

# **The Bureaucratization of the environment. Insights from water in Chile**

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## **Abstract**

This dissertation explores the relationship between bureaucracy and the unprecedented anthropogenic environmental change in what has been discussed as the Anthropocene. For this I take the case study of Chile's Water Code implemented in 1981 in the context of larger neoliberal reforms under Pinochet's dictatorship (1973-1990). In the first section I describe the key features of that process and how it departed from more embedded understandings of what water is. Then I take ethnographic and other evidence on water conflicts in Chile since the return of democracy to show how the bureaucratic language has shaped both exploitation and resistance, despite conflicts have usually been framed by scholars as 'neoliberal'. I focus mainly on how indigenous people have managed the gaps and exceptions created by law to use bureaucratic mechanisms in their favour, with partial success.

In the second section, first I turn to two points on the role of bureaucracy in the emergence of markets and in the power of the state. Following Weszkalnys, Mitchell and Bear I describe how the Water Code has created a distinction between the administrative "neutral" managing of water and politics as a space of deliberation. Particularly, I argue that bureaucratic management of water is a key feature of speculative planning as an opaque form of state action. Secondly, I explore the work of bureaucracy as the imposition of the power of the state through violence, inflicted both to humans and ecosystems, while it remains hidden as inevitable. This violence is imposed when actors try to transform water from its socio-environmental value to monetary value. Here I base my analysis mainly on Weber and Graeber's insights on bureaucracy and its tense relation with democracy; as well as the politics of value struggles. I also relate the enforcement of bureaucracy with the idea of "virtual water" (Barns) as a way of showing the particular failures of the bureaucratic project when targeting water. I suggest that this undercover work of power through bureaucracy ("rule by nobody" according to Arendt) facilitates damage similar to the "banality of evil" in which no one can be held accountable for negative consequences.

Finally, I connect these insights with larger environmental concerns, and suggest that the massification of bureaucratic mechanisms such as the Water Code are at the root of the "Great Acceleration" that according to Steffen et. al (2015) has marked the beginning of the Anthropocene. The example of water in Chile shows that our exploitative relation with the environment has deeper roots than just neoliberalism, and includes the bureaucratic apparatus of the modern state as it consolidated in the second half of the twentieth century. I suggest that this is a cause of the sense of agency loss that has been present in many debates nurturing the Anthro-scene. In the conclusion I show how the imposition of bureaucracy has consequences at the level of our political imagination and our capacity to think about other ways of relating with water and other elements present in the ecosystems we inhabit.

Key words: bureaucracy, water, values, Anthropocene, Chile

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*[O]ne can debate long and profitably on the rule of Nobody, which is what the political form known as bureau-crazy truly is'. Hannah Arendt (1963/1994, p.289)*

## **I. Introduction: concealing agency. Old and new tricks**

It has been a while since bureaucracy stopped being a part of social life overlooked by anthropologists. In the last years ethnographic studies have shown different textures of how bureaucracies are entangled in everyday life in complex (and usually far from 'rational') ways. At the same time, this everyday life is living at the edge of environmental disaster, if not already in it. This dissertation connects these two seemingly separate issues in a way that clarifies the underlying common issue of human agency. Both bureaucracy and ecological crisis operate in bewildering ways, often relying on discourses of depoliticization and innocent instrumental rationality. An anthropological approach can help us unpack these modern discourses and bring back our human capacity to act.

Recovering the analytical significance of bureaucracy can be useful when most of the attention in social sciences has been given to 'neoliberalism' as the main cause of contemporary malaise. As some have noted, the use of neoliberalism as a buzzword has significant theoretical limits, as is it often referred to as a totalizing force with unclear edges that is pointed as the ultimate source of virtually any exercise of power (Kingfisher & Maskovsky 2008, Ferguson 2010). In this dissertation I draw my attention to the more specific scope of dynamics conforming bureaucracy, and how it allows deep transformations of different arenas of life, social and beyond.

Anthropology has a large amount of work on bureaucracy in social areas such as immigration, policing and border control (Heyman, 1995; Tucket, 2015; Fassin, 2011) nation-state and nation-building (Navaro-Yashin, 2009; Kelly, 2006; Herzfeld, 1992) social policy (Rojas, 2015; Auyero, 2012; Dubouis, 2009; Shore & Wright, 2015) and governmentality (Gupta, 2012; Ferguson, 1994). There is also rich ethnographic work focused on contestation from outside bureaucracy (Nahum-Claudel, 2016; Street, 2012), and accommodations by bureaucrats themselves (Lipsky, 1980/2010; Pia, 2017; Bear 2011, 2015). Transversely, what this literature shows is that bureaucracy is not a place of neutrality. It is a setting of power, contestation, affects, and moral and ethical projects. But how, then, has this appearance of administrative asepsis been sustained for so long, especially by policy experts and economists? The water regime existing in Chile offers the opportunity to explore this question.

As a starting point, it is worth noting that in the bureaucratization of water the main target to be controlled and managed is an object, not people. However, this does not mean that this form of administration just runs parallel to social life. Precisely, the tensions to be explored in this dissertation come from this initial idea of bureaucracy merely as a tool for the work of the economy in administering already existing objects. It seeks to address the question: what can we learn from this form of market-making? How do those defending the efficacy of bureaucracy foster a discourse of its own invisibility?

On a related point, I also suggest that bureaucracy in this case undermines the political dimension of the state. I approach bureaucracy from the point of view of violence and how it supports contradictions made through value transformations. I argue that this kind of violence is a usually unexplored one, and take the case of water in Chile for analysis. I describe the way in which bureaucracy has been truly transformative of the realities in which it has acted, while failing dramatically at achieving its quest for sustainability.

Finally, I connect the previous insights with the larger discussion of the Anthropocene epoch and suggest that the period of the Great Acceleration is useful to see the connection between bureaucratization and environmental change. I consider both the term and the discussion surrounding the 'Anthropocene' -what some have called the Anthro-scene (Lorimer 2017)- to be symptomatic of a larger process in which we (humans in general) have lost sight of our own agency. Our evident inability to act collectively and effectively against global threats like climate change, soil degradation or plastic pollution is an example of the obstacles that doing things through bureaucracy has created to the recognition of our human ability to take action in a significant way.

This dissertation has five sections. The first two present the case study of Chile, historically and ethnographically, as well as delineating the broader political contemporary discussion surrounding water. The last three build an interrelated anthropological analysis of bureaucracy: how it creates and sustains a particular vision of the economy; how it acts through violence backed up by the state; and how it relates to the recent surge of resource use and environmental degradation. In the end I draw some conclusions on political imagination and how to recover human agency in a time of environmental catastrophe.

## II. Transformations and conflicts of water in Chile

### 1. An infrastructure for extraction. Historical perspective on the Water Code

In this section I present a brief outline of the implementation and more relevant reforms the Water Code, the main document regulating the use of water in Chile, has gone through<sup>1</sup>. As Bauer (2015: p. 73ff) has extensively analysed, the 1981 Water Code must be situated in the larger political moment of Pinochet's reforms across several areas that followed the logic of structural adjustment (Ceballos, 2008). These deep and drastic transformations of the state were closely sustained by the intellectual input of the 'Chicago Boys' in what is now considered as one of the earliest examples of neoliberalization (Harvey, 2005; Klein, 2007). These economists were trained in the United States in the fifties in the context of the cold war and many of them were appointed to relevant state positions, after the 1973 military coup to democratically elected Salvador Allende by General Augusto Pinochet (backed by the CIA). Having studied mostly at the University of Chicago, they were particularly close to Milton Friedman's economic ideas. All these elements made Chile one of the earlier examples of what Klein calls 'shock doctrine', and allowed the implementation of the Water Code and many other radical economic reforms.

The Water Code was approved just a year after the new 1980 constitution, and it reflects its core principles: reduction of state regulation to a minimum to allow the spontaneous creation of markets, which is considered the most desirable way of distributing resources across society. In the case of water, this meant 3 fundamental modifications of the previously existing regime (1) separation of water ownership from land ownership; (2) the creation of different "consumptive" and "non-consumptive" rights and (3) the creation of water ownership as private property through the figure of 'water rights' (*Derecho de Aprovechamiento de Agua*).

The new legislation gave the General Water Management [*Dirección General de Aguas, DGA*] state agency the role of registering these rights. Since then The DGA is obliged to conceive any amount of water required by anyone, as long as it is physically and legally available. There is no fee for registering the rights, and once registered they are guaranteed and protected as private property. Property of these rights is protected by the constitution and regulated by private law (Budds, 2013). Those asking for water rights do not have to specify what they will use it for, and can change the use without asking for permission. The DGA is reduced to keep track of the rights registered, being only narrowly allowed to restrict the extraction of water in cases of extreme drought, and only temporarily.

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<sup>1</sup> The Water Code and works cited in this dissertation refer only to continental water.

The creation of a distinction between 'consumptive' and 'non-consumptive' water rights had the promotion of hydroelectric energy in mind. A non-consumptive right means that water is deviated from its original course -like a river- only to be returned to a different point downstream, theoretically without affecting the amount of water available for others once it returns. Consumptive rights, on the other hand, had the model of agriculture in mind, where the use of water means that the source effectively loses the quantity being extracted. This distinction would allow for the non-conflictual use of the same water twice: upstream by a hydroelectric engine, and downstream by farming. At the same time, the separation of water from land ownership was facilitated by the acquisition of huge amounts of water virtually anywhere by anyone, and therefore the emergence of a water market, where litres per second can be bought and sold without transaction costs. Policy makers praised the Chilean arrangement as promoting effectively the dynamism of the agricultural area (Muchnik, Luraschi & Maldini, 1997).

The breaking of land and water ownership is especially relevant since in the previous regime of President Eduardo Frei Montalva the *Reforma Agraria* had expropriated and redistributed most of the arable land to peasants. Together with the land came the right to use the water existing there. Separating both things meant detaching water from its broader social and environmental setting. The threat this had provoked to large landowners and Allende's will to continue this process are key to understand why the reform to water was so clear in protecting private property.

The approval of the Code was followed by a period of regularization of existing water use, which was recognized by the Code as valid rights under the new law. However, this happened slowly and government led campaigns for registration only began once democracy returned in 1990 (Bauer, 1997). In the meantime, new rights were predominantly claimed by big mining companies and export-oriented farmers (Budds, 2013). The ability of the DGA to regulate was restricted to particular emergency scenarios, which in practice have been scarcely enforced. This means that temporal restrictions to the full use of water legally always comes only *after* the damages of drought are critical. After the return to democracy, messiness in keeping records was also highlighted as an obstacle to the emergence of water markets, as 'possible transactions are also hindered by the uncoordinated system of record-keeping, and by information that is costly and hard to obtain' (Bauer, 1997: p.647). In the last decade the idea of 'improving institutionality' has been present in virtually any official document about water, highlighting the fact that the official water record remains incomplete and outdated, and that

accurate studies of the different basins are urgently needed (Ministerio de Obras Públicas, 2013; Ministerio del Interior, 2015).

Additional remarks can be made regarding the most recent transformations and debate around water in Chile. In the 90s Chile entered a period of accelerated development of agribusiness and hydroelectric energetic projects, as well as expanded provision of potable water by private firms in urban areas. Together with these rapid changes, water has come to be at the heart of many conflicts. Inasmuch the Water Code of 1981 was mainly oriented to the promotion of agriculture for exportation, it severely marginalized issues such as indigenous rights and access to water for human needs, not to mention environmental damages of overexploiting water basins. Rural communities have been the most affected, even though recently the provision of water for urban inhabitants has also been at risk, raising protests (Chile Sustentable, 2010; CIPER, 2014). Some of the clearest conflicts that show the political nature of the bureaucratization of water are those connected with larger indigenous environmental struggles (Observatorio Ciudadano, 2018).

For this last issue it is crucial to consider the Indigenous Law (*Ley Indígena*), passed in 1993, which created legal tools to restore or preserve land and water for the livelihood of indigenous communities. For this it created a fund to be managed by the Indigenous Development Corporation (*Corporación Nacional de Desarrollo Indígena*, CONADI). In the case of northern indigenous (*Aymara* and *Atacameña*) communities the additional figure of 'ancestral property' seeks to capture the way in which water is founded in the cosmology of indigenous communities as well as the use they do of water in reproducing their social, economic and cultural life (Yañez, 2015). A special mandate was given to CONADI to recover that type of water for the indigenous communities. Still, the legislation established restrictions: water given to indigenous communities cannot be sold in 25 years. In the case of *Aymara* and *Atacameña* communities, their priority to obtain the ownership of water in their ancestral territories cannot harm the rights obtained by others through the regular mechanism established in the 1981 Water Code (*Ley N°19,253*, 1993). All these elements created a bureaucratic infrastructure supporting unchecked extraction. In the next section I examine how the language established by the administration of water rights was embedded in the multiple conflicts that emerged after the dictatorship while remaining out of sight.

## 2. Review of evidence on water conflicts in Chile

Although the rules of the game were set in 1981, it was only in the 90s that the fruits of this legislation could be seen and started being really assessed. Both the return of democracy and the sharp increase in export-oriented agriculture aligned bringing conflicts over water to light.

In this section I explore some of the evidence and discuss particularly how they relate with the bureaucratic relation with water prefigured in the Water Code.

While some employ a strict opposition between the aims of mining companies such as the state-owned Codelco and indigenous communities under the idea of 'competing rationalities' (Molina, 2012), others described more nuanced relations that, although are not free of conflict, show that indigenous communities do not simply reject the idea of buying and selling water. Babidge (2016) shows how the commodity logic present in the buying and selling of water by mining companies is not totally opposed to the moral value of water existing in indigenous *Atacameño* communities. She indicates how, for instance, *Atacameños* resisted the intromission of bureaucratic authority through their self-organized provision of water. When notified by the DGA in 2012 that they must regularize their water rights, as well as complying with a series of regulations that would include the audit of water quality by outside professionals, they managed to adopt the formal structure of the rural water committees, while refusing to cede any additional space of water managing to outsiders. At the same time, they actually did engage in selling small amounts of their water obtained through the *Ley Indígena* even though 'selling these surface waters is illegal and the very basis for recognition of its indigenous value is inconsistent with commodity values' (Babidge, 2016: p.98).

Other *Atacameño* communities have been able to organize and use the existing structure accommodating it to their holistic relation to water. This has meant the rejection of the originally envisaged idea of creating an efficient water market through transactions, as water ownership has been used to maintain collective property and resist temptations of obtaining money by selling it: 'the communities have been using the water market as an instrument to recollectivize or decommodify those individual water rights that were privatized.' (Prieto 2016:32). While noting the ability of the structurally disadvantaged indigenous communities to make regulation play in their favour, it is also worth noting that these conflicts are pervaded by the language of bureaucratization and quantification. For instance, Minera Escondida -a mining company operating the largest open pit copper mine in the world- has been pumping water back to the wetlands as a way of compensating for the extraction (Babidge 2016:90) even though this action cannot really repair the environmental damage caused by exhausting basins.

Even in the rainy south of Chile where water was once abundant, the relations between the indigenous Mapuche people and extractive industries such as forestry have been significantly marked by contestations of the bureaucratic rationale of the Water Code. For example, As Carrasco (2012) shows, in 2008 the Forestry National Agency (CONAF) started promoting a model of 'Mapuche Intercultural Forest Management' [*Modelo Forestal Intercultural Mapuche*]

which created funds for the restitution and protection of land and water for ceremonial uses as part of integral economic development programs. The decision to integrate cultural and ecological Mapuche elements was seen as a response to the escalating conflicts in the area, which had, among other things, left some rural communities without access to water because the drying of their wells. This critical ecological issue has been faced by *Mapuche* communities heterogeneously, being possible to identify two main streams, according to Torres-Salinas, García, Henríquez, Zambrano-Bigiarini, Costa and Bolin (2016). Some, following a radical critique to the neoliberal model of development, refuse to engage in the legal fiction that separates water from land<sup>2</sup>; while others appropriate the legal devices of the Indigenous Law to recover the control of some territories, applying for subsidies for buying land water rights. (Torres-Salinas et. al 136).

Even though most of the ethnographic evidence can be found in the conflicts between indigenous and corporate groups, the underlying bureaucratic logic created by the Water Code can also be found in other contexts. Babidge (2017) documents critical issues and complains around water scarcity in the city of Calama, since the Loa river, which had historically provided Calama with water, was overexploited by mining companies and declared as 'exhausted' by the DGA in 2000 (Ministerio de Obras Públicas, 2000). Rural water committees and cooperatives, which cover areas not supplied by private sanitary companies, have also suffered vulnerability in their functioning by the overexploitation of aquifers made by export-oriented agriculture and urban sanitary companies (Cabaña & Calcagni, 2013; Nicolas-Artero, 2016).

Opposition to major hydroelectric projects in the southern region has also been shaped by the quantitative logic of the Water Code. This is closely related with the creation of the figure of non-consumptive water rights. Virtually none of them are being used to other than hydroelectric power plants (Prieto, 2015), as imagined in the original design of the Water Code. The interaction between water law and electricity law has given de facto ownership of water to owners of hydropower dams (Bauer, 2015b). In the particular and emblematic case of *HidroAysen*, it was this figure what allowed ENDESA, a Spanish firm owned by the Italian ENEL, and Colbún, an originally state-owned energy company privatized in 1997, to claim water rights for the volume of several millions of liters<sup>3</sup> and plan the building of five dams in the south of Chile. In the case of the Baker River, the largest in the country, the ownership went

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<sup>2</sup> Organizations representing the first position, like the *Coordinadora Arauco Malleco*, have been criminalized (Pineda, 2014).

<sup>3</sup>They were 650 thousand liters per second in the Pascua River and more than one million litres in the Baker River (Revista Electricidad)

up to 90% of the existing rights over it. This was resisted from several fronts, and at the local level it meant the articulation of activist networks that raised opposition to the dams and advocated for the environmental protection of the area (Chile Sustentable, 2010). These initiatives of conservation were strongly shaped by market mechanisms, as the emblematic efforts of *Conservación Patagónica*, led by Kristine Tompkins, show (Jones, 2012). As Jones describes, it was the purchase of large states in the southern territory of Patagonia by the non-profit *Conservación Patagónica* that allowed the creation of the commodified image of wilderness that was used to oppose to the hydroelectric project. The region was defended as a space for business that was in harmony with the preservation of an untouched nature. This intertwining of conservation with the leisure industry was key for the building of a successful campaign through the transnational connections of Tompkins. This ecophilanthropist force based on the use of images detached from their social production contrasts with the political force organized by inhabitants of the Aysén region in 2012, when they claimed to have a say in the projects being planned in their surroundings.

All these conflicts acted as catalysts for the reform to the Water Code that was discussed during the 90s and was approved in 2005. As Bauer (2015, p.141) explains, the centre of the discussion was about whether it would be better to implement a tax in all water rights in general or implementing a “non-use” fee, as an instrument to avoid the hoarding and speculation over water that had become evident. Some forces in the *Concertación*<sup>4</sup> governments wanted to push for more state control. The reform decided on the imposition of a non-use fee, which although resisted by the conservative right was explicitly described by the proponents as not modifying the original spirit of the Code. As Peña, DGA director between 1994 and 2006 stated “there is widespread national consensus regarding the benefits of using the market to reallocate existing water rights and the need to (...) provide legal certainty to water-related investments and to enable the market to reallocate water resources” (ECLAC, 2005, p.2). It ended up being an attempt to better regulate the system that was already in place and facilitating efficiency (Budds, 2013). Nevertheless, these modest corrections have had an impact, and for instance the *Hidroaysén* joint venture cancelled the project and gave up on their water rights in 2017 after paying the non-use fees for several years, which in 2016 reached \$2,200 million CLP (3,5 million USD) (Revista Electricidad, 2016; La Tercera, 2017).

By the early 2000s several basins were already overexploited and rights had been granted beyond sustainable rates of extraction (World Bank, 2011). The situation of chronic draught is projected to get worse in the next decades due to increase demand and other factors like

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<sup>4</sup> The centre-left alliance that ruled after Pinochet uninterruptedly from 1990 to 2010.

climate change (Ministerio del Interior, 2015). The exacerbation of draught has also meant that in the last years at least half a million people have been receiving drinking water through trucks, and not only in the dry northern regions (Oficina Nacional de Emergencias, personal communication 2018).

After the 2005 reform there have been other attempts to reform the code, most of them trying to nationalize water, modifying the constitution for allowing the government to take back the water rights already given without having to pay for them (since expropriation is the only current legal tool to take water rights back once granted). A new bill for reforming the Water Code was introduced to parliament on 2010 and was still under discussion by August 2018. Similar remarks on the preservation of the core logic of the water rights have been done by the new government authorities to calm apprehensions surrounding the possibility of a radical change: 'we cannot accept a precariousness and change of the water use rights' (Ministro de Agricultura quoted in Diario Financiero 2018, translation my own). Under this spirit, it is to expect that the work done by bureaucracy all these years will likely remain in place.

### III. The invisible power of bureaucracy

#### 3. A language for means

In this section, I show how the case of water in Chile allows for the creation of an abstracted and quantifiable relation with water. I relate this modality with the emergence of the modern state, and the definition of bureaucracy and politics as different spheres within it. I also explore the role of 'market efficiency' as an economic device to make sense (with limited success) of reality; and connect it with speculative planning as a modality that hides the actions made through bureaucracy.

Scholars have highlighted the early neoliberal character of the Chilean Water Code in line with a series of privatisations in virtually all the areas formerly in charge of the state such as health, housing and education (Raczynski, 1994). Thinkers in the tradition of political ecology have described the active political project that made water privatisation and the removal of direct state control from water management possible (Budds, 2013; Swyngedouw, 2005a). According to Swyngedouw, states and other organisations like the World Bank 'are centrally involved in "regulating" and "organizing" privatization and dispossession. They change laws, rules, and conventions and produce new legal and institutional frameworks that permit and "regulate" privatization' (Swyngedouw, 2006: p.89). These analyses allow us to see that what is usually described as withdrawal of the state is actually its active orientation towards making private ownership possible. The spaces left or omitted by the state must be actively produced as fields fertile to market transactions. For instance, rural water committees and cooperatives are another kind of space that can be created and maintained when the leading role of the state is absent<sup>5</sup>.

To track the constitution of this new bureaucratic field we first need to account for the inception of "the economy" as an object, possible to be managed (Mitchell, 1998). Mitchell roots this process in the 1930s when a group of economists started talking about 'the economy' and 'modelled the economic process as a mechanical apparatus' (1998: p.86). He understands the emergence of this economy as intertwined with the consolidation of the nation-state, as it was 'through these novel forms of political rationality and practice [that] it became possible to imagine the economy as a self-contained sphere, distinct from the social, the cultural, and other spheres' (1998:91). The boundaries of the economy come to be the boundaries of the

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<sup>5</sup> These organizations deliver water at the local level through democratically elected councils that manage fees collection and infrastructure investments. They reinvest any surplus back to the community they supply and are accountable only to them. Private companies do not operate in rural areas because it is stipulated by law.

state (therefore we can talk about 'the Chilean economy'). This object can also be managed to grow from outside. But when looking closer, when thinking about property regimes and the relations it entails, for instance, this distinction falls apart. The state is in charge of managing the economy and keeping it growing through the tools of quantification and abstraction.

I agree with Mitchell in the emergence of an image of state and economy as separated, but a simultaneous second movement was also being prefigured inside the establishment of the state itself: the separation of bureaucracy from politics. In the case of water in Chile, bureaucracy's power comes from its claim -as the economy- to represent a real object. More specifically, from the claim of being able to produce an accurate description of water as it exists available for exploitation in the national territory.

As Mitchell (1999) describes, modern political practices produce the state while modern organization of labour produces the notion of capital. The 'state effect' emerges from mundane activities and processes that 'create the appearance of a world fundamentally divided into state and society or state and economy' (1999, p.95). But this production of the modern state comes with its own internal differences. The practices of governmentality that create the state effect rely in the division between politics as a deliberative arena (the democratic dimension, open to change and discussion) and bureaucracy as the administrative apparatus that follows those orders and that therefore is not open to discussion (it is only guided by the politically neutral principle of efficiency). Bureaucracy here is the key practice that enables the illusion that the state manages the economy from outside without interfering, only giving "space" to the free market to operate. It is helpful for stability because it reduces the space for political contestation<sup>6</sup>. Bureaucracy becomes the means to the exercise of state power.

In this bureaucratic space, the narrative of market efficiency works as an economic device (Weszkalnys, 2011; Çalıřkan & Callon, 2009). Economic devices are key elements that perform in processes of assembling new fields as 'economic'. Weszkalnys (2011), for example, describes the 'resource curse' and how it acts as an economic device in the minds of economists and policy experts: while simultaneously being articulated in multiple ways with existing realities and expectations at the local level. Even though economic theories try to describe and clarify a particular process happening or about to happen, reality is always more messy. As she describes, this is what happens with the mobilization of the resource curse in São Tomé and Príncipe (STP). Following her line, I suggest that in the case of Chile bureaucracy was instrumental to the construction of market efficiency as an economic device,

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<sup>6</sup> It contributes to the installation of the power of the state in a way similar to that described by Ferguson as the 'anti-politics machine' (Ferguson, 1994).

and was then mobilized by institutions such as the World Bank. The case of Chile was repeatedly presented as an example of achieving better resource allocation through market mechanisms. Any accused problem was ascribed to institutional failure that could be corrected with 'minor amendments' (World Bank, 1993). For example, the market logic implemented in Chile was highlighted as allowing water management to 'become a matter of voluntary and mutually beneficial agreements between willing buyers and willing sellers' (World Bank, 2004, p.24). Remarkably, the World Bank only recognized some problems like over-granting water rights in 2011, and recommended institutional corrections to improve the work of the water markets (World Bank, 2011)<sup>7</sup>. The not intervening presence of the state, reduced to the granting of rights through its registration, was a key point of the narrative. And just as the resource curse, the ability of the myth of the market logic to make sense of the local implementation is limited. Weszkalnys shows how, regardless the absence of oil, the resource curse 'played an important role in framing STP's emergent oil economy. It did so by setting the terms of the debate [and] suggesting measures for a cure' (2011, p.365). The case of Chile offers a similar insight: even though the implementation of a free market logic for governing water did not create the pictured harmonious reality of willing buyers and sellers, this language still framed the terms of the debate and the (so far) successful contestations in the water conflicts. This, regardless of the lack of institutional power of the DGA to keep an accurate ledger of water rights that reflects water as how is actually being used. In this sense, the Water Code contributed actively to the formation of the neoliberal project in Chile from its early beginning (Budds, 2013) by offering a model of alleged self-regulation without the state that was eagerly adopted by institutions such as the World Bank in for their own agenda of economic reforms.

This is why a description that does not take the discourse of the separation between bureaucracy and politics as freestanding is crucial to make sense of the complex entanglements between the economy and the multiple inner sections of the state, with the bureaucratic apparatus and its justification at its core. In the case of water in Chile, bureaucracy comes to be the only accepted presence of the state. It allows for speculative planning as a mechanism that makes accountability opaque and political contestation difficult (Bear, 2011). This speculation can be seen in the blunt hoarding and posterior selling of water rights without any revenue being taken by the state. Still, this form of planning is different than that described by Bear for the Hooghly river in India (2011, 2015) since it does not generate economic returns for public institutions as do the activities of Indian bureaucrats under austerity. Instead, the

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<sup>7</sup> The DGA had required technical support from the World Bank for the formulation of a new policy for water management.

Chilean state goes further and subsidizes private enterprise when paying for the trucks that deliver water in drought-affected areas where water intensive extractive industries work<sup>8</sup> (CIPER, 2017). Bear also identifies the mystifying power of bureaucracy to conceal its entanglement with politics in what she calls 'the enchanting power' of bureaucratic registers as they generates amnesia 'about their controversial origin in political struggles, autocratic decisions and forms of impotence. These are turned into mathematical facts and neutral rulings.' (Bear, 2015, p.24). This enchanting power is certainly present in the Chilean case.

The installation of the Water Code did more than attempt the creation of an economic utopia. It also helped a broader process that redefined the aspects of the state and its power that are open to discussion, and those that are out of question. By moving crucial decisions to the realm of procedure and bureaucratic records, it helped the production of a democratic deficit (Shore, 2000; Swyngedouw, 2005b) especially regarding accountability. As a result, the horizon of what can be effectively problematized and resolved through politics shrunk under the rule of unquestionable bureaucratic procedures.

In the Chilean case, the work of bureaucracy is based in the transformation of a very particular thing -water- into an abstraction that can be added, subtracted, bought and sold. This movement is crucial for allowing the unchallenged work of bureaucracy as the infrastructure of water extraction. But unlike other materials like gold, water plays a significant role wherever is flowing or still, having a crucial (use) value in itself. This transformation of such a fundamental thing for life into economic value through bureaucratic means deserves attention as it can easily slip into violence. This nexus with violence is the topic of the next section.

#### 4. The state, value transformations and violence

The transformation from values to economic value is never uncontroversial (Graeber, 2013). In this case, the legitimacy of the Water Code comes from the utopian possibility of achieving a perfect transformation between the intrinsic value of water as part of living ecosystems and the economic value it can take in productive processes. In this section I draw from theories of bureaucracy and water policy to explain what kind of violence is produced when this abstracted relation with water is imposed. I argue that violence comes both from its success as a narrative and its failure in taming the intrinsically complex relations in which water takes part.

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<sup>8</sup> Between 2000 a 2017 the Chilean state spent more than CLP 92 billion (more than US\$145 million) in paying private firms to deliver water in drought affected areas.

Max Weber famously described the modern state as a bureaucratic achievement, its main feature being the separation between the administrative staff and the material resources of administration (1919/2004). He had also recognized this bureaucratic rationality as having a strained relationship with democracy. For him, bureaucracy brings the promise of neutrality and the elimination of political power based in ascription. Still, when faced with the tendency of democratically elected leaders to remain in office and to avoid the technical requirements of bureaucracy 'democracy inevitably comes into conflict with the bureaucratic tendencies which have been produced by its very fight against the notables' (2004, p.61). Even though Weber's understanding of bureaucracy focused on an ideal model of early European states and did not consider the management of physical elements like water, I argue this tension is useful for understanding what happens in Chile regarding water. Bureaucracy creates a field for its own action in which political representatives cannot interfere. In the case of water management in Chile, the strong attributes of the Water Code as managed by the DGA allow those relying on them an overwhelming (and disguised) power. As I mentioned, this was part of a broader restructuring of the Chilean economy, itself a pioneer in the introduction of pro-market reforms all over the world. The Water Code therefore fits as a small piece in Graeber's (2015) understanding of the second half of the twentieth century as an era of 'total bureaucratization': 'the gradual fusion of public and private power into a single entity, rife with rules and regulations and whose ultimate purpose is to extract wealth in the form of profits' (p.17). Graeber locates the roots of this process in the 1971 U.S dollar abandonment of the gold standard and the following processes of financialization. His approach highlights not only the private and public dimensions of modern bureaucracy, but the increasing overlap of the two categories. This is the conflation we can find in the case of water in Chile: the bureaucratic procedures guaranteed and protected by the state are the bedrock to private investment and profit.

This link also helps us understand how bureaucratic practices entail violence. In one way, described by Graeber, bureaucracies ultimately rely on the use of physical violence by agents of the state when anyone tries to avoid its instructions. They can also perpetuate structural violence in a more subtle way by supporting arbitrary decisions that reproduce inequality and avoiding the debates and negotiations typical of egalitarian societies. As Gupta (2012) states 'the reason such violence is considered to be structural is that it is impossible to identify a single actor who commits the violence' (2012, p.20) In the case of Chile, the rule of bureaucracy is a way of stopping more political debates from questioning the extractive logic that damages and dispossess the most disadvantaged of society. The Water Code transforms the (constructed) concept of efficiency in water management into a paramount value, ruling

out any intrinsic primacy of water usage beyond the registered rights<sup>9</sup>. There is no space in the regulation to state which use of water (or by whom) should have privilege in case of scarcity<sup>10</sup>.

Additionally, I suggest that in the case of water there is a particular form of violence embedded in the qualities of the element. The effectiveness of the Water Code relies on what Jessica Barnes (2013) calls *virtual water* as a way of facing scarcity. Barnes defines virtual water as an abstraction that measures the amount of water used in the creation of a product, and it is also a policy tool used to manage water scarcity in agricultural business. In her study, she describes how the concept is mobilized to talk about water being transferred from one region of the world to the other by trade, as a way to avoid water waste in drought prone areas. But this abstraction of water from its material context has a limitation: “by abstracting water from the acts of labour that make it productive and from the wide-ranging productivity of water itself, virtual water sows the seeds of its own demise. It erases the other things water does” (Barnes, 2013, p.381). It is possible to imagine virtual water because of the work of the bureaucratic apparatus that allows conceptualizing water as a quantifiable stock available to be divided and traded. But water is an ‘uncooperative commodity’ (Bakker 2003), which given its biophysical characteristics, does not lend itself easily to being transformed from use value to exchange value. It resists being appropriated into production. In the same line, and considering bureaucracy as a process parallel but also previous to commodification I suggest that trying to force water into the bureaucratic calculations exerts violence on the ecosystems and the humans that inhabit them. The harm can be seen in the chronic drought that has been affecting the different territories of Chile and their living inhabitants, from plants to humans and other animals. Damage is not evenly distributed, but stronger on those areas and peoples targeted as means for the larger goal of economic development. The destructive consequences of water overexploitation allowed by the Water Code is hidden under the bureaucratic logic, which ‘has made this intuitive division between rational, technical means and the ultimately irrational ends to which they are put seem like common sense’ (Graeber, 2015: p.40). This is also congruent with Arendt’s understanding of violence as inherently instrumental. The rise of efficiency as the ultimate paramount value fosters violence and covers it with a sense of inevitability.

At the same time, the experience of water in Chile shows that bureaucracy creates its own exceptions to the rule that are learnt by those most affected and threatened by the actions of the owners of water (in figures like the *Ley Indigena* and rural water committees and

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<sup>9</sup> What Graeber (2013) calls the transformation from an infravalue to a metavalue

<sup>10</sup> By August 2018 one of the main reforms to the Water Code in process was to prioritize water for human consumption, a long-standing fight of communities that have been depending of water trucks for their livelihoods.

cooperatives). But these exceptions only reinforce the infrastructural and hidden nature of the overwhelmingly superior prevalence of water bureaucratization. The main victory of bureaucracy is imposing its logic as the natural language for framing both problems and legitimized solutions.

Undeniably, this regulation of water fits the definition of neoliberalism as the invasion of market logic to areas previously under public administration, and contrasts with other policy approaches that would give a much heavier role to state regulation. Nevertheless, the language present in both owners defending their right to exploit water and those resisting either from their particular subjectivities (indigenous) or by using the same tools of capital (like *Fundación Patagonia*) refers to the same bureaucratized relation with water. They are successful when managing the spaces opened or overlooked by bureaucracy, and respecting the rules set by it. This can be framed as a political contest, but at a practical level it also allows the persistence of the same mechanisms. After decades of protests, the roots of the Water Code that sustain water ownership as a primarily administrative procedure remain in place.

The other relevant point is that bureaucratization in this case does not come with the centralization of (water) governance, but relies on the centralized power of the state<sup>11</sup>. This superficial decentralization is what supports the idea of state withdrawal, and diminishes the possibilities of political accountability and contestation. This lack of tracking of how decisions regarding water use are reached supports the impression that no individual actor can be held responsible by the ecological and social consequences of overexploitation. Individually, all the actors hold legitimate rights to use the water, and on paper their activities are not in conflict with each other. Nevertheless they provoke a damage similar to that described by Arendt (1963) as 'the banality of evil', an evil that is not based in the intention of doing harm but comes from following indications in a context where obedience is highly valued. It is also related to Arendt's understanding of bureaucracy as 'the rule by Nobody' (Arendt 1970). Arendt describes this as the most tyrannical of all regimes, as no one can be asked to respond for what is being done. The DGA and its authorities main role since the implementation of the code has been to stress how little power they have to avoid the conflicts over water, oversee or promote the registration of water rights by those using it (Minería Chilena, 2014; El Día, 2017), and have remained in the background of most conflicts for the same reason<sup>12</sup>. The damage caused by this banal form of evil lies in the social injustices that have their roots in the

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<sup>11</sup> Others (Price 1994) have studied how water management is intertwined with the emergence of a centralized state. The previous Chilean model seems to fit into those ideas, which shows that bureaucracy is flexible enough to be adapted to different ideological projects.

<sup>12</sup> Maybe this is why there are no ethnographies on the work of this administrative apparatus.

bureaucratization of water, and the environmental damage they are intimately intertwined with. It is to this enduring damage to the ecosystems and its foundation in the processes started by bureaucracy that I now turn toward.

#### 5. The bureaucratic engine of the Great Acceleration

In this final section I examine closely the environmental implications of the processes hitherto described. In Chile, chronic drought is actively produced by bureaucracy but perceived and described as a confluence of unlucky circumstances with some institutional (and, as we saw, amendable) failures. At the same time, this contributes to a characterization of our period as the 'era of humankind', the Anthropocene, which dilutes concrete responsibilities on how we have not been able to stop the dramatic high levels of environmental damage happening all around us, regardless of having explicit scientific information on how they are produced and could be avoided or amended.

The discussion on the existence of the Anthropocene started within the natural sciences when Paul Cruzen (2002) stated that anthropogenic activity had created an increase in carbon dioxide emissions that will affect the atmosphere significantly for the next millennia. In that first coining of the 'Anthropocene' Cruzen already linked the epoch to the increase in the exploitation of Earth resources by a minority of the global population. The 'real' existence of the Anthropocene as a distinct geological epoch has been discussed following the principles of chronostratigraphy, although the discussion is far from being depoliticized (Barry and Maslin, 2016; Finney & Edwards, 2016). Complementing that discussion, from the social sciences, and anthropology in particular, there has been abundant debate about how to make sense of the multiple environmental catastrophes related with this new period and concerns about the future of life on Earth. The issue of political responsibility has been particularly present in debates over the naming of this apparently emergent epoch, as some suggest a better name would be Capitalocene or Chthulucene (Moore; Haraway, 2016). This would highlight that issues such as the use of fossil fuels are not the responsibility of humans in general, as there are significant gaps between those benefiting and those suffering from its exploitation (Malm & Hornborg, 2014).

Naming is also closely related to debates over the starting date of the proposed epoch. Moore, to cite a relevant example, locates the beginning of our epoch at the emergence of the foundations of capitalism, during the 16th century, and argues that the name 'Capitalocene' offers a better description of what is the particular source that has sustained the growth of carbon emissions and other threats to ecosystems, through industrialization that expanded from Europe to the rest of the world. Others like Davis and Todd (2017) keep the name

'Anthropocene', but are emphatic about locating its beginning in 1610, at the dawn of the colonization of the Americas. This as a way of putting the accent on the exploitative activities and displacement enforced by settler colonialists as the foundations of long term and ongoing relationships that have produced the epochal shift. All of these voices have configured an intellectual scene that has reinvigorated interdisciplinary environmental discussions with a heavy political signature: the Anthro-scene (Lorimer, 2017).

Discussions of dating and naming are fundamental for bringing up issues of who is responsible and can be asked to lead the changes for reducing the damage the Anthropocene is -and will continue to- inflict. I suggest that including bureaucratization as a conceptual lens helps illuminate how, even though exploitative activities can be traced several centuries ago, the magnitude of environmental depletion has skyrocketed since the second half of the twentieth century. This period matches with what Steffen et al call (2015) 'The Great Acceleration' as a way of dating the Anthropocene that emphasizes indicators of global socio-economic and Earth Systems changes in arenas such as water use, primary energy use or tropical forest lost. All share a dramatic increase in the second half of the twentieth century consistent until 2010, last date they updated their records. Steffen et al relate this surge with "growth of (...) economic activity, and hence consumption, and in resource use" (2015:92). It is possible to relate these processes first to the developmental state of the post-World War Two period and then to the following neoliberal reforms, of which the Chilean Water Code is an example. Bureaucratization and its enhancement then would be a key element in the propagation and escalation of socio-environmental relations that can be traced back to the industrial revolution. This line of analysis puts more emphasis on the continuities of liberalization reforms started in the 70s and 80s with previous projects of progress; and would go against the narrative of the 'withdrawal' of the state under neoliberalism.

Bureaucracy is a crucial element of how we build our relationship with nature, similar to what Escobar (1999) describes as the emergence of a capitalist nature regime. What Escobar reminds us is that this rationalized form of relation with nature is far from obvious or inevitable. Marisol de la Cadena (2010, 2015) and Mario Blaser (2009, 2010), among others describe concrete practices that build alternative relations with nature -some would say, alternative ontologies<sup>13</sup>- in Latin America. For instance, under De la Cadena's description of 'earth beings' water is a sentient being -not a 'resource'- creating a radical rupture with modern administrative language. Part of the particularity of these beings is that they are not reducible to rationalizing

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<sup>13</sup>Here I do not argue for or against the 'ontological' nature of the differences explored by these authors. Still their work is useful to illustrate a counterpoint to what bureaucracy tries to make real.

accounts coming from either neoliberal or openly leftist political projects. They exist as part of a web of caring relations among humans and other-than-human beings. And in their encounter with bureaucracy 'the new liberal state (unable to see these relations) dismisses this place, abstracts it, and legally reterritorializes it' (De la Cadena, 2010, p.356).

In the Chilean case, we can consider the example of the Chiu Chiu *vegas* (Prieto, 2015) as a non-bureaucratized relation with the environment. Chiu-Chiguyanós had a long tradition of watering patches of green pasture (*vegas*) in the desert for their alpacas, llamas and sheep. This cultural cultivation of the *vegas* required sophisticated irrigation techniques and the coordination of entire villages, but with the new water code the DGA argued that these were 'natural' wetlands and considered the water used to maintain them available for delivery to industrial production. In the case of the *Aymara* communities of Chui Chui, before the strict bureaucratic regime started in 1981 the environment was actively managed, but not through bureaucracy. The violent imposition of such regime -the wetlands are now dry, and the livelihood of Chiu-Chiguyanós has been severely damaged- resembles the bureaucratic environmental conservation initiatives taken by the Paraguayan government in Yshiro territory, which could only be reinforced 'either through the effective or the threatened use of coercive force' (Blaser, 2009: p.16). The Yshiro actively rejected the erasing of their meaningful relations with the beings of their worlds. As these authors show, earth beings and their recognition are powerful because they challenge the encompassing power of bureaucracy. Babidge's (2016) account of *Aymara* communities in the north of Chile resisting bureaucratic procedures over water management also echoes the resilience of non-bureaucratic ways of organizing collective life as intertwined with the ecosystem; and resonates with De la Cadena's example of how indigenous communities tried to leave the administrative figure of the cooperative imposed by the State in Perú as soon as it was imposed (De la Cadena, 2015: p.156).

Modernity and its preferred bureaucratic logic bring a heavily political relationship with nature into existence. The case of water in Chile points to bureaucracy as a productive way of thinking how The Great Acceleration was shaped from within different kinds of institutions and the quotidian decisions being made through them. My emphasis in the role of the state resonates with James Scott's (1999) ideals of 'high modernism', legibility and simplification that are characteristic of developmentalist states and would hardly be labelled as neoliberal. But in this case, significantly, there is a detachment of water from the multiple relationships between people, sentient and non-sentient beings, landscape, etc. in which it is embedded. Originally supported to promote freedom among rational actors, bureaucracy ended up creating unexpected consequences. Bureaucratization started as a state-lead effort, and the liberal turn occurring from the 70's onwards was built on top of this rationality. The success of bureaucracy

was not in the amassing of power by a central monolithic state. It gained traction because it has been taken for different and sometimes conflicting aims by different actors (Murray Li, 2005). The flexibility of bureaucracy for being presented as a neutral language for means has made it an underpinning hard to criticize.

Arendt wrote about the “rule of nobody” in 1970, just when the changes towards total bureaucratization were starting to take place. The concept is useful to understand the sense of a loss of agency that has accompanied discussions surrounding the definition of the Anthropocene, in what Hornborg (2017) describes as a post-humanist turn. In it, objects and non-human materials (artifacts) seem to act independently of human intention: 'the responsibility for human social relations – and for human-environmental relations – is delegated to things, as if they were the ultimate sources of society' (p.104). This description appears to fit in the impression generated by actions mediated by bureaucracy. A similar anti anthropocentric turn in anthropology when discussing the Anthropocene is described by Boyer as a tendency to 'dismiss enduring inquiry into human reason and agency as though that inquiry were itself somehow part of the problem' (2014: p.319). Both authors urge to recover the centrality of human agency -and therefore, responsibility- in the debate. This common call is fundamental. Part of what makes the Anthropocene so daunting is that the magnitude of the phenomenon makes it difficult to relate it to our own actions; or the actions of anyone *in particular*. Bureaucratization might be related to this feeling not only that we cannot control what we do, but also that no one is really in control.

#### **IV. Conclusions: drying the imagination**

In this section I briefly develop on the significance the study of water management in Chile can have for understanding human agency in the context of rapid and complex environmental changes more broadly. As a first point, I argue that bureaucratization reduces our tools for political imagination as it restricts us to think about technical fixes to scarcity, keeping invisible the production of scarcity itself. This is why challenging bureaucracy is engaging in a value struggle, which always is political. Secondly, acting through bureaucracy enacts a paradoxical 'will to ignorance' (McGoey, 2007). In light of this, I suggest that to recover agency's analytical power in the Anthropocene it is necessary to recognize the devices -such as bureaucracy- that are precluding political discussions and decisions.

The naturalization of the work of bureaucracy is what sustains the technification of solutions. The main strategy from the agricultural sector, for instance, has been advocating for a more efficient use of water. Fabricated scarcity is turned into a new opportunity for innovation. This rationalization of the use of water to maximise results builds on the same bureaucratic logic that created the problem in the first place. In a way, it is good for the market because the market needs scarcity to work, especially in sectors that rely on naturally available elements (McDermott Hughes, 2017). Scarcity or lack of water therefore becomes a problem of using 'backwards' techniques and any conflict is framed as a problem to be solved by the next engineering innovation. For example, the official 2013 document delineating the policy guidelines for water until 2025 identifies scarcity as a key issue, calling for the building of more dams and moving water from places where is abundant to places with shortage as solutions (Ministerio de Obras Públicas, 2013). Political discussions beyond the need of efficiency become unable to enter the public sphere. In this case, as it often happens, what is excluded from the debate is as important as the debate itself (if not more).

To challenge bureaucracy -and particularly efficiency- as the ultimate value means engaging in value struggles. Bureaucracy, once established, is extremely difficult to eliminate (Graeber, 2015), in part because failures inside bureaucracy can always be coded as solvable by bureaucracy's own mechanisms, eluding the question of whether bureaucratization itself is a failure. The issue of what values are being served by bureaucracy remains unasked. The defence of bureaucracy serves a very particular configuration of power and things, revealing particularly what some people are not willing to change (for example, those owning water rights in the agricultural sector are not willing to admit any threat to their current use of water as protected by law). Politicization has been criminalized as it challenges the supremacy of efficiency as a guiding value for making decisions. What happens in Chile with water can be

seen as a microcosm of why bureaucratic organizations have also been incapable so far of offering substantial action on pressing issues of the Anthropocene such as climate change or plastic pollution. This is also why more political voices of the Anthro-scene (such as the degrowth economy) have been labelled as too radical, since they challenge the language used to judge what is convenient or not to do.

In this case, the bureaucratic building worked too closely to the ideal Weberian rational model. The problem is that it tried to rationalize and make more “efficient” something that is harder to domesticize than people: water. People adapt, learn to navigate bureaucracies and change their tactics, water does not. It is not an “interactive kind” in Hacking’s (2000) terms. Aquifers simply collapse when faced with the imposition of the bureaucratic reality. Bureaucracy tries to re-draw the world, but the physical and socio-natural existence of water does not sustain that design. It does not mean that water or other elements are passive; rather their agency is expressed in their stubborn resistance to the bureaucratic logic that tries to simplify the complex nature of water basins.

Paradoxically, the danger of encompassing bureaucracy comes from its failure to do what it was set to do (in the case of the DGA, manage water sustainably and efficiently for the public good<sup>14</sup>). The DGA enacts a will to ignorance (McGoey, 2007) of the complexities of the reality it tries to manage when it relies on bureaucratic order to address pressing cases of drought and water dispossession. The continuing absence of legislative bodies such a regulation for glaciers in a country like Chile<sup>15</sup> serves to justify inaction. Following McGoey in her idea of defensive ignorance as a strategy (or rather what she calls an anti-strategy) to reduce liability I suggest that in this case ignorance is bounded to a will to powerlessness by state institutions like the DGA. As mentioned above drought is attributed by institutional voices to climate change, decrease in rain and overexploitation, but does not connect these circumstances with the actions of those exploiting water or the regulatory bodies that approve and protect those uses. This ignorance also resonates with the indifference that is produced in bureaucracies dealing with people (Herzfeld, 1992).

Acknowledging the existing link between bureaucracy and environmental degradation is urgent. This will allow us to abandon the 'bad luck narrative' (Whyte, 2017) that has abounded in discussions like climate change mitigation and adaptation. Questioning the neutrality of the administrative apparatuses is a first step to recover agency and political discussions.

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<sup>14</sup> DGA mission must be accomplished following the principles of public interest, sustainability and efficiency (DGA 2018)

<sup>15</sup> Chile hosts 76% of glaciers in South America.

It is also relevant to remember that this analysis does not approach the work of bureaucrats themselves in their everyday management of the bureaucratic water regime. The analysis presented here must not be understood as an erasure of their own lived experiences. Anthropologists know from ethnographies in other contexts that bureaucrats do more than just 'interpret' the rules, but due to the lack of ethnographic material available in this case I will have to leave that fascinating question open for further research. What is clear is that beyond the intentions both of the original intellectual authors of the Water Code and of those currently administering this state apparatus the reproduction of bureaucracy has deep -and in this case, worrisome- consequences.

An important final point is the loud ethnographic silence existing on bureaucratic practices regarding water (and the environment more broadly) in Chile. Materiality is absent of this analysis for lack of evidence, but its crucial role must not be discarded (Hull, 2000). Today the database of water rights is available for download as a massive and complicated excel spreadsheet. There is still a lot to learn from its im/materiality. And more importantly, there is still an urgent need to seriously question whether we want to keep using bureaucracy as a way of eluding political action and discussion.

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