
Prices and Politics in Andean Water Reforms

Rutgerd Boelens and Margreet Zwarteveen

ABSTRACT

Water rights are best understood as politically contested and culturally embedded relationships among different social actors. In the Andean region, existing rights of irrigators' collectives often embody historical struggles over resources, rules, authorities and identities. This article argues, first, that the neo-liberal language that is increasingly used in water policies is ill-suited for recognizing and dealing with these social, cultural and political dimensions of water distribution. Local water rules and rights, their dynamics, and the way they are linked to power relations, local identities and contextualized constructions of legitimacy, remain invisible in neo-liberal policy discourse. Second, this same discourse actively destroys these local rights systems and presents itself as the only viable cure to the problems it generates. The ways in which local irrigators' collectives attempt to protect their water security raise questions about the fundamentals and effects of neo-liberal water reforms, but these questions are neglected or poorly understood. This article proposes a more situated, layered and contextualized approach to Andean water questions, not just to improve representational accuracy but also to increase political visibility and legitimacy of peasant and indigenous water claims. What is needed is not just a new 'typology' or 'taxonomy' of water rights, but an alternative 'water rights ontology' that understands locally existing norms and water control practices, and the power relations that inform and surround them, as deeply *constitutive* of water rights.

INTRODUCTION

As in many others regions of the world, most water policy proposals in the Andean countries tend to focus on preventing future water shortages and solving current water problems by following global neo-liberal recipes. The three basic ingredients of these recipes are decentralized decision-making, private property rights, and markets. In the Andes, most actors involved in water policy and management agree on the need for improving water control. Most would even agree that such a change should take the form of decentralization. The reasons for wanting change, however, vary widely between different actors. Indigenous and peasant groups perceive

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decentralization as a means to redress their historical exclusion from decisions about water allocation. They demand a fair and adequate representation in water policy-making processes in the hope of (better) securing their own water rights. They depend on water for irrigating their crops and demand rights that enable continued livelihood security and survival as communities. International lending institutions, often together with national governments, see decentralization and privatization of water management as a means to both reduce government spending on water and to increase the efficiency of water use. State agencies hope to mobilize more tax revenues, and improve jurisdiction over water. Commercial water companies, in their turn, hope to be allowed to exploit existing and new water infrastructures in ways that will bring them economic profits.

Given this diversity of interests, it is hardly surprising that water reforms are contested, and form the topic of much debate and political struggle. Water is a finite resource, and the proposed water reforms unquestionably imply changes in access to and control of this resource. Since the option of expanding supplies seems to have reached its limits, those who receive more do so at the expense of others who receive less. Yet, the terminology that is increasingly used (by all parties) for articulating water problems and solutions is the terminology of neo-liberalism, which does not allow the recognition of power and politics as constitutive of water realities. Although the proposed measures differ, current water reforms share a problem analysis strongly influenced by privatization models, new institutionalism and rational choice theory (Gleick et al., 2002; Mollinga, 2001; Moore, 1989; Zwarteveen, 1998). Water bureaucracies are understood through the prism of rent-seeking, and the debate about water markets and tradable water rights is largely framed in the language and tools of neo-liberal thinking (Briscoe, 1996; Perry et al., 1997), while the organizational dynamics of local level farmer organizations are seen in terms of new institutionalist concepts (see, for example, Baland and Platteau, 1996; Ostrom, 1990, 1992).

This tendency is understandable: neo-classical and new institutionalist formulae are attractive for their clarity and for the efficiency with which they simplify complex realities and behaviours. Neo-liberalist concepts sit easily with the mindsets of water-professionals, characterized by a preference for large-scale standard policy initiatives and a predilection for 'design principles' — universally valid sets of factors, conditions or principles that can be applied to design a particular institutional transformation (see FAO, 1996; Ostrom, 1992; Plusquellec et al., 1994). The beliefs that flows of money and water follow universal scientific laws, and that human beings roughly follow the same rational, utility-maximizing aspirations everywhere are important sources of consolation and relief for policy-makers who are confronted with increasingly complex, seemingly chaotic, and highly dynamic water situations.

Yet, and as many before us have argued, the fact that neo-liberalism makes it possible to divide the water world into bite-size pieces which

policy-makers can chew on, should not be mistaken for representational accuracy (Cleaver, 2000; Goldman, 1998; Mosse, 1997; van der Ploeg, 2003). Neo-liberalism is a strongly positivistic scientific and universalizing language. It presents choices that are deeply political and concerned with distributional questions, as neutral, scientific or technical. While some aspects of reality (those that can be influenced through policy interventions) and some causal mechanisms (prices and finances, markets, formal laws and institutional frameworks) can be expressed in neo-liberal terms, there are many elements of reality and many causal mechanisms that escape their notice.

In this respect, it is worrisome that many studies on the impacts and effects of neo-liberal water reforms consist of comparing the normative water reality as assumed in the policy model with what happens 'on the ground' using the deductive method, and without questioning or empirically validating the behavioural and institutional assumptions employed. This typically leads to accounts of reality in terms of 'gaps', or of how the actual situation diverges from the desired situation as described in the policy model. It also leads to recommendations of interventions aimed at closing these gaps, rather than to proposals to re-assess the model. In this article, we argue that it is precisely such a re-assessment that is required. Actual water management rules and practices differ from what the models predict because they are embedded in, and importantly constituted by, existing social and political relations and hierarchies, cultural values, patterns and criteria of legitimacy, and locally specific ecological conditions. What water rights and management forms are, ontologically, and how they function can therefore not be understood or even described in isolation from the actual political and social context in which they are used and discussed.

Neo-liberalism is not just one of several alternative ways of simplifying the world; it also entails a pro-active and interventionist agenda for change. Through powerful laws and rules, the neo-liberal model of the water world is (often forcefully) turned into reality. Those realities that do not fit the model are either transformed or destroyed. Consequently, the dominance of neo-liberal representations of water problems threatens to destroy those realities, not just ontologically, but also materially. They can no longer be talked about or referred to in official water negotiations; they disappear from water policy agendas; and they do not count in measuring the success of policy measures. Most critical writings on water privatization are about the brutal and spectacular entrance of large international drinking water companies onto local scenes, and the dangers of such capitalist expansion for poor people's access to affordable and good quality drinking water. In this article we want to demand attention for a different water reality that is under threat because of neo-liberalism: that of existing indigenous and collective irrigation management institutions. We fear that realizing the neo-liberal water dream may come at a high, though not easily quantifiable, price: the violation or even obliteration of existing water tenure

arrangements and collective forms of water management. This price is high not so much because of a conservationist attribution of intrinsic values to traditions and cultural heritage,¹ although these also play a role, but especially because of the implied threats to water and livelihood securities and to existing ways of living and being of marginalized groups in Andean countries. It is also high because of the risks to the very objectives of water reform programmes, of using water more effectively and efficiently.

To prevent these threats from occurring, a critique of neo-liberal interpretations of reality is required. Concerted efforts to show the politics of policy choices that are presented as scientific, objective or purely economic are an important first step in decreasing the legitimacy of current water reforms. The fact that not all values of water can be easily expressed in market terms, if only because attribution of values does not just happen in the market, must be constantly reiterated. This article emphasizes the need to place a contextualized understanding of water rights at the centre of the analysis. We contend that the most important question in relation to water is not whether to price, privatize, sell or purchase, but rather who owns water access and controls rights? What are the contents of these rights? Which acquisition mechanisms are deemed valid, and who has legitimate authority to defend, enforce and sanction these water rights? Water reforms, just like land reforms, are about changing entitlements to a crucial productive resource. Rights to water cannot be thought of as simply following from centrally ordained laws and policies; they have emerged historically through negotiations and often embody years of labour investments and struggles. In the Andes, water rights are also closely associated with cultural meanings and identities. We suggest, in short, replacing the current emphasis on institutional mechanisms of water management with a focus on the actual functioning and outcomes of water rights and laws, and on the norms and rules surrounding the distribution of water. In our view, such a focus provides a much more promising and fruitful entry-point for critical thinking and action in water management issues.

In the following section, we critically analyse neo-liberal water rights rationality and suggest an alternative conceptualization that invites investigation of the logic and dynamics of water rights realities in the terms employed by those who directly use and manage water. In some respects, this conceptualization builds on attempts by irrigation management scholars in the 1980s who were concerned with finding ways of fostering the participation of farmers and understanding and strengthening locally existing forms of water rights and organization.² It aims to provide a new and

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1. Neo-liberalist discourse and policies do in fact allow specific cultural rights to indigenous people (Hale, 2002), based on a rather essentialized conceptualization of 'indigenous identity', and mostly focusing on typical liberal individualized rights (Stavenhagen, 1994).
 2. These include Chambers (1988); Coward (1986); Levine (1980); Nobe and Sampath (1986); Uphoff (1986).

better understanding of what water rights are, ontologically and in practice. Using this understanding, we then describe a number of cases which illustrate how irrigation collectives react to water reforms. Many existing water rights communities do not silently accept usurpation by states and markets, but resist and fight against water reform proposals. These struggles are expressions of fear for the destruction of existing livelihoods, local domains of agricultural production and identity. As such, they challenge the new water resources distribution, the new water rules, and the new water language and discourse. We end the article with a reasoned plea for a contextualized and historicized understanding of water rights and water reforms, which explicitly acknowledges the politics and power of water and which allows for culture and identity as determinants of water realities.

DIVERGENT CONCEPTUALIZATIONS OF WATER RIGHTS

Water Rights in Neo-Liberal Thinking

Current thinking about water rights is intimately tied up with the privatization discussion, and emerges from the widely-held insight that states have done a poor job in managing and allocating water in cost-effective and efficient ways (Merrey, 1996; Ostrom, 1990, 1992; Vermillion, 1991). The central privatization argument is that water needs to be transferable and marketable for it to be used in an economically efficient way, producing the highest possible marginal returns. For water market transactions to succeed, clearly defined and enforceable water rights need to be in place. Private water rights are thus a crucial condition for water markets to emerge (Ringler et al., 2000; Rosegrant and Binswanger, 1994; Rosegrant and Gazmuri, 1994; World Bank, 1996). In neo-liberal thinking, water rights, by defining rules for the allocation and use of water resources, are seen to provide the means for describing and accounting for committed water uses. Water rights allow water to be priced per unit consumed, encouraging a reduction in wasting water. In addition, water rights provide a good basis for allocating maintenance responsibilities among beneficiaries. They also provide security of tenure to users, thus establishing incentives for investments in infrastructure.

This approach is right in assuming that most of the anticipated benefits of water markets will not be achieved unless substantial efforts are made to establish and protect security of tenure in water. Yet, it wrongly conveys the impression that water rights and water markets are inseparable. In fact, most of the benefits attributed to water markets would be achieved through the provision of security of tenure alone, irrespective of whether water rights are traded or otherwise transferred (Bauer, 1997). While neo-liberal thinking suggests that the lack of (incentives for) transferring or marketing of water is the root cause of current water problems, a more accurate problem

description would be that water management is such a complicated matter precisely because of the difficulties inherent in establishing an effective and enforceable system of water allocation and distribution (Seckler, 1993: 6). The assumption that security of water tenure can only be achieved by means of private water rights does not hold true, at least for the Andes and probably for many other places. In the Andean history of diverse property regimes, tenure of water was typically most insecure for large sections of the population in those periods characterized by privatized regimes.

This shifts the question from whether and what to privatize, to how to distribute water according to agreed objectives and values. In other words, the question that lies at the heart of many water problems (and reforms) is how to create the infrastructure, laws and institutions that allow security of water tenure, rather than how and whether to privatize and trade water. To address this question, we need a more complex and layered understanding of water rights than the current prescriptive instrumental and legalistic notion of water rights that prevails in neo-liberal water accounts (see also Boelens et al., 2002). In this improved understanding, it is particularly important to realize that what a right is, ontologically, cannot simply be 'read' from legal texts and written laws. Instead, rights obtain their meaning in the particular contexts in which they are discussed, used and applied.

Dimensions and Contents of Water Rights

What, then, is a water right? When referring to irrigation, it is useful to think about a water right as the right that provides its holder with the authorization to take water from a particular source, including the particular social privileges and obligations that are associated with such authorization (Beccar et al., 2002). A water right encompasses three dimensions: socio-legal, technical and organizational. Socio-legally, a water right is an expression of agreement about the legitimacy of the right-holder's claim to water: such agreement must exist within the group of claimants, but it is equally important that rights over a resource be recognized by those who are excluded from its use. Agreement about the legitimacy of right-holders' claims to water is intimately linked to social relations of authority and power, and can be based on a variety of grounds: it can be based on state legislation, water laws and regulations, but it can also be based on local rules established and authorized by traditions and community organizations.³

3. We have further elaborated this conceptualization elsewhere: see, for instance, Boelens and Zwartveen (2003) and Roth et al. (2005). For similar conceptualizations of (water) rights, see Benda-Beckmann et al. (1998); Bruns and Meinzen-Dick (2000); Gelles and Boelens (2003); Zwartveen (1997); Zwartveen and Meinzen-Dick (1998).

However, having the legal possibility (and social power) to take water is meaningless without the two other dimensions of water control. First, the means (infrastructure, technology, and technical skills) to actually take water from a source and convey it to fields — the technical dimension — must be present. Second, it is necessary to organize and manage not just water allocation and the operation of infrastructure, but also the mobilization of resources and decision-making processes around these issues — the organizational dimension. Responsibility for these management tasks may lie with government or non-government agencies, with private companies, or community organizations, or with a combination of these. Many irrigators' organizations in the Andes are community-type organizations, although some are set up or supported by governments or NGOs. Having a right to water often goes hand in hand with the right to participate in systems operation and management, but also with a number of duties and obligations, such as the requirement to contribute cash or labour to the operation, maintenance and management of an irrigation system. Failure to comply with those duties often leads to sanctions such as exclusion from one or more water turns or the payment of fines (Boelens and Zwarteveen, 2003; Gerbrandt and Hoogendam, 1998).

Rights in Action

The distribution of water is much less straightforward than that of many other resources: because of the variable availability and fluid characteristics of water, and because of the difficulties of rigorously monitoring and controlling water flows, there is much scope for users at different levels to act in ways that diverge from distributional agreements as stipulated in state laws, regulations, infrastructural lay-outs and technologies. This explains why water distribution is typically subject to continuous bargaining and negotiation. Such bargaining may involve the technical characteristics of the irrigation infrastructure, the operation of that infrastructure, or the very contents of the water right. Water distribution and control, therefore, cannot be understood by simply looking at the legal status of right-holders, nor can it be deduced from statutory law. An understanding of actual water use and distribution practices is also required, including the different norms and discourses that groups of users refer to when claiming access to, or simply taking, water.

To allow for such differentiation, and thus to capture the difference between 'rights on paper' and actual water control and distribution, we suggest the following distinction of categories of rights: reference rights, activated rights and materialized rights. This distinction should not be read in the evolutionary sense of expressing increased levels of specification, or as a typology or taxonomy distinguishing different types of water rights. Instead, it aims to capture the fact that the precise meaning of rights

changes depending on the context in which it is used. These categories can be seen as different manifestations of rights.

Reference rights can be derived from broader principles, rules and ideologies that embody notions of fairness and justice (Boelens and Dávila, 1998); they may be based on national law or on locally formalized water regulations, such as communities' irrigator regulations. Reference rights specify, in general terms, the powers of right-holders — in terms of access-related, operational, and decision-making privileges and choices — and also define the characteristics of right-holders, for instance by specifying that water right-holders should be landowners, community members, men or heads of households (F. and K. von Benda-Beckmann, 2000). Reference rights matter, for instance, in discussions between state agencies and user groups about water allocation priorities, or in negotiations about national or regional water policies and plans.

Activated rights (or 'rights in action') refer to the operationalization of reference rights. In irrigation systems, they often consist of rules and procedures for water distribution, and of rules about participation and voting in meetings of water users' organizations. Seasonal water delivery plans and water rotation schedules are clear expressions of activated rights. These usually come about in pre-season meetings among (representatives of) irrigators, which may or may not involve representatives of state water agencies. Assessments of actual water availability to decide on quantities of water to distribute often matter here, as do records of the behaviour of right-holders in previous seasons — did they contribute the stipulated amount of labour or cash; did they take more water than agreed, and so on.

Materialized rights refer to actual water use and distribution practices, and to the decision-making processes about these practices. Materialized rights are often not written down, but are authorized by routine or are unspoken or informal agreements. Both the definition of the contents of each of these rights and the links of transformation from one right to the other are subject to negotiations and struggle. The social and political domains in which such negotiations and struggles occur are likely to be different for each type of right, although they may overlap. Inclusion in such domains is thus important in terms of the protection of one's water security.

Legal Pluralism and Embeddedness

In most Andean irrigation systems water rights exist in conditions of legal pluralism where rules and principles of different origin and legitimization co-exist in the same locality. The question of which rules and principles are to be considered (most) legitimate is therefore often an intrinsic part of struggles over water in the Andes, including the current ones surrounding the privatization of water. State laws are often challenged by representatives

of local communities by referring to 'their own' traditional socio-legal systems. There may also be a diversity of mechanisms for acquiring water rights, and the mechanisms considered legitimate by water users' communities are not necessarily those adhered to by legislative authorities at national levels. In many cases, the very existence of detailed local water rights and laws only comes to the attention of legislators at national level through the resistance of local communities against proposals for water reforms. Water legislation as formulated at national levels in countries like Ecuador, Peru and Chile does not recognize existing diverse and dynamic water rights and distribution practices, but often does include very specific and precise rules and prescriptions about how water users should behave and organize, and about how water should be distributed (Bustamante, 2002; Gentes, 2002; Guevara et al., 2002; Pacari, 1998; Palacios, 2002).

Apart from territorial rights claims and outcomes based on historical struggles and negotiations, the prevalent way in which local Andean communities have obtained ownership of water, now and historically, is through investments of often tremendous amounts of labour and other resources in the construction of irrigation infrastructure. Labour investments also served as a way to decide who within the community could use water and have decision-making rights: investments in collective property construction, therefore, led to the 'construction' not only of the infrastructure but also of individual or household rights to access water and to its management. Two different types of rights were thus established: the collective rights that refer to the claim of the group of users of one irrigation system (or sometimes a series of water-use systems) *vis-à-vis* third parties; and individual (or household level) rights that refer to the rights of water users within one irrigation system and specify their claims *vis-à-vis* each other. This process of acquiring ownership of water lies behind Coward's notion of hydraulic property, developed to express the fact that investment processes in irrigation not only establish people's relation to the irrigation system, but also their relation to each other. Such relationships constitute the social basis for collective action in various irrigation tasks. Thus, labour contributions to maintenance of irrigation systems serve not only the upkeep of the system, but also the actualization of property rights (Coward, 1986). In many Andean irrigation systems, rights embody years of accumulated labour investments and simultaneously form expressions of social relations among irrigator households. In the current context of privatization discussions, it is important to emphasize that water rights of individuals exist within (and because of) collective agreements and are enforced by and through local, collectively legitimated authorities. As such, they are radically different from the 'privatized water rights' referred to in neo-liberal water policies (Beccar et al., 2002; Boelens and Doornbos, 2001).

The rules, rights and duties attached to water are, in many Andean communities, closely linked to all kinds of non-water related rights and duties and are closely intertwined with economic and non-economic

institutions and networks of social and political relations. In other words, as Peters observes, definitions of rules, rights and obligations, of appropriate uses and users, and the ways in which these definitions are to be materialized, are closely embedded in specific historical sets of political and economic structures as well as in cultural systems of meanings, symbols and values (Peters, 1987; see also Gelles, 1998; McCay and Jentoft, 1998). The transfer of water rights, for instance, happens in a social context in which locally-specific exchange relations function as important mechanisms to maintain networks of friends and relatives. In some communities, people's sense of community identity is strongly linked to having a shared history of struggling against landlords or mining companies for water and land rights. Importantly, current resistance is also a way to express and reinforce community values.

Ironically, although privatization aims at deregulating bureaucratic water management through the delegation of decisions to the lowest possible level, actual water reforms in the Andes threaten to destroy existing local and indigenous water rights systems. Local communities and actors are only granted decision-making powers when they accept the terms and conditions specified by higher-level laws and rules. Co-existence of a great diversity of rules, rights and obligations is actively discouraged, since such diversity is seen as potentially obstructing inter-regional and international transfers and trades; locally-specific rules and rights that tie water to a geographical area or to a community may get in the way of investments and profits. Moreover, recognition of a diversity of local water authorities is sometimes interpreted as a threat to the power and rule-making capacity of national bureaucrats.

PRICES AND POLITICS: EVIDENCE OF NEO-LIBERAL WATER REFORMS

Neo-Liberal Claims and Counterclaims

Expectations about the benefits of neo-liberal water reforms are high. Proponents claim that such reforms will result in water savings, greater water-use efficiencies, more private investments in water infrastructure and maintenance, less government spending on water management, and higher economic returns to investments. In addition, they claim that water reforms will be accompanied by democratization of water decision-making. However, a growing number of case studies have produced evidence that casts doubt on whether these claims are realized, or whether they are even realistic. Hendriks (1998) shows how water distribution, water-use efficiency and agricultural productivity in several Chilean irrigation systems are worsening instead of improving as a result of water rights privatization. Trawick (2003) describes the causal link between privatization of water rights and the decline of water-use efficiency and productivity in collective irrigation systems in Peru. Hendriks (1998) and Oré (1998) describe cases

where water rights privatization discouraged investments in local irrigation systems. Dourojeanni and Jouravlev (1999) and Bauer (1997, 1998) show how the Chilean privatization model in practice worked towards the monopolization of water rights in the hands of elites and a few powerful companies, instead of enabling a multitude of competitors to interact in an open market atmosphere. Whereas water markets were supposed to stimulate allocation of water to the economically most beneficial and valuable uses, examples from Chile show that one effect of privatization may actually be non-productive speculation with water rights (Solanes, 2002). There is not necessarily any positive correlation between how much people are willing to pay for water and their eagerness to use it efficiently. All the above studies raise doubts about whether neo-liberal water policies meet their own expectations, measured against their own goals and indicators for success. Our argument here is that many of these cases of failure can be interpreted in terms of the incommensurability of existing irrigation realities with the policy model: existing realities cannot be described and represented in neo-liberal terms, and they do not 'behave' as predicted by the model.

There are an increasing number of documented instances of farmer organizations fiercely standing up against privatization efforts and neo-liberal water reform programmes. This resistance shows that 'not fitting the model' is often a conscious choice, and not — as privatization proponents would have it — a result of traditionalism or stubbornness. Describing and understanding this opposition using the conceptualization of rights proposed in the previous section leads to a different interpretation of the determinants of water-use efficiencies, and points to the need for re-assessing water allocation priorities. The struggles can be read as a critique of the very rationality of the reforms, and actively question their claims to neutrality and objectivity. Peasant irrigator communities do not just demand alternative, more equitable ways to distribute water rights among stakeholder groups in society; they also demand new ways to think and talk about water.

Large-scale water conflicts and related social differentiation processes under private water property regimes are by no means new to the Andes. In Peru and Ecuador, for instance, private property regimes prevailed before the establishment of the Water Laws (of 1969 and 1972, respectively) which nationalized property rights. The private property regimes were the cause of much violent struggle between large hacienda owners and indigenous communities.⁴ These struggles form an important part of the political and social history of many communities, which partly self-identify through the collective memory of these important water rights battles. However, many of those battles were won by the large landowners, and the resulting problems of water scarcity are still fresh in the minds of many communities.

4. See, for example, Boelens and Dávila (1998); Gelles (2000); Mayer (2002); Oré (1998); Pacari (1998); Peña (2004); Ruf (2001); Vos (2002).

The new proposals for privatization thus ring some familiar bells. Many communities and indigenous organizations perceive the new water plans as yet another in a sequence of attempts to take away resources that historically belong to them and that form the basis of their livelihoods. In Peru, Bolivia and Ecuador massive nationwide uprisings have effectively resulted in a standstill or change in the implementation of the new water policies and laws. The rest of this section provides some illustrations of such struggles, and uses the contextualized rights' framework presented above to begin interpreting them.

Establishing Water Allocation Priorities

In order to promote possibilities for free trade in water rights and to allow water to be allocated to its most profitable uses, Chilean neo-liberal water policy states that water rights allocation should follow market principles. Chilean legislation, therefore, does not establish access priorities or preferences for particular uses (such as drinking water for human consumption above industrial use), nor does it express norms to protect particularly vulnerable groups, the environment or, ultimately, water quality (CEPAL, 1998; Dourojeanni and Jouravlev, 1999). Peasant and indigenous organizations in the other Andean countries that were to adopt Chile's water legislation have strongly objected to this lack of prioritization in water allocation. For example, CONAIE — the Federation of Indigenous Nationalities in Ecuador — defended a water allocation principle in their Water Law proposal that prioritizes water for human and domestic use and for subsistence agriculture above water for commercial agriculture. Commercial agriculture, in turn, gets a higher priority as compared to industrial, mining and power generation activities (CONAIE, 1996). In Bolivia, peasant and indigenous organizations fiercely protested against market allocation principles which would, in their opinion, endanger water access to the economically less powerful (Bustamante, 2002; WALIR, 2002).

Throughout the Andes, peasant irrigators thus challenge the reference rights and allocation priorities as stipulated in existing laws and new neo-liberal reform proposals. Often, struggles are also about the right to be included in the social arenas in which reference rights are determined. Along with the mechanisms of water allocation, the underlying values on which allocation is based are questioned. Although the struggles are primarily about demands for alternative legal priority orders that are based on greater social justice and local embeddedness, they also illustrate that changing water realities is not just a matter of changing legal reference rights. It is simultaneously a quest for activating and materializing alternative rights orders 'in the field' and changing the actually existing water allocation priorities as they are embedded in unequal power relationships in society.

‘Unused’ Rights Accumulation

In Chile, when the new Water Code was enforced in 1981, most indigenous communities were unaware of the need to officially register their century-old customary rights. In the words of a Mapuche leader: ‘The big landowners here in the area have registered the water rights in their names, and the Mapuches, for not knowing about the laws of the Chilean State, were left without possibilities to claim theirs’ (quoted in Solón, 2003). Water rights that were not formally registered were neutrally labelled ‘unused rights’, and were allocated to those who presented official requests — powerful commercial companies, especially mining and power generation enterprises, and landlords. Mapuche communities are furious about this. The Mapuche leader expressed his anger:

The water sources that originate in the communities here have 98% of their trajectory on Mapuche territory, but the owner of the water is a landlord who lives in the city. He bought the water from the State, and nobody can use it. We cannot use it for irrigation, not even for drinking water, because the water has been bought. But the water was born in and flows through Mapuche communities, and no one of the Mapuches was aware of the need for official recognition when this person registered the water rights on his name. No one of us was consulted and no Mapuche ever knew of the existence of this law. (Quoted in Solón, 2003)

It is not only the neo-liberal assumption that (market) information is freely available to everyone that is challenged here, but also the very basis for rights claims. Mapuche communities feel strongly that the water is theirs, because they have been using it for centuries and because it flows through their territory, whereas the Water Code demands official registration as a first basis for rights allocation (see also Gentes, 2000, 2002; van Kessel, 1992). This case illustrates that there are different social domains in which water rights are negotiated and contested, and that indigenous communities may not be well-positioned to be included and represented in the domains that officially matter. It also illustrates that legal reference rights often do not express the historical and social realities of the Mapuches, pointing to a serious lack of social legitimacy and applicability of the new water policy.

Companies versus Communities

Mining companies based in Chile have already appropriated a large part of the historical water rights of Atacameño and Aymara indigenous communities in northern Chile. The same mining companies are now trying to get authorization for the appropriation of Bolivian water, which is currently collectively owned by indigenous communities. The legalization of certain rights — in this case, the right of the Bolivian government to sell and export privatized water rights — automatically implies the illegalization of all

existing rights, such as ancestral and socio-territorial rights. Bolivian indigenous communities struggle against this neo-liberal policy. In the words of one user: 'They want to export 3000 to 6000 litres per second to Chile. We are talking about subterranean water resources. What the government wants to do is to make a law to export water and favour the big Chilean enterprises such as Chuquicamata, Inés de Collahuasi and Escondida. This is our great preoccupation'. Another indigenous irrigation leader in Bolivia commented on this water power play: 'Behind the back of our communities, the Bolivian government wanted to enforce a new law to legalize water export to Chile. The communities never were consulted or knew about this law, which was handled in secret . . . Rainfall in this Southern Altiplano region is extremely limited, only 100 mm/year. And in the Eduardo Abaroa reserve it's even less, 60 mm/year. . . . I think that to defend our water is a matter of life and death' (both quoted in Solón, 2003). This case is another example of how current water reforms inherently evoke struggles about water tenure, and shows that they are not neutral programmes fostering more efficiency. Indigenous communities are not recognized as water right-holders, in spite of their long history of using water and of investing in infrastructure to make such use possible. They are not offered the choice of how to control what they consider as their water, but are simply disregarded as right-holders.

Democratizing Decision-Making?

In most communal water systems in Peru, Bolivia and Ecuador, the 'one person, one vote' rule applies, implying that each right-holder has one decision-making vote in the users' organization. In contrast, World Bank and Inter American Development Bank proposals for new water legislation in Peru and Ecuador stipulated that voting rights should be made proportional to the quantity of water-use rights each user holds, like shareholders in a joint-stock company (see World Bank, 1995, 1996). The Chilean Water Code sets the example for these proposals. Hendriks (1998) gives an example of how such a re-definition of voting rights may shape local political economy and power relations. In Belén, Precordillera Comuna de Putre, the great majority of irrigators — smallholders who depend on agriculture for their livelihoods — called for changes to the irrigation schedule in order to intensify their agriculture and save water. They wanted to have more frequent irrigation turns with smaller flows, a decision ratified in several community assemblies. But in Belén, a majority of water shares is owned by a small group of wealthy absentee landholders who live in the city of Arica and make their money from other economic activities. They only go to the irrigation system when necessary, for example when they have their water turns. Obviously, they have no interest in increasing irrigation frequency, for it would mean more time and travel costs. This group's voting weight

and related decision-making power prevents the majority of smallholders, who depend on agriculture, from improving their irrigation system and increasing economic productivity. As Hendriks (1998: 306) remarks:

When users with abundant water and less need for careful use of available water have more weight in decision-making it affects the rationality of the system's collective operation. This problem of resistance to change, by the people who migrate to the city and own a relatively heavy weight of water shares, is recurrent in many remote locations in the north of Chile.

Similar cases have been reported in Peru after the neo-liberal government of Fujimori changed the regulations of water-user associations, concentrating decision-making rights and voting rights in the hands of a powerful minority of large water right-holders (Oré, 1998; Vos, 2002).

Generally, both legal and local reference water rights include specifications of how water control decisions are to be made and who is allowed to join this process. As this example illustrates, neo-liberal reference norms concerning control over decision-making seriously endanger the possibilities for marginalized water-user groups to activate their water access rights, to improve system efficiency, and to materialize traditionally existing collective choice rights.

Another example of this kind of struggle comes from Bolivia. The main water users of the Central Valley of Cochabamba, Bolivia, are peasant and indigenous irrigator communities, who for decades have organized access to and distribution of water according to their 'uses and customs'. They engaged in a major conflict when, in 1997, the Cochabamba drinking water company started to drill wells in the Central Valley, affecting their already over-extracted ground water resources. In 2000, the Valley again became a violent battlefield when indigenous and peasant communities together with urban water users protested against the state's plans to privatize the drinking water sector. The government signed a contract with a large foreign consortium, and enacted a privatization support law that allowed the international company to have exclusive water rights over all waters in the district, including those of smaller systems in the metropolitan area and rights to exploit the aquifers. Another law was rushed through the parliament so that the company could capture new water resources, and even charge water fees for co-operative wells that were to be expropriated. Directly after privatization, the international company raised water fees substantially, without any system improvement. Urban and rural water users formed an alliance of opposition: the citizens protested against rising water rates, while the rural municipalities and indigenous communities protested against the new law, because it affected their rights and could expose them to new encroachments of their water sources. Violent confrontations with the army were the result. At the end of this 'water war', the government had to retract its decision and commit to amending all of the articles in the proposed law to which the popular alliance objected (Boelens and Hoogendam, 2002; Bustamante, 2002;

Laurie et al., 2002). These water struggles originate from the co-existence of different sources of legitimation for rights' claims. Peasant communities demand that their history of use of and investment in water is accepted as a legitimate claim to water, and that their 'uses and customs' are accepted as a rightful framework of reference for water management.

Decentralized User Negotiations

Bottom-up and democratic watershed platforms are central to user-oriented water management policies. Inclusion and participation in such decision-making platforms by local and indigenous communities is regarded as a means to ensure that they can voice their concerns and secure their interests. In Chile, success with such platforms is mixed. The influence that local communities can exert in platform meetings is limited, partly because negotiations are dominated by the rich and powerful. Indeed, water rights negotiations do not happen in isolation from economic power relations. Bauer, for instance, shows how, in multiple-sector conflicts in Chile, the bigger and more powerful water users have little incentive to negotiate water allocation and settle conflicts in platforms, precisely because their private rights are so strong relative to the regulatory authority of the state or any possible platform: 'The task of coordinating different water uses at the level of river basins is left mainly to voluntary bargaining among private rights-holders and their organizations. Because state administrative intervention is so limited, when bargaining fails the conflicts are supposed to be settled by the ordinary civil courts, which have expanded powers' (Bauer, 1998: 149).

In the case of the Maule River, local irrigators for many years confronted the power generation company, which cut off their water upriver to store it during the season of maximum agricultural demand. The company also often interrupted the flow and released water in irregular amounts and unforeseeable timing, making it unusable for farmers. Before the company was privatized, there were ways to solve such conflicts in terms of public interests, but now the two parties face off as two private entities in court. After many years of legal battle, the Supreme Court backed the company, but found no solutions for the thousands of local farmers affected. The courts made decisions solely on the basis of legalistic prescriptions, closing their eyes to the social and productive consequences. Meanwhile, several other hydropower plants have been built in the watershed, reinforcing the sector's growing power and allowing it to consolidate its rights. Similarly, Bauer reports on the construction of the Pangué dam on the Bío Bío River, which would reduce down-river flow and concentrate pollutants. Affected indigenous, environmental and irrigators' organizations joined in an action platform and went to court. At first, the court ruled in favour of the dam opponents, asking the dam project to make a compromise with the affected users before continuing construction. However, the Supreme Court

overruled that decision and gave the project its blessing, without considering possible alternative solutions that would be less harmful to the indigenous communities, the farmers and the environment. Instead of insisting on a platform compromise, the court worsened the conflict by ruling in favour of power generation: 'The Pangué decision resulted in a major transfer of wealth from farmers and the agricultural sector to power companies: a political decision with significant distributional consequences' (Bauer, 1998: 142). As Bauer explains, in Chile's legalistic private-ownership system, other multi-sectoral watershed management issues are even more troublesome, with all problems to be settled through ordinary civil law courts, between private and privatized players of unequal power. Even when economically less powerful user groups do have legal reference rights to access and control water, the neo-liberal model makes it difficult for them to solve disputes and activate and materialize their rights through local negotiation and platform collaboration.

These examples show, firstly, that the presumably objective and efficient restructuring of water entitlements and water rules implied by neo-liberal water reforms does not go uncontested. Secondly, different actors engage in these contestations on very unequal terms. The formal ability to demand rights to water, in the neo-liberal world, becomes a function of one's ability to enter and bargain in markets and meetings. Neo-liberal political programmes simply assume that all water actors are equal in terms of these abilities; markets and meetings only work when all participants can interact 'as equals'. These assumptions, while critical to the very success of the neo-liberal programme, could hardly be more erroneous in the Andean water situation, which is characterized by deep, historically-embedded social differentiations and divisions. Water actors in the Andes are not equal in terms of monetary income; making the ability to pay for water a prime allocation mechanism thus favours private companies and business actors. Also, market prices rarely adequately capture water's marginal value or utility to indigenous communities and are therefore a poor language for expressing this value. Nor are water actors equal in terms of their ability to access and influence decision-making and wield power in platforms and meetings: there are differences in terms of skills, information and education, which are often deeply rooted in historical divides and intertwined with cultural beliefs and biases. Gender, class and ethnicity are three important axes of such divides, and work in complex ways to colour and shape an individual's possibilities for political deliberation (cf. Fraser, 1997: 78). Rather than modelling and seeing water actions and decisions of different actors as functions of markets and formalized meeting procedures, they should be seen as the result of continuous processes of networking and negotiations, struggles and social interactions that are permeated by wider social relations of economic and political power.

In the absence of money and influence in formal meetings, local irrigators' communities have to resort to less formal and less lawful ways to

defend their water rights and express their water opinions. In the Andes, more than in many other parts of the world, indigenous movements and organizations have actively taken up the issue of water. Through organizations and in demonstrations and public campaigns, they form parallel discursive arenas in which they invent and circulate counter discourses about water, permitting the formulation of oppositional interpretations of their rights, identities and needs. The success of these struggles and actions partly depends on the political willingness of governments to listen and provide space, that is, on the political climate of the particular country. So far, water struggles have hardly led to opening and widening the discursive spaces for discussing new water policies, nor have the terms of the debate significantly altered as a result of protests. Neo-liberalism has not yet been dethroned as the hegemonic water language. It is high time for this to happen. As a first important step, the assumptions of political neutrality and scientific objectivity legitimizing Andean water reforms should be cast aside in favour of conceptualizations and narratives that explicitly show the on-the-ground politics of water policies and their effects, that allow for diversity and historical contextualization, and that acknowledge subjectivity and situatedness. The question of water tenure should be made much more central to attempts to understand water reforms and the reactions they provoke. In all the cases presented here, indigenous communities — rather than just questioning privatization or water pricing and marketing — question the legitimacy of the state in framing water policies. In particular, they question the proposed rules and principles for distributing water rights as well as the state's authority in making such rules and establishing such principles.

PRICES OR POLITICS? SOME CONCLUDING REMARKS

We have shown that neo-liberal water reforms in the Andes meet with resistance from different social movements which demand alternative ways of using, owning and managing water. While such movements are motivated by a range of concerns, including social justice, the environment, 'right to livelihood' or ethnic identity, they all make claims for more equitable and just access to water. Logically, they all centre on the question of property rights; whoever controls property rights controls the processes of water allocation, distribution and management. Water reform struggles are also, and importantly, over the right to define what a water right entails, how it can be obtained, and over the power to attribute value to water. The struggle for control over water is a struggle for existence, and a struggle to define what existence means.

We have argued that the language of neo-liberalism is not suited to expressing the political choices and dilemmas that characterize this struggle. Neo-liberal discourse presents water reforms as neutral and technical

interventions aimed at assisting central water agencies in controlling and managing water resources and crises. What this article has shown is that the proposed ways in which water is to be owned, distributed and managed imply fundamental changes, as do the ways in which different water users relate to each other. If the policies are implemented, such relations are increasingly dictated by extra-communal laws, institutions and markets. The proposed water reforms, therefore, are deeply political, in the sense that they actively create and transform (through laws and institutions) the political and social water-world. By asserting that flows of money and water follow universal, scientific laws, and that human beings share the same aspirations and motives everywhere, neo-liberalism establishes a universal rationality and efficiency, based on a 'natural' and 'objective' truth. The policies that are based on new institutional theories, in their turn, establish universal criteria for optimizing water management. Such universalization can be seen as a process of Foucauldian disciplining and normalization, while at the same time actively depoliticizing the water debate by labelling decisions about resource allocation as technical interventions.

Using the terms employed by Bourdieu in another thematic field, neo-liberal policies and the theories underlying them can be typified as 'pure mathematical fictions, based from the outset on a gigantic abstraction'. But, as Bourdieu goes on to explain, 'It has now more than ever the means of making itself true' (Bourdieu, 1998: 94–5). In the current era, which celebrates the death of ideologies and the rise of belief in markets, the power of neo-liberal water policies and discourses is not to be underestimated. However, as we have tried to show, they are not silently accepted. On the contrary, peasant movements and indigenous organizations are actively and vocally standing up for their rights. Understanding such protests requires a more nuanced, contextualized and complex analysis than the one that currently tends to dominate global debates. The current struggles are not, as many observers would have it, a simple battle between public and private water interests; nor are they a conflict between common and private property regimes where the former is associated with tradition and the latter with modernity. It is not simply economic growth versus subsistence, abundance versus scarcity or rationality versus 'local ways of knowing'. The cases we have presented illustrate that Andean irrigators demand that their worlds and livelihoods be recognized and protected. They are not against new water reforms or liberalization *per se*, but they fear the loss and destruction of their land- and waterscapes. They organize for continued collective control over water, without being solely anti-commodity and pro-subsistence. The struggles over water, over the right to sustenance and livelihood, over the right to healthy and socially just forms of living are also struggles for specificity and contextuality, for own ways to define the language and rules of play, for the right to 'otherness'.

It is time that these demands were taken seriously, also in academic and policy arenas. For this to happen, conceptualizations of water use,

distribution and management that take contextualized water tenure as their entry point, and that allow recognition of water as a contested resource, provide a much more dynamic and layered understanding than those of new-institutionalism. Coupled with insights derived from legal pluralism and political economy, such a conceptual language invites investigation of how water rights and policy models become manifest 'in action' in peasant irrigation systems, rather than normatively predicting what should happen according to reference policy models and judging 'unruly' realities against such predictions.

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Rutgerd Boelens is a lecturer and researcher with the Irrigation and Water Engineering Group at Wageningen University (Wageningen, The Netherlands; e-mail: rutgerd.boelens@wur.nl), and co-ordinator of the international Water Law and Indigenous Rights programme (WALIR). His books include *Searching for Equity. Conceptions of Justice and Equity in Peasant Irrigation* (with G. Dávila, Van Gorcum, 1998) and *Water Rights and Empowerment* (with P. Hoogendam, IEP/Van Gorcum, 2002).

Margreet Zwarteveen is a lecturer and researcher with the Irrigation and Water Engineering Group at Wageningen University (e-mail: margreet.zwarteveen@wur.nl). Her work stretches from investigating gendered rights in water management to the critical feminist analysis of water policies and professional water cultures. She has published widely on these topics, including the book co-edited with Dik Roth and Rutgerd Boelens, *Liquid Relations. Contested Water Rights and Legal Complexity* (Rutgers University Press, autumn 2005).