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The Global Struggle over Genetic Resources

(Mis)Understanding the Creation of an International Regime
on Access to Genetic Resources and Benefit Sharing (ABS)

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Abstract

ABS is the third objective of the Convention on Biological Diversity (CBD) and the acronym for access to genetic resources and benefit-sharing, the legal-technical term designating the practice of collecting biological resources from nature. Rhetorically this practice is either designated as bio-prospecting or as biopiracy. The current regulation of ABS is found in Article 15 of the CBD. The implementation of Article 15 has however been slow and negotiations for an international ABS regime are underway. A detailed calendar of meetings – Nagoya Roadmap – has been adopted to move the negotiations forward. The deadline for the negotiations is set to 2010. I use a discourse theoretical framework to understand ABS policy-making and the creation of an international ABS regime. I map a few meta-discourses of global environmental governance and examine them in relation to bio-prospecting and biopiracy discourses. In particular I examine how these discourses are mirrored in the operational policy discourse on disclosure requirements. While a discourse theoretical framework seems to provide a reasonable way to understand ABS policy-making, questions about the materiality of discourse are still unanswered. Moreover, the question of agency needs further theorizing. One conclusion is that further research is necessary in several respects.

Key words: global environmental governance, discourse analysis, access to genetic resources and benefit-sharing (ABS), disclosure requirements, Nagoya Roadmap

Table of content

1	Introduction.....	2
1.1	Problem and purpose.....	3
1.1.1	Limitations	3
1.2	Material	4
1.3	Outline of the study	5
2	Methodology	6
2.1	Theory/method	6
2.1.1	The discursive framework.....	6
2.2	Reflexivity.....	8
3	Global environmental governance and biodiversity.....	9
3.1	The Convention on Biological Diversity	9
3.1.1	The CBD as a framework sustainable development convention.....	10
3.2	Access to genetic resources and benefit sharing (ABS).....	11
3.2.1	The Nagoya Roadmap.....	12
4	Analysis.....	14
4.1	Mapping the discursive landscape.....	14
4.1.1	Macro-discourses of global environmental governance.....	14
4.1.2	The discursive field of bio-commerce.....	15
4.1.3	Disclosure requirements in biotechnology patent applications.....	18
5	Summary and conclusions.....	21
5.1	Summary	21
5.2	Conclusions	21
5.3	Future research	23
6	References.....	25

List of abbreviations

ABS	Access to genetic resources and benefit sharing
APEC	Asia-Pacific Economic Cooperation
CBD	Convention on Biological Diversity
COP	Conference of Parties
DR	Disclosure requirements
ILM	International Legal Materials
IPCB	Indigenous Peoples Council on Biocolonialism
TRIPS	Trade Related Aspects of Intellectual Property Rights
UNCCD	United Nations Convention to Combat Desertification
UNCLOS	United Nations Convention on the Law of the Sea
UNFCCC	United Nations Convention on Climate Change
UNU/IAS	United Nations Institute of Advanced Studies
WG-ABS	Ad Hoc Open-ended Working Group on Access and Benefit-Sharing
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

1 Introduction

*“In one drop of water are found
all the secrets of the oceans”*

- Kahlil Gilbran¹

In 2004 the well-known molecular biologist and entrepreneur Craig Venter² launched the Sorcerer II Global Ocean Sampling Expedition. The aim of the expedition was to sample the genomic diversity of marine micro-organisms. The expedition’s press release marked the moment by referring to historical events such as 19th Century sea voyages like Darwin’s on the H.M.S. Beagle and Captain George Nares on the H.M.S. Challenger. According to the Venter Institute’s homepage “the Sorcerer II circumnavigated the globe for more than two years, covering staggering 32 000 nautical miles, visiting 23 different countries and island groups on four continents”. Bio-prospecting – the practice of collecting biological resources – has been going on for a long time, and can be described as the exploration of biodiversity for scientific or commercial purposes. Other and different stories are however also told about bio-prospecting; stories about biopiracy put the practice in a moral and post-colonial context. Historically, biological resources belonged to the ‘heritage of mankind’. This situation was changed with the Convention on Biological Diversity (CBD), which ‘propertized’ genetic resources by putting them under the permanent sovereignty of states. Since the entering into force in 1993, Article 15 of the CBD regulates bio-prospecting, or in the language of the CBD – access to genetic resources and benefit-sharing (ABS). Implementation of Article 15 has however been slow and therefore negotiations for an international ABS regime are underway. What goes on could be described as a global (discursive) struggle over genetic resources. This struggle is currently played out mainly in the context of the CBD, but also in other global arenas such as the World Trade Organization (WTO) and the World Intellectual Property Organization (WIPO).

¹ This quote can be found on the Venter Institute’s homepage (www.jcvi.org).

² For those readers who are not familiar with Craig Venter it can be mentioned that he was the founder of Celera Genomics corporation which did extensive work in sequencing the human genome.

1.1 Problem and purpose

This text proceeds from a puzzle: Why create an international ABS regime and not an agreement or a binding protocol on ABS (Chambers, 2003)? Is there a ‘demand’ for an international ABS regime? I then use the word ‘demand’ as a metaphor (Keohane, 1983: 142-143). When I started to search for answers I did not find much. According to Timothy Hodges, co-chair in WG-ABS, “[o]ne of the biggest challenges for the negotiators is that there does not appear to be a common understanding of the problem that the international community is trying to solve” (Hodges & Daniel, 2005: 157). Others define a much more ‘rational’ problem; for example Dross and Wolff states that the regime should provide “an effective means of promoting access and benefit-sharing in a fair and equitable way, offers legal clarity and certainty, and thereby protects both users and providers” (Dross & Wolff, 2005: 10).

The purpose with this thesis is to examine the negotiations for an international ABS regime and the regulatory policy discourses around the ABS issue. I am particularly interested in understanding the different forces that shape ABS policy-making and the creation of an international ABS regime. In Keeley’s words, I want to examine how a discourse defines how issues are connected in an issue-area (Keeley, 1990: 94). Since it is by no means clear how the ABS issue-area should be defined, definition seems to be at the core of the negotiations project.

A central proposition of this work is that different policy choices are rooted in different worldviews, i.e. different ideas about nature, the relationship between humans and nature, what biodiversity ‘is’, etc. For example, “[a] central feature of the biodiversity debate is the recognition that diversity is important coupled with disagreement over the exact definition of biodiversity and the extent of the crisis” (Raustiala & Victor, 1996: 17). Different ideas about biodiversity produce different policy options. There is nothing mysterious about that. One distinguishing characteristic of environmental politics is that it has a primary concern with the relationship between human society and the natural world (Carter, 2007: 3-4).

1.1.1 Limitations

The ABS issue is often mentioned as one of the most complex and politically contested issues under the CBD. Although progress has been made lately on these issues, a comprehensive account of the ABS negotiation process is beyond the scope of this work. I therefore delimit myself to a brief overview of the process and then focus on a few particular issues. I specifically focus on disclosure requirements. Since this inquiry is informed by its discursive framework

discourses are constructed and used for analytical purposes, and therefore delimited in strategic ways in relation to the purposes of this inquiry (Winter Jørgensen & Phillips, 2000: 137). For example, the mapping of macro-discourses is made only to as far as necessary for the later examination of disclosure requirements. The purpose here is not to give a comprehensive account of the macro-discourses, but merely to enable another part of the analysis.

Among others, McGraw has noted that “[t]he central issue that crystallizes when examining ABS is who owns, controls and profits from the genetic information stored in genetic resources” (McGraw, 2002: 17). Indeed, property issues have always been at the core of environmental policy and they are central to the ABS debate in the shape of intellectual property. It would have been easy to continue along this path, but I believe it would take me too far into uncharted waters. The fact that disclosure requirements are about biotechnology patents does not change this. My concern here is more with process than substance.

Further, there are a few other issues that I will not deal with in this study. Issues of power will not be explicitly addressed. Nor will interactions with the WTO and the WIPO be addressed.

1.2 Material

The material can be divided into primary and secondary material. Primary material consists of the convention text, statements from different actors, COP decisions, press articles, policy documents, speeches, etc. Secondary material consists mainly of academic articles. I have mainly used secondary sources, but reference will also be made to primary sources, in particular the convention text, COP decisions and a few technical reports. It should be mentioned that since the reports from the meetings of the WG-ABS make references to compilations of submissions provided by parties and other relevant organizations such as NGO’s and business, they have been particularly useful in helping to navigate among documents. The amount of material is enormous and also generates a selection problem. Indeed, document production is a salient feature of the framework convention approach. Coombe has described lawmaking in this arena as “emergent, iterative, and performative: it reproduces like multisectoral virus as model legislation, contracting practices, database models, protocols and declarations are spread across the internet and adapted, adopted, and proclaimed in local communities, regional networks, national government agencies, and legislatures” (Coombe, 2003: 276-77). On a few occasions reference will be made to *Earth Negotiations Bulletin*.³ Some of the meetings of the WG-ABS are covered in full by the Bulletin and therefore provide one of the best sources of what goes on at the meetings. I have also consulted the Bulletin as background

³ Brunnée has noted that even negotiators consult the bulletin to keep updated during COP meetings (Brunnée, 2002: 46).

reading. Finally, it can be mentioned that the CBD Secretariat recently has created an information portal related to the negotiations of the international ABS regime (www.cbd.int/abs/ir/).⁴ I have used the portal to search for information but no references will be made to the portal itself.

1.3 Outline of the study

In the next chapter some basic theoretical and methodological issues are discussed. The role of language in this inquiry is emphasized. After that, the discursive framework is fleshed out. A few notes about reflexivity – the practice of ‘self-observation’ in conducting research – conclude the chapter.

Chapter 3 briefly introduces the notion of global environmental governance and then provides a brief outline of the main features of the CBD, in particular its nature as a ‘new’ kind of framework sustainable development agreement. A more or less chronological description of the treatment of the ABS issue within the framework of the CBD and the rise of the Nagoya Roadmap follows.

In chapter 4, I show how the discursive framework laid out in chapter 2 can be applied to the ABS process. First, a mapping of macro-discourses of global environmental governance is made. Next, the discursive field in which bio-prospecting and biopiracy discourses are at play, is laid out. After that, a policy option from the ABS process – disclosure requirements – is chosen to examine how this policy choice is shaped by the previously discussed discourses. In particular I discuss one of the latest inputs in the process; the Studies on Monitoring and Tracking Genetic Resources.

Finally, in chapter 5, I sum up the discussion in the preceding chapters and I draw out some conclusions mainly of a methodological character. In particular, the issues of agency and structure, the ‘materiality’ of discourse, and the nature of the interplay between different discourses within a discursive field are discussed. Last, some suggestions for future research are made.

⁴ The information portal is mentioned also because it may be of interest in terms of the transparency of the negotiation process. In fact, the portal is set up in response to COP decisions (IX/12, paragraph 23 and IX/32, paragraph 11).

2 Methodology

This chapter addresses methodological issues. The first section provides some general thoughts about discourses and then the discursive framework to be used in this inquiry will be developed. I talk about theory/method instead of theory and method because of fundamental philosophical standpoints. The reason for this is that I understand theory/method as a unit. This is an acknowledgement of the interplay between on the one side observation and examination, and on the other side interpretation of observations. This is also consistent with the assumption that the researcher constructs discourses for analytical purposes.

2.1 Theory/method

Theoretically, this study can be positioned with the broader field of international relations and the study of international environmental politics (Betsill, Hochstetler & Stevis, 2006). While discourse analysis does not belong to mainstream theory (Milliken, 1999: 226; Paterson, 2006), it is a growing field in international environmental politics (Litfin, 1994; Hajer, 1995; Dryzek, 1997; Bäckstrand & Lövbrand, 2006; Maguire & Hardy, 2006). However, most of the research referring to “international regimes” can be situated within a liberal tradition of international relations research. The main problem to be solved is why states cooperate (Young, 1989). But the concept of a regime must not necessarily be interpreted in a liberal way (Keeley, 1990) and it must not have as its purpose to explain cooperation. Instead I treat regimes “as loci of greater or lesser, but inevitable, tension in which actors struggle to define the regime and the space it orders” (Keeley, 1990: 98-99; Maguire & Hardy, 2006). Therefore I talk about a struggle rather than cooperation.

2.1.1 The discursive framework

The basic assumption underlying all forms of discourse analysis is that language is not just a reflection of a reality that already exists but language also creates reality. Even though any discourse analysis aims to show how language shapes reality, a wide range of approaches can be used (Hajer, 2003: 103; Howarth, 2000). In fact, “[d]iscourse theorists must remain methodological bricoleurs and refrain from developing an all-purpose technique for discourse analysis” (Torfing, 1999: 292). My analysis draws inspiration from an article by

Bäckstrand and Lövbrand. A central proposition of their article is that “forest sequestration projects in developing countries represent a *microcosm* (my emphasis) of competing and overlapping discourses that are mirrored in debates of global environmental governance” (Bäckstrand & Lövbrand, 2006: 50-51). They use a kind of discourse analysis which includes for example a notion of agency. In fact, they set out four basic propositions about their text: First, a discourse is a “shared way of apprehending the world” (Dryzek, 1997: 8). Second, discourses are treated as “knowledge regimes”. Third, in line with Hajer’s form of argumentative discourse analysis I also use his definition of discourse as an “ensemble of ideas, concepts, and categories through which meaning is given to phenomena, and which is produced and reproduced through an identifiable set of practices” (Hajer, 2005: 303). Fourth, a notion of agency is as mentioned above included in their discourse analysis (Bäckstrand & Lövbrand, 2006: 50-52). Although I realize that theory development was not the message of their article, I take the opportunity to attempt to further develop discourse theory. Bäckstrand and Lövbrand are vague on several theoretical accounts: For example how the interaction, more precisely, between macro- and micro-discourses works to produce a ‘microcosm’. Or, they do not ask themselves if there is anything beyond discourse. I am aware that the discursive approach that they use does not treat everything as discourse but in drawing their conclusions, no other possible alternative, for example material, explanations are imagined.

My approach is a form of policy analysis. I want to know how discourses shape policy and law. Policies are products of discursive struggles, not neutral tools. “[P]olicy discourses favour certain descriptions of reality, empower certain actors while marginalising others” (Bäckstrand & Lövbrand, 2006: 52). What I search for in the material are ‘answers’ to questions such as: How is the problem defined – or rather how different actors understand and define the problem? What is ABS? What kind of phenomena should be included or excluded? How big is the problem? Is it growing, does it change its character? Who is the ‘victim’? What are the threats, risks and damages? What are the causes to the problem? What conditions simplify or aggravate the problem? Who claims to have the solutions? How do different actors view each other? What strategies and measures are presented and by whom?

In line with the above prescriptions I connect three central macro-discourses of global environmental governance (Bäckstrand & Lövbrand, 2006: 52-57) – ecological modernization, green governmentality, civic environmentalism – with micro-discourses in the ABS issue-area, in particular the discourses on bio-prospecting and biopiracy. Moreover, I put this inquiry in a narrower context; the policy choice of disclosure requirements in biotechnology patent applications. I intend to study how structures shape discursive practices at the same time as those structures are contested and re-shaped by practice (Winter Jørgensen & Phillips, 2000: 133). In other words, it is the play of discourses within a discursive field that concerns me most (Winter Jørgensen & Phillips, 2000: 138). As noted above, the discursive framework needs further theorizing. Although I will touch upon some of these issues in the conclusions, several other issues are beyond the scope of this work.

2.2 Reflexivity

Since discourses are constructed for analytical purposes rather than ‘found’ in reality, the position of the researcher becomes crucial (Winter Jørgensen & Phillips, 2000: 137). The researcher must reflect on his own methods of work. Reflexivity refers to this kind of ‘self-observation’ (Alvesson, Hardy & Harley, 2008; Winter Jørgensen & Phillips, 2000: 56-57, 111-112). Moreover, since the choice of a particular approach or theory is in itself a significant driver of the reality that is observed (Rosamond, 2007: 243), disciplinary politics becomes a critical issue (Campbell, 1998: 142 ff). Theory and practice merge, as do politics and knowledge production.

3 Global environmental governance and biodiversity

Environmental policy and law-making lacks an overarching, coherent global framework. There is for example no global environmental organization similar to the WTO. Instead, policy and law develops in different forums and exists in different forms and shapes. Even though we find a popular way to conceptualize and understand environmental politics is in terms of global environmental governance (Biermann, 2006), this research field is in itself wide (Okereke, Bulkeley & Schroeder, 2009; Park, Conca & Finger, 2008). The discourse on global environmental governance shapes and is shaped by institutions and policies (Clapp & Dauvergne, 2005: 70). As such discourses are intertwined with institutions. “[I]f formal rules constitute institutional hardware, then discourses constitute institutional software” (Dryzek, 1999: 122). The “discursive sources of international order” (Dryzek, 1999) can thus be conceptualized in terms of meta-discourses on global environmental governance (Bäckstrand & Lövbrand, 2006: 51).

The institutionalization of bio-commerce within the framework of the CBD – dressed up as ABS – makes ABS an ‘object’ of global environmental governance. In other words, through the processes within the CBD framework, ‘traditional’ bio-prospecting and biopiracy discourses are becoming embedded in the broader field of global environmental governance. It is to this issue that we now turn. After a brief overview of the CBD, a more or less chronological presentation of the ABS negotiations and the rise of the Nagoya Roadmap follow.

3.1 The Convention on Biological Diversity

The CBD was opened for signature at the 1992 Earth Summit in Rio de Janeiro and entered into force on 29 December 1993. The CBD is – together with the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat desertification (UNCCD) – often regarded as a ‘new’ kind of environmental agreement which incorporates a number of innovative elements as part of sustainable development discourse: global character, strong North-South dimension, role of participatory process, long-term horizon, and innovative implementation schemes (Bruyninckx, 2006: 287). According to Article 1 of the CBD it has three objectives: (1) conservation of biological diversity, (2) sustainable use of its components, and (3) the fair and

equitable sharing of the benefits derived from the use of genetic resources. The CBD recognizes both the intrinsic value of biodiversity and the conservation of biodiversity as a 'common concern of humankind'. The CBD reaffirms that states have sovereign rights over their own biological resources and specifically sets out that principle in the operative part of the convention, in Article 3. According to McGraw, the CBD's key innovation is the interrelationship between conservation, sustainable use and benefit sharing (McGraw, 2002: 24). In other words, the CBD is not just about conservation; it is also an economic agreement. The economic nature of issues is apparent in the ABS issue. It is also apparent in the context of for example technology transfer and scientific cooperation. In fact, some commentators said the treaty might just as well have been designed as the "Convention on Biotechnology Transfer" (Burk, Barovsky & Monroy, 1993: 1900). Especially the adoption of Article 19 providing for the sharing of biotechnology research results was the ultimate reason for the USA not to ratify the CBD (21 ILM 848 (1992)). But it is the post-agreement negotiations that have been most challenging, much due to the fact that several of the most contentious issues were left unresolved at the time of the adoption of the CBD (McGraw, 2002: 28). Both the negotiation process that led to the adoption of the Cartagena protocol on biosafety and the current ABS negotiations are good evidence of this.

3.1.1 The CBD as a framework sustainable development convention

The environmental policy process is made up of messy and complex interactions (Haijer & Versteeg, 2005: 176) and that is certainly true also for the ABS policy-making process. Although the process officially is referred to as a negotiation process, the nature of the process cannot be treated as given – or be divided into policy stages. It is an instance of post-agreement negotiation but it also involves elements of norm-making, implementation, forum-shopping, etc., depending on how actors interpret the process. The ABS negotiation (policy-making) process should be understood as an "ongoing, interactional process", where for example "the boundaries between law-making and application are fluid" (Brunnée, 2002: 44). In line with the foregoing, I consider also the meetings of the WG-ABS as an "ongoing, interactional process". Moreover, it is clear that COP Decision VII/19 – the decision that set the terms of reference for the WG-ABS for the elaboration of an international ABS regime – breaks new ground in terms of institutional governance by promoting an institutionalized process, which is both deliberative and participatory (Footer, 2006: 269). As such, the process is an example of more innovative policy-making discourses – an example of a sustainable development policy process (Bruyninckx, 2006: 268). The CBD is thus best viewed as a "framework sustainable development convention" which overlaps with agreements beyond the environmental realm (McGraw, 2002: 24). Indeed, framework conventions are a particular kind of institutional arrangement. The conference of the parties (COP), assisted by and interact with various sub-bodies like the WG-ABS, provides a forum for ongoing dialogue. COPs "represent hybrids between issue-specific diplomatic conferences and the

permanent plenary bodies of international organizations” (Brunnée, 2002: 16). The framework approach is “designed to postpone difficult negotiating issues, but to keep at them” (Brunnée, 2002: 8). As such the framework approach is thought to be able, over time, to produce shared understandings about common problems (Brunnée & Toope, 1997). However, not everybody believes in the promises that the design of the transformational model of international regime brings with it (Downs, Danish & Barsoom, 2000). Sustainable development discourse, however, calls for the recognition and promotion of strong linkages between biodiversity and a number of other issues; poverty eradication, food security, provision of fresh water, soil conservation and human health (Redgwell, 2006: 66). As such the framework convention approach is inclusive, or integrative, while for example the trade regime under the WTO is exclusive. On the other hand, while the framework approach makes the distinction between the inside and the outside unclear, that distinction remains (fairly) clear in the trade regime. But even within its framework (the inside), the CBD has become a complex and multi-layered regime with seven thematic programmes and several cross-cutting issues. This development reflects both the breadth and depth of the biodiversity regime, but it also makes it difficult to define a clear “*problématique*” (McGraw, 2002: 23). In other words, the biodiversity concept lacks “issue salience”; it does not offer a simple formula to explain the issue to laymen (McGraw, 2002: 23-24). While biodiversity – the term given to the variety of life on Earth – is more ‘communicable’ than the longer “biological diversity”, concepts like “acid rain”, “global warming” and “ozone holes” are more easily communicable than biodiversity.

We now turn to the third objective of the convention; the ABS issue.

3.2 Access to genetic resources and benefit sharing (ABS)

Article 15 sets out the rights and obligations of member states regarding access to genetic resources and fair and sharing of benefits arising out of their use. The CBD defines “genetic resources” in very broad but still in ‘incomprehensive’ terms; according to Article 2 “Genetic resources” means genetic material of actual or potential value”. For example the concept of “derivatives” is not defined in the CBD. Another provision central to the ABS issue is Article 8(j). This provision emphasizes the importance of local and indigenous communities in maintaining biodiversity. Indigenous participation is also a cross-cutting issue and a working group has been established under the CBD framework to deal with Article 8(j) issues. In particular indigenous NGO’s has criticized this way of organizationally detaching indigenous issues from the ABS negotiations.

The implementation of Article 15 has been slow and the negotiations have mostly failed. Except for the creation of the Bonn Guidelines in 2002, it was not until the adoption of the Nagoya Roadmap last year that things really started to

happen. The break-through on the ABS issue at the latest COP in Bonn in 2008 was presented as one of the major achievements by the organisers. Process has thus developed but there has been little progress on substantive issues. Perhaps due to the strong polarization between public/private, north/south, etc.

An Ad Hoc Open-ended Working Group on Access and Benefit Sharing (WG-ABS) has been established. The first meeting of the WG-ABS was held in Bonn, Germany, in 2001. At that meeting the Bonn Guidelines were elaborated. After that the WG-ABS has held five meetings.⁵

At the World Summit on Sustainable Development in Johannesburg in 2002 the idea of an international ABS regime was first voiced and governments called for the negotiation on an international BS regime. COP 7 in Kuala Lumpur then, in Decision VII/19, mandated the WG-ABS “to elaborate and negotiate an international regime on access to genetic resources and benefit-sharing with the aim to effectively implement the provisions in Article 15 and Article 8(j) of the Convention”. The terms of reference included a requirement to draw on “an analysis of existing legal and other instruments at national, regional and international levels relating to access and benefit-sharing, including access contracts, experiences with their implementation; compliance and enforcement mechanisms; and other options”. The international regime could be “composed of one or more instruments within a set of principles, norms, rules and decision-making procedures, legally-binding and/or non-binding”.

The Inter-Sessional Meeting of the Multi-Year Programme of Work of the Conference of the Parties up to 2010 invited the WG-ABS “to consider the process, nature, scope, elements and modalities of an international regime”.

3.2.1 The Nagoya Roadmap

At COP 8 in Bonn in May 2008 WG-ABS was directed to complete its work before COP 10 in Nagoya in 2010. Decision IX/12 adopted at COP 9 established the “Nagoya Roadmap”, a detailed calendar of meetings, for the negotiations contained in that decision. COP further instructed the WG-ABS to complete the elaboration and negotiation of the international ABS regime and to submit for consideration and adoption at COP 10 in Nagoya in 2010 an instrument or instruments to effectively implement the provisions of Articles 15 and 8(j) of the CBD and its three objectives, without in any way prejudging or precluding any outcome regarding the nature of such instrument/instruments (in accordance with decisions VII/19 D and VIII/4 A).

In paragraph 11 of its decision IX/12, COP decided: “[...] to establish three distinct groups of technical and legal experts on: (i) compliance; (ii) concepts, terms, working definitions and sectoral approaches; and (iii) traditional knowledge associated with genetic resources”. The Annex of Decision IX/12 has

⁵ The reports from the *Earth Negotiations Bulletin* shows that hardly any progress was made during the first five meetings.

identified five components for the international ABS regime. These include: access; fair and equitable benefit sharing; compliance measures; traditional knowledge and capacity building. Under the compliance component one of the measures for “further consideration” is the disclosure requirements. In support of the negotiation process, the COP also requested the Secretariat (in Decision IX/12, para. 13) to commission five studies on technical and legal issues, all central elements of the negotiations. These studies address technical and legal issues such as recent developments in methods to identify genetic resources directly based on DNA sequences, and the legal relationship between the international ABS regime and other international agreements. The peer review process for ABS studies – which also forms part of the Nagoya Roadmap – are commissioned in accordance with Decision IX/12 (paragraph 13(a) (b) and (e)). The studies are currently available for peer review.

Another significant achievement in the negotiation process is the adoption of a negotiation text – first developed at the sixth WG-ABS meeting in Geneva – on which parties, indigenous and local communities and relevant stakeholders are now invited to submit views and proposals.

Among the official documents to be discussed at the upcoming seventh meeting of the WG-ABS in Paris 2-8 April this year – the first WG-ABS meeting under the Nagoya Roadmap – are the Studies on Monitoring and Tracking Genetic Resources. I will return to these studies later for a more thorough discussion.

4 Analysis

In the next section a mapping the discursive landscape will be made. First, three macro-discourses of global environmental governance will be presented. After that, the two dominant discourses on bio-prospecting and biopiracy – as two different ways of ‘narrating’ ABS – will be presented in terms of a discursive field of bio-commerce. Third, one of the most talked-about policy options in the ABS debate, disclosure requirements, will be analyzed in terms of how these different ‘levels’ or varieties of discourse interact and merge into ‘microcosms’.

4.1 Mapping the discursive landscape

Since discourses are constructed for analytical purposes rather than ‘found’ in reality, this becomes more than just a mapping exercise (Winter Jørgensen & Phillips, 2000: 137). Still, I start from well-established *a priori* understandings of both the macro-discourses of global environmental governance and the bio-prospecting and biopiracy discourses.

4.1.1 Macro-discourses of global environmental governance

Bäckstrand and Lövbrand has identified three macro-discourses – ecological modernization, green governmentality and civic environmentalism – which provide rough maps for understanding the discursive framing of global environmental politics (Bäckstrand & Lövbrand, 2006: 52).

The discourse of *ecological modernization* is closely related to sustainable development (Eckersley, 2004: 70-79). The basic idea of ecological modernization is that environmental conservation is good for business profitability (Dryzek, 1997: 11). Ecological modernization treats Biodiversity as a natural asset. Ecological modernization is silent on North-South issues; it is ‘Eurocentric’ and technocentric; “[i]ts technocentric view of nature recognizes no limits to growth and assumes that all problems are open to solution” (Carter, 2007: 231). Importantly, ecological modernization entails shifts in terms of state-business and state-civil society relations (Paterson, 2008: 124). A critical counter-discourse to ecological modernization is green developmentalism (McAfee, 1999).

The discourse on *green governmentality* is based on an elitist technocratic management narrative (Bäckstrand & Lövbrand, 2006: 62). Notions of stewardship and management of resources are also manifestations of green

governmentality. The production of a new set of “eco-knowledges”, and control logic are salient features of this discourse.

Civic environmentalism is a strong reflexion of one of the widely accepted policy principles – participatory policy-making – that characterize sustainable development policy processes (Bruyninckx, 2006: 268). It is also a reflection of Principle 10 in the Rio Declaration which states that “[e]nvironmental issues are best handled with participation of all concerned citizens”. While the preceding statements both relate to reform-oriented civic environmentalism, radical resistance discourse of civic environmentalism revolves around North-South inequalities, ecological and developmental narratives (Bäckstrand & Lövbrand, 2006: 64). Main elements of this discourse can be found in biopiracy discourse.

Next, I will consider the two main competing discourses in this area; the bio-prospecting and the biopiracy discourse. While the bio-prospecting discourse is strongly connected to modern science, in particular bioscience, the biopiracy discourse is much more culturally grounded and connected to notions of traditional knowledge. For example, it is in this discursive context that the relationship between biodiversity and biotechnology is constituted. These two discourses are ‘symbiotic’ and it is therefore difficult to tell where one discourse ends and the other starts. Dorsey has suggested that ideas and practices of bio-prospecting and biopiracy take shape and unfold within a discursive field; the discursive field of bio-commerce (Dorsey, 2005: 3). I will proceed by using his idea of a discursive field of bio-commerce. The three macro-discourses presented above are also used below to show how they influence/interact with the discursive field of bio-commerce and how they contribute to the shaping of the ABS regime.

4.1.2 The discursive field of bio-commerce

In this section I show how the struggle between bio-prospecting and biopiracy discourses play out within the discursive field of bio-commerce. Here, focus is on the shaping of benefit-sharing rather than on access to genetic resources.

In the introduction I used Craig Venter’s Sorcerer II Expedition as an example of bio-prospecting. This, however, is not a representative, ‘classical’ case of bio-prospecting. Venter’s Expedition deviates in many ways from the narrative usually found in stories about successful bio-prospecting. Stories about bio-prospecting are however more often framed in terms of biopiracy. Hoodia Cactus is one of the most talked about cases, but biopiracy discourse provides other stories about biopiracy containing more or less the same dominant narrative. Well-known examples include the Rosy Periwinkle, the Neem Tree, the Enola Bean and Turmeric (Burrows, 2005; McGown, 2006; Laird & Wynberg, 2008).

The bio-prospecting discourse contains an allusion to “mineral prospectors, travelling into virgin territory looking for viable deposits” (Dryzek, 2000: 125). Both bio-prospecting and biopiracy discourse contain a number of historical metaphors; a prospector is an adventurer, colonialism, etc. The Sorcerer II Expedition is a good example with its allusions to Darwin (Pottage, 2006: 137).

According to Takeshita, the notion of benefit-sharing is constructed within the discourse on bio-prospecting, and in doing that the discourse characterizes bio-prospecting as a win-win situation (Takeshita, 2001: 288).

The biopiracy discourse must be understood as a counter-discourse – or rather conceptualized in terms of resistance to the bio-prospecting discourse – which is made possible by the bio-prospecting discourse. While the (contemporary) discourse on bio-prospecting – although having its linguistic roots in mineral prospecting – has its scientific roots in modern synthetic biology, the biopiracy discourse has completely different origins; the value of modern (Western) science is questioned; instead the importance of local traditional knowledge is emphasized. Vandana Shiva – one of the most well-known proponents of biopiracy – takes a critical stance on these issues: “Five hundred years after Columbus, a more secular version of the same project of colonization continues through patents and intellectual property rights . . . The creation of property through piracy of others’ wealth remains the same as 500 years ago” (Shiva, 2001, quoted in Heald, 2003: 519). From this quote it is clear that illegitimate property claims are central to biopiracy discourse. The existence of intellectual property rights, in particular patents, is one of the fundamental problems to be solved. Biopiracy discourse usually describes the unauthorized use of traditional communities’ knowledge of biological resources. However, biopiracy discourse should not be understood as being associated only with ‘theft’ (piracy) but also with unequal shares of benefits. For example indigenous people view the international ABS regime with suspicion. They see the proposed ABS regime as an attempt to legalize biopiracy under the guise of compensation (benefit-sharing) (IPCB, 2003). Consequently, it is more or less impossible not to situate the biopiracy discourse in relation to concerns about global environmental justice (Mickelson, 1998).

The discourse on bio-prospecting is strongly connected to the discourse of ecological modernization in that bio-prospecting refers to commercialization of genetic resources. Bowen provides an unusually straightforward ecological modernization account of bio-prospecting, when he describes bio-prospecting as “a high cost, high risk process with no guarantee of any financial return at all.” (Bowen). In this discourse it is the market through contractual practices that takes care of benefit-sharing. Although contemporary stories about bio-prospecting, such as the story about the Sorcerer II Expedition are being told, the story about the Merck-INBio Agreement is still the dominant story being told about the shared value (win-win) of bio-prospecting (Coughlin, 1993). As such Material Transfer Agreements (MTAs) between pharmaceutical firms and developing countries has been the most common form of benefit-sharing (Zebre, 2002: 304). In radical discourses of bio-colonialism this type of benefit-sharing has been described as reviving “the colonial type of trade of a Third World commodity, which is then given value by the North . . . a repeat indeed of the formula which has resulted in the present North-South ‘imbalance’ of trade terms and pauperized large parts of the Third World” (Nijor, quoted in Zebre, 2002: 305). This discourse analogizes genetic resources with natural resources and historical (colonial) North-South relations. Further, it is often emphasized that the contractual approach to the value of genetic resources leads to “low value of

individual transactions and not to full valuation of environmental services provided by biodiversity” (Tvedt, 2006: 199). This statement reflects what Coombe calls ‘works in progress (Coombe, 2003) and it is made possible by an idea about a certain relationship between humans and nature and the special character of genetic resources. For many the private contract approach fails to include the value of the historical contribution and value-adding efforts put into genetic resources. For Tvedt “[g]enetic material is not only pre-existing in nature, but is partly dependent on efforts by man” (Tvedt, 2006: 199).

Despite the fact that the Venter Institute entered into benefit-sharing agreements with all countries where sampling took place – including the fundamental principle that genomic sequence data from the study will be publicly available to scientists worldwide and that no intellectual property rights will be sought by the Venter Institute on these genomic sequence data – the Institute was accused of biopiracy. Canadian-based NGO the Action Group on Erosion, Technology and Concentration labeled Venter a “biopirate” and awarded him the Captain Hook Award in 2006 (Nicholls, 2007). The Venter Institute’s agreements were questioned on another ground – the ground that only a small group of scientists in the world can use the knowledge (Nicholls, 2007). This is a new and different argument, more related to capacity than to justice. But Venter’s expedition surely raises ethical issues (Rimmer, p 54).

According to Pottage, “[m]odes of bioprospecting have been profoundly transformed by the emergence of sequencing technologies, bioinformatics and synthetic biology” (Pottage, 2006: 155). As noted by Wolbring, the face of biotechnology is certainly changing (Wolbring, 2007) and there is disagreement about the current and future significance of bio-prospecting for life sciences. Some say that “[b]ioprospecting is as critical to the genetic resources industry as mineral exploration is to mining.” (Bowen, p 12). The Sorcerer II Expedition and the bio-prospecting for extremophiles in Antarctica (UNU/IAS, 2003) support this view. Others say that modern genomics and synthetic biology will make bio-prospecting redundant. But somehow modern bio-prospecting practices strengthen the link between biodiversity and biotechnology moving policy into biotechnology regulation in general perhaps even detaching it from biodiversity issues. As a promoter of mega-science, Venter also reinforces the discourse on green governmentality.

Since the Sorcerer II Expedition was surveying marine and terrestrial microbial populations an important fact about the expedition is that the expedition took place outside the jurisdiction of the CBD. Instead the United Nations Convention on the Law of the Sea (UNCLOS) establishes the legal order in which the Expedition takes place. There is however uncertainty as to the relationship between the different orders set out in the conventions. According to UNCLOS, mineral resources on the deep seabed are considered the ‘common heritage of mankind’, which means that any benefits deriving from them should be shared with the international community. “But when it comes to biological resources, just about anything goes” (Nicholls, 2007: 381).

According to Dryzek, through biopiracy discourse “the assumptions of private property that underpin commercial law are undermined, and so the piracy

construction can point to different systems of common property and their associated practices which will need to be negotiated in non-market fashion” (Dryzek, 2000: 126). Pottage has pointed out that there is already ‘too much’ ownership in the Convention (Pottage, 2006: 153); “ownership narratives continue to proliferate around genetic resources” (Pottage, 2006: 151).

4.1.3 Disclosure requirements in biotechnology patent applications

I suggest that the discourse on disclosure requirements (DR) is best understood as a regulatory, operational micro-discourse. The policy choice here is a particular kind of regulation. It will however interact with a broader context; the field of bio-commerce, but also wider discourses on global environmental governance. As such the discourse on DRs is a micro-discourse consisting of a multiplicity of discursive elements that come into play in various strategies (Foucault, 1979: 100). In this discourse elements from ecological modernization and green governmentality merge with elements from discourses of bio-prospecting and biopiracy.

The terms of reference for WG-ABS list, as one element to be considered for inclusion in the regime, the “Disclosure of origin/source/legal provenance of genetic resources and associated traditional knowledge in applications for intellectual property rights”. Originally, disclosure requirements seemed to be a simple ‘thing’. DR is a collective term for certain requirements to be incorporated into patent law (Dutfield, 2005). DRs focus more on equitable benefit-sharing than on access, but it also depends on how issues are linked (Tvedt, 2006). DRs have received a lot of attention and several studies and reports have been written about them. In the prevailing policy discourse, DRs have become part of a wider, complex global administrative system; While DR in terms of a “certificate of origin” originally signified a standard document as evidence of Prior Informed Consent (PIC) to be submitted together with patent applications it is now referring to an administrative system of documentation for tracing the flow of genetic resources.

Hoare and Tarasofsky point out that one of the characteristics of the debate on DRs is that many of the key terms and concepts are not fully defined and that there is no consensus as to the extent or nature of the DRs (Hoare & Tarasofsky, 2007: 150). Still, a certain idea about the nature of genetic resources makes DRs an appropriate policy option.

According to ecological modernization discourse, DRs would severely diminish the value of patents. Some say they even appear to be designed for that purpose (Bowen, p 15). In ecological modernization discourse DRs is one of the problems, not a solution. The effectiveness and feasibility of DRs remains unproven (Hoare & Tarasofsky, 2007: 160). The APEC Study, authored out by Bowen, is a prime example of ecological modernization (Bowen). The problem is ‘technological’ and should be solved by means of innovation, technology and markets, not by means of regulation. Regulation is considered expensive and even

unnecessary if there is no market to regulate. Therefore DRs do not fit very well with the project of ecological modernization.

In the “Studies on Monitoring and Tracking Genetic Resources” (UNDP/CBD/ABS/GTLE/2/INF/4) experts provide a detailed examination of two technical issues: (a) recent developments in methods to identify genetic resources directly based on DNA sequences; and (b) identification of different possible ways of tracking and monitoring genetic resources through the use of persistent global unique identifiers (GUIDs), including the practicality, feasibility, costs and benefits of the different options. For the non-expert, reading the expert “Studies on Monitoring and Tracking Genetic Resources” is like reading science fiction. As such the report is not imagining the future but rather creates the conditions for the possibility of new technologies (Thacker, 2001: 157). The experts talk a lot about what is becoming rather than what is. And it also reflects the many different promises and expectations underlying different claims in the struggle for genetic resources. But it also fits with ecological modernization discourse; Thacker has argued that “[s]cience fiction enables the biotech industry to create a narrative of a bioinformatically based, disease-free, corporate-managed future (Thacker, 2001: 157). But it is technocratic green governmentality that seems to exert the strongest influence on the discourse on DRs and this discourse is in fact becoming more and more pronounced over time. “[T]here is the common idea that genetic resources travel through the world much like rare (tangible) commodities, they have to be ‘prospected’ in remote locations and physically transported (or smuggled) across borders” (Pottage, 2006: 151). Although the commodification of genetic resources as such is a manifestation of ecological modernization, nature (genetic resources) also becomes something to be managed by experts. Some of the latest expert reports to the WG-ABS testify about this, in particular the “Studies on Monitoring and Tracking Genetic Resources”. These studies – which are prime manifestations of green governmentality in the sense that they are disciplinary articulations of “a new set of “eco-knowledges” that extend government control to the entire planet” (Bäckstrand & Lövbrand, 2006: 54) – are made in the context of the issue of compliance and address the identification, monitoring and tracking of genetic resources. Interestingly, the experts move also into the controversial issue of derivatives (Hodges & Daniel, 2005: 151). According to Tvedt, “[t]he whole problem of derivatives arises from looking at genetic resources as a static type of natural resources that could be regulated at the point of time of access” (Tvedt, 2006: 197). Tvedt argues that if benefit-sharing was linked to end uses and value created by the use of genetic resources rather than to access the problem (with derivatives) would be solved (Tvedt, 2006: 197).

A kind of parallelism between the biodiversity regime and the climate change regime can be observed. Bäckstrand and Lövbrand have noted that by depicting forests as reservoirs and sinks of carbon, green governmentality discourse paves the way for techno-scientific control measures in the climate change regime (Bäckstrand & Lövbrand, 2006: 62). In a similar way, the depicting of tropical rainforests as genetic storehouses for pharmaceutical companies (Dryzek, 2006: 113) reflects the control logic of green governmentality in the biodiversity regime. Green governmentality discourse thus provides a somewhat different picture of

biodiversity and genetic resources. Coombe's description of how local communities nurture and improve natural resources is telling: "[j]ungle habitats are characterized as experimental laboratories in which genetic properties are routinely discovered, synthesized, and honed by tribal peoples. Resources exist in their current form thanks to the applied knowledge of indigenous and traditional communities in monitoring and improving them for specific purposes." Peasants have become "small in-situ biotechnologists" (Coombe, 2003: 18). The idea of human stewardship over nature is clearly expressed in green governmentality discourse. And so is the control logic. Takeshita argue that indigenous people are imposed a stewardship identity that does not fit with indigenous peoples' self-identity. In this way the identity of stewardship function as an apparatus of control instead of as a reflection of social reality (Takeshita, 2001: 291).

To conclude, in DR discourse bio-prospecting and biopiracy discourses merge; notions of traditional knowledge coexist with science fiction-like futuristic biotechnology visions. In fact, the "Studies on Monitoring and Tracking Genetic Resources" emphasise that a system would accurately have to reflect our current and future knowledge of biology (p 3). In this perspective, the creation of an international regime rather than an agreement makes sense; what is needed is a flexible framework not a rigid foundation. There are not many elements of civic environmentalism to be found in the discourse on DRs. One reason for this could be the lack of 'issue salience'; people in general do not understand the issues and might not feel that it concerns them. In this discourse green elitist technocratic governmentality seems to marginalize civic elements. The marginalized voices of indigenous people are rather kept under control than empowered (Takeshita, 2001: 291). Elements of civic environmentalism may however be found in the ongoing process, revealed for example in the peer review and some other working methods of the Secretariat in which parties, governments, organizations, indigenous and local community organizations and stakeholders are invited to provide comments to draft studies. Notwithstanding the fact that the kind of regulation that DRs is an example of continues to be challenged by market-oriented partnership-based narratives – as exemplified by the INBio Agreement – even in ecological modernization discourse "ABS partnerships" is a preferred policy option (Laird & Wynberg, 2008). It is rather radical biopiracy counter-discourses including justice and development narratives that continue to challenge DRs.

5 Summary and conclusions

5.1 Summary

The overall purpose with this study is to examine the negotiations for an international ABS regime and the regulatory policy discourses around the ABS issue. An understanding of the different forces that shape ABS policy-making and the creation of an international ABS regime has been a particular focus. Since the study is informed by a discursive framework, other possible ‘forces’ than discursive have not been taken into account. Notwithstanding the fact that the type of discursive framework allows for institutional practices to be taken into account, a better understanding could probably be reached if material forces were included in the analysis.

While the bio-prospecting discourse is strongly connected to ecological modernization, the biopiracy discourse is rooted in post-colonialism, environmental justice and green developmentalism. The discourse on DR, however, seems on the one hand to be an outcome of a ‘synthesis’ within the field of bio-commerce, on the other hand an outright result of green governmentality. Indeed, green governmentality appear to be a strong force in shaping the ABS regime.

Although the discursive framework applied in this analysis includes a notion of agency, this part of the analysis has not been come to the fore here. The analysis therefore risks appearing overly structural. In order to avoid studying a “process without a subject” (Hay, 2002: 255), a further development could consist in advancing the notion of agency.

5.2 Conclusions

The Sorcerer II Expedition generates a number of new issues both with regard to research methodology and to ABS policy. One research issue is the question whether a comprehensive account of the global struggle for genetic resources can be given solely in terms of a *discursive* struggle. This question is about the ‘materiality’ of discourse or the relationship between the discursive and the non-discursive. Crucial questions thus involve “how to distinguish structural, material and discursive influences and the conditions of their influence” (Mitchell, 2001: 506). Mitchell has noted that “we know little about ‘the process through which a

discourse crystallizes around a problem on the international political agenda', or on how and when rhetorical power resources can overthrow more material resources to replace dominant discourses with alternative ones" (Mitchell, 2001: 504; Litfin, 1994: 10). I am aware that an analysis which confines itself exclusively to ideas of ABS, bio-prospecting, biopiracy etc. as discourses, risks becoming overly structural ignoring the role of agents (Hay & Rosamond, 2002: 151). Of course, this goes to the very core of the agency/structure debate. As mentioned above, the discursive framework employed in this text allows for a kind of agency, but it is not theoretically developed here. Several other examples beside the Sorcerer II Expedition can be mentioned. The 'existence' of the biopiracy discourse is for example conditioned by the appearance of new social actors such as progressive NGO's and local social movements (Escobar, 1998; Parks & Roberts, 2006: 330, 341), and the fact that global environmental institutions are providing political space for radical alliances of opponents of biopiracy (McAfee, 1999: 134). The positions (interests and identities) of states (and other actors) may also change due to other circumstances than discursive change. Nordic countries as new sites for bio-prospecting may for example change their interests (identities) and consequently their positions in the negotiations.

The statement that the international regime could be "composed of one or more instruments within a set of principles, norms, rules and decision-making procedures, legally-binding and/or non-binding", gives the impression of a strong institutionalist influence (Clapp & Dauvergne, 2005: 65). The official documents give the process a very technical, non-political, managed impression. An example of this kind of 'management' is that what activists call "biopiracy" has become an effort to define "misappropriation" within the framework of the ongoing negotiations. Perhaps inclusion of side-events in the analysis would change this picture. This picture also gives the impression of international cooperation rather than a struggle between actors. Most items on the institutionalist agenda which calls for measures to make global environmental governance more efficient reveal themselves clearly in the ABS negotiation process; the need to assure better monitoring, better compliance, better coordination, better implementation and better finance (Clapp & Dauvergne, 2005: 228-229).

The technocratic character of the work carried out by the WG-ABS, in particular the legal gap analysis is probably due to the fact that the WG-ABS tries to ensure that the evolving rules are compatible – and in the end legitimate – with CBD and other agreements (Brunnée, 2002: 42; Hodges & Daniel, 2005: 150). But at the same time for example the relationship between CBD and TRIPS is both politically and legally controversial. It could also be due to the "shadow" of the WTO. DRs are for example used as bargaining chips in the WTO negotiations (Hoare & Tarasofsky, 2007: 160). However, the legal gap analysis may very well be a reflection of learning and how institutions 'get better' at global environmental management (Mitchell, 2001: 511). There are certain signs of emerging reflexive governance. In fact, the design of the Nagoya Roadmap shows several signs of this; apart from the legal gap analysis, the role of leadership and the peer review process can be mentioned. Although learning experiences from

the Cartahena Protocol negotiations are not often mentioned in the context of the ABS negotiations reflections on how the biosafety negotiations developed and how the final text emerged is of course of interest for the ABS negotiations (Hodges & Daniel, 2005: 158-159; *The Cartahena Protocol on Biosafety: A Record of the Negotiations*). The role of the Secretariat in the negotiations is important, because they analyze and interpret information, invest information with meaning that “orients and prompts action, thereby transforming information into knowledge” (Barnett & Finnemore, 2004: 6-7).

From a green governmentality perspective, the ABS negotiations must be seen in another light. There was no pure unmediated problem to be found ‘out there’. But through various techniques, procedures and practices the field of genetic resources is constructed and produced in such a way that they have become both “objects for knowledge and targets for regulation” (Bäckstrand, 2004: 703).

If the nature of the ABS negotiation process, as other social and political processes, is “inherently contingent, indeterminant and ultimately unpredictable” (Hay, 2002: 259), how can we do meaningful research? Is everything in the eye of the beholder? In any case, by now it must have become clear that this study is an inquiry into a process where the very meaning of ABS is constructed. One reason for this is the lack of consensus on so many things; problems, concepts, etc in the ABS process (Hodges & Daniel, 2005: 157-158). In fact, it is easy to get the impression that possible solutions float around in search of problems in a way that makes the policy process resemble the ‘garbage can’ model of decision-making rather than problem-solving (Richardson, 1996: 12).

5.3 Future research

There are three issues that I particularly would like to point out for future research. First, the relationship between macro- and micro-discourses is an interesting one. However, I am not sure what Bäckstrand and Lövbrand mean when they talk about a “microcosm of competing and overlapping discourses” (Bäckstrand & Lövbrand, 2006: 50). I believe that it could be what Alvesson and Kärreman mean with the “formative range of discourse” (Alvesson & Kärreman, 2000: 1133). In fact, here I will suggest that we follow Foucault’s cautionary prescription that “we must not imagine a world of discourse divided between accepted discourse and excluded discourse, or between the dominant discourse and the dominated one; but *as a multiplicity of discursive elements that can come into play in various strategies*”(Foucault, 1979: 100). Later Foucault goes on saying that “[w]e must make allowance for the complex and unstable process whereby discourse can be both an instrument and an effect of power, but also a hindrance, a stumbling-block, a point of resistance and a starting point for an opposing strategy” (Foucault, 1979: 101).

Second, the relationship between the discursive and the non- discursive; the ‘materiality’ of discourse must be addressed. A good example is the piracy metaphor, which for obvious reasons holds a central place in biopiracy discourse,

is well-known in intellectual property discourse (Loughlan, 2006). According to Sell and Prakash “[t]he piracy metaphor effectively changed a [TRIPS] policy debate into an absolutist moral drama. Theft is simply wrong”. Sell and Prakash mean that this discourse had a clever pre-emptive quality; “there is no room for a policy discussion about the merits of piracy, nor any space for compromise in the direction of pirates” (Sell & Prakash, 2004: 173). Yet, these conclusions do not seem tenable in the field of bio-commerce. Hardy, Palmer and Phillips point out that for discourses to function as strategic resources actors must hold subject positions that warrant sufficient voice (Hardy, Palmer & Phillips, 2000: 1245). A discourse must thus be appropriately grounded in the prevailing discursive context to have this ‘power’.

Third, I believe future theorizing of the notion of agency in discourse theory is desirable. It would for example allow a closer examination of actors’ use of discourse as strategic resources. As pointed out by Chalaby; “[t]exts are weapons that agents in struggle use in their discursive strategies” (Chalaby, 1996: 694). Studies of discourses as strategic resources could be made by analyzing statements from different actors (Maguire & Hardy, 2006). In doing this the relationship between agency and structure must be addressed (Torfing, 1999: 137-154).

Finally, critical constructivism could provide a viable framework to develop the above suggestions (Adler, 1997; Checkel, 1998; Eckersley, 2004; Hopf, 1998; Keck & Sikkink, 1998; Price & Reus-Smit, 1998).

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