Also the field of water-related development is characterized by a similar intellectual ferment (Meinzen-Dick, 2007; Ingram, 2011; Molle, 2008).

Obviously, the water expert community *does* face impressive and very diverse challenges that do not have *one* miraculous solution (UNDP, 2006; Pahl-Wostl *et al.*, 2008; UN-Water, 2012): between 1.4 and 2.1 billion people currently live in water-stressed or over-exploited river basins (IPCC, 2008); floods affect 140 million people each year (IPCC, 2008); and nearly 800 million people still lack access to safe drinking water (WHO-UNICEF, 2012). Just like in any other sector of development, however, the alleged failure to achieve the desired progress in addressing these challenges is invariably attributed either to the misconception of the preceding policy, or to an unintended gap between policy making and implementation (Mosse, 2004; Rap, 2006). Therefore, new ideas, theories, technologies, management schemes, policies and eventually new overarching paradigms are incessantly proposed to correct the preceding policy or to reduce the

gap between policy and practice. To name only one such trend, the water community has produced over the past fifty years policies that emphasized first public, then private, then community-based, and then mixed private-public institutions as *key* to water management (Meinzen-Dick, 2007; Ingram, 2011).

To the critical observer, these constant conceptual renewals appear as 'fads', 'fashions', 'bandwagon concepts' or 'buzzwords' (Cornwall, 2007). Thanks to their discursive and disembodied power they engross the whole community of development professionals (as in Ferguson, 2007 [1990]). At best they are promoted by a global epistemic community and multi-lateral agencies (Haas, 1992; Stone, 2003) or an advocacy coalition (Sabatier and Weible, 2007).

To the contrary, in the positivist observer's view, these constant conceptual renewals reflect the quest towards better and refined practice-informing policies. This view is largely grafted on the 'stagist' theory of the policy process (as in Easton, 1965; Jenkins, 1978), which supposes that it is possible objectively formulate the problem, make a well-informed policy making, straightforwardly implement the policy, and objectively evaluate the policy (Kremer *et al.*, 2009b).

Both views are highly problematic. The first ignores the role of individuals and networks of individuals in the shaping and framing of the concept, in making them work, and in keeping them alive (Shore and Wright, 1997; Rossi, 2004; Molle, 2008). The second view relies on an overly positivist epistemology (Chambers, 1997; Crewe and Harrison, 1998; Bryld, 2000; Cooke, 2004; Kothari, 2005; Wilson, 2007a,b). I argue, in line with the growing number of 'ethnographers of aid' (e.g Gould and Marcussen, 2004; Mosse, 2005b,a) and 'anthropologists of policy' (e.g. Shore and Wright, 1997), that both the critical and the positivist view derogate the agency of individuals, the political struggles in policy making, and the complex relation between policy making, implementation, and real-world impact. We need ethnographies that challenge the epistemological assumptions of these grand theories (Wedeen, 2010) and that *actually observe and describe* the role of *actors* in the emergence and implementation of these putative 'fads', 'fashions' and 'bandwagon concepts'.

Integrated Water Resources Management (IWRM) is one such concept —I will call it a 'paradigm'[1]— that is currently ubiquitous in the sphere of water management and water-related development aid. IWRM holds the promise of a fair and sustainable management of water resources. It recognizes that water is key to different and often competing goals: human health, economic development, and environmental sustainability. Therefore, IWRM advocates a *cross-sectoral* management of water resources —covering the agricultural sector, industry, energy, domestic life, the environment— as well as a *vertical* integration of the different decision-making levels —national government, river basin, municipality, community (GWP, 2000a; Conca, 2006). To reach this horizontal

[1]See sections 2.2 for the reasoning behind this and section 2.5 for a definition.

Survey	categories as mentioned in the survey			respondents
	IWRM plans or strategies in process	*IWRM plans or strategies in place*	*IWMR plans or strategies being implemented*	
GWP, 2006	53%	21%	n.a.	95
	water laws being changed	*IWRM plans in place*	*IWRM plans being implemented*	
UN-Water, 2012	81%	64%	34%	125

Source: Adapted from UN-Water (2008, 2011)

Table 8.1: Countries with IWRM-inspired laws and management plans, auto-declared in surveys.

and vertical reconciliation of sectors and levels, IWRM counts on some form of Habermasian communicative rationality: actors reach, through consensus building, a common understanding of the problems and the desired actions (Mehta *et al.*, 2007; Saravanan *et al.*, 2009).

Scholars concur that over the past two decades the IWRM paradigm has attained a hegemonic status in water policy making and management worldwide (Conca, 2006; Saravanan *et al.*, 2009; Orlove and Caton, 2010). Over 80% of countries worldwide now have the IWRM principles in their water laws and two thirds have developed a national IWRM plan (see Table 8.1). This success is surprising in two ways. First, water governance is highly scattered at international level (Gupta, 2009) and IWRM is not endorsed by any international agreement like the one on trans-boundary waters (Conca, 2006). Second, despite being on the lips of many, there is still much debate about the practical value of IWRM (van der Zaag, 2005; Merrey, 2008; Quevauviller, 2010), given its malleability and the lack of concrete guidelines for implementation (Gooch and Stålnacke, 2006; Saravanan *et al.*, 2009; Orlove and Caton, 2010).

I argue that IWRM does *not* derive its hegemony from being a woolly "nirvana concept", as stated by Molle (2008), or for being a widely spoken "lingua franca" (Ingram, 2011), or "discursive construct" (Orlove and Caton, 2010). Instead, in the next section I show the crucial role of *actors* in supporting the emergence of the IWRM paradigm in the sphere of multi-lateral organizations towards the end of the 20th century, and in routing the IWRM paradigm towards Mali during the first decade of the current century. I trace the myriad major and minor connections that actors knit amongst each other in order to establish a firm network that can make other actors *do* something. These connections can take the form of organizations, agreements, principles, or any other hybrid artifact. In my tracing of this network I try *not* to invoke presupposed discursive powers or social structures, nor to artificially separate 'policy makers' from 'policy takers'. I only trace links.

This way of describing the emergence and the hegemony of IWRM is very innovative. With a few exceptions such as Conca (2006), very few scholars pay attention to the

loads of work that was required from *actors* and their network to make the paradigm emerge, and the *loads of work* that continues to be required from *actors* to maintain the paradigm alive and prominent. My way of describing 'the social' is based on Actor-Network Theory (Latour, 2005), a tool for the description of social data that is rooted in science and technology studies but that has been finding its way to other domains of the social sciences as well (Latour, 2000). I will show that a paradigm such as IWRM appears to be 'successful' precisely *because* a well-built network sustains it.

The data presented in this article is based on policy documents, 48 interviews with key people, 21 focus group discussions, and 13 months of participant observation at three different sites in the network of development actors, to wit, at the headquarters of the Global Water Partnership (2011), at the headquarters of a non-governmental development organization (2010), and in Mali's Inner Niger Delta (2010-11).

The article is structured as follows. In the next section I describe the network of actors that underpinned the emergence of IWRM in the multi-lateral sphere as well as the implementation of IWRM in Mali through inter-governmental and non-governmental cooperation. The article does not *evaluate* nor *judge* these processes — it limits itself to description. In the third section I thoroughly introduce ANT and I discuss the suitability of the ANT vocabulary to describe the ups and sufferings of the IWRM paradigm. In the fourth section I reflect on the meaning of 'success' and 'failure' of a paradigm.

8.2 Tracing the IWRM network

8.2.1 Before the IWRM paradigm emerged

The history of IWRM dates back to at least the early 1900s (Viessman and Welty, 1985; Muckleston, 1990), when for the first time in modern history administrative units were established for the *integrated* management of natural resources in an area defined by a water body. Watershed Conservancy Districts were created for the Ohio river in 1913 as well as for the Muskingum and Miami rivers; the pioneering Tennessee Valley Authority was founded in 1933 (Mitchell, 1990).

The United Nations Water Conference of 1977 in Mar del Plata, Argentina, is generally considered as the first attempt to tackle water problems *globally* (Conca, 2006). "For the first time the range and complexity of the problems of water development confronting mankind were being taken up in their totality by a world forum in a systematic and comprehensive manner" (UN, 1977, p.555). In reality, the conference was narrowly focused on water supply and sanitation, and the sovereignty of nations over water resources in their territory was not under discussion. In the wake of the conference, the UN declared the 1980s as the International Drinking Water Supply and Sanitation Decade (IDWSSD).

Throughout the 1980s, water continued to be neglected as a cross-sectoral finite re-

source. The landmark Brundtland report *Our Common future* limited its discussion of 'water management' to 'irrigation', touching solely upon the problems of water pollution, salinization, and rapidly lowering water tables (Brundtland, 1987, p.134).

The *Abidjan Accord* of 1990, agreed in the framework of an assessment of the progress in water supply in Africa after one decade of dedicated efforts, argued that the increasing demand for finite water resources needed to be addressed through "an integrated approach to water resources management". According to this *Accord*, an integrated approach supposed "a detailed consideration of supply, demand, conservation and protection" (World Bank, 1991).

The *New Delhi Statement* of the same year, which was issued at the conclusion of the IDWSSD, was more forward-looking in stressing the need for stronger local institutions and community management, and in recognizing that water resources *and* liquid and solid wastes needed an *integrated* management (UN, 1990).

The Brundtland report, the Abidjan Accord, and the New Delhi Statement all advocated the most basic form of 'integrated' water management (Mitchell, 1990): they did pay attention to both surface water *and* groundwater, as well as water quantity *and* quality—but did not yet link water to land (erosion, floods) and the environment. The latter would be, according to Mitchell, the second interpretation of 'integrated' water management. The third and broadest interpretation of 'integrated water management' considers water as a *finite resource* that is central to *social and economic development in the broadest sense*, and hence needs to be managed in a cross-sectoral manner. 'IWRM'advocates the latter.

The International Water Resources Association (IWRA), a membership organization of water professionals founded in 1972, was very influential in shaping and promoting the IWRM paradigm (Conca, 2006), given that the organization, unlike other professional associations, positioned itself form the start as interdisciplinary (Falkenmark, 2011). Basically all promoters of an integrated management of water resources in the 1980s and 1990s, including Mitchell himself, were linked to IWRA.

Bringing the third and broadest interpretation of 'integrated' water management on the agenda of multi-lateral organizations in the early 1990s is to a large extent the merit of a cluster of key Scandinavian organizations and individuals. This is where my tracing of the IWRM network starts.

8.2.2 Nordic effervescence in the early 1990s

The Scandinavian countries, and Denmark in particular, had been major contributors to the IDWSSD initiative of the 1980s. Building on the first-hand experience that those projects had suffered from an approach too sectoral, and with the prospect of the forthcoming United Nations Conference on Environment and Development (UNCED) in Rio

de Janeiro in 1992, the Danish International Development Agency (Danida) took the initiative to establish a Nordic Freshwater Initiative (NFI), with the explicit objective to feed operational guidelines for *integrated* water resources planning and management into UNCED (Jønch-Clausen, 1992). The two key figures in the NFI were the Danish water professional Torkil Jønch-Clausen the Swedish academic Jan Lundqvist.[2] Jønch-Clausen, who was CEO of the Danish Water Quality Institute in 1993-1997 and secretary general of IWRA in 2004-6, was contracted by Danida to coordinate NFI. Jan Lundqvist was also a habitué of the multi-lateral scene, as consultant to the Swedish International Development Agency (SIDA), Swedish delegate to a number of UN bodies in 1987-92, regional director of IWRA in 1991-4, and vice president of IWRA in 1998-2000.

The NFI received a global platform at the first Stockholm Water Symposium in August 1991 (Jønch-Clausen, 1992). The first chair of the Symposium's Scientific Program Committee (1991-2003) was the Swedish professor Malin Falkenmark, only woman on IWRA's first board of directors when IWRA was created in 1972. The Symposium, predecessor of the present Stockholm World Water Week and a major platform for water policy makers worldwide (SIWI, 2012), took stock of everything that was going wrong in the water sector at that time and 'problematized' this as follows: water is a major constraint to any form of development and hence it needs to be seen as an *economic good* rather than as a freely available resource (Stockholm Water Symposium, 1992, p.5-7). The key message sent to the upcoming UNCED was that water management needed *multisectoral* strategies (Falkenmark, 1992, p.27).

Three months later an informal consultation of the NFI in Copenhagen in November 1991 further invigorated the Nordic plea for integrated, cross-sectoral management. Contrary to the critical tone of the Stockholm Water Forum, the *Copenhagen Statement* was conceived to feed *two practical guiding principles* for integrated water management into the UNCED process: (i) water needs to be managed at the lowest appropriate decision-making level, and (ii) it needs to be managed as a finite resource with 'an economic value'. The *Copenhagen Statement* still used the phrase "integrated water resources development and management" whereas the *report* was the first document to use "integrated water resources management" (NFI, 1992). Not only the term but also the two principles would prove to live a long life.

In January 1992, another three months later, 28 UN agencies and 58 external organizations met in Dublin for the International Conference on Water and Environment (ICWE) —the last preparatory meeting before UNCED in Rio the Janeiro— and agreed on the so-called 'Dublin Principles' (UN, 1992b):

1. Fresh water is a finite and vulnerable resource, essential to sustaining life, development, and the environment

[2]Interview with senior water advisor to Danida, 4 January 2012

2. Water development and management should be based on a participatory approach, involving users, planners and policy makers at all levels
3. Women play a central part in the provision, management, and safe-guarding of water
4. Water has an economic value in all its competing uses and should be recognized as an economic good

The *Dublin Principles* integrally incorporate the two principles that were proposed by the *Copenhagen Statement*. That the NFI coordinator was on the ICWE board and that the participants of the conference were government-designated experts (many linked to IWRA) rather than diplomats, had facilitated the broad support for the *Copenhagen Statement*, its translation into the Dublin principles, and the *de facto* acceptance of IWRM.

At the UNCED conference (or *Earth Summit*) later that year in Rio de Janeiro, which was a political rather than a technical conference, water did not attract the high-level regime-building negotiations that surrounded climate or biodiversity and IWRM was not high on the agenda (Conca, 2006). The 'action plan' that was published afterwards, *Agenda 21*, nevertheless dedicated an entire chapter to water. *Agenda 21* was the first multi-laterally endorsed political document to use the phrase "integrated water resources management". Moreover, *Agenda 21* invited all countries to have, by the year 2000, "costed and targeted national action programmes [...] and appropriate institutional structures and legal instruments [for IWRM]" (UN, 1992a, Chapter 18).

Danida preceived this as a major success and renewed its engagement in water-related development:[3]

> The Danish government was very happy with the Copenhagen and Dublin Statements and with the impact they had [in Rio], because that is what governments and donors care about: to have a strong footprint. So, Danida got very keen on this IWRM.

Uganda was Danida's IWRM pilot case. Thanks to a strong support from within the Ugandan water sector[4] —the permanent secretary of the Ugandan Ministry of Water, B.K. Kabanda, was already involved in the NFI and was amongst the subscribers of the Copenhagen Statement (NFI, 1992)— Danida chose to assist Uganda in developing a Water Action Plan, between January 1993 and July 1994. This plan can be considered the first African IWRM plan *avant la lettre*. The Danish Hydraulic Institute (DHI), a research-based not-for-profit foundation where Jønch-Clausen at that moment served as director of the Water & Environment division, obtained the contract to develop the plan. The water professionals of Danida felt that the approach of the Ugandan Water Action

[3] *ibid.*

[4] Interview senior advisor to GWP, 1 November 2011, and interview senior advisor to Danida, 4 January 2012.

Plan was replicable and started a similar IWRM process in Central America (1997-99), Burkina-Faso (1998-2001) and Vietnam (2004-05).

The chief of the Water and Sanitation Division at the World Bank, however, lamented that the Dublin principles, agreed in January 1992 by the *technicist* ICWE conference, had disappeared from *Agenda 21* (Briscoe and Garn, 1994). Instead, *Agenda 21* was stuffed with "a long list of unreachable and unfundable targets, with no fewer than 184 activities advocated in [the freshwater] chapter alone". He proved right as not *Agenda 21* but the *Dublin Principles* became the basis for the World Bank's Water Resources Management Policy, the OECD's benchmark for the assessment of water-related development, and water-related bilateral aid of France and the Nordic countries (Briscoe and Garn, 1994). Briscoe himself would play a role in the further institutionalization of the Dublin Principles (see next section).

Since the UN lacked —and still lacks— an entity dedicated to water that could assist the developing countries in designing IWRM plans by the year 2000, the impact of *Agenda 21* in the water sector was relatively weak. This shortcoming was in part parried by two initiatives to institutionalize IWRM at intergovernmental level: the establishment of a World Water Council and a Global Water Partnership (see next section). Both initiatives were taken by individuals and organizations that had already espoused the IWRM paradigm.

8.2.3 Anchoring IWRM in new international organizations

Following the appeal of the Rio conference, the World Bank vice president for Environmentally and Socially Sustainable Development Ismail Serageldin, and the Policy Director at the United Nations Development Programme (UNDP) Anders Wijkman, took the initiative to create a Global Water Partnership (GWP). The 'operational team' to do so consisted of the earlier mentioned John Briscoe (Water and Sanitation Division at the World Bank), Roberto Lenton (Director of the Sustainable Energy and Environment Division at the United Nations Development Programme), Johan Holmberg (SIDA) and the earlier mentioned Torkil Jønch-Clausen (Danida, DHI).[5] GWP was conceived as a network organization with the objective to advocate the implementation of IWRM plans and institutions around the world and share expert knowledge. Since its inception, the Dublin Principles are at the core of its mission.

The first chair of GWP was Ismail Serageldin himself. Torkil Jønch-Clausen was assigned the chair of the GWP Technical Committee (GWP-TEC). Since he continued to manage the Water & Environment division of DHI, this organization was selected as GWP-TEC secretariat. Johan Holmberg, assistant director-general at SIDA, served as

[5]Interview senior advisor to GWP, 1 November 2011

first secretary-general of GWP. Since the establishment of GWP until today, the GWP Global Secretariat is hosted by SIDA in Stockholm.

Through both the general-secretary and the TEC chair, SIDA and Danida continued to influence the intellectual and political positioning of GWP to a large extent. GWP's tripodal framework for IWRM implementation —that builds on an 'enabling environment', 'institutional roles', and 'management instruments' (GWP, 2000a, p.30)— was integrally developed years earlier by DHI, in the context of the Ugandan Water Action Plan, and was imported in GWP through Jønch-Clausen:[6]

> Whatever Danida did concerning IWRM, they always turned to us at DHI. And we could then link it to the GWP, which is one of the reasons why Danida has always been one of the key supporters of GWP. You know, it's very incestuous [*sic*]. But this is the way the world works: through networks.

A second initiative to anchor IWRM in a multi-lateral organization was taken by IWRA, the US-rooted association of water professionals, who felt that UNCED had "failed to attach much priority or urgency to water" and that *Agenda 21* reflected "no substantive inputs from the [technicist] Dublin conference" (Grover and Biswas, 1993). Therefore the IWRA president Mahmoud Abu-Zeid (also Egyptian water minister), the IWRA vice-president Aly Shady (also water advisor at the Canadian International Development Agency CIDA), and the vice director of Suez Lyonnaise des Eaux René Coulomb, founded the World Water Council (WWC) in 1996. The WWC presents itself as a more elite membership organization for private companies, government agencies, and development organizations (Conca, 2006). Its principal activity has consisted of organizing the triennial, highly influential World Water Forum (WWF). The WWC, too, had Ismail Serageldin on its initial board of governors.

In their early years, the two organizations —GWP and WWF— were by many water professionals seen as competing initiatives. The Water Supply and Sanitation Collaborative Council (WSSCC), established by the UN in 1990 to continue the work of the IDWSSD decade, offered a neutral ground where collaboration between the two organizations was cultivated. This collaboration was particularly facilitated by three Canadians:[7] Margaret Catley-Carlson, who was chair of WSSCC in 1992-1996 and chair of GWP in 2000-2008, William Cosgrove, who was chair of WWC in 2003-2005, and Aly Shady, who was water advisor of CIDA and co-founder of WWC.

The first WWF, which took place in 1997 in Marrakesh, urged the world to develop a *World Water Vision*. Such a *Vision* was subsequently developed by the ad hoc 'World Commission for Water in the 21st Century', chaired by Ismail Serageldin, and built on a number of *Regional Visions* that were gathered through GWP's network of regional technical committees. At the second WWF in 2000 in The Hague, WWC released the

[6] Interview with senior advisor to Danida, 4 January 2012

[7] Interview ex GWP employee, 29 February 2012.

World Water Vision and GWP presented a *Framework for Action* that urged the world to have "comprehensive policies and strategies for IWRM in process of implementation in 75% of countries by 2005 and in all countries by 2015" (GWP, 2000b). The WWF of 2000 firmly established GWP as a key water player at the international and regional scene (GWP, 2012).

8.2.4 Pressing for national IWRM plans

With the upcoming Rio+10 conference in Johannesburg in 2002 (the World Summit on Sustainable Development –WSSD), the water community started working again to get water and IWRM back on the agenda, since "in those large conferences water does not come in automatically."[8] Through three channels they exerted their influence: the Nordic countries brought IWRM to the attention of the European Parliament and Commission, the German government organized the Bonn Conference on Freshwater, and the GWP Regional Water Parnterships and Regional Technical Committees lobbied the governmental negotiators of the many developing countries.

Co-organized by the German ministries for Economic Co-operation and Development (BMZ) and the Environment (BMU), an international conference on freshwater in Bonn in 2001 aimed at intensifying the voice of the German government and the water community in the run-up to Johannesburg. Since GWP had shown leadership at the 2000 WWF, the then chair of GWP, Margaret Catley-Carlson, was invited as facilitator for the Bonn conference, and GWP was amply represented at its International Steering Committee.

The building up of the Bonn conference had indeed started many years earlier. Fritz Holzwarth —deputy director-general of BMU (1996-), head of the German delegation in numerous transboundary river basins, and negotiator in the EU Water Framework Directive (EU-WFD)— initiated in 1998, together with the World Bank and the German Foundation for International Development (DSE), a series of international high-level round tables on "transboundary water management" as a "catalyst for cooperation". Already the report of the first two round tables, held in Petersberg and Berlin in 1998, stated that Germany was planning to host an international conference on freshwater in 2001/2 in the run-up to the Rio+10 summit[9], with the aim to "examine the implementation of *Agenda 21*" (DSE, 1998).

In 2000 the European Parliament, too, picked up the IWRM concept as guiding principle for water-related development aid, in part through its own experience with the EU-WFD, but mostly through the continued influence of the Nordic countries. In November 2000, during a public hearing, the earlier mentioned professors Malin Falkenmark and Jan Lundqvist acquainted the parliamentary Committee on Development and Coopera-

[8] *Ibid.*

[9] The original report stated that the conference would be held in 2002, but in the end it was held at the end of 2001.

tion with the IWRM concept, which they had described, together with colleagues of the Swedish International Water Institute (SIWI), in a commissioned report on *Water and Development in the Developing Countries* (Björklund *et al.*, 2000). During this particular hearing, the chair of GWP-TEC, Jønch-Clausen, presented the *World Water Vision* and *Framework for Action* to the parliamentary Committee (European Parliament, 2000). Note that at that moment, Anders Wijkman, co-founder of GWP, was vice-chairman of this parliamentary Committee on Development and Cooperation.

The outcome of the Bonn conference —known as the *Bonn Recommendations for Action* and the five *Bonn Keys* (GTZ, 2002)— was endorsed in March 2002 by a communication of the EU Commissioner for Development and Humanitarian Aid (European Commission, 2002). As a result, the Bonn conference had two direct impacts on the WSSD negotiations: an extra Millennium Development Goal on water supply and sanitation (MDG 7c) was added to the existing goals, and the WSSD action plan repeated the call that all states had to "develop integrated water resource management and water efficiency plans by 2005, with support to developing countries" (UNESA, 2002, Chapter 4).

Like Denmark had had a footprint on UNCED in Rio through the Copenhagen and Dublin meetings of 1991, Germany influenced the WSSD in Johannesburg thanks to the Bonn conference in 2001. This strategy was repeated in 2011, when Germany organized a second Bonn conference on the Water-Food-Energy Nexus, in the run-up to Rio 2012. In both occasions the driving forces were Manfred Konukiewitz, head of division in BMZ, and Fritz Holzwarth, Deputy Director General of BMU.[10] For the second Bonn conference, GWP was again amply represented at the International Steering Committee, in the person of the current GWP-TEC chair Mohamed Ait Kadi, the former GWP chair Margaret Catley-Carlson, and Bai-Mass Taal, Executive Secretary of the African Ministers Council on Water (AMCOW)—one of GWP's strongest African allies.[11]

8.2.5 Conscripting Mali in the network

After the WSSD in Johannesburg, the insistent call to develop national IWRM plans was finally heard by a number of organizations and donors. On the one hand, Danida supported the 'IWRM 2005 Programme' of the United Nations Environmental Programme (UNEP), which ran from May 2005 to December 2008 in over 60 countries and 10 subregions. The implementation of the program happened through the UNEP-DHI Centre for Water and Environment, which had been established in October 2001 by UNEP, Danida, and DHI, and is housed in Denmark by the latter. Thanks to this collaboration, UNEP's Water Policy and Strategy is integrally based on IWRM. Torkil Jønch-Clausen,

[10] Interview senior Danida advisor, 4 Jan 2012.
[11] Observed, May 2011 - September 2010

then head of DHI Water & Environment, was also UNEP-DHI programme coordinator and member of its three-headed Steering Committee.

On the other hand, GWP took the initiative to mount a 'Partnership for Africa's Water Development' (PAWD), with the aim to develop IWRM plans in five African countries. Up till that moment, GWP had always acted as a neutral network for knowledge exchange and advocacy, not as implementer of a development project. The PAWD project, however, emerged as a bid of GWP to diversify and augment the core funding sources.[12] The Canadian International Development Agency (CIDA) responded to the needs of GWP and agreed to sponsor the PAWD-under-construction, but it imposed, much against the will of the GWP-TEC, a project-like setup of PAWD. CIDA also hand-picked the eligible countries according their own interests—Mali was one of them.[13] The PAWD project supported Mali from January 2004 to December 2007 in the production of a national IWRM plan 'PAGIRE', which was eventually adopted by the parliament in 2008.

The PAWD project started in Mali when significant reforms were already being made in the water sector. IWRM was not an entirely new concept anymore, as it had entered the country already through two doors. In March 1998 Danida and DHI organized a West African conference on IWRM in Ouagadougou. In effect, Danida had experience that a similar regional conference in Entebbe had proven effective in initiating regional cooperation in Eastern Africa. In the occasion of the Ouagadougou conference, the Malian minister of water signed, together with 11 West African colleagues, the *Ouagadougou Statement*, pledging to reform water management at both national and regional level. A regional secretariat, part of the regional economic union ECOWAS, was established to follow up on the regional IWRM plan, and Mali's neighbor Burkina-Faso, IWRM pilot case of DHI and Danida, started developing its own national IWRM plan (1998-2001).

Moreover, in May 1998 the French Development Agency (AFD) and UNDP had organized a first concertation workshop in Mali to start developing a national *Water Code*.[14] The *Code* was set to include references to IWRM and to water as economic resource, in agreement with the *Dublin Principles*. The Water Code was eventually adopted in 2002.

In April of 2003, one year after GWP had created a West African Regional Water Partnership (RWP), this Regional Water Partnership founded a Malian country water partnership (PNE-Mali). The chair was assigned to Amadou Maïga Housseini, who had already collaborated with GWP in the *World Water Vision* process (1997-2000), and who served at that moment as focal point of the Niger Basin Authority at the Malian Water Directorate (DNH). DNH is the operational branch of the Ministry of Water in Mali. The DNH, which has always been the central hub for donors in the water sector, nimbly pulled together different donor strings —principally from the World Bank and

[12] Interview ex GWP employee, 29 February 2012.

[13] *Ibid.*

[14] The creation of the *Water Code* is the step that preceded the creation of the *Water Law* and *Water Policies*.

GWP— to create a new IWRM unit within the DNH and put Maïga Housseini at the head of this IWRM unit (see chapter 7 for more details).

In December 2003 a memorandum of understanding was signed between GWP, DNH and PNE-Mali, identifying PNE-Mali and the DNH-IWRM unit as the two focal points for the GWP-led PAWD program, that was poised to start in January 2004 in Mali. Although there was an intense consultation of stakeholders (Patterson, 2008), the preparation and finalization of the IWRM plan was centralized within the DNH-IWRM Unit, whereas PNE-Mali's role was limited to sensitize all stakeholders in IWRM matters.[15] The fact that the chair of PNE-Mali and the head of the DNH-IWRM unit were one and the same person, impeded stakeholders to distinguish both organizations, and hindered PNE-Mali to play its role as independent watchdog of the policy-process. Or as a permanent staff member of PNE-Mali formulated euphemistically: "the power of PNE-Mali consists in that it gets on so well with the [DNH] administration."[16]

The PAGIRE plan that came out of the project was adopted by the Malian government in April 2008, but no single donor had committed to the *implementation* of the PAGIRE. However, the aid landscape of Mali's water sector had started changing with the arrival of Denmark as a new donor in 2006. Active in neighboring Burkina Faso since several decades, Danida had expanded the radius of action of its technical assistants at Ouagadougou to Mali. Danida, later joined by SIDA, started supporting the embryonic attempt of DNH to develop a program for sectoral budget support to water and sanitation (PROSEA). Danida stimulated the creation of an inter-ministerial Cell for Planning and Statistics (CPS) in 2008. This cell has gradually assumed the authority over PROSEA but heavily depends, to date, on Danish technical support to manage and implement PROSEA.

The implementation of PAGIRE was integrally incorporated in the PROSEA. At a donor round-table in February 2009, organized by Maïga Housseini of DNH together with a the senior technical assistant of the Netherlands, a number of donors (Denmark, Sweden and the African Development Bank) pledged half of the budget needed to implement the PAGIRE component of PROSEA.

Although the PROSEA program has partly succeeded already in aligning the aid of the international development partners in the development sector,[17] the director of DNH still laments that too many foreign consultants are coming in, all of them bringing in their own ideas.[18]

[15]Interview PNE-Mali general secretary, 29 September 2010 and interview PNE-Mali chair, 17 August 2011

[16]Interview with a permanent staff member of PNE-Mali, 29 November 2010.

[17]Interview key Malian policy maker, 21 August 2011; interview senior foreign technical assistant, 24 April 2012.

[18]Interview with key Malian policy maker, 21 August 2011.

Year	International and regional sphere		National sphere (Mali)		WaNGO and the Inner Niger Delta		Year
1977	*Mar*	UN water conf., Mar del Plata					1977
1987	*Oct*	Brundtland report released			*May*	IND partially designated Ramsar	1987
1990	*May*	Abidjan Accord					1990
	Sep	New Delhi Statement					
1991	*Aug*	1st Stockholm Water Symposium	*Mar*	Overthrow Traoré regime			1991
	Nov	Copenhagen Statement					
1992	*Jan*	ICWE conf., Dublin					1992
	Jun	Earth Summit, Rio de Janeiro					
		Call to create IWRM plans					
1993			*Jan*	Decentralization law voted			1993
1995	*Dec*	Creation GWP					1995
1996	*Jun*	Creation WWC					1996
1997	*Mar*	1st WWF, Marrakech					1997
1998	*Mar*	West African IWRM conf., Ouagadougou	*May*	1st workshop on new Water Code			1998
1999	*Jan*	Creation West Africa Technical Advisory Committee to GWP					1999
2000	*Mar*	2nd WWF, The Hague					2000
		World Water Vision presented					
	Oct	EU-WFD adopted					
	Nov	Hearing of GWP in EU Parliament					
2001	*Dec*	Int. Conf. on Freshwater, Bonn	*Dec*	World Bank water sector diagnostic		WaNGO turns to water	2001
2002	*Apr*	Creation West Africa RWP	*Jan*	Adoption of Water Code			2002
	May	EC adopts IWRM as policy for water-related ACP-EU aid					
	Sep	Earth Summit, Johannesburg			*Sep*	WaNGO at Earth Summit	
		Launch of EU Water Initiative				WaNGO joins EU Water Initiative	
		Call to create IWRM plans					

Year	International and regional sphere		National sphere (Mali)		WaNGO and the Inner Niger Delta		Year
2003	*Aug*	Start pre-activities PAWD	*Apr*	Creation PNE-Mali	*Mar*	W. applies for IWRM funding	2003
	Oct	W-Afr conf on IWRM planning					
	Dec	GWP and CIDA sign PAWD	*Dec*	MoU between GWP, PNE-Mali, DNH	*Dec*	WaNGO organizes IWRM conf.	
2004			*Jan*	Start PAWD	*Feb*	Entire IND designated Ramsar	2004
	Nov	1st call EU Water Facility 1			*Apr*	WaNGO starts IWRM study IND	
2005						WaNGO mainstreams IWRM	2005
2006	*Mar*	2nd call EU Water Facility 1	*Feb*	Water Policy adopted	*Mar*	Start IWRMIND pilot phase in 4 IND municipalities	2006
			Nov	PAWD planning workshop	*Jun*	WaNGO proposes the IWRMIND project to ACP-EU Water Facility	
2007			*Nov*	National Development Strategy for Drinking Water Supply	*Oct*	IWRMIND starts in 14 IND municipalities	2007
			Dec	End of PAWD			
2008			*Apr*	PAGIRE adopted			2008
2009			*Feb*	PNE-Mali accredited by GWP			2009
			Feb	Donor round table to collect money for PAGIRE implementation			
2010	*Jun*	1st call of EU Water Facility 2					2010
2011	*Nov*	Water-Energy-Food Nexus conf, Bonn					2011
2012	*Jun*	Earth Summit, Rio de Janeiro					2012

Table 8.2: Key events in the emergence and implementation of IWRM

8.2.6 Creating an EU Water Initiative and Water Facility

As mentioned earlier, IWRM had already been discussed in the Committee on Development and Cooperation of the European Parliament, in November 2000 (European Parliament, 2000). In March 2002 the Commissioner for Development and Humanitarian Aid —at the time the Dane Poul Nielson (1999-2004)— released a communication on "Water Management in Developing Countries Policy and Priorities for EU Development Cooperation", stating that the European Commission's policy on water-related development would be "to build strategies based on the overarching *principles of Integrated Water Resource Management*"(European Commission, 2002).

At the WSSD in Johannesburg, the European Commission presented the new EU Water Initiative (EU-WI) to the world. The EU-WI, although supported by different Directorate-Generals of the European Commission, is not a proper European Commission institution, but rather an open platform for coordination between the public, private and civil society actors in water matters. Its creation was in part promoted by European non-governmental organizations such as the British WaterAid and French PSEau, research institutes such as the British WECD and Swiss SKAT, and governmental donors active in the water sector such as Denmark, France and the United Kingdom. These actors had already been meeting on a regular basis before the WSSD conference in Johannesburg.[19] The initiative enjoyed the support of the European Commission and was formalized at WSSD (Partzsch, 2009).

Obviously, also the EU-WI adhered to the IWRM principles: it declared that it would "promote better water governance arrangements and good practice centered on the *principles of integrated water resources management*" (European Commission, 2003). The Finance Working Group of EU-WI, in agreement with the World Panel on Financing Water Infrastructure (WWC, 2003), promoted the creation of a European Water Facility (EU-WF), in order to increase aid in the water and sanitation sector.[20] In January 2004 the DG Development communicated the creation of such an EU-WF, with two goals: (i) work towards the MDG on access to water and sanitation, (ii) *implement IWRM worldwide*. The EU-WF is conceived as a "fully demand driven" body in which the African, Caribbean and Pacific (ACP) countries, along with other civil society actors from Europe and from the Global South, can define the policy (European Commission, 2004b).

The EU-WF allocates the largest part of its budget through periodic calls-for-proposals. Under the first and second call, of 2004 and 2006, three types of actions were eligible: (i) improvement of water management and governance, including "the development and *implementation of integrated water resources management*," (ii) co-financing of water

[19]Interview ex executive director of WaNGO, 17 Apr 2012.

[20]The Water Facility is a funding channel of EuropeAid, exclusively dedicated to finance activities that address the MDGs in water and sanitation.

and sanitation infrastructure, and (iii) co-financing of civil society initiatives that, where applicable, "*lobby governments to address [...] IWRM*" (European Commission, 2004a). At the call of 2006 the European non-governmental organization WaNGO[21] obtained a grant to implement IWRM at municipal level in the Inner Niger Delta (IND) in Mali.

8.2.7 Conscripting non-governmental aides

WaNGO —an international, non-governmental development organization (NGO)— is founding member of the EU Water Initiative in 2002 in Johannesburg and a major non-governmental proponent of IWRM in Mali since 2004. Originally created in the late 1970s to deliver non-governmental technical assistance in a wide range of sectors in Haiti, WaNGO now works in 9 countries in Africa and Latin America. In the landscape of myriad development organizations that compete for donor funding,[22] WaNGO carved out its own specific niche in two steps: as of 2001 it concentrates its work in the water sector, and in 2005 it adopted IWRM as mainstreaming principle for all projects.

As nearly 82% of the WaNGO budget derives from governmental sources (45% project funding and 37% structural funding), WaNGO attaches great importance to its status of professional and highly specialized NGO.[23] The adoption of IWRM as guiding principle has endowed the organization, according to the employees, with an additional "comparative advantage with respect to other NGOs, definitely at the national but to some extent also at the European level."[24] Very few western or grassroots NGOs are conversant with IWRM:[25]

> Other NGOs don't care about IWRM. The ones involved in irrigation tend to work *vertically*, focusing on the agricultural production chain,[26] while we work *horizontally*, putting irrigation next to the other uses of water.

The idea to frame all actions of WaNGO within an IWRM framework emerged at the headquarters, not through discussion with the partners in the field.[27] This is common practice in the organization; strategic innovations usually sprout from the headquarters. The serendipity of the former executive director, was key in this aspect. The employees resolutely disaffirm that IWRM sneaked into the organization under pressure of the donors.[28] Conversely, they avow that it is loosely based on the practices of integrated wa-

[21] WaNGO is a pseudonym.

[22] Personal communication of WaNGO employee, June 2010.

[23] Personal communication of several WaNGO employees, February – July 2010.

[24] Quoted from an interview with the IWRM focal point of WaNGO, 30 June 2010, and confirmed by the ex director, 17 April 2012.

[25] Interview with the head of Southern Operations Department, 29 June 2010.

[26] NGOs working in the agricultural sector tend to focus on the sustainability of the entire production chain, from seed and fertilizer supply, over irrigation and yield improvement, to the sales on the market.

[27] Interview with the head of Southern Operations Department, 29 June 2010, interview with the IWRM focal point, 30 June 2010, interview with ex-director, 17 April 2012.

[28] Unlike other bandwagon concepts such as 'capacity building", see chapter 6.

ter management and river basin management in the home country, and in the European Union in general. In 2003 the WaNGO headquarters organized an IWRM conference in the home country, inviting national water management experts and academics to think up an IWRM strategy for WaNGO. Two years later, in 2005, the organization adopted an IWRM strategy that was based on "a mix of external input, own interpretation, and some experience from the field."[29] The strategy paper credits the WSSD conference and states that "for WaNGO, IWRM is the strategic reference framework in which all different actions are inscribed [but] it is not an objective on its own."[30]

8.2.8 Conscripting the municipalities in Mali

The Inner Niger Delta (IND) is a landlocked wetland area in the Malian Sahel, where the Niger river annually floods up to 35 000 km^2. Over one million people make a living in this fertile area, from agriculture, fishing and animal husbandry. Because of its extremely high natural value the IND is protected as Ramsar site. However, hydro-power dams on the Niger river, as well as changing rainfall, are affecting the eco-system and the livelihoods of the people (Zwarts, 2010).

WaNGO had been working in the IND at village level since 1997, in collaboration with two local NGOs, to provide rural drinking water infrastructure and improve the small scale rice irrigation and flood control infrastructure. In 2002 it seized the opportunity of a new donor call to define a clear IWRM project in the IND. WaNGO chose the IND for the implementation of a pilot IWRM project because "it is an environment that naturally fits IWRM." "WaNGO deployed IWRM in the IND because *there* the visibility would be higher."[31] The Niger river and the wetland character of the IND were helpful to increase the visibility of the project, both towards the donors *and* the beneficiaries:[32]

> People easily understand IWRM when the water is supplied by a gravitational systems or when they have to share a river. This is different from [our work in] Benin, where groundwater is the principal source of water.

In 2004, in the same year that GWP's PAWD took off, WaNGO launched the IWRM pilot project in the IND, covering 4 municipalities in the *cercle* of Mopti. Given that the project acronym IWRMIND[33] contains the four letters 'IWRM', WaNGO *de facto* started profiling itself as an IWRM organization in Mali, in the IND, and *vis-à-vis* the donors. However, rather than implementing a holistic management of water in the IND, the initial aim of the IWRMIND project was to "combine into one project all the *existing* activities [of WaNGO] concerning drinking water supply, sanitation, and irrigation."[34] Interviewed

[29] Interview with the head of Southern Operations Department, 29 June 2010
[30] *Ibid.*
[31] Interview with the manager of the first IWRMIND project, 4 November 2011.
[32] Interview with the manager of the first IWRMIND project, 30 June 2010.
[33] IWRMIND is a pseudonym.
[34] Interview with the manager of the first IWRMIND project, 4 November 2011.

WaNGO employees sustain that the IWRM discourse has changed their way of working, by streamlining actions that used to be fragmented, but that it did not add new elements. Indeed, in 2011 the project entered its fourth phase, involving 18 municipalities in the IND, and the vast majority of the budget is still absorbed by infrastructure works for water supply, sanitation, and irrigation, rather than by IWRM activities.

As of the third phase of IWRMIND, which was funded by the EU-WF, the national branch of GWP, PNE-Mali, was drawn in the project to build the capacities of the council members and local NGOs in terms of IWRM. In the national context, the role of PNE-Mali is mostly limited to sensitizing different audiences (council members, women, journalists) about IWRM.[35] This is no different in the IWRMIND project. PNE-Mali has been criticized for delivering theoretical trainings about IWRM whose level is much too high and whose practical use too low.[36]

8.2.9 The council members and villagers

In order to check whether the IWRM paradigm had found its way to the municipal council members and to the beneficiaries in the villages, six municipalities of the IWRMIND project were subjected to a more profound analysis.

The decentralization process, started in Mali in the early 1990s, transferred to the municipalities the responsibility to develop a municipal Plan for Social, Economic and Cultural Development (PDSEC). This is a substantial document that analyzes the needs of the municipality, sets the objectives, and makes a budget estimation. Since virtually no municipal councils in the IND (except that of Mopti) have the capacities and resources to develop a PDSEC, these plans are usually developed by an external (national) consultant and financed by external (non-governmental) organizations. Of the six municipalities under scrutiny, four had the latest version of their PDSEC financed by WaNGO and each of these four included IWRM as a key to socio-economic development (see Table 8.3). The two remaining PDSECs, financed by other organizations, make no mention of IWRM, despite WaNGO being active in those municipalities.

Municipality	**PDSEC sponsor**	**PDSEC author**	**IWRM included**
Ouroubé-Doudé	IFAD, WaNGO	Malian consultant A	no
Konna	WaNGO	Malian consultant B	yes
Socoura	WaNGO	Malian consultant B	yes
Soyé	WaNGO	Malian consultant B	yes
Togué-Mourrari	no recent PDSEC	no recent PDSEC	no
Kéwa	WaNGO	Malian consultant B	yes

Source: PDSECs of the six municipalities

Table 8.3: Characteristics of the PDSEC plans of the six municipalities

[35]Interview general secretary of PNE-Mali on 29 September 2010.
[36]Mid-term evaluation by the European Commission, January 2010.

However, PDSECs are said to "never reflect the reality on the ground," as they tend to be "ignored by most intervening development partners."[37] Therefore, 12 focus group discussions in the 6 municipalities were organized; 6 with villager and 6 with the council members.[38] Each of the groups was asked (i) in which ways the high variability of rainfall and water level throughout the year determined their livelihood and domestic economy, (ii) to what extent they were able to take control of this variability, (iii) what was needed to do that, (iv) whether the different uses of water (agriculture, animal husbandry, fishery, domestic water use) generated tensions between families or groups, and (vi) how that could be mitigated.

The recurrent answers of the villagers was that they needed more and better infrastructure, such as drinking water points, channels and dams, fishing ponds, irrigated areas, etc. In none of the discussions the villagers alluded to the idea of managing water in an integrated, comprehensive or participative. This can be explained, on the one hand, by the fact that the abstract concepts typical of development aid, such as IWRM, never penetrate into the indigenous languages. (The languages used in the discussions with the villagers were Bambara, Fula, and Bozo.) This has been ascertained by various scholars (Olivier de Sardan, 2005, p.178-84). On the other hand, IWRM is not of the issue to the villagers, as the repartition of land and water amongst different users is regulated by the customary and still widely applied laws of the *Diina* (Benjaminsen and Ba, 2008).

Surprisingly, neither during the discussions with the council members (held in French) the idea of integrated, comprehensive or participative management of water resources emerged—let alone the concept of IWRM. Some concepts typical of the realm of development aid, however, *did* penetrate into the discourses of the council members; 'climate change' and 'capacity development' in particular.[39] Again, the enduring rule of the *Diina* could explain that council members do not spontaneously think of IWRM. Notwithstanding, the municipality as administrative structure overrules the customary management of natural resources and its boundaries do not coincide with those of the *Diina* units. Only when *explicitly* asked about IWRM, the discussants subscribed to the concept, but identified it with the arrival of WaNGO in the municipality, rather than with PNE-Mali and its sensitization workshops.

8.3 Some experimentions with ANT vocabulary

In the previous section I have described IWRM's emergence and rise to hegemony by exclusively focusing on the actors, and by tracing the many major and minor links they knit amongst each other. I consciously employed this strategy in order to navigate between

[37] Focus group discussion with mayors and NGOs representatives, 24 September 2010
[38] Held in September 2010 and October-November 2011.
[39] Focus group discussions, September 2010 and October-November 2011.

the disembodied 'discursive' view and the positivist 'stagist' view on the policy process. The strategy I employed is very affine to Actor-Network Theory (ANT).

At its most fundamental level, ANT claims that there does *not* exist a *given* dimension of reality that can be labeled as 'social structure' or 'social context'. We should, in fact, not confuse the *explanans* with the *explanandum*: it is *the social itself* that needs to be explained. The social comes into being as a living assemblage of myriad connections that actors construct between each other. Connections can be of any nature —material, semiotic, economic, legal, linguistic, etc.— and they can connect very heterogeneous actors —human and non. Indeed, any entity that possesses the agency to forge, maintain, or transform a connection is considered an actor (Latour, 2005).

Actors try to establish connections and assemblages to make other actors *do things*. The relations between actors in such assemblages, however, are not causal. One actor never fully controls an action nor does he fully control other actors — an action is always 'over-taken' by the assemblage.

By leaving aside pre-conceived social structures, the analysis should also relinquish pre-conceived ideas about categories of actors, what their matters of concern are, or what counts as a social actor and what as a natural actor. These features only become clear through the tying process; they are defined by the actors themselves and by their connections. It cannot be the task of the observer to pre-assume these delineations.

One expressive, powerful repertoire that is often used to operationalize ANT is the one of 'translation' and 'enrollment', proposed by Callon and Law (1982) and Callon (1986). Take, for instance, a scientific experiment, a policy, or a paradigm. When actors take pains to bring these instances into existence, they first have to *problematize* the situation and define it in such a way that the interest of other actors is awakened to take part in the event — this is the phase of *interessement*. Second, a process of *translation* starts: if one actor A can convince another actor B that A's knowledge is useful for B to achieve B's objectives, it is said that A *translates* his knowledge in order to *enroll* B. Interests drive the knowledge-production, but the interests are also iteratively shaped by knowledge. In this translation of knowledge and interests, the most nimble actors manage to profile themselves as *obligatory passage point*. Third, by enrolling others, actors try to build long chains of associates or *allies* in order to make the experiment, the policy, or the discourse work. As said earlier, no distinction is made between a supposed realm of policy making and a realm of implementation, nor between the social and the natural. The allies in the chain can be development planners, farmer unions, as well as statistical data, concepts, legal instruments or a water well. In fact, non-human devices and artifacts are particularly powerful in anchoring durable associations (Law, 1986; Latour, 2005). Finally, actors can also grow *dissident*, which forces the allies to renegotiate the interests. The dissidence can eventually lead to a break-down of the chain. The scientific experiment, the policy, or the discourse works or fails depending on the strength of the chain — not the other

way around.

Rather than being a theory that *analyzes*, ANT is a way of *describing* the social, by tracing the translations between actors. This is possible because any translation and connection leaves physical traces (Latour, 2005, p.132). The previous section collected the traces left by the IWRM actors. My tracing was of course not an exhaustive coverage of the entire network. Drawing on the very concise body of data of the previous section, I demonstrate in what follows that Callon's vocabulary, which sprouted from science and technology studies, can equally be applied to a network of development actors.

Problematization, translation, enrollment The origins of the IWRM alliance remount to the initial phase of *problematization*. In order to make IWRM work as paradigm in water-related development activities, it needed to be put forward as solution to a problem that was insolvable without IWRM. In the sphere of multi-lateral organizations such a problem became obvious in the 1980s when the IDWSSD decade failed to attain its ambitious targets. A very select group of water professionals and organizations, described in the section 8.2.2, increasingly blamed the sectoral management of water and used different forums to propose 'cross-sectoral' or 'integrated' management of water as solution.

The problematization is also the act of formulating the problem in such a way that the other actors, that need to be enrolled in the assemblage, can recognize themselves in certain roles. The problematization ascribes roles to the to-be-enrolled actors: the multi-lateral organizations should promote IWRM and urge the development of IWRM plans, the national governments need to develop national IWRM plans, the experts/consultants can provide expert knowledge and transfer best practices, the donor agencies should mainstream IWRM in their water-related aid, etc.

This select group of water professionals and organizations proposed itself as *obligatory passage point* to reach the solution: they hold the knowledge to solve the problem, they know how to integrate the unintegrateable. This select group became in effect the obligatory passage point for the Rio process, for the EU policies concerning water-related development, for the EU Water Initiative, and for the development of IWRM plans in developing countries such as Burkina Faso and Mali.

Actors get *enrolled* in the alliance because the most nimble *mediators* succeed in *translating* the different interests and showing that the IWRM network is of fundamental use to them. The malleability of the IWRM paradigm has proven to be a strength in this translation process. Through the Dublin and Bonn conferences the expert community convinced the multi-lateral agencies that the failure to improve the access to safe water and sanitation could be overcome by IWRM. The donor agencies (Danida in 1992 and GTZ in 2002) were told that, thanks to their support to IWRM, they had had an impact at the Earth Summit (in Rio and Johannesburg respectively). The DNH in Mali understood that the PAWD program posed the opportunity to create an IWMR-Unit. WaNGO

realized that IWRM could give them the opportunity to propose a large unified project rather than fragmented one. The municipalities in the IND learned that IWRM was a new term to label trainings and investments in water supply, sanitation and irrigation.

ANT does recognize the differential pressures that are brought to bear on the assemblage by mediators and intermediaries, the latter simply adding predictability to the setting, the former shaping and transforming the assemblage in unexpected ways. The actors that are most nimble in bending the network, or the ones that have knitted most ties, are the most powerful mediators. Or citing one of the principal mediators of the IWRM network[40]:

> It always boils down to a few individuals—the champions [...] Like one dictator can ruin a whole country, a few champions can run a cause. And when they disappear, the cause disappears with them.

In the early years of the IWRM emergence, principal mediators were Torkil Jønch-Clausen of DHI and GWP, Ismail Serageldin of the World Bank, and the Swedish/European politician Anders Wijkman. The organizations GWP and WWC perpetuated their mediating role.

Devices as powerful mediators Actors do not need to be humans. In fact, non-human actors can be very effective and persistent mediators of power relations (Law, 1986) —usually much more effective and persistent than human-to-human ties, since the latter require continuous maintenance. Consider, for instance, the following non-human devices in the IWRM network: the *Dublin Principles*, the organizations GWP, WWC, and DHI, the PAWD project, a national IWRM plan, the Niger river, or the EU-WF calls-for-proposals.

The *Dublin Principles* were agreed in the last official preparatory meeting for the Rio *Earth Summit*. It took a number of Danida water experts a whole series of efforts in order to get four principles on the international agenda (these experts had to convince their government to change water development strategy, they had to establish a Nordic Freshwater Initiative, and had to convene an informal meeting with partners and multilateral agencies in Copenhagen in 1991). The NFI does not exist anymore and few people remember the *Copenhagen Statement* of 1991, but the *Dublin Principles* are still omnipresent, still quoted by many, including by GWP, and are still setting the mindset of many water managers worldwide. Even in 2011 the GWP-TEC chair still declared that the intellectual role of GWP-TEC is to "develop and implement the actual meaning of the *Dublin Principles*. They are the real intellectual background of TEC."[41]

GWP, WWC, or DHI-UNEP, too, were created by individuals, many of whom are not part of the network anymore nowadays, but the organizations themselves are still

[40] Interview with senior expert to Danida, 4 January 2012
[41] Statement by GWP-TEC chair, 17 August 2011

there, continuing to promote IWRM and to tie in new allies. The same applies to major projects such as PAWD: a small number of nimble mediators managed to forge a project with international outreach, but once funding was obtained the project was bound to go ahead, without the involvement of the original devisers.

Strangely enough, also the Niger river has played a role in promoting IWRM. As explained by a WaNGO employee, the Inner Niger Delta offered an environment that was particularly apt to IWRM, because the different uses of water interfere in a very visible way. People realize that they are sharing the same source. In Benin, especially in the areas where people exclusively rely on ground water as source of water, WaNGO has a hard time to promote IWRM.

A final and very powerful device worth mentioning is the call-for-proposals — the prevailing procedure used by donors to assign funding. The calls of the EU-WF, for instance, exactly define which types of development actions will be considered fundable (for the 1st EU-WF the three fundable actions were: water supply and sanitation, IWRM, capacity building), which types of actors can receive funding (either state or non-state actors, either national or international), in what time frame the actions need to be implemented, and how the partners will get paid. The organizations that apply to the call need to cram their project proposals in a prescribed Logical Framework, breaking down the project in hierarchical objectives and sequential activities. Moreover, the applicants and their partners need to be registered in the online database PADOR, which is "used by the European Commission for evaluating the operational and financial capacity criteria as well as for checking the eligibility of the organizations that participate in calls for proposals" (European Commission, 2012). This composition of (i) the call-for-proposals, (ii) the PADOR database, and (iii) the Logical Framework, effectively controls the mindset of the competing organizations and mainstreams their *modus operandi*. Deleuze and Guattari (1998) call such a powerful composition of extremely well geared socio-technical tools an '*agencement*'. The EU-WF *agencement* was without doubt very instrumental in promoting IWRM worldwide, as acknowledged, for instance, by the WaNGO employees.[42]

Dissidence The chain of allies needs continuous maintenance, as actors can grow dissident and break the chain. Over the past few years donors have sent out some initial signals of IWRM fatigue. There are IWRM-like plans or policies in over 80% of the countries worldwide, but in most cases the step to implementation has not been made yet (UN-Water, 2011).

> The era of financing *ideas* is over. We have to give a product. Donors want to see something tangible [...] We need to be aware of what they want.[43]

[42] Interview with a former IWRMIND manager, 30 June 2010.
[43] Personal communication of a RWP chair, 15 August 2011

Unless IWRM is renegotiated, donors will retract from the IWRM discourse. In ANT-terms, renegotiation means the 're-translation of interests'.

Also WaNGO employees have been casting doubts on the practical value of IWRM, especially on the Habermasian idea that a conciliation between different decision-levels is actually possible:[44]

> It is easy to coordinate the water users at the well—and the strategic regional or national IWRM platforms work fine, too. But there is a missing link between the two. In between the strategic platforms and the water users there is nothing.

Again, it might be a matter of translating IWRM into something that is more tangible. "As long as you work at village level —for drinking water or irrigation— you can really engage the villagers. But higher levels of IWRM coordination are unworkable [in Africa], unless real conflicts between sectors emerge." As long as sector conflicts are not felt at their cost, actors are hard to mobilize. In other words, this is one point of the network where it appears hard to translate the interests of potential allies into IWRM terms. After all, this is how IWRM emerged: "first there were the problems, then the concept."[45] Without conflict or problem, there are few interests to be translated.

Renegotiation of the paradigm Since the early 1990s, the United Nations organizations have been told that water is a "resource" that is key to any form of "social and economic development", and that it needs "cross-sectoral management strategies" (Stockholm Water Symposium, 1992). Despite this inclusive definition from the onset, the IWRM alliance constantly needs to re-translate the paradigm —translate them in the terms and worries that prevail at that particular moment in history— in an effort to keep IWRM of interest to the existing and future allies. Three fronts of renegotiation can currently be distinguished:[46] (i) 'Integrated Water and Land Resources Management' for 'green growth', (ii) 'food security', and (iii) 'climate change'.

One of the concerns of the first Stockholm Water Symposium (SWS) was the "large-scale land degradation in Third World countries." Therefore the SWS insisted that "water and land have to be managed together locally" (Stockholm Water Symposium, 1992, p.7). Now, twenty years later, the IWRM community repeats the message that IWRM is about much more than water. Skepticism about the (lack of) concrete results of IWRM is countered by the argument that the deployment of IWRM "has been too much driven by water ministries and water people"[47] and that it, instead, should be *mainstreamed* in all national economic development planning. In order to lift IWRM out of the water box, there is a burgeoning tendency to re-brand IWRM as Integrated Water *and Land*

[44] Interview with the IWRM focal point of WaNGO, 30 June 2010

[45] *ibid.*

[46] Observations at the 2011 GWP Consulting Partners meeting, and observations at the 2011 Stockholm World Water Week.

[47] Interview senior advisor to Danida, 4 January 2012

Resources Management (IWLRM),[48] and to present water as the medium that will break or make green growth.[49]

Another concern at the SWS of 1991 was "rapid population growth" and "how to feed the new inhabitants with both water and crops." Twenty years later this aspect of IWRM is still achingly relevant, with global food prices soaring since 2007 (FAO, 2012b). However, while the 1991 SWS mostly worried about "rapid population growth", today the focus of donors and multi-lateral organizations is on "food security". Thus, a second way of keeping the interest of allies alive is by plugging IWRM into the food security debate. For instance, in 2011 the GWP Secretariat developed an operational strategy on food security, and GWP-TEC was working on a technical paper on IWRM and food security. The pressure to address food security was in part donor driven—one sponsoring partner hesitated to continue its long-standing funding of GWP. But also the partners in the countries played their role. The regional water partnerships develop their five year strategy in complete independence and most of them happen to have included food security. The task of the Global Secretariat is then "to draw together the treads."[50]

The IWRM community also needs to swim with the climate change stream. Although the core IWRM actors believe that "there is nothing new addressed in climate change adaptation strategies that wasn't already addressed by IWRM,"[51] the IWRM community finds itself in the position that it *has* to "talk the climate change talk", and that it *has* to use the forums and instruments of the United Nations Framework Convention on Climate Change (UNFCCC).[52]

The GWP Global Secretariat has also found that "climate change is the funding strategy for the future."[53] Only by explicitly reorienting the activities on adaptation to climate change, GWP has been able to hitch a third phase to their landmark PAWD project and obtain funding for it. This third phase was re-branded as the 'Water, *Climate* and Development Programme for Africa' (WACDEP). In effect, the inception of WACDEP convinced another long-standing but wavering financial partner of GWP to continue sponsoring GWP. This financial partner now draws the money from a fund that it had earmarked for climate change adaptation. The network of actors behind WACDEP, however, has basically remained the same as the one behind PAWD, with the same regional partners in Africa and the same consultancy companies. The only difference is that the official ownership of the program is now in the hands of AMCOW.

WaNGO, too, seizes climate change as an opportunity to re-translate and strengthen its identity. Not only can WaNGO, due to its focus on water, present itself as an NGO

[48]Observations at the 2011 GWP Consulting Partners meeting, observations at the 2012 World Water Forum, and also Hoff (2009) and GWP (2011).

[49]The water-energy-food nexus in green growth was the topic of the 2011 Bonn conference.

[50]Interview with GWP Executive Secretary, 8 August 2011.

[51]Public statement by executive secretary of an RWP, Consulting Partners Meeting, 18 August 2011

[52]Personal communication of several GWP employees, May-September 2011

[53]Personal communication during GWP observation, 26 July 2011.

that works in the sector of adaptation to climate change. More importantly, climate change is a leverage for WaNGO to reinforce its discourse on North-South inequalities. That the climate is changing due to consumption patterns in the North, whereas the impacts will be mostly felt in the South, reinforces WaNGO's revendication that the Global North is *morally obliged* to channel development aid to the Global South.[54]

8.4 Conclusions—the meaning of success and failure

The skeptic reader might rightly wonder whether an ANT description really adds to our understanding of the development aid architecture. Perhaps, these actors, located at different points in the network, are very nimble at playing to the donor's tunes? Doesn't the alliance of actors simply align along the already well scoured flows of donor money?

From the ANT description, I deduct the exact opposite: the donor money follows those alliances that are performing. Taking a different tack than Foucauldian analyses, I argue that a paradigm such as IWRM derives its success from the loads of work that is being done 'behind the stage' by various actors in order to tie in allies in the assemblage, and to *make* the paradigm work. In other words, the paradigm performs because a network of actors makes it perform. "Only voices speaking in unison will be heard" (Callon, 1986). An alliance that performs, is also an alliance that attracts donor money. My tracing of IWRM shows that much effort had to be put in the IWRM assemblage before it attracted money: the money is an indicator that the chain performs—not the other way around.

And this is exactly happening in the case of GWP's new WACDEP program. Conceived by an ex-PAWD project manager, building upon a strong alliance with African partner AMCOW, and using IWRM to address adaptation to climate change, the new WACDEP program was hailed with interest by bilateral donors when it was presented at the World Water Week. "Donors prefer to sponsor projects that appear to be working well *already*," one WACDEP manager stated, "they don't want to run much risk."[55]

So, I claim that the IWRM network *works*. It is, however, hard to tell whether the IWRM paradigm works *in positivist terms*. Is water management in Mali better now? Has the livelihood of people in the IND improved thanks to IWRM? Is water quality better? It is very hard to collect unequivocal data about that, and even if there were data available, it would be impossible to attribute it to IWRM alone. But, to the donors, or to the water actors in the IND, IWRM appears as a successful paradigm—yes, in need of constant improvement, but successful. And this is what ANT teaches us about development policies: "development success is not merely a question of measures of performance; it is also about how particular interpretations are made and sustained *socially*." (Mosse, 2005b, p.158)

[54]Interview with the Climate Change focal point of WaNGO, 29 June 2010.
[55]Stockholm World Water Week, Focus on Africa, side event, 23 August 2011.

Part III

Theoretical articles

Introducing the theoretical articles

The following two articles reflect on the methodology. The qualitative data was collected from various sources: three participant observations, interviews, focus group discussions and documents. The data collection and analysis followed the Grounded Theory Method (Charmaz, 2006). Faithful to this method, the inquiry started with no particular theory nor a clear delineation of the field in mind. As the first participant observation (at the headquarters of WaNGO) proceeded, three paradigms emerged as interesting lines for further inquiry. They were 'followed' into two connected sites.

Although the classic Grounded Theory Method requires the data collection to be dissociated from existing theories, **chapter 9** describes four forms of unavoidable, theoretical conditioning in ethnographic data collection: (1) the framing of the research problem, (2) the implicit ontological assumptions about the world and the problem under scrutiny, (3) the delineation of the site of data collection, and (4) the theory-ladenness of observations. With examples from the conducted multi-sited ethnography, chapter 9 shows this data conditioning and its impact on the grounded theorizing. It is argued that this conditioning does not invalidate the Grounded Theory Method as such, but that it should be made explicit throughout the process of theorizing. A case is made for post-modern advances in the Grounded Theory Method, by bringing in fresh ontological categories from discourse theory and Actor-Network Theory.

Chapter 10 constitutes an *ex post* reflection on the data collection and analysis. The chapter argues that multi-sited ethnography as data collection method and Actor-Network-Theory as descriptive tool constitute a powerful method/tool package for the description of the social interactions in development aid. The chapter shows how the method and the tool are particularly geared to each other. Subsequently, it is shown that the package allows to move beyond the unflagging global/local and policy/practice dichotomies that characterize many development policy analyses. Further in the chapter, George Marcus' six operational strategies for multi-sited ethnography are translated to the context of development aid. The chapter also reflects on the peculiarities of gaining access to, and forging an identity in, the different sites.

Each chapter in Part III was originally conceived as a stand-alone article. Hence, chapters 9 and 10 can be read independently from the other chapters in this dissertation.

Chapter 9

Theoretical conditioning of the Grounded Theory Method and the observational data

I arrived in Kumasi with no particular goal. Having one is generally deemed a good thing, the benefit of something to strive toward. This can also blind you however: you see only your goal, and nothing else, while this something else —wider, deeper— may be considerably more interesting and important.

R. Kapuscinski — The Shadow of the Sun

9.1 Introduction

The Grounded Theory Method (GTM) is very widely used in the social sciences for the collection and analysis of (mostly qualitative) empirical data. It was first proposed by Barney Glaser and Anselm Strauss (1967) in *The Discovery of Grounded Theory*. The method's name summarizes the central premises: (i) the collection of empirical data concerning a social phenomenon needs to start without a particular theory or hypothesis in mind; (ii) the theorizing about the social phenomenon should be rigorously based on the collected empirical data and this theorizing should happen according a systematic and inductive procedure. The product of the Grounded Theory Method is a 'grounded theory': a new, meso-level, social theory that is grounded in the empirical data.[1] Various manuals exist that articulate, step by step, the entire theorizing process: from the collection and coding of the data, over the interrogation and analysis of the data, to the theorizing (see for instance Charmaz, 2006).

[1] I follow Bryant and Charmaz (2007b) in that the method should be called 'Grounded Theory Method' (GTM), while the outcome of the method is a 'Grounded Theory'.

A hallmark of GTM is that the theorizing starts as soon as the data starts to be collected (Charmaz, 2001). Data collection and analysis are not two separate phases of the research. They happen simultaneously because the data sampling is guided by the requirements of the theorizing, rather than by requirements of completeness. In fact, data sampling in the Grounded Theory Method does not aim to cover an entire social body or population. The data does not need to be representative nor to cover all heterogeneities (Clarke, 2005). The sampling should trigger theoretical ideas, that should be developed through further sampling.

The practical steps of the classic GTM are as follows (based on Charmaz, 2001, 2006). First, the raw data —mostly transcriptions of interviews or focus group discussions, observations, or any other ethnographic data— is scrutinized and split into smaller elements, whereby each element gets 'labeled'—or in GTM jargon: 'coded'. These codes depend on the researcher's judgment; they can mean or represent anything, as long as they emerge from the data. Nevertheless, the codes usually pay particular attention to 'action' and 'process', and they serve future analytic development rather than mere description.

A pivotal second step, between the coding and theorizing, consists of 'memo-writing'. Memo's are written by the theorist to define the codes and describe their properties, to determine theoretical categories, to demonstrate the relations between codes, and to identify gaps in the data and coding.

As stated before, the data collection continues simultaneously with the definition of codes and theoretical categories. Throughout the process of coding and memo-writing the researcher identifies gaps, which he fills with new data that is collected on purpose to improve the definition of the theoretical categories and their interrelations. This third step is called 'theoretical sampling' (Charmaz, 2001).

The data sampling stops when new data does not shed any new light on the existing core theoretical categories anymore. The grounded theory is then the collection of theoretical categories, their properties, and the relations between them, that allow to explain the social processes and interactions that have been observed.

Consistent with this interpretation of GTM, various theorists consider GTM to be an abductive rather than an inductive method (Charmaz, 2006, p.186):

> Abductive inference is a type of reasoning that begins by examining data and [...] entertains all possible explanations for the observed data, and then forms hypotheses to confirm or disconfirm until the researcher arrives at the most plausible explanation of the observed data.

In sum, GTM proposes itself as an open-minded, framework-free orientation to the social research domain. The positivist assmptions embedded in the two foundational ideas, however, have been questioned over the decades. Until today some GTM scholars stubbornly maintain that the researcher should enter the domain with no preconceived problem statement, no interview protocols nor extensive review of literature (Holton,

2007). Other GTM scholars admit that this is impossible —and probably not preferable— and placatorily suggest that the researcher collects and analyzes data with an 'open mind', rather than an 'empty head' (Bryant and Charmaz, 2007b). This second group of GTM scholars, that take a more postmodern stance towards the data collection and theorizing, also pay attention to the situatedness of observations (Clarke, 2005; Charmaz, 2006).

Drawing on my own, first hand experience of ethnographing and analyzing the social practices that constitute development aid, I reflect in the present chapter on the two foundational ideas of GTM (i.e., that the data are collected without any theory in mind, and that the grounded theory should exclusively emerge from the data). I contend that both foundational ideas are problematic. At various levels and different moments, implicit theoretical and ontological assumptions are 'always already' woven in the GTM:

- in the data collection
- in the step from raw data to grounded theory
- in the entire setup of GTM

The *step from raw data to grounded theory* is widely discussed in the GTM community, since is the one that is dearest to the grounded theorist. In the next section 9.2 I summarize these debates and argue that whichever proposal is made to guide the stepping up from data to theory, implicit assumptions about the functioning of 'the social' are included. Moreover, these assumptions are related to the theoretical and ontological assumptions in the *entire setup of GTM*. Section 9.3 elaborates on the first of three contentions: that already *the data collection* suffers theoretical conditioning.

Section 9.4, then, points out why these different forms of theoretical conditioning do not invalidate GTM. In fact, postmodern versions of GTM take the situatedness of ethnographic data into account. I suggest in section 9.4 that grounded theorists should not recoil in horror from making explicit their theoretical and ontological assumptions. To the contrary, I sustain that this will make their theorizing richer.

The points I make in sections 9.2, 9.3, and 9.4 are illustrated in section 9.5 with data from my own research, to wit, a multi-sited ethnography of development aid. Section 9.6 concludes the chapter.

9.2 Theoretical conditioning of GTM

The layout of GTM as method, independently of the social phenomenon onto which GTM is applied, is already based on implicit ideas about how 'the social' works. To understand the implicit assumptions in Glaser and Strauss' version of GTM, the historical context springs to our assistance.

Glaser and Strauss developed their theory in the 1960s, when positivism and quantification reigned supreme in the social sciences. They wanted to propose a method for

qualitative sociological research that displayed a similar epistemological and methodological rigor as quantitative sociological research, and that could generate theories. In this sense the development of GTM was *heavily influenced* by the postivist Zeitgeist: it pretends to be a method for rigorous and systematic induction. Especially Glaser, in his later work, defended the world as 'knowledgeable' and the Grounded Theorizer as an Objective Observer.

At the same time GTM was *also an opposition* to the Zeitgeist. The development of GTM was driven by an opposition to (i) the overemphasis of quantitative inquiry in the social sciences at that time, (ii) the idea that qualitative research is impressionistic and unsystematic, (iii) the primacy, at that time, accorded to the verification of hypotheses and existing theory, and (iv) the logical deduction of theory from *a priori* assumptions (Glaser and Strauss, 1967). According to Glaser and Strauss, these characteristics obscure "the prior step of discovering what concepts and hypotheses are relevant for the area that one wishes to research" (Glaser and Strauss, 1967, p.1f). Therefore they proposed GTM as a method for the systematic generation of theory *from* data, instead of verifying preconceived theory *with* data.

By the late 1960s, the positivist epistemology reigning the social sciences was challenged by various landmark publications: *The Social Construction of Reality* by Peter Berger and Thomas Luckmann in 1966, Harold Garfinkel's *Studies in Ethnomethodology* in 1967, and also *The Discovery of Grounded Theory* in 1967. While the first two were concerned with epistemological issues, the attention of Glaser and Strauss was directed to methodology. The empirical work of Glaser and Strauss, however, revealed similar social constructionist assumptions as the other two publications (Bryant and Charmaz, 2007a).

Because of the background of its two founding fathers, GTM is deeply rooted in symbolic interactionism and pragmatism, and echoes assumptions of social life as emergent, negotiated, situated in a specific setting, and open-ended (Charmaz, 2001; Clarke, 2005; Clarke and Friese, 2007). Both symbolic interactionism and GTM focus in their inquiries on the agentic actors (people that act as individuals or as collectivities) and actions. Therefore, in a sense, Glaser and Strauss's publication was not very distant from Berger and Luckmann's, or Garfinkel's: they all explicitly argued that people construct their realities through ordinary actions (Bryant and Charmaz, 2007a).

This focus of Glaser and Strauss on agency and actions, rather than on social structures, is not a neutral choice. The history of sociological and anthropological theory is characterized by an eternal quest to understand the relation between 'social structure' and 'individual agency' (King, 2004). History teaches us that micro level theories of human agency (or action) have invalidated macro level theories of structure, and vice versa. Some recent theories, such as Giddens (1984), try to find the middle path. These theories encompass structure and agency as two aspects of the same entity; one does not exist

without the other.

GTM *seems* to follow this middle path; it proposes a toolbox for grounded theorizing about the interaction between human agency (or action) and the social conditions that influence the actions. Strauss and Corbin's publication of 1993 precisely treated this interaction between agency and structure: "the action is shaped by conditions but in turn is shaped by active actors" (Strauss, 1993, p.47). There is in GTM, however, a clear preferential treatment of 'action' over 'structure'. For Glaser, and even more for Strauss, 'action' is the central concept around which a grounded theory is built up. The structure is conceived as those 'boundary conditions' that shape or influence the (inter)action, and they need to be looked for in the 'context' of the (inter)action. Put another way, GTM assumes the duality of structure and agency, but relegates structure to the 'context' of (inter)actions and hence conceives it as something detached from these (inter)actions.

This eternal question about the interplay between agency ('action') and structure ('boundary conditions') has not been settled in GTM. In fact, the irresolution of the issue reveals itself in GTM during the coding process and the development of theoretical categories. As Kelle (2005, 2007) points out, Glaser and Strauss argued in *The Discovery of Grounded Theory* (1967) that theory should be 'grounded' in the data, but the methodology they proposed to step from data to theory invoked conflicting ideas. On the one hand they defended that the theory should *emerge* from the data, while on the other hand they also make out a case for *theoretical sensitivity* from the researcher's side. A large portion of the later GTM literature should be interpreted as proposals to overcome these diverging ideas (Kelle, 2005). I argue that, after all, it is also a discussion about the 'amount of structure' that can be tolerated in grounded theorizing.

In the 1967 publication the concept of 'theoretical sensitivity' is not translated into methodological rules: it is left unclear how a theoretically sensitive researcher should use previous theoretical knowledge and experience. Not surprisingly, after their joint publication, Strauss and Glaser developed diverging views on the process of theorizing in GTM. Glaser adamantly maintained confidence in 'emergence' —I recall Glaser's maxim "all is data"— whereas Strauss attached greater importance to the 'systematic' treatment of data.

Glaser elaborated on theoretical coding and proposed an extended list of formal epistemological and social concepts —such as "Causes, Context, Contingencies, Consequences, Covariances, and Conditions" (Glaser, 1978)— and he loosely grouped them in coding families. Although Glaser invokes terms that scent of causal relations —such as 'cause', 'condition', 'consequence'— those terms in themselves are not sufficient for the development of a causal model grounded in the data (Kelle, 2005). Obviously, it is a deliberate choice of Glaser to leave the field fallow; he does not want to impose a pre-conceived causal model. Nonetheless, by doing so, he fails to explain how his proposed coding families should be used and linked with each other (Kelle, 2007).

Where Glaser suggested a loose list of terms, Strauss and Corbin proposed a general and well-articulated model of action —the paradigm model— rooted in pragmatist and interactionist social theory. Their paradigm model, they wrote, serves "to think systematically about data and to relate them in very complex ways" (Strauss and Corbin, 1990, p.99). They invited the grounded theorizer to fit all the categories and concepts that he developed during the open coding in one of the classes of their own general paradigm model. Moreover, a 'conditional matrix' was proposed to think out of the micro level box, and to link —through 8 distinct levels (!)— the micro processes to the macro level.

Strauss and Corbin's coding paradigm came under heavy criticism by Glaser and others, who accused them of 'forcing' the data. Nonetheless, all sides seem to have undermined GTM's basic principle of framework-free data collection and analysis.

From this brief historical overview I distill three tentative conclusions. GTM in itself is not free from theoretical and ontological assumptions, because of its very own outline:

- The classic version of GTM assumes the duality of (inter)action and constraining conditions. Moreover, the conditions are to be extracted from the context. This research outset determines the researcher's way of looking into the world, and it determines what he is interested in and what he will focus on during observation and coding.
- The step from raw data to theory happens through coding and categorization of the data. Since the researcher cannot 'erase' his mind, he cannot create such categories *ab ovo*. Moreover, GTM requires a certain 'theoretical sensitivity'. Therefore, various proposals —both less and more structured versions— have been made for the coding process and for the theoretical categories. These have been hailed with varying enthusiasm.
- The conflict between 'theoretical sensitivity' and 'emergence' reflects the unresolved agency-versus-structure quandary, since a theory-sensitive researcher will inevitably be influenced by existing theories of agency and structure, whereas the emergence-inclined researcher will inevitably emphasize action over structure.

9.3 Theoretical conditioning of observational data

In the introduction (section 9.1), I identified three levels and moments at which theoretical and ontological assumptions are implicitly woven in GTM:

- in the data collection
- in the step from raw data to grounded theory
- in the entire setup of GTM

The latter two have been explained in the previous section. In the present section I elaborate on the first contention, namely, that the collected data, too, are inevitably conditioned by theoretical and ontological assumptions. The idea that researchers can approach reality as objective observers as if they can free the mind from any preconceived ideas whatsoever has been largely abandoned by contemporary sociology, philosophy and psychology. Laudan wrote that "both historical examples and recent philosophical analysis have made it clear that the world is always perceived through the 'lenses' of some conceptual network or other and that such networks and the languages in which they are embedded may, for all we know, provide an ineliminable 'tint' to what we perceive" (1977, p.15). Lakatos maintained that "there are and can be no sensations unimpregnated by expectations" (Lakatos, 1978).

In this section I describe how the collection of ethnographic data are conditioned by theoretical and ontological assumptions in four ways:

- by the problem definition and the research questions;
- by the researcher's implicit ontological and causal assumptions about the world that make him focus on specific entities, categories or phenomena;
- by the delineation of the field for data collection (including the choice of informants);
- by the 'theory-ladenness' of human observation.

It is important to carefully distinguish the first three conditionings of data collection from the last one. The first three sustain that data collection is *limited, partial, and situated*. The last conditioning, to the contrary, implies that observations (what is heard, seen, and felt) *are different* for each observer, on the basis of the conceptual and cognitive system that he has at his disposition at the moment of the observation.

I now explain these four forms of data conditioning. They will sound very abstract, but they are illustrated with examples from my empirical research in section 9.5.

The problem definition The most direct way in which the data collection is influenced by pre-existing theoretical and ontological assumptions is through the researcher's definition of the problem to be researched. The problem framing is a translation of the research purpose and already pre-defines which data are of interest.

In the hypothetic universe of all possibly available data, the researcher needs to start at one certain point. That point is determined by the scientist's research question, or area of interest in general. For instance Strauss's first rule of thumb, originally proposed in 1979, implicitly states this (Strauss, 2001):

> 1. Choose a phenomenon, and give it a name, for this will be your core category, to which all your codes will relate.

When in the field, the ethnographer observes, asks questions, collects documents, and he may even film or make photographs. These actions constitute a process of data filtering: from the infinite amount of data available and the infinite number of impressions that he receives, the researcher selects those ones that —according to his judgment— make sense to his research problem. His pre-suppositions about the problem give him already some ideas about what could be critically important elements and what can be safely ignored.

This becomes most obvious in interviews. Although Holton (2007) correctly maintains that classic GTM "requires the researcher to enter the research field with no preconceived problem statements [or] interview protocols", the researcher has to *ask questions* during an interview. These questions inevitably convey the researcher's implicit views on the problem and they focus on *supposedly* interesting data. The questions extract only a small part of data from the informant, and leave the largest part of the available data undisclosed. Obviously, according to GTM, the answers that are obtained during interviews should steer the researcher in an unconstrained way towards new data and new questions to ask. But once again, the researcher judges which new questions are asked and how they are formulated.

Although Bryant and Charmaz (2007b) state that "[W]here one starts a grounded theory study is seldom where one ends," the path from start to end is not exclusively guided by the data itself —as GTM ideally would want it. It is the researcher's judgment that ultimately determines the path.

Implicit ontological and causal assumptions In the intentional or unintentional selection and filtering of data that I have described above, the researcher automatically groups phenomena into ontological categories, only a small number of which he is interested in. This preference for certain categories over others is inspired by (mostly) implicit —but nonetheless fundamental— assumptions about the ontological structure of the research subject under scrutiny and the causal relations that underpin it (Mauthner and Doucet, 2003).

Before any theorizing can start, these implicit ontological and causal assumptions have already laid out a general, metatheoretical framework that identifies categories of phenomena or entities, and the relations between those categories.

Delineation of the field Taking up again the metaphor of the 'hypothetical universe of all possible data', the research site could be considered as the 'window' through which the researcher observes this data universe. Where he installs his window, and the size of it, is determined by pre-conceived ideas about his research subject and depends solely on the judgment of the researcher (Burrell, 2007). The observations he makes through this

window may convince him to move the window more to the left or the right, or to try a larger one, but the frame (the delineation) of the window unavoidably limits his view.

Although the selection and delineation of 'the field' deeply affects the quality of the ethnographic data, the repercussions of these choices are not readily reflected on in qualitative social science (Gupta and Ferguson, 1997; Amit, 2000; Nadai and Maeder, 2005).

Theory-ladenness of observation The fourth way in which the ethnographic data are conditioned is through the theory-ladenness of human observation. The term 'theory-ladenness' has a very specific meaning and was introduced by Norwood Hanson (1969):

> In short we usually 'see' through spectacles made of our past experience, our knowledge, and tinted and mottled by the logical forms of our special languages and notations. Seeing is what I shall call a 'theory-laden' operation [...]

It is crucial to emphasize that Hanson sustained not just the theory-ladenness of the textual *descriptions* of observations (the so-called 'observational sentences' and 'observational reports'), but the theory-ladenness of the *observations themselves*. In other words, Hanson assumes that cognition impinges upon perception—or better, that cognition and perception compose one continuum.

Hanson's thesis has been used by others to sustain relativist claims, but Hanson himself never went that far. Obviously Hanson's contention was refuted by many (e.g. Hempel, 1970) who maintain that the observable reality constitutes a realm that is separate from the realm of theories.

Although Hanson has the merit of having coined the adjective 'theory-laden', his thesis was not original at all. It was already present, for instance, in the work of Nietzsche, who rejected the possibility of a non-perspectival knowing subject: "there is only a perspective seeing, only a perspective 'knowing'; and the more affects we allow to speak about one thing, the more eyes, different eyes, we can use to observe one thing, the more complete will our 'concept' of this thing, our 'objectivity', be." (Nietzche, 1967 [1887], p.119).

The Hanson-Hempel discussion had a counterpart in the philosophy of mind, with Fodor (1983; 1984) and Churchland (1989) disagreeing about the relation between observational processes and cognitive processes. Cognitive psychology, too, grapples with the same problem and distinguishes 'bottom-up' cognitive processes from 'top-down' processes (Estany, 2001). The bottom-up process supposes that human perception detects the many basic features of a particular instance (e.g. the instance is 'material', 'round', 'green with some red', 'shiny') and the higher level cognition assembles these myriad small perceptual units into one bigger pattern (the instance is 'an apple'). To the contrary, in the top-down process the higher level cognition is believed to impose an pre-existing pattern on the lower perceptive level in order to interpret observations.

Nowadays, cognitive scientists agree that there is evidence for each of the two processes; a complete theory of perception needs to include both bottom-up and top-down

mechanisms. Based on a broad body of evidence from cognitive psychology, Estany concludes that it is not possible to adopt a strong Hempelian nor a strong Hansonian position (Estany, 2001):

> Perception is influenced by previous knowledge but is not a prisoner of it —sensations can modify expectations. Therefore, even though philosophers who defend the theory-laden thesis of observation are partly correct, they are mistaken in thinking that this inevitably leads to doubt being cast over the objectivity of science and to an epistemological relativism.

To conclude, ethnographic data are indeed shaped by the 'perspective', 'lenses', or 'spectacles' of the researcher, but, as Estany emphasizes, the observations are not *determined* by them.

Apart from the four forms of data conditioning described above, many other contingencies determine the selection, quality, and level of detail of the collected data. They are not described in this chapter because they do not originate in implicit ontological or theoretical assumptions made by the researcher. The many other contingencies include, amongst others:

- the identity that the researcher assumed (or negotiated) to enter the field, the type of the relationship between the researcher and the informants, and the level of trust between them (Coffey, 1999; Kawulich, 2011);
- the extent to which the choice and delineation of the field were dictated by contingent conditions (Amit, 2000; Burrell, 2007);
- the personal and professional background of the researcher (Coffey, 1999; Mauthner and Doucet, 2003).

9.4 Make the implicit explicit

It has become a truism to state that data are always 'situated', 'partial', 'theory-laden' or 'perspectival'. This more nuanced view on knowledge has emerged under the impulse of a general postmodern turn in the social sciences and humanities. While modernism was always seeking universality, generalization, rationality, and categorizing, postmodernism recognizes partialities, positionalities, heterogeneities, and messiness.

It does not come as a surprise, then, that also GTM scholars such as Bryant (2002), Clarke (2005), or Charmaz (2006), have adopted a more postmodern and reflective view on data collection and theorizing, without renouncing to the foundational principles of GTM. Broadly speaking, GTM has evolved, since the 1960s, into three schools: (i) the Glaserian or most positivist school, which I have been calling the 'classic' school, (ii) the Strauss

and Corbin school, which propsed a full-blown 'paradigm model' for the theorizing, and (iii) the Constructivist school. The latter was the last to emerge and has incorporated the epistemological and methodological developments of postmodernism. This school emphasizes, how the setup of the research, the methodological strategy to collect the data, the data themselves, and the analysis of the data are all *constructed* by the researcher (Bryant and Charmaz, 2007b).

The Constructivist GTM school is conscious that objective observations and *ab ovo* theorizing are chimera, but this school argues that this does not invalidate the inductive/abductive approach of GTM *per se*. In fact, they believe that GTM has 'always already' contained some seeds of a postmodern epistemology, due to its affinity with pragmatism and symbolic interactionism (Clarke, 2005). However, the Constructivist school has pushed GTM a bit further around the postmodern turn in a number of ways that correspond fairly well with the points I made in the previous two sections.

First, Bryant and Charmaz (Charmaz, 2006; Bryant and Charmaz, 2007b) have called to fully "re-position" the *epistemology* of GTM according postmodern insights. The data collection, as well as the inductive/abductive process of theorizing, are conditioned by the positionality and perspective of the researcher. Theoretical categories do not emerge *from* the data; they are the researcher's interpretation *of* the data. Hence, the result of GTM should be a carefully *situated* Grounded Theory, that sees complexities, and that avoids generalizations of time, difference, or location. Indeed, any Grounded Theory rendering is just this: "a *representation* of experience, not a replication of it" (Bryant and Charmaz, 2007a, p.51). This epistemological repositioning roughly corresponds with what I described in the section 9.3.

Second, Clarke (2005) encourages GTM scholars to abandon the duality of 'social process' and 'structural context'. This reflects my argument of section 9.2. Clarke particularly pulls down the concept of 'context' that in classic GTM is treated as a separate entity in which the structural conditions are embedded. Instead, she proposes to analyze the 'situation' as a whole. In such a 'situational analysis' the researcher is invited to map the situation with *all* possible salient elements (human and non-human, discursive and material, ...), the relations between the elements, and the relations with other situations (Clarke, 2005, p.66-71):

> I attempt to specify all the key elements in a given situation and understand them as co-constitutive —as in part constituting each other— assuming that origins, meanings, and change lie in relationality [...] *The conditions **of** the situation are **in** the situation.* There is no such thing as 'context.' The conditional elements of the situation need to be specified in the analysis of the situation itself as they are constitutive of it, not merely surrounding it or framing it or contributing to it.

Third, and closely linked to the situational analysis, GTM has been pushed further in the postmodern epistemology by paying attention to the material objects in situations.

This evolution is inspired by two intellectual currents. On the one hand, Actor-Network Theory attributes agency to 'non-human actants' (Callon, 1986; Latour, 1993), since material and natural objects are often forged by social dynamics and hence reproduce those social dynamics. Haraway's metaphor of 'cyborg' for "artefactual nature" is closely related (1991). On the other hand, Foucault has also described the way in which discursive regimes materialize as '*dispositifs*' (Foucault, 1972; Keller, 2005, 2011). The *dispositifs*, according to Foucault, are the material infra-structures that sustains the discourse production. They are the devices that realize the power effects of discourses.

Both intellectual currents have raised the awareness that the material world is co-constructed together with the social world and with its power relations. Both in the data collection and the theorizing the researcher cannot ignore any longer the agentic character of the non-human or material elements.

Fourth, GTM has broadened its view to include discourses. In fact, Foucault's theory of discursive regimes and GTM's interactionist view on action have a common denominator: 'practices'. While 'action' is central to the classic GTM project, and 'power' central to Foucault's, the two projects meet in the affine conceptualizations of 'practices' as fundamental building blocks of action and change (Clarke, 2005). Therefore, a sensitivity to the ontological categories of reality deriving from Foucauldian theory, such as descriptions of power, discourse, and subjectivation, can enrich the observations and grounded theorizing.

The last three of these four postmodern invigorations of GTM have opened the eyes of Grounded Theorizers to ontological categories —such as 'situation', 'non-human actants', or 'discourses'— that were left relatively under-explored in GTM. Since postmodern GTM scholars believe that the data do *not* speak for themselves —Glaser and Strauss upheld that data *do* speak for themselves— it is of uttermost importance that the observer is 'theoretically sensitive' to a large panoply of possible ontological categories in the situation he is observing (Clarke, 2005). "Awaiting 'emergence' from the data is not enough" (Clarke, 2005, p.75).

Making all these theoretical assumptions more explicit does not at all mean that the researcher should enter the field with a pre-conceived and full-blown theory in mind about the functioning of the phenomena under scrutiny. However, I sustain that by making the implicit more explicit, the grounded theorizing will be more solid and credible, for two reasons.

- Theoretical and ontological assumptions are anyhow present in GTM—also in the positivist or classic versions of GTM. They are not a problem *per se*, but failing to recognize them will put the integrity of the grounded theory at risk. Trying to turn them explicit forces the observer to think about the implicit assumptions and

limitations of his data.

- Moreover, when the implicit theoretical assumptions have been made explicit, the researcher can fearlessly explore novel theoretical categories from existing theories. He can sharpen his theoretical sensitivity, not only during the theorizing, but already from the first moment that he starts collecting data. For instance, if he is not aware of the novel ontological category of 'non-human actors' at the onset of his research, the researcher is unlikely to collect data concerning this category. It does not matter whether he will use the data concerning these non-human actors in his future theorizing. It matters, however, that at least he *collected* the data.

I admit that the researcher cannot be aware of all implicit theoretical and ontological assumptions in his research, nor whether the ones he makes explicit are really preponderating in his observations, but he can at least *try* to make them as explicit as possible.

9.5 Case study: multi-sited ethnography of development aid

That it is impossible to enter the field with an 'empty head' —as demanded by classic GTM— is not only sustained by philosophers and demonstrated by cognitive scientists, it also becomes obvious in practice. Drawing on my own doctoral research experience, I will now illustrate each of the points that I raised in the sections 9.2 and 9.3.

The research that I draw on consisted of an observation of the network of development aid actors in the water sector (the data was reported in chapters 6, 7, and 8). The main scope of the research was to understand how novel development discourses (or paradigms) attain a hegemonic status in the entire network, and whether this hegemonic status in reality conceals dissent and conflicting interests. Therefore, a multi-sited ethnography was conducted in 2010 and 2011 at three sites: (i) the headquarters of an multi-lateral organization that advocates the integrated management of water, (ii) the headquarters of a medium-sized, non-governmental development organization (NGO) specialized in water projects, and (iii) six rural municipalities and villages in the Inner Niger Delta in Mali.

9.5.1 The theoretical conditioning of the research

The foundational ideas of GTM seem simple: collect data with an open mind, do not try to demonstrate anything, and create your own theory that is entirely grounded on the collected data. As argued in sections 9.2 and 9.4, these ideas convey major theoretical assumptions, and the act of 'creating an own theory grounded on the data' also requires a number of assumptions.

In the case of my own research, I pretended to be able to study the underpinnings and effects of hegemonic development discourses (or paradigms) by means of participant observations. This presupposes that the hegemonicity and effects of a discourse (or paradigm) can actually be *observed* in the interactions of individuals, in their utterances, or in their behavior. This hypothesis does include a whole number of undeclared and vague, but nevertheless fundamental, assumptions about the relation between social structure, agency, and discourse.

In the process of theorizing, then, I deliberately chose not to think of agency and structure as a duality. Instead, I opted to follow the suggestion of Clarke (2005) and Clarke and Friese (2007) to examine the observed interactions as happening within 'a situation', rather than within a 'context' or a 'structure'. Therefore, in the theorizing process I mapped all major human, nonhuman, discursive, historical, symbolic, cultural, political and other significant elements without dividing them in a group of 'agentic' and a group of 'structural' nature. This decision, too, conveys significant assumptions about the functioning of 'the social'.

9.5.2 The theoretical conditioning of the data

The problem definition Although my research did not depart from a hypothesis to be verified, nor a theory to be confirmed or disconfirmed, there was nevertheless a (broad) problem definition that steered and limited the data collection. I was originally interested in the transfer of discourses and/or knowledge from one development actor to another. I assumed that my (broadly) defined research problem would be *possible* to be investigated by means of participant observation, and that in the end it would provide an *interesting* story about the interactions of development actors.

Moreover, the problem definition already (implicitly) included a number of suppositions: that the actors in development aid epistemically and discursively *influence each other*; that this mutual influencing can be *represented* as a chain or a network; that there do *exist* hegemonic discourses; and finally, that these discourses might be *interpreted differently* by different actors in the network.

Therefore, of the infinite amount of observable data available in the field, I retained only a very small part: those data that I considered to be relevant to the research questions and that fell within the boundaries of the suppositions. From the onset, I was trying to *identify* interesting discourses, and *looked for* data that could support the idea that the discourse is supported by a network or chain. In other words, one could sustain that the problem definition *created* the problem.

Implicit ontological and causal assumptions The problem definition entails rudimentary assumptions about the existence of certain ontological categories and their rele-

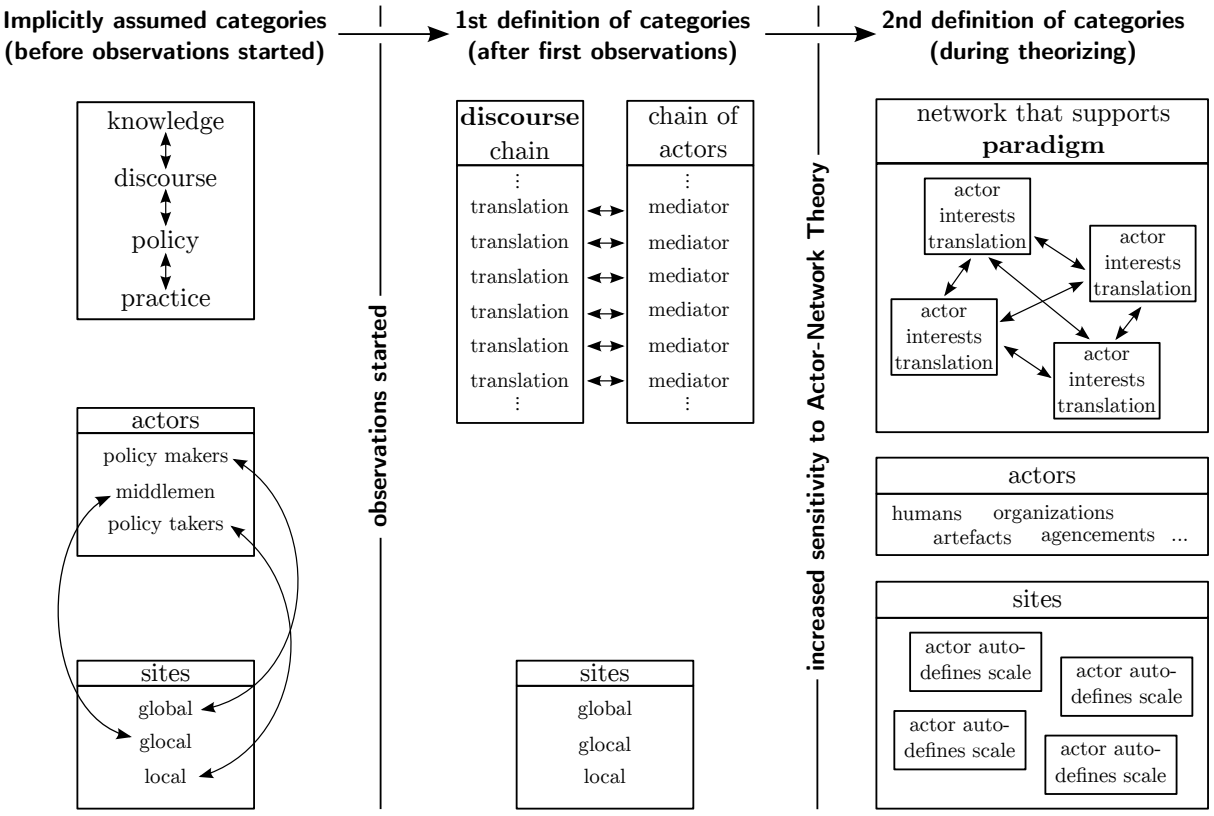


Figure 9.1: Some ontological categories that were implicitly assumed at the onset of the observations, and how they changed during the course of grounded theorizing.

vance for the research. For instance, the problem definition anticipated that the different sites —the multi-lateral organization, the non-governmental organization, and the rural villages in Mali— would lodge actors that pertain to fundamentally different categories. The cataloging or labeling of these actors and sites already happened at the onset of the research, in an implicit and unconscious manner. Other entities, such as 'discourse', 'policy', and 'practice', were also implicitly supposed as distinct and observable entities.

In addition, I assumed relations of taxonomic and causal nature between these ontological categories. In my observations at the headquarters of the different organizations, for instance, I focused on the utterances and daily activities of the employees, or on the financial transactions between organization. No data was collected on the eating habits of the employees, nor on the color of their clothes. My preference for certain data over other data demonstrates that I already implicitly assumed some causal relations. The rise and fall of a development paradigm, I presumed, is more likely to relate to financial transactions than to the eating habits of the employees.

It should be clear that the (implicit and unconscious) delineation and definition of the ontological categories and their interrelation are entirely the work of my own cognition. These tentative delineations and definitions were already in place *before* the formal process of theorizing started—they were even in place before the data collection started! I summarized some of those implicitly assumed categories in figure 9.1.

The same figure also reveals that these categories significantly changed over the course of the grounded theorizing. Major changes included:

- the rejection of 'knowledge', 'discourse', and 'practice' as separate categories, in favor of the idea that they form one continuum of 'translations';
- the move away from discourse as central concept to 'paradigm' as core category;
- the preference to conceive actors as interacting in a 'network', rather than in a hierarchical 'chain';
- the inclusion of non-human actors;
- the adoption of 'interests', rather than 'financial flows', to explain links between actors;
- the dismissal of 'global' and 'local' as explanatory categories.

Many of these shifts emerged from the data and the theorizing, but they were reinforced in the final stages of theorizing by an increased sensitivity to Actor-Network Theory. The data was not forced into the Actor-Network Theory framework, but this framework provided me with theoretical categories that I had largely overlooked, such as non-human actors (Callon, 1986; Latour, 2005) and *agencements* (Deleuze and Guattari, 1998; Callon, 2006).

Delineation of the field Initially, the data collection was designed to be sourced from participant observations in 3-4 sites in the network of different types, but no specific sites had been identified. As GTM commands, the sites were selected on the basis of theorizing during the data collection.

The first site (the headquarters of the development NGO) was mainly chosen because of its accessibility. The selection of the second site (rural villages in Mali) followed from the data collection in the first. And the third site (headquarters of a multi-lateral organization) followed from the second. The research could have been conducted in Mali only, or in any of the two other selected sites. Instead, I explicitly opted for a multi-sited research. The delineation of the field was clearly inspired by the assumption that the three sites play different roles in the development network, and by the assumption of a certain link between the three sites. Therefore, the particular delineation of the field (the multi-sited delineation) forced the data collection to focus on the links between sites rather than on the dynamics within one single site.

Moroever, the choice of the 3 sites and their delineation are inevitably arbitrary. The three sites are embedded in a large network of organizations that are linked by innumerable connections and the boundaries of each of the three sites are fuzzy. By selecting 3 sites, and by imposing limits to these sites, the ethnographic data collection covered only a small portion of the entire network. The delineation of this small portion

was judged by myself—it were not the sites themselves that revealed their boundaries to me.

Theory-ladenness of observation That observations are theory-laden is hard to demonstrate. This form of data conditioning should not be confounded with the three aspects illustrated up till now. While the latter three referred to the *partiality and limitations* of the data collection due to pre-existing assumptions, the theory-ladenness of data collection implies that each researcher actually *sees* the world in different way. In other words, two different observers that are observing the same action *observe* this action in a slightly different way and *describe* it in different ways. The following example can clarify this.

One day an employee of the NGO headquaters was looking at the printed drawing of a pipeline network. The network was designed to transport water, in an African country, from a natural well uphill to a number of villages in the valley. Observer A, with no understanding of hydraulic engineering but with professional experience in developing countries, observed an employee that was checking the outline of the network and the fair distribution of water amongst the different villages (the observer knows that water distribution amongst villages is often a bone of contention).

Observer B instead, who was trained in hydraulic engineering, assumed that the employee was checking the diameters of the tubes and the hydraulic heads in each point of the network (the second observer knows that this is the essential design aspect of a pipeline network). In other words, observer B concluded that the employee of the NGO headquarter was controlling whether the African consultant, to whom the job was outsourced, got the technical calculus right.

Observer A observed an employee interested in the fairness and sustainability of water distribution, whereas observer B observed an employee diffident of the job done by the southern partner. Which of the two observers was right? We cannot know. The observers could have asked the NGO employee himself what he had been doing, but each of the two observers would have asked different questions, would have got different answers, and would have understood them in two different ways. Does this necessarily lead to relativism? As Estany (2001) points out, the theory-ladenness of observations exists, but it does not determine observations in an absolute manner. Observer A or observer B would probably have adjusted his opinion about his observation, based on further data collection.

This theory-ladenness of observations conditions all data collection, but it is impossible to know *to what extent* the data get conditioned. Moreover, it is virtually impossible to make this theory-ladenness explicit, since I myself am not aware of the top-down processes in my own cognition. The only thing that I can easily make explicit about my cognition is my educational and professional background. I was trained as hydraulic engi-

neer as well as social anthropologist. I was, thus, observer B in the above described case. Moreover, all my observations have also been influenced by my anthropological readings about power, development, colonialism, and so forth. My observations probably differed from those of an observer who has not been influenced by such readings.

9.6 Conclusions

Classic or 'objectivist' GTM pretended to be able to generate fresh social theories that were grounded in pure and theory-free data. Postmodernism has shattered this positivist illusion of absolute objectivity. I argue, drawing on empirically data, that the theories are never 'fresh', and the data never 'pure' nor 'theory-free'. GTM is interspersed with theoretical and ontological assumptions at various levels and phases.

Above all, the whole setup of GTM as well as any particular theorizing (the move from data to grounded theory) necessarily make assumptions about the functioning of 'the social'. Glaser and Strauss's original version of GTM contained theoretical and ontological assumptions about the social and about the relation between individual agency and social structure. Postmodern GTM scholars have tried to circumvent the duality of structure and agency by proposing 'situational analyses'.

Further, I demonstrate that ethnographic data are conditioned in four different ways: the problem framing, the assumption of some ontological categories and the relations between them, the delineation of the field, and the theory-ladenness of human observation.

I sustain, however, that these different theoretical conditionings do not invalidate GTM. What Glaser and Strauss (1967) proposed in the 1960s was a general framework for inductive/abductive theorizing on the basis of qualitative social data. Thanks to both the rigor *and* the flexibility in the set of principles and practices that they proposed, the method gained wide acceptance. Researchers adopted and adapted the set of principles to conduct very diverse studies. Yet, *how* researchers use these guidelines is *not neutral* (Charmaz, 2006, p.9). The 1960s-80s shaped the work of Glaser and Strauss in one way, whereas postmodernity has shaped the work of contemporary GTM scholars in another way. Scholars of the earlier era were comfortable with a presumably global applicability of their grounded theories, whereas the later have bolstered the GTM epistemology with an awareness of situatedness (Kearney, 2007). Moreover, contemporary GTM scholars have extended the ontological sensibility towards new categories, such as 'situations', 'non-human actants', and 'discourses'. The core ideas of GTM, however, have always remained the same.

I also argue that GTM researchers should not refrain from making their ontological and theoretical assumptions explicit at the onset of the research, for two reasons. First, such assumptions are anyhow interwoven in the research. Making them explicit will bolster the resulting grounded theory with a more complete description of its own situ-

atedness. Second, the researcher should not shrink from broadening up his theoretical sensitivity to new ontological categories before starting the observations. If he got inspired by some existing theories that helped him to not overlook crucial entities in the social situation under scrutiny, he should make this explicit.

These arguments should not be too unnatural for GTM, since GTM, because of its roots in pragmatism and symbolic interactionism, has 'always already' had a propensity to constructionism and postmodernism.

Chapter 10

Actor-Network Theory and multi-sited ethnography of aid

A local 'informant', prodded by the questions of a visiting ethnographer, realizes that most of his habits of thought are coming from places and agencies over which he has no control.

Bruno Latour — Reassembling the Social

10.1 Introduction

In 2010 the global development aid network handled $143 billion in official development aid[1], corresponding to 0.23 percent of the gross global economy (OECD, 2011). Behind this single number —that covers multilateral, bilateral and non-governmental aid— hides a highly complex network of heterogeneous actors and flows that operates against the patchy background of very diverse locales. And each of these actors engages with development aid in a different way. Depending on the actors' interests, they engage with development as a profession, a market, a resource, a stake, an opportunity or even an undesired interference (Olivier de Sardan, 2005).

The size of the global development business and the complexity of the social interactions that underpin it make development and development aid interesting objects of study. More than that, any anthropological study of contemporary African, Latin American, or Asian society is inevitably also an anthropology of development and development aid (Olivier de Sardan, 2005; Mosse and Lewis, 2006). Particularly in Sub-Saharan Africa it is impossible to decouple local politico-economic or socio-cultural dynamics from the

[1]Putting this number in perspective: The global aid sector is 6.5 times bigger than the global tobacco industry (Shafey *et al.*, 2009), and corresponds with one third of the global arms industry (SIPRI, 2011). Global migrant remittances are estimated to mount to 2.3 times the global official aid (World Bank, 2012).

international development aid machinery (Olivier de Sardan, 2005). Before we can judge the desirability or effectiveness of development aid, we need to understand the politico-economic, socio-cultural, and symbolic-epistemic relations that uphold the aid machinery. The ethnography of aid can help in this project.

In the following section of the article (section 10.2) I summarize the achievements of two decades of development aid ethnography. Contributions vary from Foucauldian analyses of the hegemonic discourse formations in development, to interactionist accounts of the actors' maneuvering. By solidly grounding their studies on empirical observations of daily interactions between actors, the latter tradition has brought us closer to an understanding of the functioning of development aid *in practice*.

Nonetheless, since development aid is fundamentally a matter of long-distance flows and concatenated interactions, I contend that important dimensions of development aid remain out of sight when the ethnography focuses on the interactions in one site only. In order to understand the trans-scalar character of the aid network, the mobility and transformations of the ideas that flow through it, and the paradoxical coherence amongst actors, we need to embrace multi-sited ethnography.

Since scholars of globalization started pointing out the limitations of single-sited ethnography (e.g. Marcus, 1995; Appadurai, 1996; Gupta and Ferguson, 1997), multi-sited ethnography has become more prominent as method to study topics related to globalization and development. There are, however, very few multi-sited ethnographies of development *aid* that take full advantage of the method, i.e. the possibility to reflect on the prominent links between the very diverse and very distant realities involved in aid.

Relying on my own experience of a multi-sited ethnography of development aid, I propose in section 10.3 a comprehensive method/tool package for the study of development aid that uses multi-sited ethnography as method for data collection, and Actor-Network-Theory (ANT) as descriptive tool. Some ethnographers of development aid have already judiciously experimented with ANT notions (e.g. Mosse, 2004, 2005a,b; Lewis and Mosse, 2006b), but I will show that ANT can also be *rigorously* applied to development aid, especially when combined with multi-sited ethnography. This method/tool package can effectively account for (a) the network dimension of development aid, (b) the global-local interactions, (c) the complex policy-practice relation, and (d) the extreme inequalities in the network. I do *not* pretend that my package reveals universal wisdom, nor that it would be 'better' than localized ethnography; it only aims at increasing the researcher's sensibility to *those aspects that are largely overlooked by localized ethnographies*.

In section 10.4, I recapitulate George Marcus' proposed strategies for multi-sited ethnography (1995), and translate them into operational strategies for the multi-sited ethnography of development aid. In the last section I use again my own ethnographic experience to reflect on some practical and epistemological issues: the negotiation of access to the different sites, and the crafting of an identity in these sites.

10.2 Ethnographies of development aid

As a start, it is useful to distinguish 'development' from 'development aid' as two different —yet intimately related— objects of study of anthropology. The former is *an ideology about* socio-economic change that (loosely) draws inspiration from changes occurring in the Western world. The latter, instead, can be defined as *the actual ensemble* of the actors and their interactions, the financial and material flows, and the policies and practices, that together aim at achieving this socio-economic change. Only the latter is subject of this article (and by extension this dissertation).

Ever since its emergence as discipline, anthropology has been in an ambiguous relationship first with the colonial rule (Asad, 1973) then the development assistance machinery (Grillo and Rew, 1985). Often docking itself on these power structures, sometimes serving them, and sometimes heavily criticizing them, anthropology has approached development as object of study in many different ways. Applied anthropologists are concerned with development *aid* and put anthropological methods and theory into action —either from within development organizations or from an academic stage— in order to 'improve' the aid (see for instance Cernea, 1991; Horowitz, 1996). A school of critical anthropologists, to the contrary, have besieged —usually from an academic stronghold— the development *ideology* and deconstructed it as a hegemonic Western narrative that politically, economically, culturally and epistemologically subdues the former colonies (Apthorpe, 1986; Sachs, 1992; Escobar, 1995; Crush, 1995).

Between these two extremes lies important anthropological knowledge that is not readily explored, to wit, knowledge about the functioning of the development aid architecture *in itself*: its actors and interactions, the relation between policy making and practice, the professional strategies of development experts, the strategies of the beneficiaries, and alike. Suchlike ethnographies of development aid *in itself*, called 'aidnographies' by Gould (2004), that are strong in empirical rigor and weak in ideological bias, are much rarer than works that incline to one of the two extremes.

A train of discourse-focused ethnographies of aid is pioneered by James Ferguson's *Anti-Politics Machine* (2007 [1990]). Inspired by Foucault's power/knowledge theories, Ferguson's work is sympathetic to the deconstructionist school, but it draws on a major World Bank project in Lesotho for empirical data. His and other Foucauldian analyses of development aid have provided insights on how, at any given historical moment, specific discursive regimes make certain development practices appropriate and others unthinkable, throughout the entire network.

The Foucauldian approach used by Ferguson and followers, however, has been criticized in two obvious ways. First, actors are demoted to cogwheels in a machine that strips all actors of their agency. No one seems in control, not even the policy makers and development planners themselves (Rossi, 2004). Second, Foucauldian analyses ig-

nore the inherent openness of the development discourses, as well as their volatility over time (Hobart, 1993; Gardner and Lewis, 2000; Goldman, 2001). In fact, Foucault's own work was situated within one single spatial and cultural domain, whereas in development aid the discourse analyst faces different cultural contexts into which various exogenous discourses penetrate (Stoler, 1995).

A second approach to the ethnography of aid is called by Olivier de Sardan (2005) the 'entangled social logic approach'. Assuming an actor-oriented stance, their accounts focus on the negotiations on the interfaces between the different social worlds. Long and Long (1992) describe development interventions as an "ongoing, socially constructed and negotiated process". Scholars in this tradition have demonstrated that there is room for human agency, both in maneuvering the discourses at 'the top' of the development network (de Vries, 1992; Lewis, 1998; Lewis *et al.*, 2003), and in negotiating and resisting them at 'the bottom' (Arce *et al.*, 1994; Grillo and Stirrat, 1997; Torres, 1997; Arce and Long, 1999; Bierschenk *et al.*, 2000; Rossi, 2006).

Noteworthy is the body of literature in this current that focuses on two specific categories of development actors: the mediators and the brokers. Development brokers are individuals or organizations that pertain to the developee community —but usually not the traditional elite— and that implant themselves on the interface between the developer and developee to attract or steer the flow of development aid. They act as social entrepreneurs that swiftly speak the development language and nimbly interact with the international organizations (Bierschenk *et al.*, 2002; Olivier de Sardan, 2005; Lewis and Mosse, 2006a). The development mediators, instead, are the field workers that function as agents of mediation between the different realms of meaning-making. They graft the technical message of the developer organizations onto the symbolic-epistemic system the developee community (Bierschenk *et al.*, 2000; Olivier de Sardan, 2005).

Olivier de Sardan argues that the development mediator plays a triple role. "He or she is the *spokesperson* on behalf of technical-scientific knowledge and the *mediator* between technical-scientific knowledge and popular knowledge" (2005, 169). The former is the formal role —the one he or she is trained for— while the latter is the actual but hidden role. His third role is to negotiate, defend and secure the own personal interests.

Although ethnographies that follow the 'entangled social logic approach' have provided us with detailed empirical data on the *how* of development aid, their localized ethnographies still miss out on some important aspects of the interactions in development aid. To start, there is no convincing argument in privileging specific interfaces nor specific actors in the network (Mosse and Lewis, 2006). I propose to extend the concepts of mediators and brokers to *all* actors in the network: all actors play the role of broker or mediator to a greater or lesser extent. In order to grasp the diffused and differential agency of the actors, one needs to look at development aid from various perspectives.

The network perspective

By claiming that development interventions happen through a 'network' I mean that numerous but diverse nodes —actors or sites— are interconnected in multiple ways —through epistemic, financial, legal, and other connections— so that things happening at one node influence what happens at other nodes of the network.

The development aid network does indeed connect very heterogeneous actors, whose number and types have been increasing over time (Dufeld, 2002). Contemporary development projects and programs are implemented by a battalion of international and local non-governmental organizations (NGOs), international and local consultants, decentralized authorities, and the local private sector (Degnbol-Martinussen and Engberg-Pedersen, 2003). The increasing complexity and breakdown of the network, however, is kept in check by both spontaneous and orchestrated policy homogenization (Rossi, 2004; Lewis and Mosse, 2006b). The Millennium Development Goals and the Paris Declaration are examples of such formal instruments of orchestration. Normative discourses, however, have demonstrated to have at least as much power in aligning the mindsets of actors (Ferguson, 2007 [1990]). The network, although supported by extremely diverse actors with different goals and strategies, is able to behave as a well-tuned machinery.

This interplay of "order and disjuncture" (Lewis and Mosse, 2006b) can only be explained from a network perspective. Viewing development aid as happening through a network shifts the focus from 'single actors acting in a network' to the network itself. It also avoids two common traps: privileging particular actors, and drawing spurious dichotomies.

First of all, the network metaphor does not privilege particular 'brokers', or 'mediators'. Since the success of a development intervention depends on the diffused agency in the network, the idea of broker/mediator should be extended to all actors in the network. Actors at one node are made to do things by myriad actors somewhere else in the network. This happens in a complex way that no single actor can control. Each actor is vital in the constitution of the network; each actor is influenced and constrained by the connections in the network; but no one actor controls the network.

Second, by assuming a network configuration, the researcher avoids spurious and obfuscating dichotomies such as global versus local, developer versus developee, Western versus Indigenous, modern versus traditional, developed versus underdeveloped, or policy versus practice. Since the path from the western donor to the farmer in Sub-Saharan Africa is long and tortuous, and passes through organizations and actors with faceted identities, those crusted categories would not provide new insights on the trajectory of the path but rather obscure it. In the following two paragraphs I explore the alleged global/local and policy/practice dichotomies.

Beyond the global/local dichotomy

In our contemporary world, formations of social order and cultural identity cannot be untied from the complex but continuous flows of ideas, people, imaginaries, technologies and resources, that move through channels scoured out by migration, electronic media and the global financial system (Hannerz, 1992, 1996; Appadurai, 1996; Holton, 2005). Development aid is part and parcel of this phenomenon called 'globalization'.[2]

An irrigation development project in the Malian Sahel, for instance, might be sponsored by the World Bank in Washington, and follow guidelines that were drafted by a Dutch consultancy firm. The desk from which this rural development project is managed probably stands in Bamako. The project manager could be an Algerian national trained in France, who gained 15 years of professional experience in similar rice irrigation projects in Rwanda and Benin. The Malian farmers have probably collaborated, during their lifetime, with UNDP experts, the French development agency, and a number of American and European NGOs. At their discretion the farmers have ingeniously blended some of the Western agricultural techniques into their own traditional farming methods. The unquestionable preference of the village for one specific rice variety probably depends on the fortuitous choice of one multinational seed company to implant a retail seller in the region. And not at the least, the price of rice on the national and international markets is probably the main determinant in the farmer's decision whether to send his youngest daughter to school or not.

As this short fictitious account shows, the 'global' and 'the local' are present at each node in the network. Rather than being empirical realities of different scalar or hierarchical order, it are complementary elements in the meaning making panoply of *each* actor in the network (Geschiere and Meyer, 1998; Gupta and Ferguson, 2001; Moore, 2004). For each actor and for each interaction, the adjectives 'local' and 'global' acquire a different meaning, which depends on the flows of people, ideas, technologies, imaginaries and resources that come together at that specific node at that specific moment (Appadurai, 1996).

These flows, however, should be understood as multiple, parallel, and complementary processes that inter-relate and also conflict with each other (Appadurai, 1996; Holton, 2005). This is why 'flow' has been a handy metaphor in the anthropological work on globalization (Appadurai, 2001): flows are cohesive yet dynamic, and while a confluence of flows can be laminar or turbulent, in one way or another it forcibly generates a new flow. In order to grasp the origins of these laminar and turbulent mixtures, the ethnography of aid needs to expand the work radius from a focus on 'the local' to global-local interactions.

[2]This is only one of the many definitions ascribed to the term 'globalization'. Other interpretations, not invoked in this article, are: the increased power of multi-lateral organizations; the integration of national economies into one global market; the homogenization of culture through electronic media; globalization as discursive repackaging of Western cultural hegemony.

Beyond the policy/practice dichotomy

The two diverging stances towards development and development aid that were mentioned earlier —applied versus deconstructionist— replicate in the understanding of the relation between policy making and field practice: Mosse (2004) detects an 'instrumental' view and a 'critical' view.

According to the 'instrumental' view, policy making is a matter of well-informed agenda setting and problem solving, which takes place in one realm, whereas the implementation of the policies is a matter of managerial gymnastics, which is performed in another realm (Jordan, 2001). In the face of empirical data, however, this view appears highly naive: boundary organizations place themselves on the interfaces between the realms (Guston, 2001); global knowledge and advocacy networks blur the identities (Stone, 2002); the actors' strategies thwart the logic of unidirectionality (Mosse, 2004).

The 'critical' view, to the contrary, is not interested in the 'good' implementation of development policies, but in their (un)intended side effects and the hidden transcripts (Scott, 1990). Departing from the assumption that development policies do much more than working towards the explicitly stated goals, the literature in this field tries to demonstrate that the development machinery produces the cognitive control of all actors involved (Escobar, 1995); that it increases the state's power and expands bureaucratic control (Ferguson, 2007 [1990]); and that it subjugates, silences or erases the local and the particular (Tsing, 1993; Skaria, 1998). All this, the critical view sustains, is covered up by discourses that objectify the beneficiary, depoliticize the policies, and technocratize the interventions (Apthorpe, 1996; Hobart, 1993).

'Evidence-based policy making' constitutes an increasingly prominent middle way, especially in development policy making. It takes a positivist stance similar to that of the instrumental view, by believing that the impacts of a policy can be objectively measured and fed into future policy making, but explicitly acknowledges the non-linearity of the policy making process (Young and Mendizabal, 2009).

None of these approaches, however, takes the pains to understand *how* the policies are actually created and implemented *in practice*, through the interactions of social actors. Scholars seem reluctant to open up the black box that encloses the social intricacies of policy making and practice. Ethnographies are needed that describe, without assuming separate realms or causal flows, how both policies and practices are produced by many actors acting together (Mosse, 2004). Where and how do new policies really emerge? Do they really emerge from the beneficiaries' needs? Which actors mediate between the supposedly policy makers and implementers? What does it mean that the implementation of a policy 'fails' or 'works'?

Diversity and inequality

Above I have advocated to approach development aid from a network perspective, in order to avoid pointless dichotomies such as global/local, policy/practice or developer/developee. However, the plea to start the description of aid with only a flat network drawn on an otherwise clean slate, does not entail that the ethnographer should remain insensible to the ineffable diversities and power inequalities in the network.

In the first place, development intervention forces very discontinuous cultural spaces and very dissimilar categories of actors to interact (Rossi, 2004). Each of the actors —be it the planner, development worker, consultant, or 'beneficiary'— works in accordance with his or her own idiosyncratic values, preoccupations, goals, and strategies (Long and Long, 1992).

Second, this heterogeneous collection of spaces and actors gives rise to an equally heterogeneous collection of knowledge systems. *Each* actor in this network possesses partial and 'situated knowledge' (Haraway, 1988) about development problems and appropriate solutions, and frames them in his situated way. Although there has emerged a kind of 'global epistemic community' of development experts around Washington, Rome or Brussels (Stone, 2002), we should not ignore that this community too is very heterogeneous (Mosse, 2011a) and maintains constant conversations with other, subaltern knowledge systems (Rossi, 2006).

On top of those huge cultural and epistemic differences, a very unequal access to the available financial resources discriminates the actors in the network. A handful of donors and agencies control the vast majority of the financial flows, while thousands of smaller actors are in fierce competition for them — let alone the theoretical 'beneficiaries" who seem to have a walk-on part in this competition.

We intuit that this differential access is closely related to power inequalities —although it is unclear which one is the cause, which one the effect, or whether they are one and the same thing. These extreme power inequalities propagate in complex ways through the network. Power is, however, a vague concept that has been defined in many ways (Clegg, 2001), and its explicative value is very limited (Latour, 2005). The question that the ethnographer should pose himself is *how* the power is constituted and reproduced. A particular challenge for the ethnography of development aid is thus to study the network of actors without a prejudiced hierarchy, "without logically or chronologically presupposing either the authority of Western experience or the models derived from that experience" (Appadurai, 1996, p.49).

It would be an intellectually very poor move to start the ethnography of aid by drawing on our slate a network that includes already those differences. In fact, it is precisely the *task* of the ethnography to describe how the actors deploy the differences: *how* the cultural spaces interact and *how* the differences are reproduced; *how* the situated

knowledges of each actor bend the discourses, policies and practices; *how* the policies and practices relate; *how* the resource flows contribute to instituting and reproducing unequal power relations.

Summing everything up

Foucauldian ethnographies of aid, on the one hand, point to the hegemonic power of discourses, whereas actor-oriented ethnographies, on the other hand, highlight the room for human agency both at the top as amongst the beneficiaries. The method/tool package that I propose will need to be able to account for both, and move beyond this worn-out structure-versus-agency quandary. Moreover, the package should not include assumptions about what is 'local' and 'global', neither pigeon-hole the actors in rigid categories such as 'the policy makers', 'the practitioners', and 'the beneficiaries'. However, the effacement of pre-defined categories should not be an excuse to overlook the huge power inequalities that exist and perpetuate in the network. In fact, the ultimate goal is to show how these heterogeneous and unequal actors, in this highly dispersed development network, and despite their highly localized meaning-making, can create, through their interactions, something that resembles 'order' (Mosse, 2004; Lewis and Mosse, 2006b).

10.3 A method/tool package

Recently a number of aidnographers (notably Mosse, 2004, 2005a; Lewis and Mosse, 2006b) have signaled the usability of Actor-Network-Theory (ANT) for the description of the aid architecture and its dynamics. Rather than a theory *of* the social, ANT is a tool that allows to *describe* how actors *build* the social. ANT sprouts from science and technology studies, where it was developed to describe how scientists, their instruments, and the 'technology consumers' connect in order to make a scientific experiment work (e.g. Callon, 1986; Law, 1986; Latour, 1987, 1988), but it can be extended to any domain of the social sciences (Latour, 2000, 2005).

I concur with Mosse (2004, 2005a) and Lewis and Mosse (2006b) that ANT provides a powerful way of looking at development aid. Instead of using some insightful ANT ideas, however, I plea to rigorously stick to the complete ANT philosophy —as in Callon (1986) and Latour (2005)— to describe the development aid architecture and practices. I will show, below, that ANT provides the instruments to account for its network outline, the interplay of global and local, the entangled relation between policy and practice, the variety of actors, as well as the unequal power relations.

At its most fundamental level, ANT claims that 'the social' needs to be explained as a living assemblage of myriad connections between a collection of heterogeneous actors who possess the agency to forge, maintain, or transform these connections. The connections

can be of material, semiotic, economic, legal, linguistic, or other nature; the actors can be human and non-human. ANT scholars do not accept 'society', 'social context', or 'social structure' as a *given* dimension of reality. The social exists only through the action of actors that form assemblages (Callon and Law, 1982; Callon, 1986; Latour, 2005).

Actors try to establish connections and assemblages to make other actors *do things*. In this process, *anything* that modifies a state of affairs by making a difference is considered an actor (Latour, 2005, p.71). Therefore, also objects need to be pondered as possible actors in the formation of 'the social' (see further). The relations between actors in such assemblages, however, are not direct nor causal. When an actor takes pains to make others do things, his or his action propagate through the network in unpredictable ways, generating *transformations* and triggering unexpected *events* elsewhere in the network (Latour, 2005, p.107). This means that, when looking at one point in the network, the forces of many actors aggregate, and any interaction taking place at that point "seems to *overflow* with elements which are already in the situation coming from some other *time*, some other *place*, and generated by some other *agency*" (Latour, 2005, p.166). One actor never fully controls an action—an action is always 'over-taken' by the many actors in the assemblage.

By shifting the focus from pre-conceived social structures to the active construction of connections and assemblages, the analyst should also refrain from pre-conceived ideas about the identities of actors, their matters of concern, the scale of their actions, or the distinction between the social and the material. Each of these properties is exclusively defined by the actors themselves, through their interactions with other actors (Latour, 2005). It cannot be the task of the observer to judge their delineations (Callon, 1986).

One expressive, powerful repertoire that is often used to operationalize ANT, is the one of 'translation' and 'enrollment', proposed by Callon and Law (1982) and Callon (1986). It can be applied to the functioning of a technology, a scientific experiment, a discourse, a policy, a project, and alike. I will use the example of a development project. In their effort to render the project successful, the actors first need to *problematize* the situation and define each other's identities in such a way that the interest of other actors is awakened to take part in the project—this is the phase of *interessement*. Second, a process of *translation* starts: if one actor A can convince another actor B that A's knowledge is useful for B to achieve B's objectives, it is said that A *translates* his knowledge in order to *enroll* B. The basic idea is that the interests of the actors are not static; they are negotiable. The most nimble actors manage to profile themselves as *obligatory passage point*. Third, by enrolling others, actors try to build long chains of associates or *allies* in order to make the project work. As said earlier, no distinction is made between a supposed realm of policy making and a realm of implementation, nor between the social and the natural. The allies in the chain can be development planners, farmer unions, as well as statistical data, concepts, legal instruments or a water well. In fact, non-human devices

and artifacts are key anchor points of the social relations (Law, 1986; Latour, 2005). Finally, actors can also *betray* their allies, which forces the other actors to renegotiate the interests. The betrayal can eventually lead to a breakdown of the chain. "Projects do not fail, they *are* failed. [...] Failure is *manufactured* not inherent" (Latour, 1996, p.35-36, emphases are mine). The scientific experiment, the policy, or the discourse works or fails depending on the strength of the chain — not the other way around.

Familiar now with Callon's ANT vocabulary, we better understand Mosse (2004, p.647) when he sustains, regarding development policies, that:

> clearly common narratives or commanding interpretations are supported for different reasons and serve a diversity of perhaps contradictory interests. The differentiation of practical interests around 'unifying' development policies or project designs is a consequence of successful enrolment, and a condition of stability and success. But it also requires the constant work of translation (of policy goals into practical interests; practical interests back into policy goals), which is the task of skilled brokers (managers, consultants, fieldworkers, community leaders) who read the meaning of a project into the different institutional languages of its stakeholder supporters.

Actors are continuously involved in juxtaposing each other's identity and in translating common interests, in order to to enroll other actors in the alliance. The task of the social researcher that analyzes development aid projects is to show this (Mosse, 2004, p.647):

> examining the way in which heterogeneous entities —people, ideas, interests, events and objects (seeds, engineered structures, pumps, vehicles, computers, fax machines, or data bases)— are tied together by translation of one kind or another into the material and conceptual order of a successful project.

The method par excellence to observe this continuous work of delineating identities, translating interests, and enrolling fellow actors in alliances, is ethnography, thanks to its profound anchoring in the field and its well-developed sense of being "here-and-not-elsewhere" (Gupta and Ferguson, 1997). The interactions of global and local elements at each site, however, have plunged single-sited ethnography into a maelstrom of reflections on what 'the field' actually is (Marcus, 1995; Amit, 2000; Gupta and Ferguson, 2001), and the time has come for ethnography to think out better what this "here-and-not-elsewhere" actually means (Gupta and Ferguson, 1997; Moore, 2004). Ethnography should let go its bent for a spatially circumscribed 'place', and further exploit its well-developed attentiveness to the local as relationally constituted 'space' (Gupta and Ferguson, 1997; Gustavson and Cytrynbaum, 2003).

Latour argues that, in order to observe the chain of actors and their continuous work of translation, the observer needs to occupy various standpoints. "If action is dislocal, it does not pertain to any specific site; it is distributed, variegated, multiple, dislocated and remains a puzzle for the analysts as well as for the actors" (Latour, 2005, p.60).

Therefore the observer is urged to move from one frame of reference to another, rather than sticking to any absolute or arbitrary viewpoint.

Multi-sited ethnography severs ethnography from its enchantment with location and allows shifts in standpoint. It takes a network of interacting sites[3] as 'field', in order to examine the *circulation* of cultural meanings, objects, and identities in the diffuse time-space of this network (Marcus, 1995; Hannerz, 2003; Falzon, 2009b; Coleman and von Hellermann, 2011). The ethnographer establishes some form of literal, physical presence in a number of strategically or opportunistically selected sites, with the posited logic that the relationships between these sites are at least as important as the relationships within them (Hannerz, 2003). The focus on linkages makes the multi-sited study something fundamentally different from a mere 'comparative' study of localities — in fact, according to classical anthropological theory, the comparative study of localities was precisely based on the assumption that such linkages did not exist (Hannerz, 2003).

In multi-sited ethnography the 'global' is no longer treated as 'context' to some arbitrarily circumscribed location. In fact, *no one* macro-construct is allowed to stand for the 'context' of a site; it is exactly this macro-construct that has been reduced to a collection of equally local, equally observable, sites. Indeed, the ethnographer wants to know how one site, that used to be arbitrarily labeled as 'global', influences the actions in another site, that used to be designated as 'local'.

Deflating 'the global' and dismantling 'the context', in order to "keep the social flat", this is exactly what Latour urges us to do if we want to describe how actors build their network (Latour, 2005, p.165). Only the actors themselves have the authority to flesh out the network. The observer's only task is to rigorously describe each time some actor A is said to be connected to some actor B —be it when those connections serve to delineate identities, to define matters of concern, to articulate scale, to translate each other's interests, or to maintain an alliance. This is describing *the social*. The social is nothing more than entities connecting with other entities. And if a connection originates in some other point on earth or in time, so be it! This does not mean that the connection pertains to 'the global', 'the context' or 'the structure'. Allowing the ethnography to evolve into a multi-sited ethnography, the observer has to move from one standpoint in the network to another to follow the connections.

At this point we have a solid method/tool package to trace the network and interactions in development aid: multi-sited ethnography is the method for data collection, ANT is the tool to describe the data. Some might raise the criticism that in my package theory precedes data, contrary to the spirit of ethnography. In my defense, I oppose that ANT

[3]What Marcus (1995) called 'world system' in his article, is renamed to 'network of interacting sites' in mine.

is not a theory that *analyzes* the social, but a tool that helps to *describe* it. ANT invites to empirically record all physical traces that are left by any form of agency exhibited by any actor, and to at least *allow* all actors to be full-blown actors. An actor-network, however, remains nothing more than a concept, a mere tool to help *describe* something. It is *not* something out there (Latour, 2005, 128-31).

In the light of the new method/tool package, I revisit the four aspects I have touched upon in the previous section: the network aspect, global-local interactions, the relation between policy and practice, and the inequalities in the network.

The network perspective revisited

ANT is a tool to describe *how* actors, by building and maintaining a network, create the 'social' dimension of reality. In the ANT philosophy, the 'network' concept has little to do with a form of organization (as in Riles, 2001; Perkin and Court, 2005). The network metaphor in ANT transcends the idea of an organizational layout, and refers to the flows of agency between actors. It is a 'net-of-work', rather than a 'network' (Latour, 2005). Through their actions, actors link up with each other, and *build* the social. Nothing is given beforehand; everything is left to the action of the actors. Where there is no action, there is no network—there is only empty space.

In this net-of-work, the actors are continuously at work to construct the following delineations. First, they delineate their own identities. There does not exist an incontrovertible entity that epitomizes the basic building block of the network. The actors in the network can be individuals, organizations, factions within an organization, events, discourses, or even objects. Whichever entity that alters the configuration of the network is an actor. Actors are incessantly engaged in linking, opposing, juxtaposing, and subsuming, in order to create and define their identify. It is important that, in the observer's account, the actors are allowed to deploy their own arguments for the delineation of their identity; their arguments should sound louder than those of the ethnographer (Latour, 2005, p.30). We should not take, for instance, the World Bank as a monolithic actor, when we observe that the different categories of experts within the Bank take pains to differentiate themselves from each other (Mosse, 2011b).

Second, the world does *not* include *pre-existing* scales, levels, hierarchies, etc. Where they exist, they are created and reproduced by the actors, through their interactions. Since an actor's perception of scale is often contradictory to the ethnographer's perception (Leach, 2006; Gatt, 2009), it is a fortiori important to leave the delineation of scale to the actors themselves. For instance, whereas outsiders perceive the policies of the World Bank as produced at 'global' scale, for development experts working inside the World Bank these policies are the product of everyday, local-scale 'village politics', in this case of a village located at 1818 H Street in Washington (Mosse, 2011b).

Third, faithful to the philosophy of free association in the network, the observer must abandon all a priori distinctions between the social and the natural, between human actors and non-human actors. He must reject the hypothesis of a definite boundary between the two, since such a division is the result of the interactions between actors rather than a point of departure (Callon, 1986; Latour, 2004, 2005). Our world is full with hybrid objects that were assembled somewhere else, enter a new site as simple material objects, but start to mediate actions of the actors in the new site (Akrich, 1992). Examples are the logical framework form imposed by the European Commission for the formulation of a development project; the software used for the accountability of the development project; the Skype technology that mediates the daily contact between Bamako and 'the field'; the FAO manual for rice cultivation; the high-yielding rice seeds that require a specific cure.

A fourth observation, regarding 'fact' and 'truth', takes us back to the origins of ANT. ANT ensues from observations of how scientists, their instruments, and the 'consumers' connect in order to make a scientific experiment work (e.g. Callon, 1986; Law, 1986; Latour, 1987, 1988). Unjustly labeled as relativistic, ANT emphasizes that what appears as fact to us is not *given*, but is delivered to us by a fragile, *socially* sustained construction of ties between human and non-human elements. What appears afterwards as an alliance that was successful because 'truth was on its side', was in actuality an alliance that was successful in *building* the truth. Observing how a 'truth' is constructed, is like observing a building construction site: "you are experiencing the troubling and exhilarating feeling that things *could be different*, or at least that *they could still fail*—a feeling never so deep when faced with the final product, no matter how beautiful or impressive it may be" (Latour, 2005, p.89). Mosse translated this viewpoint on 'failure' and 'success' to development aid projects (2004):

> the success of policy ideas or project designs is not inherent (not given at the outset) but arises from their 'ability to continue recruiting support and so impose [their] growing coherence on those who argue about them or oppose them' (1996, p.78). The point is that authoritative interpretations have to be made and sustained *socially*.

The global/local dichotomy revisited

I have argued above —syntonic with various scholars of globalization— that no place is dominant enough to be labeled 'global' and no place self-contained enough to be considered 'local'. The task of an ANT registrar is to stubbornly maintain the network flat and to unravel this conundrum: what do 'locality' and 'globality' mean as a lived experience to *each* actor in this vast network that spans the World Bank offices in Washington, FAO in Rome, an NGO office in Bamako and rural villages in Mali?

This can be done, first, by following the traces of those supposedly 'global' elements to

their source of origin, without trying to 'jump' to a higher explicative level. The observer needs to patiently plod, step by step, from one mediator to another, the successive translations of the elements, to their site/actor of origin. When the mayor of a rural Malian municipality claims that his or his team 'lacks capacity' and needs 'capacity building projects', the ethnographer should wonder how this Western development jargon filtered through the mayor's vocabulary, and how this concept was translated from what it meant to UNDP two decades ago to what it means to the mayor now.

A second, contrary move is necessary to understand how the 'local' is generated. Many visible and hidden actors are at work —simultaneously or diachronically— in the *creation* of the locality. Non-human actors play a particularly important role in this process. A rice paddy in Mali's Inner Niger Delta has been *made* to be a 'local' place through the now silent mediation of objects such as: the upstream dam erected by the French colonial regime; the small barrages and channels constructed by a local NGO; the title deeds of the families; the project manager's spreadsheet that keeps tally of the paddy production. Each of these objects incorporates a script that was written somewhere else, but that define 'locality' in the new site of adoption.

By practicing the two gestures simultaneously —localizing the global and redistributing the local— only connections between actors remain, and the 'sites' as spatially defined entities disappear from the map.

The policy/practice dichotomy revisited

What is valid for the global/local dichotomy, counts for the policy/practice distinction as well. The realms of policy-oriented data collection, policy making, and policy implementation, appear as separate to us because actors construe them that way. But they are artificial. To overcome the trap of sticking to these obfuscating categories, the ethnographer should maintain an agnostic and symmetric position to what is defined as 'evidence', 'policy' or 'practice'.

The task is the same as always: follow the links from one actor to another, without creating fault lines in the network. Trace who sponsored that particular workshop in Bamako that made the ministries of water and agriculture talk to each other, trace which consultants produced the report and what their background is, show how this report was merged with other reports and reappeared as FAO guidelines, describe who distributed the guidelines, show that the guidelines influenced a Western NGO in Mali in choosing one type of rice rather than another, report how this NGO defended this choice in front of the provincial farmer union, etc. It is not the task of the ethnographer to sweep these different links into a 'policy heap' and a 'practice heap' — the actors themselves will probably do so.

Diversity and inequality revisited

The insistence of ANT on symmetry and flatness has induced critics to argue that ANT is unable to account for inequality and power (Whittle and Spicer, 2008). As clearly stated above, ANT has indeed an abhorrence of pre-conceived social structures such as power, especially when they are employed to *explain* social phenomena. There is, however, space for power in ANT, but only as *constructed* phenomenon. Instead of being an already present stratum, ANT conceives power as constructed by the assemblage itself. Power resides in the network in two ways: in the differential between mediators and intermediaries, and in non-human objects.

As stated earlier, one actor never controls the network, not even one action. Each action is over-taken by the network of actors and can result in unpredictable events. ANT does, however, recognize the differential pressures that are brought to bear on the assemblage by mediators and intermediaries, the latter simply adding predictability to the setting, the former shaping and transforming the assemblage in unexpected ways. If all actors were fully-fledged mediators, able to completely alter the network, the network would *remain* flat and egalitarian. Instead, power inequalities in the network result from the differences between mediators and intermediaries. The actors that are most nimble in bending the network, or the ones that have knitted most ties, are the most powerful mediators. Intermediaries, to the contrary, simply pass on the flows in the network without altering them. A good ethnography should lay bear which actors are powerful mediators, and which are simple intermediaries.

I repeat that mediators do not need to be humans. In fact, non-human mediators can be very effective treasurers of power relations (Law, 1986). Consider, for instance, the following non-human devices: the donors' periodical calls for proposals, the logical framework for project formulation, a national Poverty Reduction Strategy Paper, a simple earthen dam that controls the water level in the rice fields, or a new high-yielding rice variety. These non-human objects exert structuring power over other actors and *do* mold the agency of other actors. Once put in place, these non-human devices have long-lasting mediating effects—much longer than the human-human ties, which in general require continuous efforts.

Deleuze and Guattari's concept of *agencement* (1998) can be a useful descriptive tool in this respect[4]. A socio-technical *agencement* is an assemblage of heterogeneous elements that have been made to come together and carefully fit one another (Callon, 2006). As such, an *agencement* is endowed with a powerful combination of intentional and non-intentional, human and technical agency and is amazingly effective in forcing other actors to do particular things. An example of such a fine-tuned socio-technical *agencement* is the ensemble of: the periodical 'call for proposals' launched by a donor, the logical framework

[4]I a am grateful to Yuti Ariani for this suggestion.

the donor impose to formulate the proposals, the standard contract that is signed with all parties, and the sum of money transferred from donor to the implementing organization. These four elements together form a very effective agencement.

10.4 Tracing the links

Despite the comprehensive review paper by George Marcus (1995) being widely cited, multi-sited ethnography is not yet a mainstream practice in anthropology, let alone in the anthropology of development aid. Authoritative research methodology manuals in the field of anthropology, such as Bernard (2006), Hammersley and Atkinson (2007) or Silverman (2009), do not mention multi-sited ethnography at all. Lindlof and Taylor (2010) cite Marcus but do not elaborate on what multi-sited ethnography might look like.

Marcus himself describes in his review paper a number of operational strategies —opportunistic or planned— to unearth the links between sites (Marcus, 1995): follow the people; follow the thing; follow the metaphor; follow the plot, story or allegory; follow the life or biography; follow the conflict.

From two sides some criticism has been leveled against these strategies. First, why does the multi-sited approach, that preaches to break the chains of single-sited ethnography, accept new self-imposed limitations? Second, in adopting one of the six 'following' strategies, the ethnographer appears to assume a pre-existing space of trajectories that *can* be followed. That would clearly go against basic ANT principles. In other words, the researcher cannot know whether those spaces are created by the entity he is following, or by himself.

There are two simple answers to those criticisms. First, single-sited ethnography as well as multi-sited ethnography are partial in their data collection. No matter how thick a single-sited ethnographic description may be, it scrutinizes only some data in the infinite universe of available data, and leaves untouched the remainders—the infinitely large remainders (see also chapter 9). Multi-sited ethnography is no different, but rather than an interest in the interlocks at one site, it pays particular attention to the links between different sites. In other words, multi-sited ethnography is *no more holistically inclined than single-sited ethnography* (Falzon, 2009a). The six strategies proposed by Marcus are ways to strike a compromise between a grand holistic ambition (to cover the 'world system', in the words of Marcus) and an arbitrary way of 'making the cut' in this infinite universe of available data (Falzon, 2009a).

Second, despite the inevitable partiality of any form of data collection, the researcher needs to tell a coherent story (Linsteadl, 1994). Each of Marcus' strategies offers a way of slicing a *meaningful* segment out of the vast network, in order to tell a story that makes sense to both the ethnographer and the reader. In this article I have proposed a *method*

to observe such a segment (multi-sited ethnography) and a *tool* to describe it (ANT), but the *product* that tells the story is ultimately crafted by the ethnographer. It is *his* ethnography, *his* account, *his* written story. As a result, his mind and hand are in fact accomplices in constructing space(s)—in his story. But that is fine because *there is no other way*, and this absolutely does not mean that his story would be *fiction* or *less true*. The researcher himself and his texts are, in a sense, also mediators (Latour, 2005, p.125).

In what follows I will hold Marcus' six strategies to an ANT light, and translate them into the context of development aid.

Following the people

Following an individual or a group of individuals is probably the most natural form of multi-sited ethnography (Marcus, 1995), as it was already practiced by Malinowski who followed the Trobriand islanders on their *kula* journeys (1922), and is a well-established practice in contemporary migration studies (e.g. Galli, 2009; Riccio, 2011). Also in science studies, the cradle of ANT, it is a common strategy to "follow around the scientist" (Latour, 1993).

In aidnography this strategy can be translated into following around the development agent, the development consultant, or the mayor of a 'beneficiary' municipality. Taking an ANT stance, the ethnographer should not only describe the mediating powers of the observed individual or group, but also report how other close or distant actors influence the observed subject's actions, and how the actions of the subject acquire different meanings in different 'localities'.

Hovland (2009) followed around a group of Norwegian missionaries in Madagascar and came to the conclusion that the idea of 'missionary' acquires a different content in Norway and in Madagascar. She argues that disjunctures and communicative gaps are as important an aspect of globalization as flows and connections. Spencer (2008) followed tourists around in Cuba that participated in study tours, organized by local NGOs. These tours were designed to raise the awareness of the tourists of development issues. An important side effect, Spencer concludes, was that the tours also increased the social capital in Cuba.

The emerging sub-field of 'ethnography of development expertise' (notably Mosse, 2011a) has been producing interesting ANT accounts. Ethnographies of development expertise portray, for instance, the formation of alliances amongst actors to make policies work (Mosse, 2004, 2005b), or the struggle of experts to defend their professional space within the Big Organization (Mosse, 2011b).

Various of these ethnographies of expertise exploit the split identity of the ethnographer himself. In other words, these ethnographies report the ethnographer's *own adventures as development expert*. In a certain sense, by describing the own experience

as development expert, these ethnographers *de facto* apply a 'follow yourself' strategy. Unfortunately, these ethnographers tend to pay attention to only one side of their split identity. They rarely continue to 'follow themselves' when they move from their expert chair to their chair in academia, as is the case for Rossi (2004) and Mosse (2011b).

Following the life or biography

Whereas the previous strategy consisted in following a person without giving a major role to the passing of time —as if the actor-network were deployed in a "single global present" (Massey, 2005, p.76)— the second strategy consists in following a person through the several spaces that he has passed through during his entire (professional) life.

Rarely considered a strategy for multi-sited ethnography, the biographical method is nonetheless a common ethnographic method since almost a century.

Following the object or technology

Following the thing or technology is at least as natural a strategy to ANT scholars as following an individual. It involves tracing the circulation of a non-human object through different 'localities' and the role it plays in each of them. In an ideal scenario the ethnographic journey departs from the site where the object was put together. When objects are designed and created, they necessarily absorb the hypotheses made by the designer and manufacturer about the future context into which the object will be inserted. As such, designers inscribe a 'script' in the object that, when introduced in the new context, starts reconfiguring the context according the original assumptions of the designer and manufacturer (Akrich, 1992). The ethnographic journey continues to the sites where the object is inserted and where the script bends the users to its will. Of course, users have the choice not to comply with the script, with the high probability that the object will remain a chimera. It is through the users and their adaptation to the *script* that an object is rendered real or unreal, and considered to work or not to work (Akrich, 1992).

In the context of development aid, the ethnographer could, for instance, follow the design, diffusion, and use of a mobile phone based banking system, or a water potabilization plant. Luetchford (2006) followed Costa Rican Fair Trade coffee, from the coffee cooperatives in Costa Rica, over alternative trade NGOs, up to the Costa Rican agencies that negotiate the deals with the Northern buyers. Not an ethnography but a historical case study, Cherlet (2010) described how a script was inscribed into the seeds of the high-yielding crop varieties that were developed during the Green Revolution, and the impacts that this script had on the socio-technical organization of the farmers' life.

Following the metaphor, concept or discourse

Following a metaphor, concept or discourse means trailing its emergence and the alliance that sustained it, observing its ability to enroll allies, and describing its performative capacity in creating new socio-technical assemblages and 'localities'. By adhering to this strategy, the ethnographer ventures to set foot on the battlefield that surrounds Foucauldian ethnographies of development aid.

Salemink (2006) explores the effects of the international donors' emphasis on reinforcing civil society in Vietnam. He shows that the donor-set 'civil society objectives' were hard to translate linguistically, conceptually, and operationally in Vietnam's reality —which is characterized by an absence of a liberal civil society— while the Western NGOs were nevertheless evaluated against these Western 'civil society objectives'. As a result, Salemink's tale is one of "calculated misunderstandings".

In my own multi-sited ethnography, I traced the emergence of the Integrated Water Resources Management (IWRM) discourse in the sphere of multi-lateral organizations, and the deployment of the discourse in Mali's water sector (chapter 8). Besides ethnographic work in Mali, I carried out participant observations at the headquarters of an intergovernmental water organization as well as a non-governmental water organization that are both active in Mali. I showed that, from an ANT vantage point, the IWRM discourse works because a strong alliance of international and national actors *makes* it work.

Following the plot or project

The fourth strategy proposed by Marcus takes the narrative of a myth (in a broad sense) as starting point to allow the ethnographer to connect different real world sites and develop a multi-sited ethnography. In the case of development aid, the equivalent of a myth could be a 'project outline'. A development project is usually formulated by professional myth makers in a Western office far from the site of implementation, who inscribe in the project outline a strict script for all actors. When following a project, the ethnographer should thus trace the connections in two directions. First, he needs to trace the connections that link *backwards* and ask which elements were merged in the project formulation, by whom, and how: the juxtaposition to past or competing projects, the insertion of 'local' and 'global' elements, shifted delineations of matters of concern, etc. The second, opposite move needs to trace the connections that link *forward*, produced by the project's script: the creation of 'the local' through the project, the enrollment of new actors in the alliance, the reconfiguration of the network, etc.

Markowitz, who had collaborated with associations of Peruvian alpaca breeders in the past, uneasily noted, when she returned 5 years later, that the associations had radically moved from an agenda of political revendication to a purely commercial project. To

understand this shift she 'followed' the project trajectories from the grassroots NGOs in Arequipa to the donors in Lima and to the stakeholders in the rural Andes (Markowitz, 2001).

Whereas Markowitz followed all skeins being knitted at one single moment in time, Rossi (2004) followed a project for fighting against desertification from its early formulation in 1982 to its reformulation around the turn of the millennium. Although not explicitly based on a multi-sited ethnography, her description of the project formulation and reformulation adroitly commutes between the villages targeted by the project, the office of the project manager, and the sphere of international organizations.

Following the conflict

The last but definitely not the least interesting strategy consists of following a conflict. Consider for example the conflicts surrounding the construction of a controversial dam, or the creation of a large natural reserve in indigenous territory. By following the many strings that tangle in the Gordian conflict, the ethnographer can compose a meaningful multi-sited ethnography. Moreover, from the vantage point of ANT, a conflict sets the stage for a play in which numerous actors appeal to each other's knowledge and interests in order to create alliances. The conflict juxtaposes or ties together actors as diverse as: grassroots movements, national ministries, legal institutions, mass media, international environmental NGOs, etc. Each of the actors defines the own identity, matters of concern, and scale of the conflict in their own 'local' terms.

Where power conflicts are concerned, ethnography has a notable record of choosing the perspective of the silenced and the subaltern. Assuming an actor-network perspective, however, and moving the standpoint from one site to another, can open new windows on the conflict. It can reveal surprising links such as: the occasional coalescence of environmental discourses of grassroots movements with those of urban elite (Rangan, 2000), the interweaving of ideological values in supposedly objective environmental science (Forsyth, 2003), the seizure of an environmental issue to ventilate deeper political discontent (Robbins, 2012, p.199-214), or the occasional detrimental effect of mass media coverage to the environmental cause (Princen and Finger, 1994).

Multi-sited ethnographies of development aid are needed in order to reveal on the *links* between different sites. A number of suchlike ethnographies have been mentioned in this section. Only a very small number of them tried to include some ANT insights in their analysis.

10.5 Negotiating access and crafting an identity

As is common in ethnography, I conclude this article with a reflective note. Sticking to my objective of delivering a concrete method/tool package for empirical data collection, I limit myself to discussing practical issues directly related to the *multi-sited* character of the package. Whereas Latour asserts that he can easily come up with "two dozen ways" to shift *out* of any standpoint (Latour, 2005, p.145), the ethnographer's major concern is probably how to shift *into* another standpoint. In conducting multi-sited research, one encounters two major practical problems: first, many sites are shielded from outsiders, and second, the identity one assumes in the site determines how large the window on the site will be and which panorama one will view. Both issues are closely linked with the personal background and commitments of the researcher.

The first issue, gaining access, is perhaps the most difficult aspect of ethnography, especially when a participant observation is the goal (Bernard, 2006). Not only in indigenous communities it can be hard to pass the 'gatekeeper' (Kawulich, 2011), this is likewise the case in urban or western communities (Feldman *et al.*, 2003; Maginn, 2007), or in institutions (Schwartzman, 1992; Feldman *et al.*, 2003). According to my experience (see chapter 9) and that of others (Markowitz, 2001; Mosse, 2006), development experts or practitioners are fairly available for interviews but reluctant to tolerate a participant observation. Ethnographic description can indeed be experienced as undercutting or threatening to their professional authority, given that ethnography "examines the instability of meaning [and] detracts from the substance of official narratives" (Mosse, 2006). Especially in the case of large international organizations, the path to 'get inside' is laborious, and success is far from guaranteed. The permission to establish a long-term physical presence at the site arbitrarily depends on factors such as: the identity adopted by the researcher when knocking at the gate (social scientist, development expert, trainee, ...), the university that backs the research, the researcher's curriculum, references, language proficiency,... (Maginn, 2007).

My own case is paradigmatic. As a PhD student with a formal training in both hydraulic engineering and social anthropology, I could convince a water NGO as well as an intergovernmental water advocacy organization to accept a participant observation. Without a master degree in engineering, however, I would probably not have been granted the permission for a participant observation at their premises.

One strategy to increase the chances is to emphasize that both parties can gain from the research. The organizations that accepted my participant observation were those organizations that realized that thanks to my training and experience in hydraulic engineering I could productively contribute to their everyday activities. No one likes to feel that he or she is being used or that something has is taken without proper recompense (Kawulich, 2011). Therefore, some 'haggling' might be necessary to reach a balanced

reciprocity. This includes a willingness from the researcher's side to refocus the research when the host would benefit from research in an area other than the original area of interest (Lassiter, 2008).

If gaining access to a single site is hard, gaining access to the n sites in an n-sited ethnography is roughly n times as hard. Fortunately, the multi-sited setup of the research can be used as leverage in the negotiation of access. A development professional, for instance, might be interested in the information that the ethnographer will collect in his multi-sited research. Development professionals *do* realize that a multi-sited ethnography can throw a unique, multi-faceted light on their work.

The bottom line is that the issue of access is absolutely crucial for the research. One might develop the most brilliant research outline, but if no access is granted to the data, there is no research. Therefore I plea for a pragmatic approach in the construction of a multi-sited ethnography. I started in one site where access was relatively easily granted. From that site, uncountable links led to myriad other sites. My choice to trace some links rather than others was largely determined by the access permits I could obtain along the path—not the intrinsic interest of one link over another. Obviously, this strategy cuts out only a limited section of the entire actor-network, but partiality and situatedness are anyhow to be accepted as inevitable (see chapter 9). As stated earlier, multi-sited ethnography does not have the ambition to be more holistic than single-sited ethnography.

The second issue, crafting an acceptable identity, is one of epistemological concern. Once access is granted to the site, the identity and attitude of the researcher will determine the depth to which the informants will allow his to dig, and where. Depending on which identity is crafted, new spaces will open up and others will remain shielded off (Coffey, 1999). It is self-evident, for instance, that only a female ethnographer could have access to the intimate life world of Bedouin women (Abu-Lughod, 1986). In most cases, however, the role of identity is more subtle. For the collection of ethnographic data among Muscogee (Creek) people, playing the identity of 'farmer's daughter' proved to be a better gambit than playing the identity of 'academic researcher interested in contemporary Muscogee culture' (Kawulich, 2011). However, the ethnographer is not always in control. The status and position of the gatekeeper that granted the access to the site will vest the ethnographer with a specific identity that can open new doors in a snowballing manner, but will as well close others (Feldman *et al.*, 2003).

In my own multi-sited research on development aid in water management, I overtly entered the headquarters of a water NGO as an observer, but was forced to assume the role of trainee when I tried to enter a multilateral organization. As a result, attending closed meetings was obvious in the former site but somewhat harder in the latter. In the rural Malian villages, the third site of inquiry, I was careful not to present myself as collaborator of the water NGO but as independent researcher. By contrast, in order to get access to the representatives of the European Commission in Mali, I was more

successful when wearing the hat of the NGO than the hat of academic researcher.

The aforementioned remarks apply to any participant observation. A multi-sited ethnography, however, complicates the identity issue even further, as the work in one site influences the position of the researcher in another site. Although I entered the multilateral water organization in the capacity of trainee, thanks to my preceding field work in Mali and collaboration with a water NGO, I managed to acquire a certain status of authority on 'local' issues within the multilateral organization. It notably increased the trust in my work and loosened the tongues.

My experience, accumulated in the different sites, had also another effect. Having taken cognizance of the reality in Mali, and having observed the everyday preoccupations of the individual employees at the headquarters of different development organizations, it was hard to suppress emotions that oscillated between *pity* and *perplexity*, when realizing that each of the sites, although interlinked in multiple ways, is incredibly detached from the others. I experienced each site as a new world, *parallel* to the other sites I had observed, not a world *above* or *beneath* the other sites. Marcus believes that multi-sited ethnography definitely eliminates the possibility of doing non-engaged observations, not because of some preference for the subaltern, but because the multi-sited methodology in itself constitutes a form of *disciplinary* activism:

> "In certain sites, one seems to be working with, and in others one seems to be working against, changing sets of subjects. This condition of shifting personal positions in relation to one's subjects and other active discourses in a field that overlap with one's own generates a definite sense of doing more than just ethnography, and it is this quality that provides a sense of being an activist for and against positioning in even the most self-perceived apolitical field-worker" (Marcus, 1995).

In ANT as well there is some form of activism: the political project of welcoming and giving voice to *any* possible actors, in an attempt to reassemble our common social world, free from the limits that had been prematurely imposed by modernist thinking (Latour, 1993, 2004, 2005). In ANT's quest of detecting links that had sunk into oblivion, multi-sited ethnographies are indispensable.

Part IV

Conclusions

Chapter 11

Conclusions of the research

> *The emergent when it appears is always found to follow from the past, but before it appears it does not, by definition, follow from the past.*
> George H. Mead — The Philosophy of the Present

Various scholars share with me a feeling of amazement when observing that the actors involved in development aid *manage to work together* (e.g Mosse, 2004, 2005b; Gould, 2008). In fact, despite the continuously shifting ideas about 'good' and 'bad' ways of delivering aid, despite the immense heterogeneity of actors involved in the development aid machinery, and despite the very situatedness of these actors' knowledge, the actors display a high degree of congruence in implementing development ideas and projects that seems to extend from the donor, over the professional consultant, to the village chief.

Therefore, the main research question was: *Given this immense heterogeneity and these continuous policy shifts, how can their homogeneous support for a specific development paradigm or paradigm shift be explained?* This question led to three sub-questions: First, where does a new development paradigm (and the related paradigm shift) come from? Second, how does a new paradigm gain new support of the entire network? Third, is there actually congruence amongst all actors or is this just an appearance?

An answer to the research questions was sought by collecting qualitative data regarding the dynamics of development paradigms that appeared to be hegemonic in the development aid network.

Different theoretical viewpoints reveal different stories in the data

Data collection and analysis happened by means of the *Grounded Theory Method*. At the start of the data collection phase, the research field had been limited to the water sector, yet no particular sites (other than the first) had been selected. In fact, faithful to GTM, the data collection started with no hypothesis nor a clear delineation of the field in mind. As the first participant observation proceeded, two subsequent sites were

selected for participant observation, based on their links with the first site and based on the ongoing theorizing. The first site was the head office of an international development NGO specialized in water projects, the second site was the Inner Niger Delta in Mali, and the third site was the global secretariat of an multilateral network organization that promotes the integrated management of water.

From the participant observations soon emerged that the field of inquiry would be further reduced to three (apparently) hegemonic paradigms in the water sector. The first was 'Integrated Water Resources Management' (IWRM) as best practice, the second was 'Capacity Building' as mode to deliver the aid, the third was 'Adaptation to Climate Change'. During the data collection and analysis, however, 'Adaptation to Climate Change' was gradually abandoned as separate paradigm, and was only considered in relation with IWRM.

The theorizing concerning the three research questions happened together with the data collection and resulted in a theoretical journey from a more Foucauldian interpretation to a more actor-oriented interpretation (see Table 11.1). Therefore, the four articles that compose the empirical part of this dissertation give answers to the research questions from different theoretical perspectives. First, a historical analysis of the emergence of the 'Capacity Building' paradigm solicited the use of the Foucauldian concept *genealogy*. The empirical observations concerning the actual use of the 'Capacity Building' paradigm were best explained using the concept of *translation*. The third empirical chapter moved the focus to the IWRM paradigm, and showed the importance of *individual agency* rather than the *discursive power* of the paradigm for the implementation of IWRM in Mali and Burkina Faso. The last empirical article relied on full-blown *Actor-Network Theory* to

	CB paradigm	**IWRM paradigm**
Foucauldian	Chapter 5 *Genealogy* (archive data)	
Actor-oriented	Chapter 6 *Translations of interest* (ethnographic)	
		Chapter 7 *Actors, Agency* (interviews, archive data)
		Chapter 8 *Actor-Network Theory* (ethnographic, archive data)

Table 11.1: Theoretical approaches and main data sources of the four empirical chapters.

describe the network that supports the IWRM paradigm. The latter resulted to be the most articulated tool to describe the eclectic collection of data that was obtained from the multi-sited ethnography, interviews, focus group discussions and documents.

As the four empirical articles of Part II demonstrate, one theory cannot explain everything. Just like some physical properties of light can only be explained by means of the 'wave theory', and others by the means of the 'particle theory', the emergence of a paradigm and its implementation can be viewed through genealogical spectacles as well as actor-oriented spectacles. The conclusions that are drawn from the two different analyses are not contradictory—they are complementary.

Paradigms have age-long lines of descent

Chapter 5 explored the origins of paradigm shifts, by having a closer look at the emergence of 'Capacity Building' (CB) as hegemonic paradigm in development cooperation. If this paradigm is interpreted as an opposition to the 'technological determinism' ingrained in traditional 'technical cooperation'—as argued by the proponents of CB themselves—CB needs to be placed in an age-long genealogy of discussions about the role of knowledge and technology (K&T) in development. Chapter 5 showed that the genealogy of these discussions goes back to Enlightenment—the moment in history that the very 'development' idea took shape. At any moment in history, since the Enlightenment until today, more deterministic and less deterministic interpretations concerning the role of K&T in development have existed along each other and yet the one or the other extreme prevailed. CB, the currently hegemonic paradigm in development cooperation, is no more than the latest non-deterministic discourse concerning K&T in development.

The development industry has a very strong propensity to reflection, auto-evaluation, and auto-correction (Gould, 2008). This reflex, however, does not seem to go back in time more than a couple of years, a decade at best. Promoters of CB, however noble and justified their case might be, would do well to realize that their arguments bear many similarities with some of the criticism issued in the early 1950s against Technical Assistance (TA), when the latter was still in its phase of inception. But this advice, to look further than one decade back in time, applies even the more to those who promote deterministic paradigms of 'K&T in/for development'.

Actors, their agency, and their context-specific translations are crucial

While in Chapter 5 the descent of CB was still viewed through a Nietzschean/Foucauldian genealogical lens, the ethnographic data collected at the different sites directed the theorizing towards more actor-oriented theories. The spread of the CB paradigm and the IWRM paradigm, their influence on policy makers and development professionals around

the globe, their rise to hegemony, their resilience and mutations, and their downfall all depend on the agency of actors.

The ethnographic data showed that the CB paradigm, for instance, is interpreted differently at various points in the development network —from the donor to the rural municipalities in Mali's Inner Niger Delta. The data presented in chapter 6 elicited that the link between the abstract CB paradigm and its implementation on the ground exists only by virtue of numerous mediators and intermediaries that, perforce, interpret the paradigm (and related policies) differently. The often blamed 'gap' between policy making and practice is bridged by the multiple small shifts in interpretation. Moreover, *all actors actively translate* the new policy according to their own interests, in order to reaffirm the own position in the complex network that bridges the 'gap'. Therefore, the paradigm (and related policies) only fails when a number of actors decides to desert the network, provoking the disintegration of the network.

Also the ethnographic data concerning the IWRM paradigm (Chapters 7 and 8) showed the essential role of individual actors. Although some critics have described IWRM as just another "nirvana concept" for water scholars and practitioners (Molle, 2008), our account showed that, in reality, IWRM required the relentless work of individuals in order to become hegemonic in the sphere of multilateral organizations (Chapter 8) and to be implemented at country level (Chapter 7).

Chapter 7 described the complex interplays of policy entrepreneurs at the multilateral level and policy entrepreneurs at the national Burkinabé and Malian level in shaping the water policy reforms in both countries over the past 15 years. Despite the global hegemony and apparent uniformity of the IWRM paradigm, the qualitative comparison of IWRM-inspired water policy changes in the two neighboring countries showed that the reforms, as well as the way in which they are 'owned' by national policy makers, are significantly distinct. The differences boil down to different levels of individual *agency* that conditioned the observed policy reforms.

The hegemony and success of the paradigm sits on a tight network of human and non-human actors

Chapter 8 zoomed out from the country-centered focus and brought the temporal and spatial extent of the IWRM network in the picture. The actors that sustained the emergence of the IWRM paradigm in the multilateral sphere two decades ago, the actors that introduced IWRM in Mali through governmental development aid, and the actors that implemented IWRM through non-govenrmental aid, they are all connected by numerous translations in one single network. The network of actors that supports IWRM has managed to *construct* a solid alliance over space and time because they constantly negotiate and translate each other's interests in order to enroll one another. Non-human actors

—e.g. the typical aid financing mechanism, the Dublin Principles for IWRM, organizations such as GWP or WWC, or the Niger river— have proven to be important anchorage points for the alliance.

The network constructs 'success'

The skeptic reader might rightly wonder whether Actor-Network Theory (Chapter 8) and the idea of 'translations' (Chapter 6) really add to our understanding of the development aid architecture. Perhaps, these actors, located at different points in the network, are very nimble at playing to the donor's tunes? Doesn't the alliance of actors simply align along the already well scoured flows of donor money?

The Chapters 6 and 8 showed that the 'success' or 'failure' of the paradigm depends on the strength of the alliance, not the strength of the paradigm. So, contrary to intuitive conclusions, the data showed that the donor money follows those alliances that are performing. Taking a different tack than Foucauldian analyses, I argue that paradigms such as Capacity Building or IWRM derive their success from the loads of work that is being done 'behind the stage' by various actors in order to continuously tie in more allies in the assemblage, and to *make* the paradigm work. In other words, the paradigm performs because a network of actors makes it perform. "Only voices speaking in unison will be heard" (Callon, 1986). An alliance that performs, is also an alliance that attracts donor money. My tracing of IWRM (Chapter 8) showed that much effort had to be but in the IWRM assemblage before it attracted money: the money is an indicator that the network performs—not the other way around.

Power relations do not explain much—power needs *to be* explained

Other critics might object that the use of 'translations' (Chapter 6) and Actor-Network Theory (Chapter 8) to describe the networks of actors behind the paradigms naively ignore 'existing power relations'. At the end, critics might argue, the outline of the Capacity Building and/or IWRM networks simply mirror existing donor-recipient structures.

The reply is simple. As stated in the theoretical Chapter 10, Actor-Network Theory has an abhorrence of *pre-conceived* social structures (such as power), especially when they are employed to *explain* social phenomena (such as unequal access to aid). Unlike Foucauldian analyses that consider discourse to be the overpowering force that precedes and encompasses all agency, power in Actor-Network Theory is *constructed*. Yes, power does curb the agency of other actors—but instead of conceiving it as a metaphysical entity, ANT tries to describe power as *constructed* by the actors and embedded in the assemblage.

For one thing, one actor never controls the network, not even one action. Danida alone did not put IWRM on the international agenda in the 1990s; it needed a tight network of

allies in order to be heard. IWRM planning in Mali and Burkina Faso was not exclusively donor-driven; the process required national and international water professionals to come up with the idea and consultants to elaborate on them.

ANT does recognize, however, the differential pressures that are brought to bear on the network by different actors, some actors simply adding predictability to the setting, other actors shaping and transforming the assemblage in unexpected ways. In other words, some mediators are able to alter the network more deeply than others. Indeed, if all actors would be fully-fledged mediators, able to alter the network at will, the network would be flat and egalitarian. Hence, power inequalities in the network result from differences in this ability to translate and enroll other actors. The actors that are most nimble in bending the network, or the ones that have knitted most ties, are the most powerful mediators. These different abilities of the actor to translate and enroll are off course path-dependent, and depend on the position of the actor in the network. That the chair of the GWP Technical Committee was also director of the Water Division of DHI, a senior advisor to Danida, as well as involved in the preparation of Rio 1992, made him a very powerful mediator in the network, able to alter the network deeply.

He did, however, never act alone. He derived his network-altering power from employing other actors, most of them coming from other times and spaces (Latour, 2005, p.166). DHI as organization existed before he became head of its Water Division. The Rio 1992 conference was planned before he got involved in the preparation of the water chapter. And otherwise, *his* network-altering power has been inscribed into non-human actors that will continue to over-flow future times and other spaces. Although new people occupy the chair of the GWP Technical Committee and the Water Division of DHI, the two organizations still collaborate. The Dublin Principles that he helped to formulate during the run up to the Rio 1992 conference are still being cited.

In fact, non-human actors such as an advocacy organization, a water management principle, an aid financing mechanism, or a water dam are effective and persistent mediators of power relations (Law, 1986) —usually much more effective and persistent than inter-human ties, since the latter require more maintenance than the former. These non-human artifacts incorporate a 'script', consciously or unconsciously written by the designers of the artifact, that has the power to establish, reconfigure and naturalize the social, political and economic relations that surround the artifact—now and in the future.

Limitations of the research

The research was consciously limited in two ways: by focusing on the water sector and by focusing on three paradigms only. Therefore, the conclusions of this research only apply to this sector and these paradigms. Obviously, the research had other limitations.

First, as described in the theoretical Chapter 10, I conducted my multi-sited ethnog-

raphy by 'following paradigms'. In doing so I presumed the existence of trajectories that *can* be followed. In other words, I cannot know whether I *really* followed the trajectories of the paradigm or whether I created them myself.

Second, I selected paradigms that had already reached a hegemonic status in the network. No serious efforts have been made to analyze the failure or demise of a paradigm, nor to analyze a paradigm that never reached hegemonic status. The dynamics that explain the support for a new paradigm do not necessarily explain the opposite movement.

Third, the identity and attitude that I assumed in each of the sites determined the type of data that I could collect, and the depth to which the informants allowed me to dig. For instance, I overtly entered the headquarters of the water NGO as an observer, but was forced to assume the role of trainee when I tried to enter the multilateral organization. As a result, attending closed meetings was obvious in the former site but harder in the latter. In the rural Malian villages, the third site of inquiry, I was careful not to present myself as collaborator of the NGO but as independent researcher. By contrast, in order to get access to the representatives of the European Commission in Mali, I was more successful when wearing the NGO hat than the academic hat.

Further research

A natural extension of the research would consist of completing the Table 11.1. On the one hand, an analysis of the sequence of different water development paradigms over the past 70 years (their *genealogy*), and their mutual oppositions, would definitely add more insights to the functioning of the development aid sector. On the other hand, a comprehensive *ANT description* of Capacity Building could validate my argument that ANT can be applied to the development aid sector to reveal certain of its dynamics.

However, it could be more innovative to analyze the *demise* of a hegemonic paradigm, or to analyze a paradigm that *never reached the status of hegemony* and that remained in oblivion. Bruno Latour did something similar when he studied Aramis, the innovative Parisian transport system that never was (Latour, 1996).

A third path for further inquiry would exclusively focus on water management in the Inner Niger Delta. As briefly mentioned in the description of the Inner Niger Delta (Chapter 3) and in the ANT analysis of IWRM in Mali (Chapter 8), access to water and land in the Inner Niger Delta used to be regulated by a century-old system of customary laws: the *Diina*. Since the creation of municipalities as lowest decentralized level of governmental decision-making in the early 1990s, the municipalities have become the main competent body in matters of environmental resources management in their territory. However, two decades later, they still need to compete with the *Diina* system (Benjaminsen and Ba, 2008). The interaction between government-supported IWRM and the traditional *Diina*-based water management definitely deserves further scrutiny.

Chapter 12

Practical implications of the research

> Life cannot wait until the sciences explain the universe scientifically.
> José Ortega y Gasset — Cultura y ciencia

The following practical implications need to be taken with caution, since they are based on *one* qualitative study only: the case of development aid to water management. They are largely based on my own extrapolation of limited research results, and are obviously interspersed with personal opinion. Nevertheless, they are supported by the findings of other anthropologists as well (such as Mosse, 2004, 2005b).

New ideas need a fertile context *and a lot of work* to emerge

The community of development professionals is well aware of their own funny habit to come up at regular basis with new ideas, concepts or policies for 'better' development aid.[1] Therefore, development professionals themselves readily mock the overpowering but transitory attraction of bandwagon concepts, and the necessity to "speak the right language at the right time."[2]

These new ideas or policies do not appear overnight but usually have a long line of descent. This has two implications. First, new ideas pop up when the time is right, or in other words, when the intellectual and political context is right. Second, usually these new ideas or policies are not as original as they suggest. Development assistance has a history of nearly seven decades. Nearly all contemporary discussions echo discussions of some earlier times. The argument that capacity building should prevail over the transfer of knowledge and technology, for instance, dates back to at least the early 1970s.

Nevertheless, a new idea or policy needs the unrelenting work of dedicated individuals in order to become hegemonic. 'Integrated Water Resources Management' (IWRM) might

[1] In my dissertation I collected them under the denominator 'paradigm'.
[2] Personal communication of an aid professional, 26 July 2011.

be considered by some as a transitory fad or fashion in water management, but it required a lot of work of some 'champions' and organizations so that IWRM would be inscribed in the water policies of more than 80% of the countries in the world. And once on the fore, the new idea or policy continues to require a strong network of actors in order not to vanish.

Where a gap between policy making and practice exists, it is *created*

A new idea or policy that becomes hegemonic in development aid does not act in a homogeneous way; neither is its implementation homogeneous. A new idea or policy is secured upon a vast network of actors that, depending on their position in the network, interpret the idea or policy differently. The idea or policy *has* to be interpreted differently by each actor. All actors —regardless of whether they constitute the donor, a mediator, or the aid recipient— implant their own interests in their interpretation of the idea or policy (the actors 'translate' their interests). These translations, that slightly differ from one actor to another, are necessary to cement and reproduce the network.

Therefore, when an idea or policy fails, this cannot be attributed to a 'gap' between policy making and practice, nor to the 'ill-conception' of the policy (Latour, 1996, p.78):

> If we say that a successful project existed from the beginning because it was well conceived and that a failed project went aground because it was badly conceived, we are saying nothing, we are only repeating the words 'success' and 'failure', while placing the cause of both at the beginning of the project, at its conception.

The idea or policy fails when (some part of) the network *wants* it to fail.

Power and dependence are reproduced in very *concrete ways*

The indisputably unequal power relations in development aid are not inscribed in some metaphysical stratum that occludes all actors and actions in an invisible and unavoidable manner. Instead, inequality is inscribed in very concrete agreements, tangible artifact, and human-made procedures.

For instance, the guidelines and procedures of the calls-for-proposals of the European Commission, together with its PADOR database of eligible aid recipients, are an effective set of tools that maintains and reproduces donor-recipient inequalities. Or, the choice of a Western NGO to assist a municipality in the South with the construction of drinking water infrastructure, but to nevertheless bypass the treasury of that municipality in order to maintain control over the aid money, perpetuates the unequal relationship between the NGO and the municipality.

In other words, unequal power relations are not a coincidence nor invisible. They are reproduced day after day by the actors, through the connections they make with other actors, and the agreements, procedures and artifacts they forge.

Appendices

Appendix A

Summary in English

Introduction and research question. Anthropology rarely manages to approach 'the social practice' of delivering development aid as research subject *per se*, without succumbing to discussions on the desirability or effectiveness of this practice. Indeed, there is a wide abyss between, on the one hand, critical but lofty contemplations that deconstruct 'development' as hegemonic Western *ideal*, and, on the other hand, applied but hidebound evaluations that merely focus on increasing the effectiveness of 'development aid' as *instrument*. In this abyss lies important anthropological knowledge that is not readily explored, to wit, knowledge about the social interactions *in themselves*, about the actors' strategies, how they handle the diversity, or how they translate an abstract policy into a concrete development project. A growing stream of 'ethnographies of aid' are now exploring the social organization of aid *as such*, and the present research situates itself in this current.

The research departed from the observation of an apparent contradiction. Development aid is delivered through a complex network of myriad actors, such as donors, multilateral agencies, consultants from the Global North and South, the private sector from the Global North and South, governmental administrations, village chiefs, grassroots NGOs, and farmers. These actors possess incredibly diverse world views, cultural backgrounds, interests, resources, and outreach. Despite this heterogeneity, though, when it comes to delivering aid and implementing projects, all actors speak the same 'development jargon' and seem to display congruence; this congruence appears to extend from the donor over the aid professional to the village chief. And although the ideas about what counts as 'good' and 'bad' aid have constantly changed over time —with new paradigms and policies sprouting every few years— the *apparent congruence* between actors more or less remains unchanged.

This observation triggered the following research questions: How can the congruence between actors be explained against the background of heterogeneity and changing paradigms? When a new paradigm appears, where does it come from and how does it

gain support? Is this support actually homogeneous amongst all actors or is it just an appearance?

Research methodology. In order to get an answer to these questions, qualitative data concerning the emergence of, and support for, hegemonic development paradigms was collected from three different sites in the development aid network, via a multi-sited ethnography. From the outset the research focused on one sector: development aid in the water sector (this covers water management *and* access to drinking water).

The collection and analysis of the qualitative data followed the Grounded Theory Method. Faithful to this method, the research started without any particular theory, hypothesis, or field delineation in mind. During the first of three participant observations, three paradigms emerged as worthwhile to be concentrated on:

- 'Integrated Water Resources Management' (IWRM) as best practice;
- 'Capacity Building' as mode to deliver the aid;
- 'Adaptation to Climate Change' and its implications for the IWRM paradigm.

From the data collected at the first site followed the selection of two subsequent sites of inquiry. The three sites of inquiry were, in chronological order, the following:

- the international headquarters of WaNGO, a non-governmental development organization specialized in implementing water projects in Africa and Latin America, one of which in the Inner Niger Delta in Mali;
- six rural villages in the Inner Niger Delta in Mali;
- the international headquarters of the Global Water Partnership (GWP), an intergovernmental organization founded by the World Bank and UNDP that fosters the integrated management of water resources worldwide, including in Mali.

Eventually the complete corpus of data consisted of 13 months of participant observation at three sites, 48 interviews, 21 focus group discussions and over 50 official documents.

Outline of the dissertation. The dissertation, which reports the above-described research, is conceived as a collection of six original articles. Part I of the dissertation sets the scene for the six articles; part II collects four empirical articles that answer the research questions; part III contains two theoretical articles that reflect on the research methodology; and the final section, part IV, reformulates the findings of the six articles in both scholarly and practical terms. Each of the six articles in part II and III stands on its own and can be read independently of the rest. They are summarized in the following paragraphs.

The four empirical articles in Part II present the data that was collected concerning 'Capacity Building' and 'Integrated Water Resources Management' (IWRM). During the data collection and analysis, 'Adaptation to Climate Change' was abandoned as separate paradigm, and was only considered in relation with IWRM. Each of the empirical articles reports and analyzes data concerning one of the paradigms in order to give an answer to one of the research questions. However, each article uses a slightly different theory to present the data, mirroring different stages in the data collection and grounded theorizing.

The first empirical article (**Chapter 5**) probes the origins of paradigm shifts, by unearthing the *genealogy* of Capacity Building, a currently hegemonic paradigm in development cooperation. If this paradigm is interpreted as an opposition to the technological determinism ingrained in traditional Technical Cooperation —as argued by the proponents of Capacity Building themselves— Capacity Building can be considered as the latest offspring of an age-long genealogy of discussions on the role of knowledge and technology in development. In fact, it is shown that the genealogy of these discussions dates back to the Enlightenment. Moreover, at any moment in history, more deterministic and less deterministic interpretations have existed along each other, with the sequence of development paradigms swinging back and forth between both extremes. Capacity Building is, hence, no more than the latest non-deterministic paradigm concerning the role of knowledge and technology in development.

As is the case with Capacity Building, new development paradigms are usually presented as the thaumaturgic successor of a previous failing paradigm —with failure usually being attributed either to the misconception of the previous paradigm, or to a gap between the original paradigm and its practical implementation. In the case of Capacity Building, the failing predecessor was Technical Assistance. This dichotomized image of the paradigm and its implementation as two monolithic and separate entities is untenable. In fact, the ethnographic data adduced in the second empirical article (**Chapter 6**) shows how the Capacity Building paradigm is interpreted differently at various points in the development network —from the donor to the rural municipalities in Mali's Inner Niger Delta. The link between the donor and the Malian municipalities exist only by virtue of numerous mediators and intermediaries that, perforce, interpret the paradigm differently. Therefore it is hard to claim the existence of a 'gap'. Moreover, all actors actively *translate* the new paradigm according to their own interests, in order to reaffirm the own position in the network and in order to reproduce the network. Hence, the paradigm stands or falls with the integrity of the network.

The third article (**Chapter 7**) is the first of two articles to have a closer look at the IWRM paradigm. Definitely moving away from the idea that paradigms have an overpowering and disembodied discursive power, this article highlights the *role of individual agency* in the deployment of a paradigm. Taking the introduction of the IWRM paradigm in Burkina Faso (in 1996) and Mali (in 2004) as entry point, the article de-

scribes the interplay between national policy entrepreneurs, international organizations, and structural constraints in the shaping of the IWRM-inspired water policy reforms in the two countries. Despite the apparent uniformity of the IWRM paradigm, the qualitative comparison of the policy change process in the two countries shows that the reforms, as well as the national 'ownership' of these reforms, are significantly distinct. The idiosyncrasies of the reform dynamics and ownership largely depend on the agency displayed by individual policy entrepreneurs.

The last empirical article (**chapter 8**) traces the network of actors that sustained the emergence of the IWRM paradigm in the multi-lateral sphere two decades ago and the implementation of IWRM in Mali through governmental and non-governmental development aid. The article displays the most advanced level of theorizing in the dissertation, as it found inspiration in *Actor-Network Theory* to describe how actors enroll each other in an alliance that makes the paradigm work. Non-human actors —e.g. the typical aid financing mechanism, the Dublin Principles, the organization GWP, or the Niger river— have proven to be important anchorage points for the alliance. Yet, the alliance that once was so strong, seems to be disintegrating now, and actors are compelled to renegotiate IWRM by drawing in 'climate change'. In resonance with Chapter 6, Actor-Network Theory proves helpful in showing that the 'success' or 'failure' of the paradigm depends on the strength of the alliance, not the strength of the paradigm.

The two theoretical articles in Part III reflect on the use of, respectively, the Grounded Theory Method and multi-sited ethnography. Although the classic Grounded Theory Method requires the data collection to be dissociated from existing theories, it is argued in the first reflective article (**Chapter 9**) that there are at least four forms of unavoidable, theoretical conditioning in the data collection: (1) the framing of the research problem, (2) the implicit ontological assumptions about the world and the problem under scrutiny, (3) the delineation of the site of data collection, and (4) the theory-ladenness of observations. Drawing on the experience of the multi-sited ethnography, the article exemplifies this data conditioning and its impact on the grounded theorizing. It is asserted, however, that this conditioning does not invalidate the Grounded Theory Method as such, but that it should be made explicit throughout the process of theorizing. Therefore, a case is made for post-modern advances in the Grounded Theory Method, by allowing novel ontological categories from Discourse Theory and Actor-Network Theory to enter the theorizing. In the most advanced phase of theorizing in the present research, the latter theory provided powerful categories for the description of the data.

In an *ex post* reflection on the data collection and the data description, the second reflective article (**Chapter 10**) points out that multi-sited ethnography as data collection method and Actor-Network Theory as descriptive tool constitute, in effect, a powerful method/tool package to describe the social interactions in development aid. The article shows that the method and the tool are particularly geared to each other. Subsequently, it

is shown that the package allows the analyst to move beyond the persistent global/local and policy/practice dichotomies that characterize many development policy analyses. Further in the article, George Marcus' six operational strategies for multi-sited ethnography are translated to the context of development aid. To conclude the article, the author draws again on the experience of the conducted multi-sited ethnography to reflect on the peculiarities of gaining access to, and forging an identity in, the different sites.

Conclusions. The four empirical articles experiment with different theoretical concepts to present the data. Starting with a *genealogical* description of the Capacity Building paradigm in the first empirical article, the theorizing subsequently demonstrates that this paradigm gets *translated* in numerous ways. The third empirical article shows the importance of *individual agency* in the implementation of the IWRM paradigm, and the last relies on full-blown *Actor-Network Theory* to describe the network —widespread in time and space— that supports the IWRM paradigm. Although each theoretical perspective emphasizes different aspects of the data, Actor-Network Theory turns out to be the most apt tool to describe the eclectic set of data that was obtained from multi-sited ethnography, interviews, focus group discussions and documents.

Regarding the research questions, the data shows that neither the Capacity Building nor the IWRM paradigm shift happened overnight; they have a long line of descent. More importantly, they needed the unrelenting work of a small number of dedicated individuals to become hegemonic and they continue to require a strong network of actors to remain so.

Moreover, these paradigms are no monolithic entities; neither is their implementation. No 'gap' between paradigm and implementation is observed, but only a vast network of actors that collectively adhere to the paradigm and that, depending on their position in the network, interpret the paradigm differently. All actors implant their own interests in their interpretation of the paradigm (the actors 'translate' their interests), regardless of whether they constitute the donor, a mediator, or the aid recipient. These translations are necessary to cement and reproduce the network: actors enroll each other in the network by translating interests. The strength of a novel development paradigm depends on the strength of the network and the translations.

The limitations of the reported research are obvious: it is based on a small selection of paradigms from only one aid sector. The results might not be generalizable. Moreover, the research focused on paradigms that were said to be *working*; no data was collected on the demise or failure of development paradigms. The latter could be the topic of future research.

Appendix B

Summary in Italian

Introduzione e domanda di ricerca. L'antropologia raramente riesce ad affrontare 'la pratica sociale' di fornire aiuti allo sviluppo come oggetto di ricerca *in sé*, senza soccombere alle discussioni sulla necessità o sull'efficacia di questa pratica. Infatti, vi è un profondo abisso tra, da un lato, le critiche ma ampollose contemplazioni che decostruiscono lo 'sviluppo' come *ideale* occidentale e, dall'altro, le applicate ma grette valutazioni che si concentrano meramente per aumentare l'efficacia degli 'aiuti allo sviluppo' come *strumento*. In questo abisso giace un importante sapere antropologico che in gran parte rimane inesplorato, cioè, la conoscenza sulle interazioni sociali *in sé*, sulle strategie degli attori, il modo in cui gestiscono la diversità o il modo in cui traducono una politica astratta in un progetto di sviluppo concreto. Un flusso crescente di etnografie dell'aiuto però inizia ad esplorare questo abisso e la presente ricerca si colloca in questa corrente.

La ricerca è partita dall'osservazione di un'apparente contraddizione. L'aiuto allo sviluppo avviene attraverso una complessa rete di innumerevoli attori come i donatori, le agenzie multilaterali, i consulenti del Nord e del Sud Globale, il settore privato del Nord e del Sud Globale, le amministrazioni governative, i capi villaggio, la società civile e gli agricoltori. Le visioni del mondo, i background culturali, gli interessi, le risorse ed i raggi d'azione di questi attori sono incredibilmente diversi. Nonostante la loro eterogeneità, quando si tratta di implementare progetti di cooperazione, tutti gli attori parlano lo stesso 'gergo di sviluppo' e sembrano mostrare congruenza; tale congruenza pare che si estenda dal donatore al professionista dell'aiuto, fino al capo villaggio. E anche se le idee su cosa considerare 'aiuto buono' e 'aiuto cattivo' sono costantemente cambiate nel tempo —con nuovi paradigmi e politiche che spuntano ogni paio d'anni— l'apparente congruenza tra gli attori rimane quasi invariata.

Questa osservazione ha innescato le seguenti domande di ricerca: Come può essere spiegata la congruenza tra gli attori alla luce dell'eterogeneità e dei paradigmi volubili? Quando appare un nuovo paradigma, da dove proviene e come fa ad ottenere sostegno? Questo sostegno è realmente omogeneo tra tutti gli attori o è solo un'impressione?

Metodologia di ricerca. Al fine di ottenere una risposta a queste domande, sono stati raccolti dei dati qualitativi —relativi all'emersione e al sostegno di paradigmi di sviluppo egemonici— da tre diversi punti nella rete di attori dello sviluppo, attraverso un'etnografia multi-sito. Fin dall'inizio, la ricerca si è focalizzata su un unico settore: gli aiuti allo sviluppo nel settore idrico (che include la gestione delle risorse idriche e l'accesso all'acqua potabile).

La raccolta e l'analisi dei dati qualitativi ha seguito il metodo della 'grounded theory'; fedele a questo metodo, la ricerca è iniziata senza particolari teorie, ipotesi o delimitazioni di campo in mente. Durante la prima delle tre 'osservazioni partecipanti' sono emersi tre paradigmi su cui si è deciso di concentrarsi:

- la 'Gestione Integrata delle Risorse Idriche' (GIRI) come 'best practice';
- 'Capacity Building' come modalità per fornire gli aiuti;
- 'l'Adattamento ai Cambiamenti Climatici' e le sue implicazioni sul paradigma GIRI.

Dai dati raccolti nel primo sito è derivata la selezione dei due siti d'indagine successivi. I tre siti di indagine sono stati, in ordine cronologico, i seguenti:

- la sede internazionale di WaNGO, un'organizzazione di sviluppo non governativa specializzata nell'implementazione di progetti idrici in Africa e in America Latina, uno dei quali nel delta interno del fiume Niger in Mali;
- sei villaggi rurali nel delta interno del fiume Niger (DIN) in Mali;
- la sede internazionale della Global Water Partnership (GWP), un'organizzazione intergovernativa fondata dalla Banca Mondiale e UNDP che promuove la GIRI in tutto il mondo, incluso il Mali.

Alla fine, la banca dati completa consisteva in 13 mesi di osservazione partecipante in tre siti, 48 interviste, 21 focus group e più di 50 documenti ufficiali.

Schema della tesi. La tesi, che descrive suddetta ricerca, è concepita come una raccolta di sei articoli originali. La parte I della tesi prepara la scena per i sei articoli, la parte II raccoglie quattro articoli empirici che rispondono alle domande di ricerca, la parte III contiene due articoli teorici che riflettono sulla metodologia di ricerca e la parte IV riformula i risultati dei sei articoli, in termini sia accademici sia pratici. Ognuno dei sei articoli nella seconda e terza parte è a sé stante e può essere letto indipendentemente dal resto: tali articoli vengono riassunti nei seguenti paragrafi.

I quattro articoli empirici della parte II presentano i dati che sono stati raccolti in materia di 'Capacity Building' e 'Gestione Integrata delle Risorse Idriche' (GIRI). Durante la raccolta dei dati e l'analisi, 'l'adattamento ai cambiamenti climatici' è stato abbandonato come paradigma separato ed è stato considerato solo in relazione alla GIRI. Ogni

articolo empirico riporta e analizza i dati relativi ad uno dei paradigmi al fine di dare una risposta ad ogni domanda di ricerca. Tuttavia, ogni articolo utilizza una teoria leggermente diversa per presentare i dati, rispecchiando diverse fasi della raccolta dei dati e della teorizzazione (la 'grounded theorizing').

Il primo articolo empirico (**Chapter 5**) indaga le origini di un 'cambiamento di paradigma', concentrandosi sul paradigma Capacity Building, che è attualmente egemonico nella cooperazione allo sviluppo. Se questo paradigma viene interpretato come un'opposizione al determinismo tecnologico radicato nella tradizionale cooperazione tecnica —come sostengono i fautori stessi della Capacity Building— la Capacity Building può essere considerata come l'ultimo discendente di una genealogia secolare di discussioni su quale ruolo abbiano la conoscenza e la tecnologia nello sviluppo. Nell'articolo si dimostra che la genealogia di queste discussioni risale all'Illuminismo. Infatti, nonostante abbiano sempre coesistito delle interpretazioni più o meno deterministiche, in qualsiasi momento della storia l'uno o l'altro estremo è ha sempre prevalso—alternandosi. La Capacity Building è niente più che l'ultimo paradigma non-deterministico sul ruolo della conoscenza e della tecnologia nello sviluppo.

Come nel caso della Capacity Building, nuovi paradigmi vengono immancabilmente presentati come il successore miracoloso di un precedente paradigma fallito—e il fallimento di quest'ultimo viene invariabilmente attribuito alla sua erroneità inerente o a un divario tra il paradigma originale e la sua attuazione pratica. Nel caso della Capacity Building, il predecessore fallito era l'assistenza tecnica. Questa immagine dicotomizzata del paradigma e della sua attuazione come due entità monolitiche e separate è insostenibile. Infatti, i dati etnografici addotti nel secondo articolo empirico (**Chapter 6**) mostrano come il paradigma della Capacity Building sia interpretato in modo diverso nei vari punti della rete di attori—dal donatore ai comuni rurali nel delta interno del Niger in Mali. Il legame tra il donatore e questi comuni esiste solo in virtù di numerosi mediatori e intermediari che, necessariamente, interpretano il paradigma in maniera differente. Pertanto, è difficile sostenere l'esistenza di un divario. Inoltre, tutti gli attori traducono attivamente il nuovo paradigma in base ai propri interessi, al fine di riaffermare la propria posizione nella rete e riprodurre la rete stessa; quindi, la continuità o il decadimento del paradigma dipendono dall'integrità della rete.

Il terzo articolo (**Chapter 7**) è il primo di due articoli che esaminano più da vicino il paradigma GIRI. Allontanandosi in modo decisivo dall'idea che l'egemonia di un paradigma deriva da un potere discorsivo incorporeo e sovrumano, questo articolo mette in evidenza il ruolo del libero arbitrio individuale ('agency') nella diffusione e implementazione di un paradigma. Prendendo come punto di partenza l'introduzione del paradigma GIRI in Burkina Faso (nel 1996) e in Mali (nel 2004), l'articolo descrive l'interazione tra responsabili politici nazionali, organizzazioni internazionali e vincoli strutturali nelle riforme politiche dell'acqua in questi due Paesi. Nonostante l'apparente uniformità del

paradigma della GIRI, il confronto qualitativo del processo di riforma delle politiche dell'acqua nei due Paesi mostra che queste riforme, così come la 'ownership' nazionale di queste riforme, sono significativamente distinte. Le idiosincrasie sia delle riforme stesse sia della 'ownership' risultante dipendono in larga misura dal libero arbitrio ('agency') manifestato dagli individui, sia a livello nazionale che internazionale.

L'ultimo articolo empirico (**Chapter 8**) mostra il livello di teorizzazione più articolato della parte II. L'articolo ripercorre la rete di attori che hanno sostenuto l'emergere del paradigma GIRI nell'ambito multi-laterale negli ultimi due decenni e l'attuazione della GIRI in Mali attraverso gli aiuti allo sviluppo governativi e non governativi. Sfruttando la 'Actor-Network Theory' come strumento descrittivo, l'articolo illustra come gli attori si ingaggino a vicenda in un'alleanza che permette al paradigma di funzionare. Attori non umani —per esempio, il tipico meccanismo di finanziamento degli aiuti, i Principi di Dublino per la GIRI, l'organizzazione GWP o il fiume Niger— hanno dimostrato di essere importanti punti di ancoraggio per l'alleanza. Tuttavia, l'alleanza che una volta era così forte, sembra che ora si stia disintegrando e gli attori sono costretti a rinegoziare la GIRI attingendo dai 'cambiamenti climatici'. In risonanza con il capitolo 6, la Actor-Network Theory si rivela utile a dimostrare che il 'successo' o il 'fallimento' del paradigma dipendono dalla forza dell'alleanza e non dalla forza del paradigma.

I due articoli teorici nella parte III riflettono sull'utilizzo, rispettivamente, del metodo della grounded theory e dell'etnografia multi-sito. Anche se versione classica della grounded theory method richiede che la raccolta dei dati sia dissociata da teorie esistenti, nel primo articolo riflessivo (**Chapter 9**) si argomenta che ci sono almeno quattro forme di inevitabile condizionamento teorico alla raccolta dei dati: (1) l'inquadratura del problema di ricerca, (2) le ipotesi ontologiche implicite sul mondo e sul problema in esame, (3) la delimitazione del sito di raccolta dei dati e (4) la carica teorica ('theory-ladenness') di osservazioni empiriche. Basandosi sull'esperienza dell'etnografia multi-sito, l'articolo esemplifica questo condizionamento dei dati ed il suo impatto sulla teorizzazione (la 'grounded theorizing'). Si afferma, comunque, che questo condizionamento non invalida il metodo della grounded theory in quanto tale, ma che dovrebbe essere reso esplicito nel processo di teorizzazione. Pertanto, viene spezzata una lancia per i progressi post-moderni nel metodo della grounded theory che hanno consentito a categorie ontologiche tipiche della Discourse Theory e della Actor-Network Theory di entrare nella grounded theory. Nella fase più avanzata di teorizzazione della presente ricerca, quest'ultima teoria ha fornito potenti categorie per la descrizione dei dati.

In una riflessione a posteriori sulla raccolta e la descrizione dei dati, il secondo articolo riflessivo (**Chapter 10**) sottolinea che l'etnografia multi-sito, come metodo di raccolta di dati, e la Actor-Network Theory, come strumento per descrivere i dati, costituiscono, in effetti, un potente pacchetto metodo/strumento per studiare le interazioni sociali negli aiuti allo sviluppo. L'articolo mostra che il metodo e lo strumento sono particolar-

mente orientati l'uno all'altro. Successivamente, si dimostra che il pacchetto permette all'analista di superare le persistenti dicotomie globale/locale e politica/pratica che caratterizzano molte analisi della politica allo sviluppo. Inoltre, in questo articolo, le sei strategie operative per l'etnografia multi-sito di George Marcus sono tradotte al contesto degli aiuti allo sviluppo. Per concludere l'articolo, si richiama nuovamente l'esperienza dell'etnografia multi-sito condotta per riflettere sulle peculiarità di assicurare l'accesso ai diversi siti e forgiare un'identità negli stessi.

Conclusioni. I quattro articoli empirici sperimentano diversi concetti teorici per presentare i dati. Partendo da una descrizione *genealogica* del paradigma della Capacity Building nel primo articolo empirico, la teorizzazione dimostra successivamente che questo paradigma viene *tradotto* in vari modi. Il terzo articolo empirico mostra l'importanza del *libero arbitrio individuale* nell'attuazione del paradigma GIRI mentre l'ultimo si basa interamente sulla *Actor-Network Theory* per descrivere la rete —estesa nel tempo e nello spazio— che supporta il paradigma GIRI. Anche se ogni prospettiva teorica enfatizza diversi aspetti dei dati, la Actor-Network Theory risulta essere lo strumento più adatto per descrivere l'eclettico insieme di dati ottenuto con l'etnografia multi-sito, le interviste, i focus group e i documenti.

Per quanto riguarda le domande di ricerca, i dati mostrano che né il paradigma della Capacity Building, né quello della GIRI sono emersi da un giorno all'altro ma che invece hanno una lunga discendenza. Ancora più importante, questi paradigmi hanno bisogno del lavoro incessante di un piccolo numero di persone dedicate per diventare egemonici e continuano a richiedere una forte rete di attori coerente per rimanere tali.

Inoltre, questi paradigmi non sono delle entità monolitiche e nemmeno le loro attuazioni lo sono. Non si osserva un 'divario' tra il paradigma e la sua attuazione; si osserva solo una vasta rete di attori che aderiscono collettivamente al paradigma e che, a seconda della loro posizione nella rete, interpretano il paradigma diversamente. Tutti gli attori iscrivono nella loro interpretazione del paradigma i propri interessi (gli attori 'traducono' gli interessi), indipendentemente dal fatto che essi costituiscano il donatore, un mediatore o il beneficiario dell'aiuto. Queste traduzioni sono necessarie per cementare e riprodurre la rete: gli attori si ingaggiano a vicenda nella rete traducendo i loro interessi. La forza di un nuovo paradigma di sviluppo dipende dalla forza della rete e delle traduzioni.

I limiti della ricerca presentata sono evidenti: essa si basa su una ridotta selezione di paradigmi e su dati provenienti da un unico settore. I risultati potrebbero non essere generalizzabili. Inoltre, la ricerca si è focalizzata su dei paradigmi che si ritengono funzionanti mentre nessun dato è stato raccolto sulla scomparsa o sul fallimento di un paradigma: quest'ultimo potrebbe essere il tema di una futura ricerca.

Appendix C

Summary in Dutch

Inleiding en onderzoeksvraag. Het is blijkbaar moeilijk om de sociale interacties die aan de grondslag van ontwikkelingshulp liggen als onderzoeksobject *op zich* te benaderen zonder te vervallen in eindeloze discussies rond de wenselijkheid en effectiviteit van die sociale interacties. Er bestaat inderdaad een vrij grote kloof tussen, enerzijds, kritische maar hoogdravende beschouwingen die 'ontwikkeling' als een hegemoniaal en Westers *ideaal* afdoen, en, anderzijds, de concrete maar navelstarende evaluaties die de effectiviteit van 'ontwikkelingshulp' als *instrument* proberen te verhogen. In de kloof tussen deze twee uitersten ligt belangrijke antropologische kennis die weinig ontgonnen wordt. Het betreft kennis over de sociale interacties *op zich*, over de strategieën die de verschillende actoren in ontwikkelingshulp hanteren, hoe zij omgaan met elkaars diversiteit, of hoe ze abstracte beleidslijnen vertalen in concrete projecten. Een groeiend aantal etnografen begint zich nu te interesseren voor deze sociale interacties *op zich*, en het onderhavige onderzoek situeert zich binnen deze groep.

Aan de basis van dit onderzoek lag een zeker gevoel van tegenstrijdigheid in ontwikkelingshulp. Ontwikkelingshulp wordt gedragen door een complex netwerk waarin enorm veel actoren samenwerken: donoren, multilaterale organisaties, consultants uit Noord en het Zuid, privé-bedrijven, overheidsadministraties, de civiele maatschappij uit het Zuiden, dorpshoofden en boeren. Deze actoren hebben ongelooflijk verschillende wereldbeelden, culturele achtergronden, belangen, financiële middelen en politieke slagkracht. Vreemd genoeg, wanneer het erop aankomt hulp te leveren en ontwikkelingsprojecten uit te voeren, spreken alle actoren hetzelfde ontwikkelingjargon en lijken ze een zeer grote eensgezindheid te vertonen; deze eensgezindheid spreidt zich uit van de donor, over de consultant, tot bij het dorpshoofd. En hoewel de ideeën omtrent 'goede' en 'slechte' ontwikkelingshulp continu veranderen in de tijd —waardoor elke paar jaar een nieuw ontwikkelingsparadigma of -beleid te voorschijn schiet— blijft de eensgezindheid van actoren toch min of meer voortbestaan.

Deze waargenomen tegenstrijdigheid leidde tot de volgende onderzoeksvragen. Hoe

kan de eensgezindheid van de actoren worden verklaard ondanks de enorme heterogeniteit van de actoren en de instabiliteit van ontwikkelingsparadigma's? Wanneer een nieuw paradigma ten tonele verschijnt, waar komt dit dan vandaan en hoe verkrijgt het opnieuw de eensgezinde steun? En is deze steun echt homogeen of is dit slechts schijn?

Onderzoeksmethodologie. Om een antwoord op deze vragen te krijgen werden kwalitatieve gegevens verzameld betreffende een aantal wijdverspreide ontwikkelingsparadigma's, hun opkomst, en de steun die ze genieten. De gegevens werden verzameld d.m.v participerende observaties op drie verschillende locaties in het netwerk van ontwikkelingsactoren (dus d.m.v. een *multi-sited* etnografie). Er werd geconcentreerd op één sector: ontwikkelingshulp in de watersector (dit omvat zowel hulp voor waterbeheer als toegang tot drinkwater).

Het verzamelen en analyseren van de gegevens gebeurde volgens de *Grounded Theory Method*. Volgens deze methode mag de gegevensverzameling niet geleid of gelimiteerd worden door eender welke theorie, hypothese, of terreinafbakening. Tijdens de eerste van de drie participerende observaties kwamen drie paradigma's naar voor waarop geconcentreerd werd tijdens het verdere onderzoek:

- 'Integraal Waterbeheer' (IWB) als *best practice*;
- 'Capaciteitsversterking' als *modus operandi* voor ontwikkelingssamenwerking;
- 'Aanpassing aan de klimaatverandering' en de gevolgen hiervan voor het IWB-paradigma.

De gegevens verzameld op de eerste locatie leidden de onderzoeker naar twee andere maar gerelateerde locaties in het netwerk. De drie locaties van het onderzoek waren, in chronologische volgorde, de volgende:

- het internationale hoofdkantoor van WaNGO, een niet-gouvernementele ontwikkelingsorganisatie die waterprojecten beheert in Afrika en Latijns-Amerika—één ervan in de binnendelta van de Niger in Mali;
- zes landelijke dorpen in de binnendelta van de Niger in Mali;
- het internationale hoofdkantoor van het Global Water Partnership (GWP), een intergouvernementele organisatie opgericht door de Wereldbank en UNDP die wereldwijd IWB promoot (dus ook in Mali).

Uiteindelijk bestond het volledige corpus aan gegevens uit 13 maanden observaties op drie locaties, 48 interviews, 21 focusgroepdiscussies en meer dan 50 officiële documenten.

Overzicht van het proefschrift. Het proefschrift, dat de resultaten van het hierboven samengevatte onderzoek rapporteert, is opgevat als een verzameling van zes originele

artikels. Deel I van het proefschrift schetst het bredere kader; deel II bevat vier empirische artikels die elk een deel van de onderzoeksvragen beantwoorden, deel III bevat twee theoretische artikels die reflecteren op de onderzoeksmethodologie, en het laatste gedeelte, deel IV, vat de bevindingen van de zes artikels samen in zowel wetenschappelijke als praktische bewoordingen. Elk van de zes artikels uit deel II en III kan los van de rest van het proefschrift gelezen worden. De volgende paragrafen vatten de zes artikels samen.

De vier empirische artikels in deel II presenteren de bevindingen omtrent 'capaciteitsopbouw' en 'Integraal Waterbeheer' (IWB). Tijdens de analyse van de gegevens werd het paradigma 'Aanpassing aan de klimaatverandering' enkel in beschouwing genomen in zijn relatie tot het IWB-paradigma. Elk van de empirische artikels rapporteert de bevinding rond één van de paradigma's om een antwoord te geven op één van de onderzoeksvragen. Elke artikel gebruikt echter een licht verschillende theoretische invalshoek om de gegevens te presenteren, hetgeen een weerspiegeling is van de verschillende stadia die doorlopen werden bij het verzamelen en analyseren van de gegevens.

Het eerste empirische artikel (**Chapter 5**) peilt naar de oorsprong van paradigmaverschuivingen, door concreet te graven naar de wortels (de genealogie) van het momenteel zeer populaire concept 'capaciteitsopbouw'. Men zou dit paradigma kunnen beschouwen als de tegenhanger van traditionele 'technische coöperatie' —een stelling die ook de voorstanders van capaciteitsopbouw zelf onderschrijven. In het bijzonder neemt capaciteitsopbouw afstand van het technologisch determinisme dat schuilgaat in technische coöperatie. Het draait eigenlijk allemaal rond de vraag wat de rol van kennis en technologie in ontwikkeling is—of moet zijn. Deze discussie is echter verre van nieuw en kan getraceerd worden tot aan de Verlichting. Op elk moment in de geschiedenis, sinds de Verlichting tot vandaag, hebben erg deterministische en minder deterministische interpretaties van die rol elkaar bekampt, waarbij de opeenvolgende ontwikkelingsparadigma's heen en weer slingerden tussen beide uitersten. Het idee van 'capaciteitsopbouw' is dus niets meer dan het meest recente, niet-deterministische paradigma betreffende de rol die kennis en technologie moeten spelen in ontwikkeling.

Nieuwe paradigma's worden vaak voorgesteld als een wondermiddel dat het voorgaande, 'falende' paradigma moet vervangen. Dergelijk 'falen' wordt meestal toegeschreven aan het 'foute' opzet van het vorige paradigma, of aan discordantie tussen het paradigma en zijn praktische uitvoering. In het geval van capaciteitsopbouw wordt technische coöperatie afgedaan als de 'falende' voorganger. Dit tweeledig beeld dat een paradigma en zijn toepassing voorstelt als twee monolithische maar gescheiden entiteiten, stemt nauwelijks met de werkelijkheid overeen. Het tweede empirische artikel (**Chapter 6**) laat zien hoe het paradigma van capaciteitsopbouw op diverse wijzen wordt geïnterpreteerd op verschillende punten in het netwerk van ontwikkelingsactoren, van de donor over de NGO's tot de gemeentes in Mali. Eigenlijk zijn deze verschillende interpretaties *nodig*; de link tussen donor en Malinese gemeente kan slechts bestaan dankzij het werk van een

rist aan tussenpersonen en bemiddelaars die, noodgedwongen, het paradigma telkens net ietsje anders gaan interpreteren. Dat er een kloof zou bestaan tussen paradigma en uitvoering is dus een betekenisloze stelling. Bovendien zijn die verschillende interpretaties van het paradigma telkens een vertaling van het eigenbelang van elke actor, zodanig dat elke actor zijn eigen positie in het netwerk bevestigt en dus ook het netwerk als geheel in stand houdt. Vandaar dat een paradigma staat of valt met de integriteit van het netwerk, niet met de effectiviteit van het paradigma zelf.

Het derde artikel (**Chapter 7**) is het eerste van twee artikels dat IWB onder de loep neemt. Het stapt resoluut af van het idee dat een paradigma een allesomvattende, onpersoonlijke, discursieve macht zou zijn, en belicht daarentegen de rol van individuen in de promotie en implementatie van een paradigma. De invoering van IWB in Burkina Faso en Mali (in resp. 1996 en 2004) als startpunt nemende, beschrijft dit artikel het samenspel van nationale beleidsmakers, internationale organisaties, en structurele condities, in de hervorming van het waterbeleid in beide landen over de laatste 15 jaar. Ondanks de schijnbare uniformiteit van het IWB-paradigma toont een kwalitatieve vergelijking van de beleidsveranderingen in de twee landen dat zowel de hervormingen zelf als ook het nationale 'eigenaarschap' van deze hervormingen beduidend verschillend zijn. De specificiteit van de hervormingen en het niveau van nationaal eigenaarschap zijn het resultaat van het handelen (*agency*) van individuen—beleidsmakers in het bijzonder.

In het laatste empirische artikel (**Chapter 8**) bereikt de uit-de-data-voortvloeiende theorie zijn meest gearticuleerde vorm. In het artikel wordt het netwerk van actoren getraceerd dat enerzijds het IWB-paradigma gepromoot heeft in de kring van multi-laterale organisaties, en anderzijds de implementatie van IWB in Mali ondersteund heeft, zowel via gouvernementele als niet-gouvernementele ontwikkelingssamenwerking. Gebruik makend van *Actor-Network Theory* om dit netwerk te beschrijven, toont het artikel hoe de actoren elkaar rekruteren voor de alliantie door elkaars interesses te vertalen. Op die manier ontstaat een hecht netwerk dat het paradigma doet werken. Sommige niet-humane actoren —zoals het typische financieringsmechanisme van ontwikkelingshulp, de Principes van Dublin voor IWB, de organisatie GWP, of de Nigerrivier zelf— blijken belangrijke ankerpunten te zijn voor de alliantie. Toch lijkt de IWB-alliantie niet meer zo sterk als ze ooit was, en de actoren zien zich genoodzaakt om de IWB-alliantie opnieuw te onderhandelen door 'klimaatverandering' als hulp in te roepen. In overeenstemming met hoofdstuk 6 toont *Actor-Network Theory* in hoofdstuk 8 aan dat het 'succes' of 'falen' van het paradigma afhankelijk is van de sterkte van de alliantie, niet van de sterkte van het paradigma.

De twee theoretische artikels in deel III maken een nabeschouwing rond het gebruik van respectievelijk de *Grounded Theory Method* (GTM) en *multi-sited* etnografie. Hoewel volgens de klassieke GTM de gegevensverzameling los moet staan van bestaande theorieën, wordt er in het eerste theoretische artikel (**Chapter 9**) aangetoond dat deze

gegevensverzameling op ten minste vier manieren theoretisch geconditioneerd is: (i) door de probleemstelling zelf, (ii) door impliciete ontologische veronderstellingen betreffende de wereld en het probleem dat onderzocht wordt, (iii) door de afbakening van het terrein waar de gegevens verzameld worden, en (iv) doordat waarnemingen altijd theoretisch gekleurd (of *theory-laden*) zijn. De vier vormen van conditionering worden aangetoond aan de hand van voorbeelden uit het onderhavige onderzoek. De auteur is echter van mening dat deze conditionering de GTM methode als zodanig niet onbruikbaar maakt, maar dat de verschillende vormen van conditionering wel expliciet moeten gemaakt worden. De auteur pleit ervoor GTM mee te laten evolueren met postmoderne ontwikkelingen in de sociale wetenschappen, die oog hebben voor, enerzijds, de gesitueerdheid van dataverzameling, en anderzijds, innovatieve ontologische categorieën die voortkomen uit discourstheorie en *Actor-Network Theory*. In de meest geavanceerde fase van het onderhavige onderzoek bleek *Actor-Network Theory* inderdaad zeer krachtige categorieën aan te kunnen brengen voor de beschrijving van de gegevens.

Het tweede theoretische artikel (**Chapter 10**) wijst erop dat *multi-sited* etnografie als methodologie voor dataverzameling en *Actor-Network Theory* als instrument voor de databeschrijving een krachtige pakket vormen voor het bestuderen en beschrijven van de sociale interacties in ontwikkelingshulp. De methodologie en het instrument zijn bijzonder goed op elkaar afgestemd. Het pakket laat de de analist toe om vastgeroeste tweedelingen zoals globaal/lokaal en beleid/praktijk wat genuanceerder te gaan bekijken. Verder in het artikel worden de zes strategieën van George Marcus voor *multi-sited* etnografie vertaald naar de context van ontwikkelingshulp. Tot slot overpeinst de onderzoeker, op basis van de eigen onderzoekservaring, een aantal kritische kwesties rond het verkrijgen van 'toegang tot' en het creëren van een 'identiteit binnen' de verschillende sites van de *multi-sited* etnografie.

Conclusies. De vier empirische artikels experimenteren met verschillende theoretische perspectieven om de gegevens te presenteren. Terwijl het eerste artikel de *genealogie* van capaciteitsopbouw aanbrengt, wordt in het tweede artikel aangetoond dat dit paradigma op tal van verschillende manieren *vertaald* wordt door de actoren. Het derde empirische artikel toont het belang van individuen en hun *handelen* in de implementatie van IWB, en het laatste baseert zich op *Actor-Network Theory* om het brede netwerk te beschrijven dat het IWB-paradigma ondersteund heeft in tijd en ruimte. Hoewel elk theoretisch perspectief verschillende aspecten van de gegevens benadrukt, blijkt Actor-Netwerk Theorie het meest geschikte instrument te zijn om de eclectische verzameling van gegevens —die werd verkregen uit *multi-sited* etnografie, interviews, focusgroepdiscussies en documenten— tot zijn recht te laten komen.

Wat de onderzoeksvragen betreft, blijkt uit de gegevens dat noch capaciteitsopbouw, noch IWB uit het niets verschenen zijn, maar dat ze allebei een uitgebreide stamboom

kunnen voorleggen. Bovendien, en mogelijks nog belangrijker, blijkt dat beide paradigma's slechts op het voorplan konden verschijnen dankzij het niet-aflatende werk nodig van een klein aantal zeer toegewijde individuen. Ook om op het voorplan te blijven, hangen ze nog steeds af van de sterkte van het netwerk van actoren dat het paradigma ondersteunt.

Deze paradigma's zijn allesbehalve monolithische entiteiten, en net zomin is de uitvoering ervan. Er bestaat geen 'kloof' tussen het paradigma en de uitvoering; er bestaat enkel een zeer uitgebreid netwerk van actoren die allen het paradigma onderschrijven, en die, afhankelijk van hun positie in het netwerk, het paradigma op de ene of andere wijze interpreteren. Elk van de actoren verweeft zijn eigen belangen in de interpretatie van het paradigma (de actoren 'vertalen' hun belangen), ongeacht of het om de donor, een tussenpersoon, of de ontvanger van de ontwikkelingshulp gaat. Deze vertalingen zijn noodzakelijk om het netwerk samen te houden en te reproduceren: actoren rekruteren elkaar in het netwerk door elkaars en hun eigen belangen te vertalen. De sterkte van een nieuwe ontwikkelingsparadigma is daarom afhankelijk van de sterkte van het netwerk en de vertalingen.

De beperkingen van de gerapporteerde onderzoek zijn duidelijk: het is gebaseerd op de observaties omtrent een kleine selectie van ontwikkelingsparadigma's uit slechts één ontwikkelingssector. De resultaten zijn mogelijks niet veralgemeenbaar. Bovendien is het onderzoek gebaseerd op paradigma's die reeds alomtegenwoordig waren in het netwerk; er werden geen gegevens verzameld omtrent paradigma's die afgewezen zijn of die nooit de status van alomtegenwoordigheid bereikt hebben. Dit zou het onderwerp kunnen uitmaken van toekomstig onderzoek.

Appendix D

List of observations and interviews

Participant observations

Description	Period	Place
Headquarters WaNGO	Feb-Jul 2010	Belgium
Inner Niger Delta (6 villages & office WaNGO-Mali)	Sept-Oct 2010	Mali
Headquarters Global Water Partnership (GWP)	May-Sept 2011	Stockholm
the latter participant observation included:		
GWP Regional Days (meeting with regional networks)	15-17 Aug 2011	Stockholm
GWP Network and Consulting Partners meeting	18-19 Aug 2011	Stockholm
Stockholm World Water Week	21-27 Aug 2011	Stockholm

Semi-structured one-on-one interviews

Description	Date	Where
WaNGO employee, Capacity Building focus point	9 Mar 2010	Belgium
WaNGO executive secretary	12 Mar 2010	Belgium
WaNGO employee, head of Northern Operations Dept.	15 Mar 2010	Belgium
WaNGO employee, head of Administrative Dept.	16 Mar 2010	Belgium
WaNGO employee, head of Southern Operations Dept.	24 Mar 2010	Belgium
WaNGO employee, head of Northern Operations Dept.	29 Mar 2010	Belgium
WaNGO employee, desk officer Great Lakes	30 Mar 2010	Belgium
WaNGO employee, desk officer Mali & Madagascar	12 Apr 2010	Belgium
WaNGO employee, head of Southern Operations Dept.	29 Jun 2010	Belgium
WaNGO employee, ex project manager Ecuador	30 Jun 2010	Belgium
WaNGO employee, IWRM & Climate Change focal point	30 Jun 2010	Belgium
WaNGO employee, ex IWRMIND manager	30 Jun 2010	Belgium
WaNGO-Mali head	16 Sept 2010	Bamako

Description	**Date**	**Where**
Wetlands-Mali executive secretary	17 Sept 2010	Bamako
Senior technical assistant to DNH (1)	20 Sept 2010	Sévaré
WaNGO-Mali head	24 Sept 2010	Sévaré
GWI/CARE-Mali executive secretary	27 Sept 2010	Sévaré
EU-Mali employee, desk officer water projects	29 Sept 2010	Bamako
EU-Mali employee, Climate Change focal point	29 Sept 2010	Bamako
PNE-Mali executive secretary	29 Sept 2010	Bamako
PNE-Mali permanent staff member	29 Sept 2010	Bamako
World Bank employee, water projects manager	2 Feb 2011	Washington
World Bank employee, Niger Basin project manager	3 Feb 2011	Washington
World Bank employee, Water Anchor	4 Feb 2011	Washington
GWP employee, desk officer West Africa	13 May 2011	Stockholm
SIWI employee, Capacity Building director	May 2011	Stockholm
GWP employee, desk officer West Africa	1 Jun 2011	Stockholm
GWP executive secretary	8 Aug 2011	Stockholm
GWP employee, desk officer West Africa	12 Aug 2011	Stockholm
GWP employee, head of Knowledge Management	12 Aug 2011	Stockholm
PNE-Mali chair	17 Aug 2011	Stockholm
Ex GWP employee (1)	18 Aug 2011	Stockholm
WaNGO evaluator	18 Aug 2011	Stockholm
Malian water policy maker	21 Aug 2011	Stockholm
GWP employee, desk officer West Africa	30 Aug 2011	Stockholm
GWP employee, WACDEP manager	1 Sept 2011	Stockholm
Senior consultant to GWP and SIWI	1 Nov 2011	by phone
WaNGO employee, ex IWRMIND manager	4 Nov 2011	Belgium
Senior water advisor to Danida	4 Jan 2012	by phone
Ex GWP employee (2)	29 Feb 2012	by phone
Ex executive director WaNGO	17 Apr 2012	by phone
Independent Belgian consultant	17 Apr 2012	by phone
Burkinabé water policy maker[1]	19 Apr 2012	Ouaga.
Senior consultant, Mali & Burkina Faso expert	23 Apr 2012	by phone
Senior technical assistant to DNH (2)	24 Apr 2012	by phone
SEODC executive director	26 Apr 2012	Brussels
SEODC employee, Capacity Building evaluation	26 Apr 2012	Brussels
Senior consultant to GWP and SIWI[2]	3 May 2012	by phone

[1] Interviewed by co-author of Chapter 7.
[2] *Ibid.*

Focus group discussions

Description	Date	Where
WaNGO employees, about Capacity Building	16 Feb 2010	Belgium
WaNGO employees, about Capacity Building	5 May 2010	Belgium
Representatives of Belgian NGOs in Mali	16 Sept 2010	Bamako
WaNGO-Mali employees & SI-NGOs from Bamako	17 Sept 2010	Bamako
Regional government & *Maison du Delta*	20 Sept 2010	Sévaré
Socoura council members	21 Sept 2010	Socoura
WaNGO-Mali employees & SI-NGOs from IND	21 Sept 2010	Sévaré
Discussion with regional government, mayors, and water NGOs about MdO in the IND	24 Sept 2010	Sévaré
WaterAid-Mali employees and executive secretary	28 Sept 2010	Bamako
Soyé council members	21 Oct 2011	Soyé
Soyé villagers	21 Oct 2011	Soyé
Togué-Mourrari council members	26 Oct 2011	Togué-Mourrari
Mourrah villagers	26 Oct 2011	Togué-Mourrari
Kéwa council members	27 Oct 2011	Kéwa
Para-Bozo villagers	27 Oct 2011	Kéwa
Konna council members	29 Oct 2011	Konna
Takoutala villagers	29 Oct 2011	Konna
Socoura council members	1 Nov 2011	Socoura
N'Gomi villagers	1 Nov 2011	Socoura
Ouroubé-Doudé council members	9 Nov 2011	Ouroubé-Doudé
Dèra-Sedengué villagers	9 Nov 2011	Ouroubé-Doudé

Appendix E

Questions of the 12 focus group discussions in the IND

Six focus group discussions were held with the council members of six municipalities. Six other focus discussions were held with a number of villagers in six villages, one village per municipality. The main objective of these discussions was to understand

- which problems the council members and villagers experience as most pressing with respect to water availability, management and variability;
- how they word these problems and which terminology they use;
- how they frame the problems and solutions;
- to what extent their wording and framing is influenced by the discourses of external actors;
- whether they use in their answers the terms 'capacity building', 'integrated water resources management', 'climate change', or alike, even when the interviewer does not mention at any moment these terms.

The following questions were asked during the focus group discussions with the municipal council members:

- Can you describe how the economic activities in your municipality depend on water, rainfall, and the river?
- Can you describe how the cycles of the rain and the river determine the activities (domestic activities, fishing, agriculture, animal husbandry).
- Is water or rain sometimes lacking for these activities?
- And in previous years? Do you remember years of scarcity and years of abundance?
- Are there disputes concerning the use of water in the municipality, or amongst communities?

- What can be done so that the communities depend less on the varying availability of water?
- What can *you* do?
- Have the DRH and/or TFPs carried out interventions in this area in the recent past to improve the management of water? And to improve the access to drinking water?
- What else should they do, according to you?

The following questions were asked during the focus group discussions with the villagers:

- Can you describe how your life depends on water, rainfall, and the river?
- Can you describe how the cycles of the rains and the river determine your activities (domestic activities, fishing, agriculture, animal husbandry).
- Is water or rain sometimes lacking for these activities?
- And in previous years? Do you remember years of scarcity and years of abundance?
- Are there disputes concerning the use of water, due to the different uses of water you have described earlier?
- What can be done so that you depend less on the varying availability of water?
- What can *you* do?
- Have the government or NGOs carried out interventions in this area in the recent past to improve the management of water? And to improve the access to drinking water?
- What else should they do, according to you?

Appendix F

Translations of key words in French, English, Bambara, Fula

French	English	Bambara	Fula
périmètre irrigué villageois	irrigated village perimeter	dugu ka maloforo	dikoudji jaarnètedi (guessè jaarnètètè)
aménagement périmètre	perimeter management	maloforo labenni	modjindé dikoudji
aménagement hydroagricole	hydro-agricultural management	forow	modjindè hakkitèredjiyam guèssè
borne fontaine	water standpipe	robinè	robinè
château d'eau	water tower	dji bon	fadounmaraou djiyam
changement climatique	climate change	—	—
GIRE	IWRM	—	—
maîtrise douvrage	ownership of works and infrastructure	—	—
renforcement de capacité	capacity building	kalan djidili ou hakili dayèlè	beïditirgol famou
projet de développement	development project	dèmè djièkoulouw	gollèdji djiwirnodji

Appendix G

List of publications and presentations

Articles included in this dissertation

Cherlet J. (2013). Epistemic and Technological Determinism in Development Aid Discourses. *Science Technology & Human Values*, accepted with revisions.

Cherlet J. (forthcoming). Implementing the capacity building paradigm: a matter of translations. *Journal of Development Studies*, submitted.

Cherlet J. and Venot, J-Ph. (forthcoming). Structure and agency: understanding water policy changes in West Africa. *Water Policy*, submitted.

Cherlet J. (forthcoming). The deployment of Integrated Water Resources Management in Mali: an actor-network analysis. *Development and Change*, submitted.

Cherlet J. (forthcoming). The Grounded Theory Method and the theory-ladenness of ethnographic observations. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, in preparation.

Cherlet J. (forthcoming). Multi-sited ethnography of aid and Actor-Network Theory. *Field Methods*, in preparation.

Other articles

Cherlet J. (2011). Review of Keller R., 2011, Wissenssoziologische Diskursanalyse. Grundlegung eines Forschungsprogramms. *Technoscienza—Italian Journal of Science and Technology* 2*(1)*.

Cherlet J. et al. (2010). About the Sense and Nonsense of a 'Development' Label. *EASST Review* 29*(3)*.

Book chapters

Cherlet J. (forthcoming). Renegotiating the integrated water management paradigm in the light of climate change. In: Pongigliano, F. and Pancaldi, G. (eds). Proceedings of the round-table discussion on Climate Change. Bologna: CIS.

Cherlet J. (2010). Political ecology and STS in dialogue: future directions for the social study of environmental controversies. In: Mazzotti, M. and Pancaldi, G.(eds). *Impure Cultures: Interfacing Science, Technology, and Humanities.* Bologna Studies in the History of Science 12. Bologna: CIS.

Cherlet J. (2010). A Social Study of the Technologies composing the Green Revolution. In: Frank M.L. and Pogliano C. (eds). *Scorci di storia della scienza. Seminario congiunto dei dottorati. Bari 26-28 giugno 2008.* Pisa: Plus.

Conference and workshop presentations

Cherlet J. (2012). The deployment of Integrated Water Resources Management in Mali: an ANT analysis, 12th EASA Biennial Conference, 10-13 June 2012, Nanterre University, Nanterre.

Cherlet J. (2012). Translating the capacity building paradigm: evidence from water management in the Inner Niger Delta. Science, Technology, and Livelihood Systems, Graduate Workshop, 15-16 March 2012, CIS, University of Bologna.

Cherlet J. (2012). Renegotiating the integrated water management paradigm in the light of climate change. Climate change - A round-table discussion, 31 January 2012, CIS, University of Bologna.

Cherlet J. (2011). Fluid discourses. A multi-sited ethnography of development aid in the water sector. CRG-MENARG seminar, 3 Oct 2011, Ghent University.

Cherlet J. (2011). Fluid discourses. A multi-sited ethnography of development aid in the water sector. TIS-CONTEC seminar, 29 Sept 2011, Technical University of Eindhoven.

Cherlet J. (2011). Fluid Discourses. A Multi-sited Ethnography of Development Aid in the Water Sector. Brown International Advanced Research Institute, 11-25 June 2001, Brown University, Providence, RI.

Cherlet J. (2011). The Social and Behavioral Dimensions of Climate Change: Fundamental but Disregarded? Brown International Advanced Research Institute, 11-25 June 2001, Brown University, Providence, RI.

Cherlet J. (2011). Climate Science at Work: the Structures of Production and Legitimization. Knowledge at Work: a Graduate Workshop, 8 April 2011, CIS, Department of Philosophy, University of Bologna.

Cherlet J. (2011). A Genealogy of Epistemic and Technological Determinism in Development Aid Discourses. Proceedings of DIME workshop 'Technology, Institutions, Development', Max Planck institute, 18-19 February 2011, Jena.

Cherlet J. (2010). Theoretical reflections on Capacity Building as vehicle for knowledge transfer in development cooperation, drawing on the observation of water development projects. EASST010 Conference, 2-4 Sept 2010, Trento.

Cherlet J. (2010). The analysis of knowledge production and global discourse concerning water scarcity. An outline of the research methodology. IPA2010 Interpretative Policy Analysis conference, 23-25 June 2010, Grenoble.

Cherlet J. (2010). How to Quench the World's Thirst: from Knowledge over Discourse to Practices in Water Development Projects. CRG-MENARG seminar, 25 April 2010, Ghent.

Cherlet J. (2009). Lo 'Script' della rivoluzione verde. Seminario congiunto dei dottorati di Storia della Scienza, 26-28 giugno 2008, Bari.

Cherlet J. (2009). The construction and transfer of knowledge in international development. The case of water. Current Debates in International Development, a multi-disciplinary conference of PhD students of development, 25-26 June 2009, School of International Development, University of East Anglia, Norwich.

Bibliography

Abu-Lughod, L., 1986: *Veiled Sentiments: Honour and Poetry in a Bedouin Society*. Berkeley: University of California Press.

Akrich, M., 1992: 'The De-Scription of Technical Objects'. In W. E. Bijker and J. Law, eds., *Shaping Technology - Building Society: Studies in Sociotechnical Change*, Cambridge: MIT Press, 205–224.

Amit, V., ed., 2000: *Constructing the field: Ethnographic fieldwork in the contemporary world*. London: Routledge.

Anand, S. and A. K. Sen, 1994: *Human Development Index: Methodology and Measurement*. Human Development Report Office: Occasional Papers. New York: UNDP.

Anderson, W., 2002: 'Introduction: Postcolonial Technoscience'. *Social Studies of Science*, 32 (5-6), 643–58.

ANICT, 2005: *Guide à la matrise d'ouvrage des Collectivités Territoriales au Mali*. Bamako: PACT-ANICT.

Appadurai, A., 1996: *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press.

Appadurai, A., 2001: 'Anthropology of Globalization'. In *International Encyclopaedia of Behavioral and Social Sciences*, Amsterdam: Elsevier, 6266–6271.

Apthorpe, 1986: 'Development Policy Discourse'. *Public Administration and Development*, 6, 377–89.

Apthorpe, R., 1996: 'Reading development policy and policy analysis: on framing, naming, numbering and coding'. In R. Apthorpe and D. Gasper, eds., *Arguing development policy: frames and discourses*, London: Frank Cass.

Arce, A. and N. Long, 1999: *Anthropology, Development, and Modernities: Exploring Discourses, Counter-Tendencies and Violence*. London: Routledge.

Arce, A., M. Villarreal and P. de Vries, 1994: 'The Social Construction of Rural Development: Discourses, Practices and Power'. In D. Booth, ed., *Rethinking Social Development: Theory, Research, and Practice*, Essex: Longman.

Argyris, C. and D. Schön, 1978: *Organisation Learning*. London: Addison-Wesley.

Arndt, H. W., 1987: *Economic Development. The History of an Idea*. London: University of Chicago Press.

Asad, T., ed., 1973: *Anthropology and the Colonial Encounter*. Atlantic Highlands: Humanities Press.

Atkinson, M. and W. D. Coleman, 1989: 'Strong states and weak states: sectoral policy networks in advanced capitalist economies'. *British Journal of Political Science*, 19 (1), 48–67.

Avgerou, C., 2003: 'The link between ict and economic growth in the discourse of development'. In M. Korpela, R. Montealegre and A. Poulymenakou, eds., *Organizational information systems in the context of globalization*, New York: Springer, 373–86.

Bâ, A., 1991: *Amkoullel. L'enfant peul. Mémoires*. Paris: Actes Sud.

Barnes, J., 2009: 'Managing the Waters of Ba'th Country: The Politics of Water Scarcity in Syria'. *Geopolitics*, 14 (3), 510–30.

Baser, H. and P. Morgan, 2008: *Capacity, Change and Performance. Study report 59B, April 2008*. Maastricht: European Centre for Development Policy Management.

Baumgartner, F. and B. Jones, 1991: *Agendas and Instability in American Politics*. Chicago: University of Chicago Press.

Benjaminsen, T. and B. Ba, 2008: 'Farmer-herder conflicts, pastoral marginalisation and corruption: a case study from the inland Niger delta of Mali'. *The Geographical Journal*, 175 (1), 71–81.

Berg, R. J. and J. Seymour Whitaker, eds., 1993: *Strategies for African development*. London: University of California Press.

Bergamaschi, I., 2009: 'Mali: patterns and limits of donor-driven ownership'. In *The Politics of Aid. African Strategies for Dealing with Donors*, Oxford: Oxford University Press, 217–245.

Berkes, F., 2009: 'Indigenous ways of knowing and the study of environmental change'. *Journal of the Royal Society of New Zealand*, 39 (4), 151–156.

Bernard, H. R., 2006: *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. Oxford: Altamira Press, 4th edition.

Bierschenk, T., J. Chaveau and J. Olivier de Sardan, eds., 2000: *Courtiers en développement: Les villages africaines en quête des projets*. Paris: Karthala.

Bierschenk, T., J. Chaveau and J. Olivier de Sardan, 2002: *Local development brokers in Africa: The rise of a new social category. Working Paper No. 13*. Mainz: Johannes Gutenberg University, Department of Anthropology and African Studies.

Bijker, W. E., 1995: *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change*. Cambridge: The MIT Press.

Bijker, W. E., 2010: 'How is technology made?—That is the question!' *Cambridge Journal of Economics*, 34, 63–76.

Björklund, G., A. Brismar, U. Ehlin, M. Falkenmark, J. Lundqvist, J. Rockström and A. Swain, 2000: *Water and Development in the Developing Countries, A Study Commissioned by the European Parliament, Development Series, DEVE 100 EN*. Stockholm: SIWI.

Booth, D., 2011: *Aid effectiveness: bringing country ownership (and politics) back in*, volume 226 of *ODI Working Paper*. London: Overseas Development Institute.

Briscoe, J. and M. Garn, 1994: *Financing Agenda 21: Freshwater. A paper prepared for The United Nations Commission on Sustainable Development*. Washington: World Bank.

Brundtland, G. H., 1987: *Our common future. Report of the World Commission on Enivironment and Development*. Oxford: Oxford University Press.

Brunsson, N., 2003: *The Organization of Hypocrisy: Talk, Decisions and Actions in Organization*. Copenhagen: Copenhagen Business School.

Bryant, A., 2002: 'Re-grounding grounded theory'. *Journal of Inofrmation Technology Teory and Application*, 4 (1), 25–42.

Bryant, A. and K. Charmaz, 2007a: 'Grounded Theory in Historical Perspective: An Epistemological Account'. In A. Bryant and K. Charmaz, eds., *The SAGE Handbook of Grounded Theory*, London: Sage Publications, 31–57.

Bryant, A. and K. Charmaz, 2007b: 'Introduction. Grounded Theory Research: Methods and Practices'. In A. Bryant and K. Charmaz, eds., *The SAGE Handbook of Grounded Theory*, London: Sage Publications, 1–28.

Bryld, E., 2000: 'The Technocratic Discourse: Technical Means to Political Problems'. *Development in Practice*, 10 (5), 700–5.

Burall, S. and S. Maxwell, 2006: *Reforming the international aid architecture: Options and ways forward*, volume 278 of *ODI Working Paper*. London: Overseas Development Institute.

Burgess, P., 1975: 'Capacity Building and Elements of Public Management'. *Public Administration Review*, 35, 705–16.

Burrell, J., 2007: 'The Field Site as a Network: A Strategy for Locating Ethnographic Research'. *Field Methods*, 21 (2), 181–99.

Callon, M., 1986: 'Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay'. In J. Law, ed., *Power, Action, Belief: A New Sociology of Knowledge? Sociological Review Monograph 32*, Edinburgh: University of Keele, 196–233.

Callon, M., 2006: *What does it mean to say that economics is performative? CSI Working Papers Series n.005*. Paris: Ecole des Mines de Paris.

Callon, M. and J. Law, 1982: 'On interests and their transformation: enrolment and counter-enrolment'. *Social Studies of Science*, 12, 615–25.

Carden, F., 2009: *Knolwedge to Policy. Making the Most of Development Research*. London: Sage.

Carlile, P. R., 2004: 'Transferring, Translating and Transforming: An Integrative Framework for Managing Knowledge Across Borders'. *Organization Science*, 15 (5), 555–68.

Cernea, M. M., 1991: *Putting People First: Sociological Variables in Rural De elopment*. Oxford: Oxford University Press.

CGD, 2011: *Commitment to Development Index*. Washington: Center for Global Development.

Chambers, R., 1997: *Whose Reality Counts? Putting the First Last*. London: Intermediate Technology.

Chang, H.-J., 2007: *Bad Samaritans. The Guilty Secrets of Rich Nations and the Threat to Global Prosperity*. London: Random House Business Books.

Charmaz, K., 2001: 'Grounded Theory: Methodology and Theory Construction'. In *International Encyclopedia of the Social & Behavioral Sciences*, Amsterdam: Elsevier, 6396–99.

Charmaz, K., 2006: *Constructing Grounded Theory. A Practical Guide Through Qualitative Analysis*. London: Sage Publications.

Cherlet, J., 2010: 'A Social Study of the Technologies Composing the Green Revolution'. In M. L. Frank and C. Pgliano, eds., *Scorci di storia della scienza: Contributo al seminario congiunto dei dottorandi: Bari, 26-28 giugno 2009*, Pisa: Plus - Pisa University Press.

Churchland, P. M., 1989: *A Neurocomputional Perspective. The Nature of Mind and the Structure of Science*. Cambridge: MIT Press.

Clarke, A. E., 2005: *Situational Analysis. Grounded Theory After the Postmodern Turn*. London: Sage Publications.

Clarke, A. E. and C. Friese, 2007: 'Grounded Theorizing Using Situational Analysis'. In A. Bryant and K. Charmaz, eds., *The SAGE Handbook of Grounded Theory*, London: Sage Publications, 363–97.

Clarke, P. and K. Oswald, 2010: 'Introduction: Why Reflect Collectively on Capacities for Change'. *IDS Bulletin*, 41 (3), 1–12.

Clay, E., M. Geddes and L. Natali, 2009: *Aid Untying: Is It Working? Thematic Study on the Developmental Effectiveness of Untied Aid: Evaluation of the Implementation of the Paris Declaration of the 2001 DAC Recommendation on Untying ODA to the LDCs*. Copenhagen: Danish Institute for International Studies.

Clegg, S., 2001: 'Power in Society'. In *International Encyclopaedia of Behavioral and Social Sciences*, Amsterdam: Elsevier, 11932–6.

Coffey, A., 1999: *The ethnographic self: fieldwork and the representation of identity*. London: Sage Publications.

Coleman, S. and P. von Hellermann, eds., 2011: *Multi-Sited Ethnography. Problems and Possibilities in the Translocation of Research Methods*. London: Routledge.

Comte, A., 1975 [1830]: *Auguste Comte and Positivism: The Essential Writings*. New York: Harper & Row.

Conca, K., 2006: *Governing water: contentious transnational politics and global institution building*. Cambridge: MIT press.

Condorcet, M., 1795 [1793]: *Esquisse d'un tableau historique des progres de l'esprit human. Ouvrage posthume de Condorcet.*. Paris: Chez Agasse.

Cooke, B., 2004: 'The Managing of the (Third) World'. *Organization*, 11 (5), 603–29.

Cornwall, A., 2007: 'Buzzwords and fuzzwords: deconstructing development discourse'. *Development in Practice*, 17 (4-5).

Cotula, L. and S. Cissé, 2006: 'Changes in 'customary' resource tenure systems in the Inner Niger Delta, Mali'. *Journal of Legal Pluralism*, 52, 1–29.

Cozzens, S. E., S. Gatchair, K.-S. Kim, G. Ordez and A. Supnithadnaporn, 2008: 'Knowledge and Development'. In E. J. Hackett, O. Amsterdamska, M. Lynch and J. Wajcman, eds., *The Handbook of Science and Technology Studies*, Cambridge: MIT press.

Crawford, G., 2001: *Foreign Aid and Political Reform. A Comparative Analysis of Democracy Assistance and Political Contitionality*. Houndsmills: Palgrave.

Crewe, E. and E. Harrison, 1998: *Whose Development?: An Ethnography of Aid*. London: Zed Books.

Crush, J., 1995: 'Introduction'. In J. Crush, ed., *Power of Development*, London: Routledge.

Danida, 2006: *Appui au Secteur Eau Potable, Assainissement et Ressources en Eau (PASEP-ARE), Phase 1, 2006-2009*. Bamako: Danish Embassy in Mali, unpublished document.

Danida, 2010: *Appui Dano-Suédois au Programme Sectoriel Eau et Assainissement (PROSEA), Mali, 2010-2014*. Bamako: Danish Embassy in Mali, unpublished document.

Dante, I., J.-F. Gautier, M. A. Marouani and M. Rafnot, 2002: 'Le DSRP á Mali: 'gagner l'argent' ou formuler une politique de développement?' In J. Cling, M. Razandrakoto and R. François, eds., *Les nouvelles stratégies internationales de lutte contre la pauvreté*, Paris: Economica, 291–309.

De Haan, A., 2009: *How the Aid Industry Works: An Introduction to International Development*. Sterling: Kumarian Press.

de Vries, P., 1992: 'A Research Journey. On Actors, Concepts, and the Text'. In A. Long and N. Long, eds., *Battleelds of Knowledge: The Interlocking of Theory and Practice in Social Research and Development*, London: Routledge.

Degnbol-Martinussen, J. and P. Engberg-Pedersen, 2003: *Aid: Understanding International Development Cooperation*. London: Zed Books.

Deleuze, G. and F. Guattari, 1998: *A Thousand Plateaus: Capitalism and Schizophrenia*. London: Athlone.

Descartes, R., 1974: In C. Adam and P. Tannery, eds., *Œuvre de Descartes, rev. edition, 12 vols. Volume X*, Paris: Librairie Philosophique J. Vrin.

DGD, 2011: *Belgische ODA 2007-2010*. Brussels: Ministry of Foreign Affairs.

DNH, 2008: *Cadre de Dépenses à Moyen Terme 2009-2011*. Bamako: Direction Nationale Hydraulique.

Dove, M. R., 2006: 'Indigenous People and Environmental Politics'. *Annual Review of Anthropology*, 35, 191–208.

DSE, 1998: *Transboundary Water Management: Experience of International River and Lake Commissions. International Round Table, Berlin, 27-30 September 1998*. Berlin: German Foundation for International Development.

Dufeld, M., 2002: 'Social reconstruction and the radicalisation of development: aid as a relation of global liberal governance'. *Development and Change*, 33, 1049–71.

Eade, D., 2005: *Capacity-Building: An Approach to People-Centred Developement*. Oxfam Development Guidelines. Oxford: Oxfam.

Easton, D., 1965: *A Framework for Political Analysis*. New Jersey: Prentice Hall.

Edquist, C., ed., 1997: *Systems of Innovation: Technologies, Institutions, and Organizations*. New York: Pinter.

Escobar, A., 1995: *Encountering Development. The Making and Unmaking of the Third World.*. Princeton: Princeton University Press.

Estany, A., 2001: 'The Thesis of Theory-Laden Observation in the Light of Cognitive Psychology'. *Philosophy of Science*, 68 (2), 203–17.

European Commission, 2002: *Communication from the Commission to the Council and the European Parliament: Water Management in Developing Countries Policy and Priorities for EU Development Cooperation. SEC(2002)288*. Brussels: European Commission.

European Commission, 2003: *Water for Life. EU Water Initiative: International Cooperation - from knowledge to action. EUR20612*. Burssels: European Commission-DG Development.

European Commission, 2004a: *ACP-EU Water Facility - Actions in ACP countries. Guidelines for grant applicants responding to the restricted Call for Proposals for 2004*. `http://ec.europa.eu/europeaid`, accessed 20-09-2011.

European Commission, 2004b: *Communication from the Commission to the Council and the European Parliament: Communication on the future development of the EU Water Initiative and the modalities for the establishment of a Water Facility for ACP countries. COM(2004)43*. Brussels: European Commission.

European Commission, 2007: *Communication from the Commission to the Council and the European Parliament: EU Code of Conduct on Division of labour in Development Policy. COM(2007) 72*. Brussels: European Commission.

European Commission, 2011: *First Water Facility - 9th EDF*. `http://ec.europa.eu/europeaid`, accessed 20-09-2011.

European Commission, 2012: *Frequently Asked Questions on P.A.D.O.R.*. `http://ec.europa.eu/europeaid/`, accessed 25-02-2012.

European Parliament, 2000: *Minutes of the meeting of 20, 21 and 22 November 2000, Committee on Development and Cooperation, PE/XIV/00-15*. Brussels: European Parliament.

Evers, H.-D., M. Kaiser and C. Müller, 2009: 'Knowledge in development: epistemic machineries in a global context'. *ISSJ*, 195, 55–68.

Falkenmark, M., 1992: 'Living at the mercy of the water cycle'. In Stockholm Water Symposium, ed., *Water Resources in the Next Century. Proceedings of the Stockholm Water Symposium, 12-15 August 1991, Stockholm*, Stockholm: Stockholm Vatten AB, 11–29.

Falkenmark, M., 2011: 'Early focus on water strategies for the twenty-first century: IWRA as an interdisciplinary forerunner'. *Water International*, 36 (7), 776–81.

Falzon, M.-A., 2009a: 'Introduction'. In M.-A. Falzon, ed., *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research*, Farnham: Ashgate, 1–23.

Falzon, M.-A., ed., 2009b: *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research*. Farnham: Ashgate.

FAO, 2012a: *Aquastat database*. `http://www.fao.org/nr/water/aquastat/main/index.stm`, accessed 01-05-2012.

FAO, 2012b: *FAO Food Price Index*. `www.fao.org/worldfoodsituation/wfs-home/foodpricesindex`, accessed 26-02-2012.

FAO/WFP, 2010: *The State of Food Insecurity in the World: Addressing food security in protracted crises*. Rome: FAO/WFP.

Feldman, M. S., J. Bell and M. T. Berger, eds., 2003: *Gaining access: a practical and theoretical guide for qualitative researchers*. Walnut Creek: AltaMira Press.

Ferguson, J., 2007 [1990]: *The Anti-Politics Machine. "Development", Depoliticization, and Bureaucratic Power in Lesotho*. Minneapolis: University of Minnesota Press.

Ferry, J., 1885: *"Les fondements de la politique coloniale". Discours prononcé à la Chambre des députés le 28 juillet 1885*. `http://www.assemblee-nationale.fr/histoire/ferry1885.asp`.

Fine, B., 2002: 'Economics Imperialism and the New Development Economics as Kuhnian Paradigm Shift?' *World Development*, 30 (12), 2057–2070.

Fisher, W., 1997: 'Doing good? The Politics and Antipolitics of NGO Practices'. *Annual Review of Anthropology*, 26, 439–64.

Fodor, J., 1983: *Modularity of Mind*. Cambridge: MIT Press.

Fodor, J., 1984: 'Observation reconsidered'. *Philosophy of Science*, 51, 23–43.

Fontanelle, B., 1752 [1688]: 'Poésies pastorales avec un Traité sur la nature de l'élogue et une Digression sur les Anciens Poëtes & Modernes'. In *Œuvres diverses de M. de Fontenelle, Tome Quatrième*, Paris: Brunet.

Forsyth, T., 2003: *Critical Political Ecology*. London: Routledge.

Foucault, M., 1972: *The Archaeology of Knowledge*. New York: Pantheon Books.

Foucault, M., 1980: In C. Gordon, ed., *Power/Knowledge: Selected Interviews and Other Writings*, New York: Pantheon.

Foucault, M., 1991a: 'Nietzsche, Genealogy, History'. In P. Rabinow, ed., *The Foucault Reader*, Penguin, New York.

Foucault, M., 1991b: 'Questions of Method'. In G. Burchell, C. Gordon and P. Miller, eds., *The Foucault Effect: Studies in Governmentality*, London: Harvester, 87–104.

Frank, A. G., 1969: *Latin America: Underdevelopment or revolution. Essays in the development of underdevelopment and the immediate enemy.*. New York: Monthly Review Press.

Freeman, C., 1982: *The Economics of Industrial Innovation*. Cambridge: MIT Press.

Fukuda-Parr, S., C. Lopes and K. Malik, eds., 2002: *Capacity for development: new solutions to old problems*. London: Earthscan Publications.

Galli, E., 2009: 'In the Right Place at the Right Time? Some Reflections on Multi-Sited Ethnography in the Age of Migration'. In M.-A. Falzon, ed., *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research*, Farnham: Ashgate, 87–102.

Gardner, K. and D. Lewis, 2000: 'Dominant paradigms overturned or 'business as usual'? Development discourse and the White Paper on International Development'. *Critique of Anthropology*, 20 (1), 15–29.

Gasper, D., 2000: 'Evaluating the 'logical framework approach' towards learning-oriented development evaluation'. *Public Administration and Development*, 20 (1), 17–28.

Gatt, C., 2009: 'Emplacement and Enivronmental Relations in Multi-Sited Practice/Theory'. In M.-A. Falzon, ed., *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research*, Farnham: Ashgate, 103–18.

Geschiere, P. and B. Meyer, 1998: 'Globalization and Identity: Dialectics of Flow and Closure. Introduction'. *Development and Change*, 29 (4), 601–15.

Giddens, A., 1984: *The constitution of society. Outline of a theory of structuration.*. Berkeley: University of California Press.

Glaser, B., 1978: *Theoretical Sensitivity. Advances in the Methodology of Grounded Theory*. Mill Valley: Sociology Press.

Glaser, B. and A. L. Strauss, 1967: *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine.

Goldman, M., 2001: 'The Birth of a Discipline: Producing Authorative Green Knowledge, World Bank-Style'. *Ethnography*, 2 (2), 191–217.

Gooch, G. and P. Ståhlnacke, eds., 2006: *Integrated transboundary water management in theory and practice. Experiences from the new EU Eastern Borders*. London: IWA Publisher.

Gould, J., 2004: 'Introducing Aidnography'. In J. Gould and H. Marcussen, eds., *Ethnographies of aid — Exploring development texts and encounters*, Roskilde: Roskilde University.

Gould, J., 2008: *Thinking outside development. Epistemological explorations 1994–2008*. e-book only, `http://blogs.helsinki.fi/gould/files/2008/06/thinking-outside-96-dpi-17v08.pdf`, version of 17 June 2008.

Gould, J. and H. Marcussen, eds., 2004: *Ethnographies of aid — Exploring development texts and encounters*. Roskilde: Roskilde University.

Gouvernement du Burkina Faso, 1998: *Politique et Stratégies en Matière d'Eau*. Ouagadougou: Gouvernement du Burkina Faso.

Gouvernement du Burkina Faso, 2003: *Le PAGIRE Dans le Contexte du Secteur de l'Eau du Burkina. Document de Base: Table Ronde des Bailleurs de Fonds du Plan d'Action pour la Gestion Intégrée des Ressources en Eau*. Ouagadougou: Gouvernement du Burkina Faso.

Grillo, R., 1997: 'Discourses of Development: the View from Anthropology'. In R. Grillo and R. Stirrat, eds., *Discourses of Development: Anthropological Perspectives*, Oxford: Berg.

Grillo, R. and A. Rew, eds., 1985: *Social Anthropology and Development Policy*. London: Tavistock.

GRILLO, R. and R. STIRRAT, eds., 1997: *Discourses of Development: Anthropological Perspectives*. Oxford: Berg.

GROVER, B. and A. K. BISWAS, 1993: 'It's Time for a World Water Council'. *Water International*, 18 (2), 81–83.

GTZ, 2002: *International Conference on Freshwater, Bonn 3-7 December 2001. Conference Report*. `www.un.org/esa/sustdev/sdissues/water/BonnConferenceReport.pdf`, accessed 15-02-2012.

GUPTA, A. and J. FERGUSON, 1997: 'Discipline and Practice: "The field" as Site, Method, and Location in Anthropology'. In A. Gupta and J. Fergueson, eds., *Anthropological locations: boundaries and grounds of a field science*, University of California Press, 1–46.

GUPTA, A. and J. FERGUSON, 2001: 'Beyond "Culture": Space, Identity and the Politics of Difference'. In J. Inda and R. Rosaldo, eds., *Anthropology of Globalization*, Blackwell Publishing, 65–80.

GUPTA, J., 2009: 'Driving forces in global freshwater governance'. In D. Huitema and S. Meijerink, eds., *Water Policy Entrepreneurs: A Research Companion to Water Transitions around the Globe*, Cheltenham: Edward Elgar, 37–57.

GUSTAVSON, L. C. and J. D. CYTRYNBAUM, 2003: 'Illuminating Spaces: Relational Spaces, Complicity, and Multisited Ethnography'. *Field Methods*, 15 (3), 252–70.

GUSTON, D., 2001: 'Boundary organizations in environmental policy and science: an introduction'. *Science, Technology and Human Values*, 26 (4), 399–408.

GWP, 2000a: *Integrated Water Resources Management. GWP-TAC Background Paper 4*. Stockholm: GWP.

GWP, 2000b: *Towards Water Security: A Framework for Action*. Stockholm: Global Water Partnership.

GWP, 2011: *GWP Network and Consulting Partners Meeting 2011*. Stockholm: Global Water Partnership.

GWP, 2012: *GWP history at a glance*. `http://www.gwp.org/en/About-GWP/History`, consulted 15-02-2012.

HAAS, P. M., 1992: 'Epistemic communities and the international policy coordination'. *International Organization*, 46 (1), 1–35.

HAJER, M. A., 1995: *The Politics of Enivronmental Discourse. Ecological Modernization and the Policiy Process*. Oxford: Clarendon Press.

HALLEZ, H., S. CHERLET and J. CHERLET, 2002: *Ode aan den Boudewijn. Of hoe een gebouw een levensloop kan sturen*. Ghent, unpublished document.

HAMMERSLEY, M. and P. ATKINSON, 2007: *Ethnography: principles in practice*. New York: Taylor & Francis.

HANDLER, P., ed., 1977: *World Food and Nutrition Study: The Potential Contributions of Research. Report of Study Team 9*. Washington: National Academy of Sciences.

Hannerz, U., 1992: *Cultural Complexity: Studies in the Social Organization of Meaning*. New York: Columbia University Press.

Hannerz, U., 1996: *Transnational Connections: Culture, People, Place*. New York: Routledge.

Hannerz, U., 2003: 'Being there... and there... and there! : Reflections on Multi-Site Ethnography'. *Ethnography*, 4 (2), 201–16.

Hanson, N., 1969: *Perception and Discovery: An Introduction to Scientific Inquiry*. San Francisco: Freeman, Cooper.

Haraway, D., 1988: 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspectives.' *Feminist Studies*, 14 (3), 575–599.

Haraway, D., 1991: *Simians, Cyborgs and Women: The Reinvention of Nature*. London: Routledge.

Harris, D., M. Kooy and L. Jones, 2011: *Analysing the governance and political economy of water and sanitation service delivery*. Overseas Development Institute, Working Paper 334. London: Overseas Development Institute.

Havinden, M. and D. Meredith, eds., 1993: *Colonialism and Development: Britain and its Tropical Colonies, 1850-1960*. London: Routledge.

Hearn, S. and E. Mendizabal, 2011: *Not everything that connects is a network. Background Note May 2011*. London: Overseas Development Institute.

Hempel, C., 1970: *Aspects of Scientific Explanation*. New York: The Free Press.

Hertzog, T., A. Adamczewski, F. Molle, P. J.-C. and J.-Y. Jamin, 2012: 'Ostrich-like strategies in sahelian sands? Land and water grabbing in the Office du Niger, Mali'. *Water Alternatives*, 5 (2), 304–21.

Hobart, M., 1993: *An Anthropological Critique of Development: The Growth of Ignorance*. London: Routledge.

Hoff, H., 2009: 'Global water resources and their management'. *Current Opinion in Environmental Sustainability*, 1 (2), 141–7.

Holton, J. A., 2007: 'The Coding Process and Its Challenges'. In A. Bryant and K. Charmaz, eds., *The SAGE Handbook of Grounded Theory*, London: Sage Publications, 265–89.

Holton, R. J., 2005: *Making Globalization*. Houndmills: Palgrave MacMillan.

Homer, 1863: *The Odyssey*. London: Williams and Norgate.

Horowitz, M. M., 1996: 'Thoughts on development anthropology after twenty years'. In E. F. Moran, ed., *Transforming Societies, Transforming Anthropology*, Ann Arbor: University of Michigan Press.

Hovland, I., 2009: 'Follow the Missionary: Connected and Disconnected Flows of Meaning in the Norwegian Mission Society'. In M.-A. Falzon, ed., *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research*, Farnham: Ashgate, 135–47.

Huitema, D., L. Lebel and S. Meijerink, 2011: 'The strategies of policy entrepreneurs in water transitions around the world'. *Water Policy*, 13, 717–33.

Hume, D., 1854 [1752]: 'Of the Rise and Progress of the Arts and Sciences'. In *The Philosophical Works of David Hume*, Cambridge: Allan and Farnham, 119–149.

Ingram, H., 2011: 'Beyond Universal Remedies for Good Water Governance: A Political and Contextual Approach'. In A. Garrido and H. Ingram, eds., *Water for Food in a Changing World*, London: Routledge.

IPCC, 2008: *Climate Change and Water. IPCC Technical Paper VI*. Geneva: IPCC Secretariat.

James, R., 2010: 'Vices and Virtues of Capacity Development by International NGOs'. *IDS Bulletin*, 41 (3), 13–24.

Jasanoff, S., 1997: 'NGOs and the environment'. *Third World Quarterly*, 18 (3), 579–594.

Jaycox, E. V., 1993: 'Capacity Building: The Missing Link in African Development'. In *African-American Institute Conference "African Capacity Building: Effective and Enduring Partnerships", Reston, Virginia, May 20, 1993*.

Jenkins, W., 1978: *Policy Analysis: A Political and Organisational Perspective*. London: Martin Robertson.

Jønch-Clausen, T., 1992: 'Integrated management of land and water resources at the lowest appropriate levels: the Nordic Freshwater Initiative'. In Stockholm Water Symposium, ed., *Water Resources in the Next Century. Proceedings of the Stockholm Water Symposium, 12-15 August 1991, Stockholm*, Stockholm: Stockholm Vatten AB, 105–18.

Jordan, A., 2001: 'Environmental Policy: Protection and Regulation'. In *International Encyclopaedia of Behavioral and Social Sciences*, Amsterdam: Elsevier, 4644–51.

Kaplan, A., 2003: 'Capacity building: shifting the paradigms of practice'. In D. Eade, ed., *Development Methods and Approaches Critical Reflections*, Oxford: Oxfam.

Kapuściński, R., 2001: *The Shadow of the Sun. My African Life*. London: Penguin books.

Kawulich, B. B., 2011: 'Gatekeeping: An Ongoing Adventure in Research'. *Field Methods*, 23 (1), 57–76.

Kearney, M. H., 2007: 'From the Sublime to the Meticulous: The Continuing Evolution of Grounded Formal Theory'. In A. Bryant and K. Charmaz, eds., *The SAGE Handbook of Grounded Theory*, London: Sage Publications, 127–50.

Kelle, U., 2005: '"Emergence" vs. "Forcing" of Empirical Data? A Crucial Problem of "Grounded Theory" Reconsidered'. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 6 (2). `http://nbn-resolving.de/urn:nbn:de:0114-fqs0502275`.

Kelle, U., 2007: 'The Development of Categories: Different Approaches in Grounded Theory'. In A. Bryant and K. Charmaz, eds., *The SAGE Handbook of Grounded Theory*, London: Sage Publications, 191–213.

Keller, R., 2005: 'Analysing Discourse. An Approach From the Sociology of Knowledge'. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 6 (3). `http://nbn-resolving.de/urn:nbn:de:0114-fqs0503327`.

Keller, R., 2011: *Wissenssoziologische Diskursanalyse. Grundlegung eines Forschungsprogramms*. Wiesbaden: VS-Verlag, 3rd edition.

King, A., 2004: *The Structure of Social Theory*. London: Routledge.

King, K. and S. McGrath, 2002: *Globalisation, Enterprise and Knowledge*. Oxford: Sympsium.

King, K. and S. McGrath, 2004: *Knowledge for development? Comparing British, Japanese, Swedish and World Bank aid*. London: Zed Books.

Kingdon, J., 1984: *Agendas, Alternatives, and Public Policies*. Boston: Little, Brown.

Kline, R. R., 2001: 'Technological determinism'. In *International Encyclopedia of the Social & Behavioral Sciences*, Amsterdam: Elsevier, 15495–98.

Konaté, M., I. Diabaté and A. Assima, 2010: *Dynamique des langues locales et de la langue française au Mali: un éclairage à travers les recensements généraux de la population (1987 et 1998). Rapport de recherche de lODSEF*. Québec: ODSEF/Université Laval.

Kothari, U., 2005: 'Authority and Expertise: The Professionalisation of International Development and the Ordering of Dissent'. *Antipode*, 37 (3), 425–46.

Kremer, M., P. van Lieshout and R. Went, eds., 2009a: *Doing Good or Doing Better. Development Policies in a Globalizing World*. Amsterdam: Amsterdam University Press.

Kremer, M., P. van Lieshout and R. Went, 2009b: 'Towards Development Policies Based on Lesson Learning: an Introduction'. In M. Kremer, P. van Lieshout and R. Went, eds., *Doing Good or Doing Better. Development Policies in a Globalizing World*, Amsterdam: Amsterdam University Press.

Kriesi, H., 1994: *Les Démocraties Occidentales: Une Approche Comparée*. Paris: Economica.

Kühl, S., 2009: 'Capacity Development as the Model for Development Aid Organizations'. *Development and Change*, 40 (3), 551–77.

Kuhn, T., 1962: *The Structure of Scientific Revolutions*. University of Chicago Press.

Lafontaine, A., 2000: *Assessment of Capacity Development Efforts of Other Development Cooperation Agencies*. New York: GEF-UNDP.

Lakatos, I., 1978: *The Methodology of Scientific Research Programmes*. Cambridge: Cambridge University Press.

Landes, D., 1998: *The wealth and poverty of nations*. London: Abacus.

Lassiter, L. E., 2008: 'Moving past public anthropology and doing collaborative research'. *NAPA Bulletin*, 29, 70–86.

Latour, B., 1987: *Science in Action*. Cambridge: Harvard University Press.

Latour, B., 1988: *The Pasteurization of France*. Cambridge: Harvard University Press.

Latour, B., 1993: *We have never been modern*. Cambridge: Harvard University Press.

Latour, B., 1996: *Aramis, or the love of technology*. Cambridge: Harvard University Press.

Latour, B., 2000: 'When things strike back: a possible contribution of 'science studies' to the social sciences'. *British Journal of Sociology*, 51 (1), 107–23.

Latour, B., 2004: *Politics of nature: how to bring the sciences into democracy*. Cambridge: Harvard University Press.

Latour, B., 2005: *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.

Laudan, L., 1977: *Progress and its Problems. Towards a Theory of Scientific Growth*. Laudan: Routledge & Kegan Paul.

Law, J., 1986: 'On power and Its tactics: a view from the sociology of science'. *The Sociological Review*, 34 (1), 1–38.

Leach, J., 2006: 'Anthropological Description of Power, Regeneration and Scale on the Rai Coast of Papua New Guinea'. In S. Coleman and P. Collins, eds., *Locating the field: space, place and context in anthropology*, Oxford: Berg, 149–62.

Leeuw, F., 2009: 'Evaluation: a booming business but is it adding value?' *Evaluation Journal of Australasia*, 9 (1), 3–9.

Lele, U., A. Zazueta and B. Singer, 2010: *The Environment and Global Governance: Can the Global Community Rise to the Challenge?*. Cambridge: Lincoln Institute of Land Policy.

Lewis, D., 1998: 'Partnership as process: Building an institutional ethnography of an inter-agency aquaculture project in Bangladesh'. In D. Mosse, J. Farrington and A. Rew, eds., *Development as process: Concepts and methods for working with complexity*, London: Routledge, 99–114.

Lewis, D., A. Bebbington, S. Batterbury, A. Shah, E. Olson, M. Siddiqi and S. Duvall, 2003: 'Practice, power and meaning: Frameworks for studying organizational culture in multi-agency rural development projects.' *Journal of International Development*, 15, 1–17.

Lewis, D. and D. Mosse, 2006a: *Development brokers and translators: the ethnography of aid and agencies*. Sterling: Kumarian Press.

Lewis, D. and D. Mosse, 2006b: 'Encountering Order and Disjuncture: Contemporary Anthropological Perspectives on the Organization of Development'. *Oxford Development Studies*, 34 (1), 1–13.

Lindauer, D. and L. Pritchett, 2002: 'Whats the Big Idea? The Third Generation of Policies for Economic Growth'. *Economia*, Fall, 1–39.

Lindlof, T. R. and B. C. Taylor, 2010: *Qualitative Communication Research Methods*. London: Sage Publications, 3rd edition.

Linsteadl, S., 1994: 'Objectivity, Reflexivity, and Fiction: Humanity, Inhumanity, and the Science of the Social'. *Human Relations*, 47 (11), 1321–46.

Lipson, B. and M. Hunt, 2008: *Capacity building framework: A values-based programming guide*. Oxford: INTRAC.

Long, N., 1992: 'From Paradigm Lost to Paradigm Regained? The Case for an Actor-oriented Sociology of Development'. In N. Long and A. Long, eds., *Battlefields of knowledge: The interlocking of theory and practice in social research and development*, London: Routledge.

Long, N. and A. Long, eds., 1992: *Battlefields of knowledge: The interlocking of theory and practice in social research and development*. London: Routledge.

Luetchford, P., 2006: 'Brokering Fair Trade: Relations between Coffee Cooperatives and Alternative Trade Organizations—A View from Costa Rica'. In D. Lewis and D. Mosse, eds., *Development Brokers and Translators: The Ethnography of Aid and Agencies*, Sterling: Kumarian Books, 127–48.

Maginn, P. J., 2007: 'Negotiating and securing access: Reflections from a study into urban regeneration and community participation in ethnically diverse neighborhoods in London, England'. *Field Methods*, 19, 42540.

Magnette, P., 2011: *Algemene beleidsnota Overheidsbedrijven, Wetenschapsbeleid, Ontwikkelingssamenwerking en Grootstedenbeleid, 23 december 2011*. Belgische Kamer van volksvertegenwoordigers DOC 53 1964/021. Brussels: Chamber of Representatives.

Malinowski, B., 1922: *Argonauts of the Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea*. London: George Routledge & Sons.

Mansell, R., 2011: 'Power and Interests in Information and Communication and Development: Exogenous and Endogenous Discourses in Contention'. *Journal of International Development*, published online.

Marcus, G. E., 1995: 'Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography'. *Annual Review of Anthropology*, 24, 95–117.

Markowitz, L., 2001: 'Finding the Field: Notes on the Ethnography of NGOs'. *Human Organization*, 60 (1), 40–46.

Massey, D., 2005: *For space*. London: Sage.

Matz, M., 2010: 'Rethinking IWRM under cultural considerations'. In W. Scheumann, S. Neubert and M. Kipping, eds., *Water Politics and Development Cooperation*, Berlin: Springer-Verlag.

Mauthner, N. and A. Doucet, 2003: 'Reexive Accounts and Accounts of Reexivity in Qualitative Data Analysis'. *Sociology*, 37 (3), 413–31.

MEA, 2010: *État des lieux du Delta Intrieur - vers une vision commune de développement*. Bamako: Ministère de l'Environnement et de l'Assainissement.

Mehta, L., 2001: 'Commentary. The World Bank and Its Emerging Knowledge Empire'. *Human Organization*, 60 (2), 189–196.

Mehta, L., 2005: *The Politics and Poetics of Water. Naturalising Scarcity in Western India*. New Delhi: Orient Longman.

Mehta, L., F. Marshall, S. Movik, A. Stirling, E. Shah, A. Smith and J. Thompson, 2007: *Liquid Dynamics: challenges for sustainability in water and sanitation (STEPS Working Paper 6)*. Brighton: STEPS centre.

Meinzen-Dick, R., 2007: 'Beyond panaceas in water institutions'. *PNAS*, 104 (39), 15200–5.

Merrey, D., 2008: 'Is normative integrated water resources management implementable? Charting a practical course with lessons from Southern Africa'. *Physics and Chemistry of the Earth, Parts A/B/C*, 33, 899–905.

Michel, C., 2008: *Algemene beleidsnota van de Minister van Ontwikkelingssamenwerking, 5 november 2008*. Belgische Kamer van volksvertegenwoordigers DOC 52 1529/015. Brussels: Chamber of Representatives.

Michel, J.-B., Y. K. Shen, A. Presser Aiden, A. Veres, M. K. Gray, The Google Books Team, J. P. Pickett, D. Hoiberg, D. Clancy, P. Norvig, J. Orwant, S. Pinker, M. A. Nowak and E. Lieberman Aiden, 2011: 'Quantitative Analysis of Culture Using Millions of Digitized Books'. *Science*, Published online ahead of print: 12/16/2010.

Mitchell, B., 1990: 'Integrated water management'. In B. Mitchell, ed., *Integrated Water Management*, London: Bellhaven Press.

Mitchell, T., 2002: *Rule of experts: Egypt, techno-politics, modernity*. Berkeley: University of California Press.

MMEE, 2006: *Politique Nationale de l'Eau*. Bamako: Ministère des Mines, Energie, et de l'Eau.

Molenaers, N., S. Dewachter and S. Dellepiane, 2011a: 'Moving into the new aid approach, dilemmas for NGOs: the Belgian case'. *Public Administration and Development*, 31, 188–204.

Molenaers, N., L. Nijs and H. Huyse, 2011b: *The Belgian NGO Landscape and the Challenges of the New Aid approach: Dealing with Fragmentation and Emerging Complexities*. Institute of Development Policy and Management, Discussion Paper / 2011.02. Antwerp: University of Antwerp.

Molle, F., 2008: 'Nirvana concepts, narratives and policy models: Insights from the water sector'. *Water Alternatives*, 1 (1), 131–56.

Moore, H., 2004: 'Global Anxieties: Concept-metaphors and Pre-theoretical Commitments'. *Anthropological Theory*, 4 (1), 71–88.

Morgan, L. H., 1974 [1877]: *Ancient society, or researches in the lines of human progress from savagery through barbarism to civilization*. Gloucester : P. Smith.

Mosse, D., 2004: 'Is Good Policy Unimplementable? Reflections on the Ethnography of Aid Policy and Practice'. *Development and Change 35*, 35 (4), 639–71.

Mosse, D., 2005a: *The aid effect: giving and governing in international development*. London: Pluto Press.

Mosse, D., 2005b: *Cultivating Development: An Ethnography of Aid Policy and Practice*. London: Pluto Press.

Mosse, D., 2006: 'Anti-social anthropology? Objectivity, objection and the ethnography of public policy and professional communities'. *Journal of the Royal Anthropological Institute*, 12 (4), 935–56.

Mosse, D., ed., 2011a: *Adventures in Aidland: The Anthropology of Professionals in International Development*. Oxford: Berghahn Books.

Mosse, D., 2011b: 'Social analysis as corporate product. Non-economists/anthropologists at work at the World Bank in Washington, DC'. In D. Mosse, ed., *Adventures in Aidland: The Anthropology of Professionals in International Development*, Oxford: Berghahn Books, 81–102.

Mosse, D. and D. Lewis, 2006: 'Theoretical approaches to brokerage and translation in development'. In D. Lewis and D. Mosse, eds., *Development Brokers and Translators: The Ethnography of Aid and Agencies*, Sterling: Kumarian Books, 1–26.

Muckleston, K. W., 1990: 'Integrated water management in the United States'. In B. Mitchell, ed., *Integrated Water Management*, London: Bellhaven Press.

Murphy, H. M., E. A. McBean and K. Farahbakhsh, 2009: 'Appropriate technology A comprehensive approach for water and sanitation in the developing world'. *Technology in Society*, 31, 158–67.

Nadai, E. and C. Maeder, 2005: 'Fuzzy Fields. Multi-Sited Ethnography in Sociological Research. , 6(3)'. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 6 (3). `http://nbn-resolving.de/urn:nbn:de:0114-fqs0503288`.

Nallari, R., S. Yusuf, B. Griffith and R. Bhattacharya, eds., 2011: *Frontiers in Development Policy: A Primer on Emerging Issues by:*. Washington: World Bank.

Nederveen Pieterse, J., 2010: *Development Theory*. London: Sage Publications, 2nd edition.

NFI, 1992: *Copenhagen Report. Implementation Mechanisms for Integrated Water Resources Development and Management. Report from Copenhagen Informal Consultation, November 11-14, 1991*. Copenhagen: Danida.

NGO-Federatie, 2012: *NGO-Openboek.be, accessed on 26 March 2012*. Brussels: NGO-Federatie.

Nietzche, F., 1967 [1887]: *On the Genealogy of Morals*. New York: Random House.

Nolan, R. W., 2002: *Development anthropology: encounters in the real world*. Boulder: Westview Press.

Nutley, S. M., H. Davies and P. Smith, eds., 2000: *What Works?: Evidence-Based Policy and Practice in Public Services*. Bristol: The Policy Press.

OECD, 2011: *OECD Factbook 2011*. `http://www.sourceoecd.org/factbook`.

OECD-DAC, 1999: *Donor Support for Institutional Capacity Development in Environment: Lessons Learned*. Evaluation and Aid Effectiveness. Paris: OECD.

OECD-DAC, 2005: *DAC Peer Review - Belgium*. Paris: OECD.

OECD-DAC, 2005/2008: *The Paris Declaration on Aid Effectiveness and the Accra Agenda for Action*. Paris: OECD.

OECD-DAC, 2006: *The Challenge of Capacity Development. Working Towards Good Practice*. Paris: OECD.

OECD-DAC, 2010a: *Development Assistance Committee (DAC) Peer Review - Belgium*. Paris: OECD.

OECD-DAC, 2010b: *Facts about European NGOs Active in International Development*. Paris: OECD-DAC.

OECD-DAC, 2012: *Aid statistics*. `http://www.oecd.org/dac/stats`, accessed 25 March 2012.

Olivier de Sardan, J.-P., 2005: *Anthropology and Development: Understanding Contemporary Social Change*. London: Zed Books.

Orlove, B. and S. C. Caton, 2010: 'Water Sustainability: Anthropological Approaches and Prospects'. *Annual Review of Anthropology*, 39, 401–15.

Ortiz Aragón, A., 2010: 'A Case for Surfacing Theories of Change for Purposeful Organisational Capacity'. *IDS Bulletin*, 41 (3), 36–46.

Ostrom, E., M. A. Janssen and J. M. Anderies, 2007: 'Going beyond panaceas'. *Proceedings of the National Academy for Sciences*, 104 (39), 15176–78.

Oudshoorn, N. and T. Pinch, 2008: 'User-Technology Relationships: Some Recent Developments'. In E. J. Hackett, O. Amsterdamska, M. Lynch and J. Wajcman, eds., *The Handbook of Science and Technology Studies*, Cambridge: MIT Press.

Owen, D., 1950: 'The United Nations program of technical assistance'. *Annals of the American Academy of Political and social Science*, 270, 109–17.

Pahl-Wostl, C., P. Kabat and J. Möltgen, eds., 2008: *Adaptive and integrated water management: coping with complexity and uncertainty*. Berlin: Springer-Verlag.

Partzsch, L., 2009: 'European Union water policy: to transition or not to transition? Coalitions as key'. In D. Huitema and S. Meijerink, eds., *Water Policy Entrepreneurs: A Research Companion to Water Transitions around the Globe*, Cheltenham: Edward Elgar, 237–49.

Patterson, H., 2008: 'Mali, Report of Findings, PAWD Final Evaluation'. In P. Cox and H. Patterson, eds., *Program Evaluation of Partnership for Africa's Water Development Program (PAWD)*, Quebec: CIDA.

Perkin, E. and J. Court, 2005: *Networks and Policy Processes in International Development: a literature review (Working Paper 252)*. London: Overseas Development Institute.

Powell, W., 1990: 'Neither Market nor Hierarchy: Network forms of organisation'. *Research in Organisational Behaviour*, 12, 295–336.

Princen, T. and M. Finger, eds., 1994: *Environmental NGOs in World Politics: Linking the Local and the Global*. London: Routledge.

Pronk, J., 2003: 'Aid as a catalyst: a rejoinder'. *Development and Change*, 343 (3), 383–400.

Quevauviller, P., 2010: 'Is IWRM achievable in practice? Attempts to break disciplinary and sectoral walls through a science-policy interfacing framework in the context of the EU Water Framework Directive'. *Irrigation and Drainage Systems*, 24 (3-4), 177–89.

Ramalingam, B., 2011: *Mind the network gaps. ODI research report*. London: Overseas Development Institute.

Ramsar, 2012: *The Ramsar Convention on Wetlands*. `http://www.ramsar.org`, accessed 23 May 2012.

Rangan, H., 2000: *Of Myths and Movements: Rewriting Chipko into Himalayan History*. London: Verso.

Rap, E., 2006: 'The success of a policy model: Irrigation management transfer in Mexico'. *Journal of Development Studies*, 42 (8), 1301–24.

Reber, A., 1993: *Implicit Learning and Tacit Knowledge: An Essay on the Cognitive Unconscious*. Oxford: Oxford University Press.

Riccio, B., 2011: 'Exploring Senegalese Trans-local Spaces: Reflections on Multi-Sited Research'. In S. Coleman and P. von Hellermann, eds., *Multi-Sited Ethnography. Problems and Possibilities in the Translocation of Research Methods*, London: Routledge.

Riles, A., 2001: *The network inside out*. Michigan: University of Michigan Press.

Rist, G., 1996: *Le développement. Histoire d'une croyance occidentale*. Paris: Presses de Sciences Po.

Robbins, P., 2012: *Political Ecology: A Critical Introduction*. Oxford: John Wiley & Sons, 2nd edition.

Roberts, J., 2004: 'Thirty-five Years Later in Development Assistance: Have We Moved On, or Just Performed a Minuet?' *Development Policy Review*, 22 (5), 483–95.

Roe, E., 1994: *Narrative Policy Analysis: Theory and Practice*. Durham: Duke Press University.

Rosenberg, N., 1970: 'Economic Development and the Transfer of Technology: Some Historical Perspectives'. *Technology and Culture*, 11 (4), 550–75.

Ross, E. B., 2003: 'Malthusianism, Capitalist Agriculture, and the Fate of Peasants in the Making of the Modern World Food System'. *Review of Radical Political Economy*, 35 (4), 437–61.

Rossi, B., 2004: 'Revisiting Foucauldian Approaches: Power Dynamics in Development Projects'. *Journal of Development Studies*, 40 (6), 1–29.

Rossi, B., 2006: 'Aid Policies and Recipient Strategies in Niger. Why Donors and Recipients Should Not Be Compartmentalized into Separate "Worlds of Knowledge"'. In D. Lewis and D. Mosse, eds., *Development Brokers and Translators: The Ethnography of Aid and Agencies*, Sterling: Kumarian Books, 27–49.

Rottenburg, R., 2009: *Far-fetched Facts. A Parable of Development Aid*. Cambridge: MIT Press.

Sabatier, P., 2007a: 'Need for Better Theories'. In P. Sabatier, ed., *Theories of the Policy Process*, Boulder: Westview Press.

Sabatier, P., ed., 2007b: *Theories of the policy process*. Boulder: Westview Press.

Sabatier, P. and H. Jenkins-Smith, eds., 1993: *Policy Change and Learning: An Advocacy Coalition Approach*. Boulder: Westview Press.

Sabatier, P. and C. M. Weible, 2007: 'The advocacy coalition framework. Innovations and clarifications'. In P. Sabatier, ed., *Theories of the Policy Process*, Boulder: Westview Press, 189–220.

Sachs, J., ed., 2005: *Investing in Development: A Practical Plan to Achieve the Millennium Development Goals*. New York: UNDP.

Sachs, W., 1992: *The Development Dictionary: A Guide to Knowledge as Power*. Atlantic Highlands: Zed Books.

Salemink, O., 2006: 'Translating, Interpreting, and Practicing Civil Society in Vietnam: A Tale of Calculated Misunderstandings'. In D. Lewis and D. Mosse, eds., *Development Brokers and Translators: The Ethnography of Aid and Agencies*, Sterling: Kumarian Books, 101–26.

Sanderson, I., 2002: 'Evaluation, Policy Learning and Evidence-Based Policy Making'. *Public Administration*, 80 (1), 1–22.

Saravanan, V. S., G. T. McDonald and P. P. Mollinga, 2009: 'Critical review of Integrated Water Resources Management: Moving beyond polarised discourse'. *Natural Resources Forum*, 33, 76–86.

Scheumann, W., S. Neubert and M. Kipping, eds., 2010: *Water Politics and Development Cooperation*. Berlin: Springer-Verlag.

Schlager, E., 2007: 'A comparison of frameworks, theories, and models of policy processes'. In P. Sabatier, ed., *Theories of the Policy Process*, Boulder: Westview Press.

Schumacher, E., 1973: *Small is Beautiful: A Study of Economics as if People Mattered*. London: Blond and Briggs.

Schwartzman, H. B., 1992: *Ethnography in organizations. Qualitative Research Methods Series n.27*. London: Sage.

Scott, J., 1990: *Domination and the Arts of Resistance: Hidden Transcripts*. New Haven: Yale University Press.

Sen, A., 1985: *Commodities and capabilities*. Amsterdam : North-Holland.

Sen, A., 1999: *Development as Freedom*. Oxford: Oxford University Press.

SEODC, 2010: *Evaluation of NGO partnerships aimed at capacity development*. Brussels: Special Evaluation Office Development Cooperation.

Shafey, O., M. Eriksen, H. Ross and J. Mackay, 2009: *The Tobacco Atlas, Third Edition*. The American Cancer Society and World Lung Foundation.

Shah, E., 2009: 'Manifesting Utopia: History and Philosophy of UN Debates on Science and Technology for Sustainable Development'. In *STEPS Working Paper 25*, Brighton: STEPS Centre.

Shore, S. and S. Wright, eds., 1997: *Anthropology of Policy: Critical Perspectives on Governance and Power*. London: Routledge.

Silverman, D., 2009: *Doing Qualitative Research*. Sage Publications, 3rd edition.

Singer, H., C. Cooper, R. C. Desai, C. Freeman, O. Gish, S. Hill and G. Oldham, 1970: 'Draft Introductory Statement for the World Plan of Action for the Application of Science and Technology to Development'. In *Science and Technology for Development: Proposals for the Second Development Decade*, New York: United Nations, Annex II.

SIPRI, 2011: *SIPRI Yearbook 2011. Armaments, Disarmament and International Security*. Oxford: Oxford University Press.

SIWI, 2012: *Website of the Stockholm International Water Institute*. `www.siwi.org/sa/node.asp?node=302`, consulted 13-02-2012.

Skaria, A., 1998: *Hybrid Histories: Forests, Frontiers and Wildness in Western India*. Delhi: Oxford University Press.

Skinner, J. and L. Cotula, 2011: *Are land deals driving 'water grabs'? IIED briefing*. London: IIED.

Smith, M. R., 1994: 'Technological Determinism in American Culture'. In M. R. Smith and L. Marx, eds., *Does Technology Drive History? The Dilemma of Technological Determinism*, Cambridge: MIT Press, 1–36.

Spencer, R., 2008: 'Lessons from Cuba: a Volunteer Army of Ambassadors'. In K. Lyons and S. Wearing, eds., *Journey in Volunteer Tourism*, Wallingford: Centre for Agricultural Bioscience International.

Standke, K., 2006: 'Sixty Years of UN and Unesco: Science and Technology in Global Cooperation, the Case of the United Nations and Unesco'. *Science and Public Policy*, 33, 627–46.

Stinchcombe, A. L., 1968: *Constructing Social Theories*. Chicago: The University of Chicago Press.

Stirrat, R. L., 2001: 'Cultures of consultancy'. *Critique of Anthropology*, 20 (1), 31–46.

Stockholm Water Symposium, 1992: *Water Resources in the Next Century. Proceedings of the Stockholm Water Symposium, 12-15 August 1991, Stockholm*. Stockholm: Stockholm Vatten AB.

Stoler, A., 1995: *Race and the Education of Desire: Foucaults History of Sexuality and the Colonial Order of Things*. Durham: Duke University Press.

Stone, D., 2002: 'Introduction: global knowledge and advocacy networks'. *Global Networks*, 2 (1), 1–11.

Stone, D., 2003: 'The "Knowledge Bank" and the Global Development Network'. *Global Governance*, 9, 43–61.

Strang, D. and M. Macy, 2001: 'In Search of Excellence: Fads, Success Stories, and Adaptive Emulation'. *American Journal of Sociology*, 107, 147–82.

Strauss, A. and J. Corbin, 1990: *The Basics of Qualitative Analysis: Grounded Theory Procedures and Techniques*. Newbury Park: Sage.

Strauss, A. L., 1993: *Continual Permutations of Action*. New York: Aldine de Gruyter.

Strauss, A. L., 2001: *Qualitative analysis for social scientists*. Cambridge: Cambridge University Press.

Tarde, G., 1895: *Essais et mélanges sociologiques*. Lyon: Storck.

Thompson, C., 2001: 'Situated Knowledge'. In *International Encyclopedia of the Social & Behavioral Sciences*, Amsterdam: Elsevier, 15532–37.

Thorbecke, E., 2007: 'The Evolution of the Development Doctrine, 1950-2005'. In G. Mavrotas and A. Shorrocks, eds., *Advancing Development: Core Themes in Global Economics*, Houndmills: Palgrave MacMillan.

Többe Gonalves, B., 2006: "Epistemological dependency' - Cognitive relativism in development thinking'. *Journal of International Development*, 1151–65.

Tolbert, G. P., 1977: 'Meeting the Health Needs of Minorities and the Poor'. *Phylon*, 38 (3), 225–35.

Torres, G., 1997: *The Force of Irony: Power in the Everyday Life of Mexican Tomato Workers*. Oxford: Berg.

Truman, H., 1949: *Inaugural address*. `http://www.presidency.ucsb.edu`.

Tsing, A., 1993: *In the Realm of the Diamond Queen*. Princeton: Princeton University Press.

UN, 1951: *Measures for the Economic Development of Underdeveloped Countries. Report by a Group of Experts Appointed by the Secretary-General of the United Nations*. New York: United Nations, Dept of Social and Economic Affairs.

UN, 1977: *Yearbook of the United Nations 1977*. New York: United Nations.

UN, 1990: *New Delhi Statement. Global Consultation on Safe Water and Sanitation, 10-14 September 1990, New Delhi*. New York: United Nations.

UN, 1992a: *Agenda 21. United Nations Conference on Environment & Development, Rio de Janerio, Brazil, 3 to 14 June 1992*. New York: United Nations.

UN, 1992b: *International Conference on Water and the Enivironment: Development issues for the 21st century. 26-31 January 1992, Dublin, Ireland. The Dublin Statement and Report of the Conference*. New York: United Nations.

UN-Water, 2008: *Status Report on IWRM and Water Efficiency Plans for CSD16*. Paris: UNESCO Publishing.

UN-Water, 2009: *The United Nations World Water Development Report 3: Water in a Changing World*. Paris: UNESCO Publishing.

UN-Water, 2011: *Draft Executive Summary of the Status Report on The Application of Integrated Approaches to Water Resources Management. Draft submitted to the UNCSD 2012 preparatory process*. `http://www.unwater.org/downloads/UN-Water_Rio_20_report_Draft_Exec_Sum_2011-10-28.pdf`.

UN-Water, 2012: *The United Nations World Water Development Report 4: Managing Water under Uncertainty and Risk*. Paris: UNESCO Publishing.

UNDP, 2001: *Human Development Report 2001. Making New Technologies Work for Human Development*. New York: undp.

UNDP, 2006: *Human Development Report 2006. Beyond scarcity: Power, poverty and the global water crisis*. New York: UNDP.

UNDP, 2009: *Capacity development: a UNDP primer*. New York: UNDP.

UNDP, 2011: *Human Development Report 2011. Sustainability and Equity: A Better Future for All*. New York: UNDP.

UNDP, 2012: *Human Development Report 2012. Building a Food Secure Future*. New York: UNDP.

UNEP, 2010: *Africa Water Atlas*. Nairobi: UNEP.

UNESA, 2002: *Plan of Implementation of the World Summit on Sustainable Development*. `www.un.org/esa/sustdev/documents`, accessed 15-02-2012.

UNHABITAT, 2010: 'Population of African Cities to Triple'. In *The State of AFrican Cities 2010*, Nairobi: UNHABITAT.

van der Schaaf, C., 2001: *Institutional change and irrigation management in Burkina Faso. Following structures and concrete struggles*, volume 11 of *ZEF Development Studies*. Berlin: Lit-Verlag.

van der Zaag, P., 2005: 'Integrated Water Resources Management: Relevant concept or irrelevant buzzword? A capacity building and research agenda for Southern Africa'. *Physics and Chemistry of the Earth, Parts A/B/C*, 30 (11-16), 867–71.

Van Langenhove, L., 2012: 'Make social sciences relevant'. *Nature*, 484, 442.

Viessman, W. and C. Welty, 1985: *Water Management Technology and Institutions*. New York: Harper and Row.

Visvanathan, S., 2001: 'Technology Transfer'. In *International Encyclopedia of the Social & Behavioral Sciences*, Amsterdam: Elsevier, 15532–37.

Wedeen, L., 2010: 'Reflections on Ethnographic Work in Political Science'. *Annual Review of Political Science*, 13, 25572.

Whitfield, L. and A. Fraser, 2009: 'Introduction: Aid and Sovereignty'. In L. Whitfield, ed., *The Politics of Aid. African Strategies for Dealing with Donors*, Oxford: Oxford University Press, 1–26.

Whitfield, L. and A. Fraser, 2010: 'Negotiating aid: the structural conditions shaping the negotiating strategies of African governments'. *International Negotiation*, 15, 341–66.

Whittle, A. and A. Spicer, 2008: 'Is Actor Network Theory Critique?' *Organization Studies*, 29, 611–629.

WHO, 2008: *The Global Burden of Disease. 2004 Update*. Geneva: WHO Press.

WHO-UNICEF, 2012: *Progress on Drinking-Water and Sanitation: 2012 update*. Geneva: WHO Press.

Wilson, G., 2007a: 'Beyond the Technocrat? The Professional Expert in Development Practice'. *Development and Change*, 37 (3), 501–23.

Wilson, G., 2007b: 'Knowledge, innovation and re-inventing technical assistance for development'. *Progress in Development Studies*, 7 (3), 183–99.

Wilson, V. E. and B. A. Myers, 1972: 'Health Care Policy Issues in the 1970s'. *Health Services Reports*, 87 (10), 879–85.

Wolfensohn, J., 1996: 'People and Development'. In *Annual meetings address, October*. Washington: World Bank.

Wood, B., J. Betts, F. Etta, J. Gayfer, D. Kabell, N. Ngwira, F. Sagasti and M. Samaranayake, 2011: *The Evaluation of the Paris Declaration Phase 2. Final Report*. Copenhagen: Danish Institute for International Studies.

Woodhill, J., 2010: 'Capacities for Institutional Innovation: A Complexity Perspective'. *IDS Bulletin*, 41 (3), 47–59.

World Bank, 1991: *Water supply and sanitation in Africa: laying the foundation for the 1990s. Proceedings of the All Africa Rural Water Supply and Sanitation Workshop and Water Supply and Sanitation Sector Conference, 7-11 May 1990, Abidjan. Volume 2: Country Statements and External Support Agency Reports*. Washington: World Bank.

World Bank, 1998: *Knowledge for Development*. Oxford: Oxford University Press.

World Bank, 2005: *Making a Large Irrigation Scheme Work. A Case Study from Mali*. Washington: World Bank.

World Bank, 2007: *Building Knowledge Economies. Advanced Strategies for Development*. Washington: World Bank Institute.

World Bank, 2010: *Africa's Infrastructure — A Time for Transformation*. Washington: World Bank.

World Bank, 2011: *Bamako Water Supply Project. Project Information Document*. Washington: World Bank.

World Bank, 2012: *Workers' remittances, 2010*. `http://data.worldbank.org`.

WWC, 2003: *Financing Water For All. Report of the World Panel on Financing Water Infrastructure. Chaired by Michel Camdessus*. Marseille: World Water Council.

Wyatt, S., 2008: 'Technological Determinism Is Dead; Long Live Technological Determinism'. In E. J. Hackett, O. Amsterdamska, M. Lynch and J. Wajcman, eds., *The Handbook of Science and Technology Studies*, Cambridge: MIT Press, 165–180.

Young, J. and E. Mendizabal, 2009: *An Anthropological Critique of Development: The Growth of Ignorance*, volume 53 of *ODI Briefing Paper*. London: Overseas Development Institute.

Zwarts, L., 2010: *Will the Inner Niger Delta shrivel up due to climate change and water use upstream? A&W rapport 1537*. Feanwâlden: Altenburg & Wymenga.

Zwarts, L., P. van Beukering, B. Kone and E. Wymenga, 2005: *The Niger, a lifeline. Effective water management in the Upper Niger Basin*. Lelystad: RIZA-Rijkswaterstaat.