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Micro-processes of justification and critique in a water sustainability controversy: Examining the establishment of moral legitimacy through accounting

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ABSTRACT

To analyse the micro-processes of moral justification and critique, this paper explores how managers combine different moral principles through the use of accounting, in order to establish the moral legitimacy of water sustainability practices. Drawing on the Economies of Worth framework and based on an exploratory case study of a water utility, this paper reveals four micro-processes of justification and critique - neutralising, enlisting, summoning and sensegiving - that reflect the different ways of moral legitimation mobilised by the managers. It also reveals the presence of different orders of worth which refer to the market, industrial, civic and green moral principles, and the dynamic role of accounting as a test of worth used to combine and bring them together. The findings suggest that moral legitimacy is not necessarily a dichotomous variable, but that it operates on a continuum established by managers and negotiated through the use of accounting. The paper illuminates the role of accounting in the unfolding of moral legitimation processes, and advances the micro-analysis of moral legitimacy in sustainability accounting research. It also contributes to sustainability disclosure research by showing that external disclosure reflects internal deliberations, and together they participate in the establishing of moral legitimacy.

1. Introduction

Water sustainability is a site of resource governance which refers to the provision, use and conservation of water in relation to short and long term sustenance, health, collective life, and opportunities for actual and future generations, and society (Council of Europe, 1968; UNESCO et al., 2015a,b; International Panel on Climate Change IPCC, 2008). This paper focuses on the demands for water sustainability that emerged after the Dublin Statement on Water and Sustainable Development (ICWE, 1992, pp. 26–31) and the subsequent reforms of the water sector in different regions of the world (Guerrini & Romano, 2014; Saleth & Dinar, 2005). The Dublin Statement set out the principle that water is an economic good in all its competing uses, also considering affordability and equity criteria (ICWE, 1992, pp. 26–31, Principle No. 4). The embodying of

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this principle within the national regulatory frameworks was highly controversial as it produced new conditions that challenged the strategic and operative conditions of water utilities (Massarutto, 2011, 2015; Ogden, 1997).

However unified in their view that human health and welfare are the most important principle, in effect, the reforms of the sector required recognition and reconciliation of the demands of emergent, multiple and, at times, competing moral principles, such as financial viability, industrial efficiency, equal access and environmental stewardship. This led to a notable conundrum because the ways of pursuing water sustainability came to be open to question, subject to controversies, and highly dependent on how multiple rationalities co-exist (Garrick, Hall, Dobson, Damania, Grafton et al., 2017).

Over the past two decades a growing body of accounting research for sustainability has investigated broad concerns relevant to water and the water sector (e.g. Chalmers, Godfrey, & Lynch, 2012; Crowther, Carter, & Cooper, 2006; Egan, 2014a; Hazelton, 2013; Jollands & Quinn, 2017). This research has provided significant contributions to the understanding of how water has come to be measured, managed and controlled, and the role of accounting in constructing internal and external representations of water concerns (Russell & Lewis, 2014, pp. 213–230). In the context of water utilities, a line of research has pointed out that accounting is not simply a part of financial transactions "but also part of a moral and cultural framework" (Annisette, Vesty, & Amslem, 2017, p. 210) that can be used by individuals and organisations to legitimate sustainability practices such as actions and outcomes (Demers & Gond, 2019).

However, while sustainability accounting research has provided valuable insights into macro aspects - such as organisational legitimacy - also related to water management and water sector (Farooq & de Villiers, 2019; Ferdous, Adams, & Boyce, 2019; Schneider & Andreaus, 2018), it has yet to fully embrace the analysis of micro-processes (Grisard, Annisette, & Graham, 2019). Analysis of micro-processes is important because it allows for a focus on individual actors, their actions, interactions and outcomes in order to explain complex macro-level phenomena (Barney & Felin, 2013; Cooper, Stokes, Liu & Terba, 2017; De Massis & Foss, 2018; Felin, Foss, Heimeriks, & Madsen, 2012).

In this context, the main aim of this paper is to show how accounting is involved on a micro-level in establishing the moral legitimacy of water sustainability practices in the presence of competing and co-existing moral principles of justification. To conceptualise the establishment of moral legitimacy and analyse the individuals' agency in a moral domain, this paper builds on Boltanski and Thévenot's (2006) Economies of Worth framework (hereafter EoW), which approaches organisational life through a moral lens (Gond, Barin Cruz, Raufflet, & Charron, 2016; Patriotta, Gond, & Schultz, 2011). In its formulation, the EoW provides a 'grammar', theorised as specific "orders of worth", that individuals can use to provide discursive and material proofs to justify the moral worthiness of their claims in relation to specific situations related to sustainability issues (Boltanski & Thévenot, 2006; Demers & Gond, 2019).

This paper's aim is addressed through an in-depth exploratory case study investigating and analysing how managers of an Italian public water utility (code-named BLUE) sought to establish the moral legitimacy of water sustainability practices by mobilising diverse accounting objects. As the concept of water sustainability is multifaced, it requires continuous engagement by individuals to establish the moral legitimacy of the practices implemented to a wider set of internal and external stakeholders (Garrick et al., 2017). The case setting was chosen because within the Italian landscape the water sector is typically operated though public utilities in a regime of regulated monopoly, which carry very specific duties in relation to water sustainability. They present a unique set of challenges in funding and maintaining aging water infrastructure, creating equitable access to water for populations, and preserving an increasingly scarce water resource (KPMG, 2012; UN-Water, 2014; UNESCO, 2015a,b).

The paper offers two main contributions to the accounting literature. Firstly, the analysis shows how the EoW framework can enrich the understanding of moral legitimacy. In contrast to the established understanding that considers legitimacy from an almost binary perspective, where practices are either legitimate or not (Bitektine, 2011; Deephouse & Suchman, 2008, pp. 49–77), this paper demonstrates that the process of moral legitimation dynamically unfolds at a micro-level on a continuum, and involves the manner in which managers undertake the discourse on sustainability and the consequences thereof. How managers participate in establishing (moral) legitimacy is a topic that has been under investigated within sustainability accounting research (Milne & Patten, 2002; O'Dwyer, 2002; Vesty, Ren, & Ji, 2018). Four micro-processes of moral justification and critique (neutralising, enlisting, summoning, and sensegiving) are captured at inter-individual level. They show that sustainability practices are more or less legitimate depending on their state of worthiness as established by managers who refer to different moral principles to justify them. This has an important implication for the refinement of the understanding of legitimacy as used in the accounting literature (Deegan, 2019; Duff, 2017) as it suggests that it is dynamically established by managers and not dichotomous.

Secondly, the analysis increases the understanding of how accounting is mobilised in the micro-processes of moral justification and critique, in the presence of competing moral principles (Aguilera, Rupp, Williams, & Ganapathi, 2007; Aguinis & Glavas, 2012; Gond & Moser, 2019; Vesty et al., 2018). It directly responds to Annisette et al.'s (2017) call for more work examining accounting objects at a micro-level. The analysis allows for a better understanding of the unfolding of the moral legitimation process through the use of accounting as a test of worth. Accounting was used to legitimise, manage and govern resource allocation and external relations. The accounting objects were therefore dynamically used as tests of worth by the managers in arranging the competing moral priorities characterising the controversies, which, in the case of BLUE, were represented by water princing and operational investments (Annisette & Richardson, 2011; Russell, Milne, & Dey, 2017; Vesty et al., 2018).

In addition to these two main contributions, this paper also extends the sustainability disclosure literature. Previous literature has often viewed the justifications for, and accounting's role in, arguments for and against contested issues in a

somewhat uni-dimensional approach, problematising either the internal or the external dimension of legitimacy (Annissette et al., 2017; Skilling & Tregidga, 2019). This paper adds to this research by critically analysing how these two dimensions interact with each other and illuminating the extent to which external comments reflect the internal underlying 'reality' of the organisation (Cho, Laine, Roberts & Rodrique, 2015). The findings show a general coherence between what is internally deliberated by the managers in order to establish the moral legitimacy of water sustainability actions and outcomes, and what has been revealed by the organisation through external reporting.

As indicated by Kuruppu, Milne, and Tilt (2019, p. 2078) the "understandings of legitimacy in accounting need to shift from narrow examinations of external report disclosures" in order to also consider the dynamic of the internal processes of legitimation. This paper provides evidence of that. The managers, and the company itself, used accounting and reporting to legitimise not just company's operations and performances, but also the underlying moral principles of the decisions taken and the related worldview.

The next section presents the theoretical background. Section Three provides a review of the literature. Section Four describes the context of the water sector in Italy. Section Five presents the research method. Section Six presents the results of the findings. Section Seven discusses them. The final section provides the conclusions and implications.

2. The Economies of Worth theoretical framework

This paper draws on Boltanski and Thévenot (2006) Economies of Worth theoretical framework. Boltanski and Thévenot have been associated with the pragmatic approach that has been increasingly influential among francophone sociologists. This paradigm is regarded as 'pragmatic sociology' and is distinct from the 'critical sociology' of Pierre Bourdieu (Annisette & Richardson, 2011). Unlike Bourdieu, who conceptualises sociology as the "instrument for describing domination and the instrument for emancipation from domination" (Boltanski, 2011, p. 19), pragmatic sociologists advocate an approach that "fully acknowledges actors' critical capacities and the creativity with which they engage in interpretation and action" (Boltanski, 2011, p. 43), and are concerned with how individuals engage in critique and justification at a micro-level (Giulianotti & Langseth, 2016).

One of Boltanski and Thévenot's most significant contributions is the theoretical paradigm known as the 'Economies of Worth'. Boltanski and Thévenot (2006) argue that modern economies contain multiple moral principles of evaluation, referred to as 'orders of worth', which individuals draw upon in different circumstances to direct their decisions and behaviours within and through particular controversies. The orders of worth, therefore, act as frames of reference that reflect specific rationalities of the social word and favour definite objectives and measures which individuals may mobilise to establish the moral legitimacy of different practices. They therefore establish worthiness by referring to these orders. The interplay of these orders brings them into relationships that vary depending on the situations.

Once individuals are faced with decisions involving contrasting frameworks (such as, for instance, business versus environment and society; commercial opportunities versus stewardship to natural resources and the community; etc.) they rely on rationalities that make judgement possible. In these situations, they may produce and examine a wide range of accounts aimed at ordering the conditions of acceptability of specific situations in a controversy, attempting to justify and criticise the legitimacy of certain practices. Accounts may express positive claims or, alternatively. criticism of certain positions (Thévenot, Moody, & Lafaye, 2000). Positive claims promote and reinforce certain ways of thinking, acting and evaluating things. Criticisms, by contrast, explicitly challenge predominant practices, beliefs and understandings of worth in order to renegotiate established conventions.

The order of worth framework deepens how organisations, through their actors, establish moral legitimacy. Given its focuses on the judgments and activities of an ensemble of actors which involve the interaction between the individual and the collective, the framework facilitates a focus on the micro nature of legitimacy (Demers & Gond, 2019). Most prior conceptualisations consider legitimacy to be a dichotomous variable which expresses the legitimacy or illegitimacy of organisations in consideration of external environment (Deegan, 2019; Deephouse, Bundy, Tost, & Suchman, 2017). Such an idea posits that companies repair legitimacy via, for example, reporting which highlights favourable activities the company is undertaking (Tilling & Tilt, 2010).

However, the establishment of legitimacy requires justification and critique processes made by individuals (Bitektine & Haack, 2015; Deephouse et al., 2017; Drori & Honig, 2013; Kuruppu et al., 2019; Suddaby, Bitektine, & Haack, 2017). Individuals must navigate the context, learn about recipients' schemas and organisational targets, practices and outcomes. In doing so, they may mobilise different moral principles to justify and critique their corespective actions and the practices carried out by organisations (Demers & Gond, 2019). Empirical work in accounting has begun to investigate the role of the individuals in legitimacy processes (Milne & Patten, 2002; O'Dwyer, 2002; Vesty et al., 2018). In this context however, the literature has not explicitly examined the micro-processes of justification and critique through which moral legitimacy is established by individuals, and the role of accounting within them. Neither has prior research sufficiently examined whether internal justifications are reflected within external reports in order to establish the moral legitimacy of the actions implemented, to a wide set of internal and external stakeholders (Kuruppu et al., 2019).

Concerning sustainability, Gray (2010) maintained that the definition of what is sustainable is the result of a judgment process that is formed, shaped and coordinated by multiple and contrasting rationalities, where "conflict, seems unavoidable in any sensible narrative of sustainability" (p. 56). Further, the specificities of water - including its multiple meanings, interpretations and use - (Garrick et al., 2017; Hellegers & Van Halsema, 2019; Li, 2013) emerge as an important site of

evaluation for sustainability practices, representing the conceptual space for the analysis of different and competing moral principles and how they unfold and support the establishment of legitimacy (Bracking, Fredriksen, Sullivan, & Woodhouse, 2018; Yates, Harris, & Wilson, 2017).

2.1. The orders of worth

The EoW comprises seven discrete orders of worth.[1] In addition to the market, the EoW identifies an industrial, domestic, fame, civic, inspirational and green order. Each order is characterised by a specific set of beliefs about how the world works, which in turn leads to different expectations about appropriate behaviours, practices or institutional structures (Appendix A).[2] Individuals can use the orders of worth to provide their moral judgements concerning the common good, which in this paper is conceptualised as water sustainability. The orders of worth serve to reveal and justify the moral worthiness of the actors' claims, and of the actions and outcomes implemented (Cloutier, Gond, & Leca, 2017; Demers & Gond, 2019; Gond et al., 2016).

The *market* order expresses the beliefs of business. It represents the notion of price, profit, transactions, deals, buyers, sellers and competitors, to justify the moral legimacity of practices implemented. It follows the rationale of competition, commercial relations, and short-term orientation. The *industrial* order expresses industrial, technological and scientific approaches. Technical performance and productivity, standardisation, and competence are the most common criteria to reveal this order. While technical competency and planning arguments are sometimes connected to economic outcomes, the bases for the moral legitimacy in the industrial worth are different from market criteria. "Market justifications place value based on the competitive price of goods while technical competency justifications place value based on the efficiency of investments, professional planning and expertise, and long term-growth. In addition, the form of proof in market justifications is short-term profitability, while the form of proof for planning justifications is long-term investment and technical or scientific competency" (Thévenot et al., 2000, pp. 243–244). The *domestic* order expresses the importance of generation and tradition, within which loyalty and respect for hierarchy and authority are highly valued.

The *fame* order expresses the relevance of public opinion. It refers to the reputation and dignity of beings in public spaces, as well as to the importance of the recognition of others. The *civic* order of worth refers to the influence of collective interests rather than individual ones. The ideas of collective welfare, solidarity, and membership are the standards of moral legitimacy. The *inspirational* order of worth focuses on creativity and originality, and is related to the creative accomplishments of the person, based on novel ideas and visions. Finally, the *green* order of worth not only recognises the value of nature, but also the harmonious relationship between humans and the biosphere as elements of moral legitimacy.

2.2. Relationships between orders of worth

Boltanski and Thévenot (2006) theorise the orders of worth as equivalent to each other, as each of them has autonomy, logic and specific criteria,[3] and in a given situation multiple orders can co-exist (Cloutier et al., 2017). Boltanski and Thévenot (2006), and Whelan and Gond (2017), identified four ways in which orders of worth can be related, namely though relationships of conflict, composite-set up, compromise, and alignment.

Conflict involves discordance and disagreement. In this situation the moral legitimacy of an order of worth is criticised by one or more co-existing orders by challenging its underlying principles of evaluation (test of worth). The individuals involved in the controversy draw on cultural, symbolic and material resources as proof to justify the superior moral legitimacy of their position. Conflict can be illustrated, for example, by a scenario wherein the green order places moral legitimacy on environmental friendliness and resource stewardship, but is brought into conflict with the moral legitimacy that the market world places on monetary worth, financial assessments and transactions.

Composite setup, implies dissonance, yet less struggle than conflict. In this case, however, different orders are related in an odd fashion "that results in the creation of 'monstrous hybrids'" (Whelan & Gond, 2017, p. 125, emphasis in the original). Composite setup can be illustrated, for example, by the ambiguity of a situation wherein a manager, in order to get employees' attention in a meeting, takes the floor and speaks passionately, presenting a shimmering picture of his ability to manage her or his family's concerns. This scenario combines the moral legitimacy the industrial order places on the ability to direct a team, with the moral legitimacy the fame order places on attracting attention and the moral legitimacy the domestic order places on family traditions, offering the picture of an awkward situation.

[1] While Boltanski and Thévenot (2006) suggested six orders of worth (*market, domestic, industrial, civic, fame* and *inspired*) made no claim that the finite number of orders they introduced represented a complete list. Thévenot et al. (2000), for example, introduced the idea of *information* and *green* worth, while Boltanski and Chiapello (2005) the idea of *network* worth. This paper is concerned with the EoW framework as originally conceived by Boltanski and Thévenot (2006), plus the green worth identified by Thévenot et al. (2000).

[2] In the EoW framework the concept of worth is expressed in sociological terms, indicating what is ultimately good, proper, or desirable in human life. It differs by the concept of worth in the economic sense, which indicates the degree to which objects are desired, particularly, as measured by how much others are willing to give up to get them.

[3] While this issue is outside the scope of this paper, scholars have criticised the equivalence of the various orders, arguing that some orders carry more power than others (Gond et al., 2016; Skilling & Tregidga, 2019).

Compromise occurs when norms and tests from different orders of worth are combined, fused together, and rendered equivalent (Boltanski & Thévenot, 2006). Compromise enables the avoidance of conflict between the orders of worth by refusing to privilege one over another, and in turn negotiates an agreement between them. Noticeable examples of compromise include sustainability practices where the moral legitimacy of industrial, civic, green and market orders are brought together (Finch, Geiger, & Harkness, 2017; Nyberg & Wright, 2013).

Finally, alignment involves a spontaneous plural consensus among orders of worth. Alignment materialises when there is a harmonious agreement between the moral legitimacy that different orders of worth place on the same phenomena, with their internal tenets, adding legitimacy to the others, and vice versa (Whelan & Gond, 2017). An example of alignment is when an investment in water infrastructure (industrial order), subsequently proves to be capable of substantially reducing water leaks (consistent with the value the green order of worth places on environmental stewardship) whilst also being economically sound (market order).

The use of the EoW theoretical framework to analyse how accounting is used by individuals to justify (or criticise) controversies not only illuminates how accounting is implicated in the sustainability controversies that involve multiple moral orders, but also 'unpacks' the moral status that individuals accord to specific practices or institutional structures adopted to justify and critique the moral legitimacy of water sustainability actions (Demers & Gond, 2019). Yet, what the EoW framework suggests is that individuals may not be using accounting and reporting to just promote activities, but rather to establish the underlying moral nature of these activities. Accounting may therefore legitimate not just actions and performances, but the underlying world view. The next section provides an overview of existing accounting scholarship that implicitly and explicitly provides insights stretching across multiple orders of worth.

3. Overview of water research in accounting

Water has been the subject of a growing volume and scope of studies in accounting for sustainability (Russell & Lewis, 2014, pp. 213–230).[4] Water-related accounting research has provided insights into several aspects, including water reporting, water accountability, water and human rights, and the role of accounting in the organisational change of water utilities. Most of these studies did not use the EoW framework but did implicitly provide insights that stretch across several orders of worth, demonstrating the tensions between them. We have, therefore, reviewed the literature according to our interpretation and understanding of the orders of worth that their insights primarily inform.

The first line of enquiry within this literature focused on the importance of promoting water as a public good. In exploring the implications of accounting for policy change, Hazelton (2013) examined the extent to which water disclosure might constitute a human right. As human rights have normative force and, in some jurisdictions, legislative force, access to water disclosure is seen as having the potential to act as a catalyst for policy change towards sustainability. In a similar vein, Signori and Bodino (2013) underlined the importance of transparent, high-quality, credible, and comparable water reporting. They argued the importance of developing accounting and accountability instruments to analyse the various implications related to water infrastructure and service, to inform the different stakeholders and to incentivise an open discussion for participatory decision-making.

Accounting has also been used to provide the market and industrial orders in support of organisational decisions relating to the long-term economic sustainability of water governance and management. Several examples are related to an Australian setting. Christ (2014) evidenced that wine producers are moving beyond reporting water-related matters to external parties, to examining how water management across supply chains has the potential to impact their economic and environmental performance. Adopting a different perspective, Egan (2014b) analysed the search for water efficiency initiatives during acute drought conditions. The analysis reveals that some companies perceived the implementation of a range of practices focused on maximising water efficiencies as an opportunity to achieve some competitive advantage. Finally, Tello, Hazelton, and Cummings (2016) revealed the perceptions of potential users of water accounting reports prepared under the Australian General-Purpose Water Accounting framework (which regards water as a financial asset). They show that the water accounting framework was considered an instrument to improve managerial performance, rather than to facilitate the discharge of duties of water accountability beyond organisational boundaries.

Another stream of literature has investigated the role of accounting in rendering visible those processes and activities aimed at protecting the green and civic orders of worth. Dey and Russell (2014, pp. 245–266), for instance, analysed the impact of water regulation on bodies of water, arguing the importance of developing a multi-stakeholder participatory approach characterised by the use of multiple reports and accounts to conserve the biodiversity of a river. Saravanamuthu and Lehman (2013) debated the role of a semi-qualitative risk matrix to enhance stakeholders' participation. This tool enabled the

[4] The concept of sustainability has been often discussed in terms of 'weak' and 'strong' sustainability. The concept of 'weak sustainability' focuses on monetary values with the explicit or implicit assumption of the broad or total substitutability among produced, human, and natural assets. In particular, natural capital (ecosystem) is not preserved for its own sake, but for its contribution to the overall productive base. At an organisational level, this means a focus on eco-efficiency issues and the question of profits, growth, and organisational survival remain (Bebbington, 2001; Gray, 2010; Milne, Tregidga, & Walton, 2009). The concept of 'strong sustainability' refers instead to another position. The natural capital should be maintained for its own sake as it functions to support livelihoods and well-being in the broader sense and in the long run. The argument in this case is that irreversible ecosystem degradation should be avoided. At an organisational level, this means a focus on eco-justice and social-justice and on a more equitable distribution of the resources between companies, society and people (Bebbington, 2001; Gray, 2010; Milne et al., 2009).

construction of new accounts concerning the environmental impact of irrigation on water catchments, and favoured criticisms concerning unsustainable economic aspects embedded in conventional irrigation accounts.

Other studies looked at the extent to which calculative frameworks, such as environmental management accounting systems and water accounting standards, contribute to raising controversies or finding compromises in the context of water governance and management. Moore (2013), for instance, found that the management routines, practices and procedures for water conservation, environmental management and regulation used by an Australian public sector water organisation were competing with the criteria used for financial reporting and costing, generating separate trajectories of implementation, and decoupling economic and environmental aspects. Jollands and Quinn (2017) showed a contested application of water billing in Ireland in which each social actor justified the worth of water using proper evaluation criteria. The government justified a tariff based on industrial and economic analyses, while the domestic water users argued the civic and collective worth of water. Such controversy generated a lack of an agreement concerning the optimal way to manage and maintain the water services.

Annisette et al. (2017) provided an analysis of the implementation of an advanced form of net present value method to reveal contrasting values of water, legitimise their importance, and finally, settle a compromise between technical and environmental criteria, able to balance the different interests involved. From a different perspective, Hunt, Staunton, and Dunstan (2013) argued the importance of including four dimensions of equity (equity of access, of distribution, investment, and the return of capital) to balance equity and efficiency within tariff-setting mechanisms, and avoid conflicts between social, environmental, economic and financial aspects. Finally, Ogden (1995) demonstrated how accounting information shaped the transformation of the water sector from the public to the private domain in the UK. Accounting participated in the process of organisational change, promoting revenues and short term market orientation. Ogden (1997) also showed that the use of accounting for customers, and particularly the assessment of performance indicators at customer service level, enabled the introduction of a market rationality within a privatised UK water utility.

Concerning external reporting and fame principles of evaluation, Vinnari and Laine (2013) showed that public Finnish water utility companies developed and then abandoned environmental reporting due to a lack of external pressure and the presence of internal hindrance factors. Ogden and Clarke (2005) reported how a set of private UK water utilities used assertive and defensive impression management techniques in their attempts to gain, maintain and repair their legitimacy as customer-focused companies. The companies did not, however, wholly succeed in persuading all of their customers that the privatisation of water was a good thing. Larrinaga-González and Perez-Chamorro (2008) evidenced a more progressive accountability by public Spanish water utilities. They engaged in extensive informal sustainability reporting to raise public awareness about the importance of water conservation and reported detailed information about environmental performance.

The above research demonstrates the numerous insights accounting studies can offer to the understanding of several key themes surrounding water and sustainability. They show how the use of accounting influences water issues, and which rationalities and principles of evaluation have been used to promote certain decisions and behaviours. Accounting was mobilised and used, both to promote a sustainable use of water and to legitimise its economic value. However, little is known about how accounting is involved, at a micro-level, in establishing the moral legitimacy of water sustainability practices. It is important to address this question as it enhances the understanding of how accounting is used by individuals in the dynamic of a micro legitimation process in pluralistic contexts where multiple, and at times competing, moral principles are present (Demers & Gond, 2019; Vesty et al., 2018). The following section sets out the case context for the research.

4. Case context

The Italian water sector has been subjected to a long process of reform and change since 1990, that challenged the legitimacy of water utilities. Originally, the supply of water was managed and performed directly by the local municipalities, by a myriad of local public companies, most of them very small in size and structure. The re-organisation of the water sector started in 1994, with the enactment of law number 36 (also known as 'Galli's Law', from the last name of the Italian MP who was the first signatory of the law). The nature of the reform was rooted in industrial rationality and was directed, on the one hand, to boost new structural investments, and enhance the efficiency and effectiveness of water services, and on the other hand, to increase an efficient use of financial resources by promoting economies of scale.

In order to achieve these goals, the reform of the water sector set out profound changes in the governance of water services. Firstly, it required that water services should be provided through an integrated water service approach. This meant that organisations involved in the supply of water (fetching, transportation and distribution) should also be involved in water sewage and treatment services. Secondly, it promoted mergers and acquisitions of existing smaller organisations operating on a local level. Thirdly, it identified, at a national level, a number of territorial basins of operation according to hydrographical and political administrative criteria where the newly formed water utilities could operate in the context of a regulated monopoly. Fourthly, it introduced a new tariff regime aimed at compensating the water utilities for the services provided, based on a full cost recovery principle. Finally, the law instituted a number of Local Authorities and a National Committee to monitor water utilities and protect the interests of external stakeholders respectively.

The process of reform continued in 2002 with the Italian budget law. It redefined the criteria for assigning the management of water services, identifying three methods: public tender, in house entrustment, and direct grant to a public-private company where the private partner was selection by a tender. This reform generated a rationalisation within the sector through merger and acquisitation processes between the different public companies. In 2006 the Italian Law 152/2006

(also know as the Environmental Code) provided new water services standards, dictating more precisely the tasks and activities for the different actors operating in the water sector (i.e. water utilities, local municipalities, regional governments, national regulatory authority).

An additional contested reform was then introduced in 2009 with Law 191. It gave private investors the opportunity to operate within the water sector, opening the industry to a market rationality. This reform established that water services had to be franchised to private or public–private utilities in which the private partner held at least 40% of the shares and that no water management utility could be totally public after December 2011. The overall framework led to a structure of the sector that eventually comprised public sector organisations, public-private partnerships and private organisations. In addition, due to the rising prices for water services, a section of the public started to complain about the reforms carried out over the years, arguing that they did more harm than good, due to a progressive move from a public to a private interest focus (Massarutto, 2011, 2015). The aim was to defend the idea of water as a public good, valorising its collective importance.

These tensions paved the way for a national referendum in 2011 where the Italian electorate was invited to vote on the proposal to approve or reject the privatisation of water and local public services. While the public provision services had been attacked for their lack of efficiency, and privatisation portrayed as the only way to offer better and cheaper water services, the vote rejected the proposal, signaling that Italian citizens preferred water services to be run by principles that did not privilege private over public interests. The referendum also rejected the principle that service providers should receive a given level of return on investment in the price tariff, creating more pressure on the economics of the public water utilities. The long process of reform focused on economic, industrial and governance aspects of the sector with the aim of achieving a more efficient and effectiveness water services.

The changing nature of the Italian water sector, discussed above, highlights the multiple and, at times, competing concerns water utilities have to deal with to achieve the desired outcome of water sustainability. It therefore indicates the context within which legitimacy needs to be establish. The next section outlines the research method that was used to collect, analyse and structure the data into the EoW theoretical framework.

5. Research design

The theoretical approach used in this paper is problem-driven rather than paradigm-driven (Davis & Marquis, 2005). In problem-driven research, questions emerge from the field and in this paper we used the EoW theoretical paradigm to answer them.

An in-depth interpretative single case study of an Italian medium sized water utility (code named 'BLUE') served to investigate the aim of the research. The case study methodology enables the analysis of uncertain and conflicting topics, and facilitates the discussion of the many reasons associated with accounting and accountability (Cooper & Morgan, 2008; Scapens, 1990). At the time of the research, BLUE had almost 400 employees and served a population of more than 700,000 people in a significant urban and industrial concentration, through a waterworks of approximately 3700 miles. BLUE's ownership structure comprised the local municipalities (which owned 55% of its shares) and a mix of public-private organisations (which owned the remaining 45% of shares).

The case analysis draws primarily on data obtained through eighteen in-depth semi-structured interviews. They were conducted between June 2012 and November 2013. The inquiry is complemented by a documentary analysis that involved accessing and assessing publicly available documents. Access to the case organisation was obtained through personal contacts within the public relations office. A preliminary meeting was made with the public relations office and sustainability unit to illustrate the aims of project, the way data would be collected, the use of the data for scientific purposes, and to guarantee confidentiality (Qu & Dumay, 2011). The selection of the profiles of those to interview followed a snowball sampling method supported by the sustainability unit and managers' recommendations (Bryman & Bell, 2015). This method aims to select the most significant respondents and allows a more in-depth focus on the respondents whose characteristics fitted the design of the study (Patton, 2002).

We interviewed managers sitting in the board of directors, managers responsible for a major business function and operation managers. They allowed a broad, in-depth understanding of the topic, enabling the researchers to gain insights into BLUE's operations, strategic aspects, and decisions. The search for new respondents ceased when saturation was reached and new insights were no longer identified, because the additional interviews neither contradicted the developed understanding nor added any significant new information (Bryman & Bell, 2015; Dai, Free, & Gendron, 2019). To ensure anonymity, interviewees names and position descriptions are not revealed. Instead, we indicated the generic coding descriptor as indicated in Table 1. Interviews lasted an average of 60 min and covered the organisations' objectives, challenges and strategies related to water sustainability issues.

Table 1
Summary of the interview participants.

Descriptor	Number	Code
Executives (Chief Officers)	2	EX
Directors (Function Heads)	5	DIR
Operation Managers	11	OM

The interview protocol (Appendix B) referred to a set of broad, open-ended questions, organised in a semi-structured manner. This method was especially valuable for the case analysed in this paper as it allowed the researchers to understand the way managers perceive the social world under study (Qu & Dumay, 2011). The aim of this method was to obtain genuine analyses and interpretations, allowing a degree of freedom to explain managers' thoughts about water sustainability issues, and to highlight aspects of specific interest and expertise that they felt they knew, with the additional aim of discovering apparent contradictions and tensions (Horton, Macve, & Struyven, 2004; Qu & Dumay, 2011).

The interview protocol was consistent throughout the interview process, so that a dependable understanding could be developed. Following the feedback received by the initial respondents, some questions were adjusted to make the protocol more effective whilst leaving its structure unaltered. These minor changes proved to be very effective in the remainder of the interviews, enhancing clarity and stimulating engagement.

The interview protocol was sent in advance to the sustainability unit which agreed to its structure and content. The protocol comprised a narrow range of ice breaking questions and a broader set of issue-based questions on organisational activities, decision-making, and accounting and accountability practices related to the concern of water sustainability.

All interviews were conducted in the native language of the managers. This led to a high level of confidence and clarity (Denzin, 2005). It also helped the managers feel at ease and allowed for the evocative use of specific terms. As a result, this process added richness to the material and helped gain further insight about the activities undertaken by BLUE (Horton et al., 2004). The interviews were digitally recorded, transcribed, and lasted an average of 60 min.

5.1. Data classification and analysis

The classification and analysis of the data focused initially on the material obtained through the interviews, which was subsequently complemented by, and integrated with, publicly available material. The sustainability and annual reports from 2011 to 2013 (inclusive); one report for the Regulator; a Life European report project; and BLUE's, the Municipalities', and the Local and National regulator's websites were analysed. The focus on disclosure and publicly available data is important, not only because it served to acquire a deeper understanding of the case study organisation and to analyse the research objectives. It is also important because it sheds light on the external dimension of moral legitimacy and how it interacts with the internal ones in order to illuminate the extent to which external reporting reflects the underlying reality of the organisation.

This paper adopts a classification approach that is conceptually similar to the method used in Patriotta et al. (2011). The initial coding process used the semantic markers identified by Boltanski and Thévenot (2006). Consistent with their method, a list of specific markers which characterised the topic of this study was added to the original list (see Appendix C for the complete list). The data classification was conducted manually to retain maximum sensitivity to the argumentative acts used by managers. The analysis of the data involved an iterative process that was directed at categorising the empirical material to detect their logical relationship with the different orders of worth that were mobilised. When there was an indication that the managers mobilised moral principles from more than one order, the relevant qualitative data was coded to more than one order (Van Bommel, 2014). Subsequently, similar codes were grouped in order to better define the problem space and identify consistent and overarching themes for the analysis. A thematic table which summarised the materials was prepared which concerned, for example, the importance of water for society, the operational problems, and water controversies concerning, for example, the financing of water infrastructure, or its environmental impact and the role of accounting in the micro-processes of moral justifications and critique. The interpretation process focused on the accounts mobilised by BLUE's managers to morally legitimise, through the use of accounting, actions and outcomes in situations where multiple and competing moral principles of water sustainability coexisted, whilst also considering their presence in external reports.

6. Case analysis

This section examines how BLUE's managers discussed the water sustainability practices by revealing four micro-processes of justification and critique: neutralising, enlisting, summoning, and sensegiving. The four micro-processes were important because while none of the managers challenged the relevance of water sustainability, they varied in how to implement and morally legitmate the related practices. The four micro-processes are analysed focusing on water pricing and operational investments as the two key water controversies which emerged from the analysis of the empirical materials and help to explain how the different sides used (or did not use) accounting and reporting to make their case and establish moral legitimacy.

6.1. Justifying the price of water: neutralising competing moral principles and enlisting suitable moral foundations

After the implementation of the new water sector reform, perhaps the most controversial issue faced by BLUE was represented by the implementation of the water tariff. The tariff is a calculative technology set out to assign a price to water supplied by a public utility. Due to the regulatory changes in the Italian water sector, BLUE's tariff increased considerably in order to finance the supply of water services and to uphold the ageing water infrastructure.

One of the critical issues for the managers was represented by the need to justify a new, steep water pricing mechanism for the community, which regarded the tariff as unfair and exorbitant. On the other hand, BLUE's managers pointed out that, according to international statistics, the average of the Italian tariff was amongst the lowest in Western Europe (EurEau, 2017). While the old policy relied on a right-based approach, the new policy challenged this view and relied on commercial rationality to convert the civic worth into forms of market and industrial worth. In this context, the question is whether the civic worth offsets the market and industrial worth. An operation manager acknowledged the challenges involved in justifying the new pricing mechanism:

> *"There are many [people] who start from the premise that they are facing a cheat, in which case that would be the company that I represent or the people who work with me."* (Interview, OM4)

To uphold the extent of the tariff, BLUE's managers sought to establish the moral legitimation of the water pricing mechanism by criticising the ability of competing principles to attain water sustainability. The OM4 exemplified this micro-process of neutralisation:

> *"The issue of water touches public opinion on an emotional level, and therefore it is grounds for incursion even by those who make propaganda, those who want to make money, those who want consensus by cheating on superficial speeches that attack and generate consensus. … It seems to me that the public discussion is quite distorted by the idea that water costs too much since there are managers who make money and there are indeed managers who make their margins, but in an industrial context it is obvious that nobody does anything if not to have profits and it's quite logical."* (Interview, OM4).

According to this micro-process, although moral legitimacy involves and competes with the civic worth, the industrial and the market principles ultimately produce it by defining its worth. Accounts and notions of worthiness from the industrial order were therefore deployed as forms of relevant proofs by the managers to justify the financial exchange-value of water against the costs of transport, sanitisation and treatment. This issue was clearly emphasised by a director who advised that a sub-optimal level of water tariff produced a sub-optimal level of resources for the operational and technological development of the water infrastructure:

> *"We have a service that has a tremendous impact due to the nature of water, which is a resource that requires transportation and treatment. While it is true that it is natural, public and free, the service itself is not […]. There is a problem because the tariff is considered negatively by the community; as a tax. And this influences the perception of the service and the company."* (Interview, DIR3)

In line with the industrial and market worth, which mainly regard efficiency, rivalry, and cost and profit as the highest principles of legitimacy of worth, these managers presented BLUE's commitment to efficiency and commercial performance as self-evident to establish their moral legitimacy over civic worth. For BLUE's managers, the industrial and market worth acted as facilitators, under which the other orders of worth can coexist, and where industrial and market moral principles created moral approval at the local level. It is worth noting, that while most of the managers were aware of the importance of water sustainability, they regarded it as a complex concept. Possibly due to its complexity, some of them justified the focus on the market and industrial worth by neutralising the moral principles of the other worths.

One manager gives a significant exemplification of the controversy regarding the moral legitimation of water pricing, revealing a second and different micro-process of justification:

> *"The fact that the tariff is higher than before implies that we have to achieve a higher level of satisfaction among customers because, of course, in the beginning when I increased the tariff, the citizens regarded us negatively. We have to give a better, more transparent and more efficient service, also cooperating with the municipalities."* (Interview, OM4)

In this micro-process of enlisting, the managers seek to establish moral legitimacy by enrolling fitting principles from different worths which can extend the acceptability of a specific version of water sustainability as common good. It is interesting to note how this manager attempted to reconcile the market (price, customers) and industrial worths (efficiency) using a contractual approach ('We have to give a better, more transparent and more efficient service') whilst mobilising processes of customer expectation management ('The fact that the tariff is higher than before implies that we have to achieve a higher level of satisfaction among customers') to justify a stiffer water price. In this context, accounting was mobilised in terms of industrial and market worth, expressed in terms of non-financial indicators of technical efficiency and customer satisfaction.

However, this version of moral legitimacy based on market and industrial worth, was not always reinforcing. While some managers used a transactional approach to justify water pricing, some voices challenged such market and industrial based views of water sustainability on a different moral ground. For example, some managers commented about the local and national community actions advocating for free water services. In order to overcome the competing market/industrial worth, local and national related stakeholders sought to appeal to the common good, emphasizing water sustainability as a part of collective well-being. In the civic and domestic worth, where collective interest, tradition and hierarchy are important, those in a position of responsibility have a duty to care for those under their authority. Here, it is the civic duty related to water sustainability that is placed at the forefront. According to this worth, the 'collective welfare' is defined in terms of rights and responsibilities: the 'civic right' of a member of the community to be provided with water services and the responsibility to provide the economic resources to fulfil this right. However, the concept of common good was a contested issue between BLUE's managers, and the members of the community and their role as customers.

In this context, the analysis unveiled deep moral tensions between BLUE's managers and members of the civic associations that reflected distinct views of the common good. Specifically, the difficulties of reconciling the different approches at play (commercial and right-based) in the determination and implementation of the tariff and services gave rise to conflictual arrangements between, on the one hand, the worthiness of water as a service (market order) and the worthiness of BLUE as operator of this service (industrial order), and on the other hand, the worthiness of water as a right (civic order). One manager clearly articulates the different approaches which unfold through economic and technical data:

> *"The different interests are badly matched, that is the problem … On average, a family of four people consumes 600 L of water a day, we put 300 euros a year, I don't think it's too much considering that they have a service that at the end the water passes through the tap and comes out safe and ready to be drink. The water that goes into the drains is purified before returning in the environment. Let's say that translated in economic terms, it seems to me an acceptable piece to pay. Surely no one would understand it but water is a limited resource, despite having a concession for another 10 years, others 20, 30 years we cannot know how much drinking water we can pick up, give to users …"* (Interview, OM6)

Mazzoni and Cicognani (2013) indicate that different moral convictions were mobilised by activists of the Italian Movement for 'Public Water' to contrast water reform: defending the right to water, preserving community ties, opposing the Government and 'water sellers', preserving the environment, and money interests. Such collective actions against water reform criticised the market/industrial worth, mobilising civic and green moral foundations. The clash of worth between BLUE's managers and some stakeholders groups reverberated in the use of the micro-process of 'enlisting' by the managers, not only based on the market and industrial orders. An example of this micro-process of enlisting concerned the efficiency of water infrastructure. A substantial difference existed between the water extracted from the aquifers and the water effectively supplied and then billed to the customers. As one director maintained:

> *"There is a continuous action to reduce the amount of water lost; it has a direct impact on the territory, on water conservation, on the services for the citizens […] The aim is to identify them, reduce them as much as possible, even if eliminating them completely is impossible given the vastness of the territory."* (Interview, DIR1)

The micro-process of enlisting, mobilised by the manager, aligned the industrial (eliminate the water losses) order with the civic (responsibility toward the population) and green (promote water conservation) orders to justify the relevance of the water pricing in the context of the water loss reduction plan implemented. Additionally, the water stock and flow information (Burritt & Christ, 2017) were used as test of worth by managers to align the above different moral principles:

> *"We have a group of research leaks that make a continuous search, even at night, using sensorial research. Our sensitivity is also to reduce the waste of water which is obviously determined also by the old piping because it would take miles and miles of investment to make new piping that we cannot do because otherwise the tariff would explode in an exponential manner. It would be nice to be able to do everything new but it is not possible, so we always try to find leaks, repair and try to improve even to reduce dispersed water".* (Interview, OM8)

The external reporting provided an analysis of the water loss reduction plan, including a wide range of non-financial indicators and qualitative information, such as the number of interventions made, the trend over the years, the criteria used to implement the interventions, and the geographical areas where the interventions took place, with the aim of establishing the moral legitimacy of the water sustainability practices implemented. Moreover, external reporting also included information on tariff and water services characteristics and pitfalls as internally expressed by the managers. For example, the management section of the annual reports provided a detailed analysis of the water tariff, explaining that it was still not sufficient to guarantee adequate investments in water infrastructure development. BLUE's sustainability report included a detailed analysis of non-financial performance measures linked to regulatory requirements and integral to the principles of evaluating the market, industrial and civic worths. The sustainability report also included discussions about the determination and the amount of the tariff. The following excerpt from the 2012 Annual Report explains:

> *"[BLUE] fully committed in the consultations promoted by the [National Authority] about the adoption of the new tariff method, in an attempt to contribute to the development of standards* (industrial) *that allow the Managers to operate within a framework of certainties and to carry forward the investments* (industrial) *that are needed in the water sector."* (Paraphrasis from BLUE's Annual Report, 2012)

The reports highlighted the tensions between multiple orders of worth, sparked by the long-standing debate about the equity of the tariff, which over the years followed a deteriorating trend and led to a lack of public trust (fame worth). Although the tariff consisted of a device aimed at a compromise between instances of solidarity towards the most vulnerable social groups (civic order), financial viability of the organisation (market order), efficient water service (industrial order) and water stewardships (green order), by being located at the nexus of those critical tensions it was subject to heated criticism.

The controversy surrounding water pricing characterises what Boltanski and Thévenot (2006) described as a "clash of worth", that is, a situation where multiple moral principles are in conflict, and the parties involved disagree about the order in which the test must be carried out. While both BLUE's managers and external stakeholders recognised water sustainability as the common good, their processes of moral legitimation followed different rationalities. The market and industrial-based approach of water sustainability was used by managers to support the moral legitimacy of the water pricing and neutralise the right-based approach used by critical civic associations actors. In establishing the moral legitimacy of the water

pricing, BLUE's managers used measurement and quantification practices (in the form of non-financial operational and commercial accounts) as a 'defusing mechanism', that is a test aimed at neutralising the moral threat posed by others' worth, as exemplified further:

> *"… one of the objectives that executives and middle managers have is the incremental reduction of the number of operational and customers complaints over the years. BLUE has to respect specifically operational and customer service standards about water and service quality indicators …"* (Interview, DIR1)

However, such a test, resting on economic and efficiency aspects, was difficult to fix, thereby leading to processes of enlisting. Without challenging other moral principles, enlisting exemplifies the potential of both financial and non-financial accounting measurements to extend beyond a single order of worth, providing the technical capabilities through which they can "hold things together" in a fragile compromise arrangement (Annisette et al., 2017).

Another telling illustration of the enlisting micro-process is given by an executive who sought to establish the moral legitimacy of the tariff, and of the services provided by BLUE to the population, by leaning on environmental responsibility (green worth) through the moral principle of resource stewardship. The executive exemplified this point, presenting BLUE as the guardian of valuable natural resources:

> *"… the purpose [of BLUE] is to preserve water use and consumption, and thus reduce the losses, reduce water extraction in the areas we think this may be a problem, and on the other hand to preserve the quality when we return it [to the environment]."* (Interview, EX2)

By emphasising the distinctive nature of BLUE, its service mission towards society, and its priority of managing water responsibly, an executive by mobilised inspirational values which he wanted everyone within the organisation to take on board (Arjaliès & Mundy, 2013; Jollands, Akroyd, & Sawabe, 2015). The executive's reflections are further emphasised by an operation manager who exemplified the potential for the green order as a qualifier of moral legitimacy:

> *"… water is a resource to protect because it is the essence of life, so this is the spirit that brings me back to work. I can say that the company is close because such messages are those that we give outside but internally we hear about it every day: water savings, attention to the resource, water quality is important and so on."* (Interview, OM7)

Inspirational values can be very compelling in steering people's behaviour, and BLUE had some of these values prominently displayed on a large poster within the main building. The poster proclaimed the principles of the European Water Charter Declaration (1968) (Appendix D), while an executives was clear in this regard:

> *"… the aquifers are delicate. They are the real reserve. […] If too much water is drawn out, the wells may become dry and recharging times are very long."* (Interview, EX1)

For the two executives, the green worth ('the aquifers are delicate'; 'water is a resource to protect') more than any other worth, was the mediator that reconciled with the industrial and the market orders. This alignment, which is perceived as pre-existing, is further solidified through a tangible calculative object: the water stress framework.

In conjunction with other private and public partners, BLUE co-developed a framework aimed at monitoring the water stress. Water stress occurs when the demand for water exceeds the available amount (United Nations UN, 2015). BLUE's managers considered accounts of water stress to be of the utmost importance for attaining the common good (water sustainability), as water stress causes deterioration of freshwater resources in terms of quantity (e.g. aquifer over-exploitation) and quality (e. g. water pollution).

The framework comprised different forms of financial and non-financial indicators, and aimed at providing BLUE's managers with an actual and prospective water stress analysis by considering the current and future urban and industrial developments, whose water needs BLUE might need to meet. As the DIR3 explains:

> *"Over the years, we have developed a comprehensive cartographic mapping system, which allows us to know the characteristics of the water networks, such as the size of the infrastructures implemented, the amount of water transported, the opportunities for urban intervention, and consequently to accurately foresee the interventions. If the water networks require new investment to guarantee a sustainable water supply, we tell the municipality that it needs to estimate the costs, through urbanization costs or other mechanisms because it is necessary to include resources to modify this section of the pipe."* (Interview, DIR3)

Various indicators were used to understand how the proposed plans for urban intervention would influence water quality and availability, using different scales. These scales were then aggregated as attributes of a broader category - water stress - that was calculated for each alternative of urban intervention. This form of commensuration created a new form of information that BLUE's managers used to make decisions (Espeland, 1998; Espeland & Stevens, 1998).[5] While deeply rooted in the green order, the framework included metrics and rationales consistent with the orientation of other worths (for example, the

[5] Commensuration is concerned with measuring different properties represented by different units with a single common standard (Espeland, 1998) that creates a relationship between two attributes. Value is revealed by comparison, by the trade-offs between the elements of the situation rendered visible by the measurement process.

industrial principle of efficiency and the civic principle of civic duty) to the extent that the framework itself became a "composite arrangement calling on several forms of justification" (Boltanski & Thévenot, 2006, p. 332). The framework was an example of a tool used to mobilise the enlisting micro-process as it established the importance of including the evaluation of both industrial efficiency and water stress within decision-making processes.

The development of the framework followed an interdisciplinary, pluralistic and participative process that embraced different bodies of knowledge and engaged a wide range of internal and external stakeholders, varying from local councils to public and private organisations. Formally conceived to provide internal decision-makers with material information about water stress, the framework also gradually became the means through which water stress information was communicated to some external stakeholders in order to establish the moral legitimacy of the actions to be implemented. This way accounts of water stress came to be objectified by BLUE's managers in order to assume the identity of water stewardship that was in turn used to rank alternatives of urban development and to identify the obligations of the various stakeholders involved in these alternatives (for instance, who would have to cover the cost for the development of the waterworks). The framework allowed the measurement of deviance from the norms, becoming the tool for assessing the place of urban development alternatives in the ranking. It is worth noting that it did not provide space for a compromising alternative but was used to offset other (and allegedly less sustainable) water practices. As one manager explained:

> *"The municipalities were used to planning urban development for civil, residential and productive activities without considering the sustainability of water services […] They now know at the outset that there is a cost to be incurred which is crucial. Municipalities can change the housing/industry development plans, but also the construction companies that know that there is a cost to be incurred can change the [economic] characteristics of their plan."* (Interview, DIR3)

As shown by Chenhall, Hall, and Smith (2013), performance measurement plays an important role in rendering visible and calculable different evaluation principles within and beyond organisational boundaries. The framework held much of this potential and could have been used to both raise and resolve the other controversies surrounding water sustainability actions and outcomes. However, how it was objectified and used by decision-makers silenced and shut down their critics. This way, controversies were resolved by reducing the conversation with BLUE's stakeholders and organisational divisions to water stewardship justifications rather than by opening up a broader understanding of water sustainability.

Some of the internal deliberations about the water stress and the related issues were reflected in the external reports in order to establish the moral legitimacy of the sustainability practices to a wider set of stakeholders. For example, the green worth ("population growth and the intensity of urbanization") and the civic ("offers policymakers indications to consider, systematically the rational use of water for the preservation of [water's] good ecological status") were the recruiter that enrolled the market worth ("increase in the demand for clean water") and industrial worth ("assesses the impact on water resources of different urban development options") as the following excerpt from documents downloaded from BLUE's website expound:

> *" … population growth and the intensity of urbanisation, leading inevitably to an increase in the demand for clean water in our urban centres. This means that the quantity of the resource available in a specific place will be exploited more intensely and will be more subject to stress and the danger of depletion, also concerning the total quantity available. […] Above all, the general perception of the availability of the resource is often erroneous, due to insufficient information, the difficulty of access to the information or lack of awareness of the problem."* (Paraphrase from a publicly available report, 2013)

For example, the annual report of 2012 stated that:

"The [framework] not only assesses the impact on water resources of different urban development options but also offers policymakers indications to consider, systematically, the rational use of water during planning processes and for the preservation of its good ecological status". (Paraphrase from BLUE report, 2012).

While a Life European report project, provided an example of the use of the framework:

> *"To date (and with only 18 months of application), about 8% of the current needs of water resources for the residential population in the Italian demonstration area have been managed through the tool and its free (no-fees) accessible website".* (Paraphrase from Life European report project, 2013)

Notably, a director (DIR4) brought the use of the framework to an end as the impact of the financial crisis changed the urban planning of the municipalities, thus releasing the pressures on water stress analyses.

The analysis of the water pricing reveals that although water sustainability is still defined as referring to four moral foundations, namely, the market ('economic prosperity'), the industrial ('efficient service'), the civic ('social well-being') and the green world ('healthy environment'), the manner in which these orders of worth are combined and justified by managers through the use of water pricing are different. It also showed how financial information and non-financial quantitative information were implicated in the micro-processes of justification and critique, with the aim of establishing moral legitimacy. One of the most heated critiques was captured by the catchphrase "water is not for sale" coined by civic association groups and originating from the right-based approach of the old policy (Mazzoni & Cicognani, 2013). After the reform of the sector, however, the domestic property inscribed in the sense of water ownership rooted in the past started to contrast with the rationales of market goods - which are entirely and freely alienable - and technical efficiency as reported by the managers by the micro-processes of neutralising and enlisting.

This opposition generated a critique denouncing the distortion in the relationship of trust (civic order) in a situation where they are spoiled by financial and technical interest (market and industrial order). In such a context, financial

calculations were therefore regarded as the means through which a market worth orientation (financial value) was introduced into the traditional way of providing water, triggering the moral (de)legitimation on the grounds of financial and technological viability. Instead, the implementation of the water stress framework is a notable example of how decision-makers objectified and used multidimensional performance measurements to silence and settle criticism, and seek moral legitimacy for certain actions. The analysis also shows how annual and sustainability reporting reflected the internal deliberations, like the relevance of the industrial and green orders, and contributed together towards establishing the moral legitimacy of the actions implemented. When the annual and sustainability reporting tried to make claims about the common good, their appeals were expressed in financial, quantitative and qualitative proofs of justifications as expressed in the internal discussions.

The micro-processes of neutralisation and enlisting reveal the struggles involved in the justification of 'composite object' (Boltanski & Thévenot, 2006, p. 279) that combine multiple orders of worth. For the managers, the common good of water sustainability and the legitimacy of the practices implemented is placed within forms of calculation that assume uncontested criteria for collecting and analysing the data exist. Accordingly, BLUE's managers framed the tariff as a means of achieving the common good of water sustainability, as a necessary condition to align the different moral principles at play, symbolising it as "synonymous" with common good, able to take the different and competing interests together. In a different manner, the managers considered the opposition voice of some stakeholders as inconsistent with the common good because they did not legitimate the financial resources necessary to enhance the efficiency and effectiveness of the water services provided and infrastructure network. The analysis also revealed that financial information was predominantly mobilised within the market order, non-financial quantitative information within the industrial order, and qualitative information within the civic and environmental orders of worth. The tariff and the water stress framework are examples of such forms because they contribute to making what is understood to be incalculable susceptible to calculation, and therefore objective. They enabled the different decisions taken to be morally legitimated, supporting the mobilisation of the micro-processes of justification and critique by the managers. The different accounting objects used provided the technical capabilities, information and space for critique. In doing so they generated compromises, alignments and clashes of worth.

6.2. Justifying additional resources: summoning legitimacy from normative definitions and giving sense to how other actors understand the common good of water sustainability

A second significant controversy for the managers was represented by the need to justify the necessity for further financial resources for operational investments. Before the reform of the sector, the water service was managed directly by the Municipalities which required as payment, an amount that did not reflect the actual cost of the service and did not provide sufficient financial resources for water infrastructure maintenance and investments. The local community did not see this as problematic because the tariff charged was little, and water users were accustomed to paying a small amount regardless of how much water they used. After the reform, all Italian water utilities needed to change their way of operating in order to assure better financial and non-financial performances and water management services, and began to consider how they would secure sufficient financial resources to assure adequate operational investments and maintenance of the water infrastructure.

The main concern, according to one manager, was focused on how to balance the unceasing need for the investment necessary to maintain and update the water infrastructure (i.e. water catchment, water treatment and distributions plants) with the financial resources available. This feeling was exemplified as follows by an operation manager:

> *The [amount of the] tariff covers the operating costs, the capital investments agreed with the public authority and the weighted average cost of capital, which ultimately give rise to the controversie on the tariff. Money is never enough; in fact, the tariff does not cover all investments we have made over the years. We need loan capital from the bank, and it is not easy because water sector is not regarded as bankable.* (Interview, OM7).

The lack of financial resources contributed to the creation of uncertainty and a sense of urgency within BLUE which was justified and mobilised by the managers through financial and non financial-information and the relevance of the industrial worth:

"We manage 5800 km of pipeline, mostly built in the 1950–60s; the conduits are old and break all the time. We would need enormous financial resources to replace and build new plants for transporting and treating water […] huge investments […], and although the tariff has increased, it cannot cover the expenditures that would be needed." (Interview, DIR2).

The managers tested the worthiness of the investment with the effectiveness of technological infrastructure, justifying the importance of the industrial worth ('we would need enormous resources to replace and build new plants for transporting and treating water'). In this context, the managers used financial data as a relevant test of worth to legitimise the moral foundations for claiming additional financial resources. As a director explains:

> *"We made, on average per year, about €50 million worth of investment with a peak of €66 million of investment in 2010 […]. The need for investment in water services, we are not the only ones to say, would need twice as much as that."* (Interview, DIR4)

One of his colleagues expressed a similar view:

> *"In our context, the investments are agreed with the public authority that represents the Municipalities which, in turn, are also interested in the waterworks. The investments that are required to make a network 'smarter' are perceived as wasted*

money. But they give visibility, improve the quality of the service and give a sense of modernity. We still have technology and processes of the early 1900s, and we keep it for reasons of cultural laziness" (Interview, OM4)

These justifications exemplify the micro-process of summoning action by others, where BLUE's managers sought to establish moral legitimacy by providing normative descriptions of how things should operate to attain the common good of water sustainability.

Also, in this case, the internal critical aspects reverberated in the external disclosure through the use of financial information. At the time of the research, for example, the financial statement allocated the entire net profit to reserves with the aim of self-financing the activities through a retained-earnings policy. The reported income indicators (e.g. ROI, ROE and ROS) showed an economic performance on a par with the sector, yet not showing a focus on financial performance achievement. Taken together, this information revealed that BLUE did not return financial resources to the central government via dividends, but rather used the net earnings to increase the equity, and thus the capability, for self-financing long-term investment in the water supply infrastructure. The financial reports reflected, in particular, the internal relevance of the industrial worth. They provided a detailed list of industrial interventions concerning water network renovation and maintenance, and the relative financial resources employed in each investment. A trend of low-level financial and non-financial key performance indicators focusing on specific processes (such as capital expenditure for a cubic meter of water and capital expenditure per user served) were also reported.

While showing the improvement of industrial performances (e.g. the reduction of water losses achieved), the annual financial reports criticised the national water policy and used financial and non-financial indicators as tests of (un)worthiness from the market (economic negative repercussions for the organisation) and domestic orders (industrial targets) to justify why local and national institutions should provide resources for water sustainability. As the extract from BLUE's financial report explains:

"In order to achieve even more significant and lasting results in reducing losses, it is, however, necessary to allocate additional financial resources to the implementation of massive pipeline replacement plans, which allow a progressive modernization of the water networks." (Paraphrase from BLUE's Annual Report, 2012)

In addition, the financial information concerning the tangible fixed assets included in the notes to the financial statements (for example the asset's historical costs and depreciation) subjected the industrial worth to a test, thereby enlisting its moral legitimacy. The notes to the financial statements reported a lengthy analysis of fixed assets' depreciation criteria and their relationship with the tariff.

The moral legitimacy of the industrial worth acted as a means of boosting the acceptability of the additional resources needed to improve water sustainability, revealing the presence of an up for grabs question. The micro-process of summoning, and the use of technical and financial accounts to convey complex industrial stories, was mobilised by BLUE's managers to legitimise the internal industrial rationality with external stakeholders and to cope with those tensions, as explained by a director:

"We have a certain level of investment for each year. It is defined in collaboration with the local authority for water utilities that control if we do it. If we do not achieve the level of investments negotiated, we have penalties to pay, therefore, we do them all. Sometimes however, there have been years that we have gone even further, with costs totally at our charge, that have been not recoverable in the tariff." (Interview, DIR1)

A related micro-process that was used by the managers to explain the controversies linked to the operational investments was 'sensegiving'. Within sensegiving, the managers, and also the external reports, seek to establish moral legitimacy by trying to influence how other actors make sense of the common good (Gioia & Chittipeddi, 1991). Sensegiving can take a variety of forms, and BLUE's managers sought to build narratives that put water sustainability and related investments in a broader perspective linked to the market, industrial and civic moral principles:

"In my opinion for too many years, other European countries teach us, in Italy there has not been an industrial management of water. Until 2002, we had municipalities that paid for water a fifth of what they pay for it now. But if in Denmark or in Germany that are places where water is not lacking, the water system has a tariff four times ours, I think these countries do not steal from their citizens […]. The problem is that we have never had this perception because no one has ever given this information to citizens. The investment plan should be double what if we want to change an adequate number of pipelines as a civil country." (Interview, DIR3)

The technical argumentations provided by BLUE's managers aimed to convey a story of industrial complexity and long-termism, designed to engender moral approval, that resounded in and affected both internal deliberations and external reporting, mobilising investment information and data. The micro-process of sensegiving largely included the up for grabs question of the investment:

"As manager of the investments, I touch it (the investment budget) with my hands every day and there is a substantial problem: the message has been passed that water is public and the invested capital must not be remunerated is a slightly superficial message. […] The remuneration of the invested capital is not that which is needed by BLUE to make profits but that which is needed by BLUE to pay the interest on the loan. It is quite obvious that I do all the calculations to optimise investments, but if I sell water at the operating cost I have little chance of making investments." (Interview, OM6)

The external reports, with their emphasis on financial and non financial information, were also part of the micro-process of sensegiving. For example, the financial information concerning the capital expenditure (Capex) and operating expenditure (Opex) acted as a relevant test for legitimising and prioritising the moral foundations of the industrial worth within the annual reports, contributing to the establishment of the moral legitimacy of the water sustainability practices implemented by BLUE. Over the years, Capex slightly increased proportionally to Opex, indicating an intensification of the capital investments compared to the operational expenditures, testing the worthiness of the long-term strategy orientation.

The adoption of sustainability reporting and of the other voluntary reporting practices are other examples of the processes of sensegiving, also related to justifying the up for grabs question concerning financial resources. Firstly, BLUE engaged in processes of sensegiving though the publication of sustainability reports that mobilised the fame worth through the reputation of internationally acknowledged organisations, regulators, and standard setters which provide reliable assurance that organisations are upholding social, environmental performance expectations. The sustainability report, for example, endorsed the principles of the Global Reporting Initiative (GRI) framework, along with a range of national and international standards, including ISO9001 (quality management system), ISO14001 (environmental management system), SA8000 (socially acceptable practices in the workplace), ISO14064 (greenhouse gas emissions), and ISO14067 (carbon footprint). The sustainability reporting was considered a fundamental sensegiving object aimed at focusing public attention on the key messages BLUE wished to deliver:

> *"… we can work well, but just the presence of a user who is dissatisfied with the service can get us in the newspaper. So, the sustainability report, I do not say in self-congratulation, it is an act of positive communication to customers that often are not aware of anything that involves managing a company like this …"* (Interview, DIR2)

In a view shared by several managers, the preparation and publication of the sustainability report reinforced BLUE's social responsibility profile, allowing the discharge of complex and interrelated duties of information and responsibility towards a wide range of stakeholders. In some cases, the sensegiving and enlisting micro-processes were combined externally in order to further strengthen the understanding of BLUE's role in facilitating the common good of water sustainability to a wider set of stakeholders:

> *"In the last three-year period, the company always showed positive and steadily growing sustainability results. Results that are all very appreciable because they have matured in a framework characterized by different elements of uncertainty explicitly related to the 2011 referendum, which threatened to block investments by companies in the water sector and in some cases to put at risk their financial stability."* (Paraphrasis from BLUE reporting, 2013).

However, the managers pointed out a situation where internal deliberations also needed to discharge duties of social responsibility beyond those performed in sustainability reporting, in order to adequately justify the request for additional financial resources. One of the main reputational concerns experienced by BLUE's managers was the unfavourable opinion of the cost-effectiveness of the water service. One manager stressed this point through a micro-process of sensegiving, based on financial and non financial considerations:

> *"In my opinion, a reflection on how the management of water services is carried out in Italy is necessary. There is a variety of behaviours between the different water utilities due to a lack of innovation and managerial laziness; some operators still have the same mentality from when the water service cost much less. I think it should be good for the whole sector, more transparency, which is not only significant at the level of public opinion but is also economically viable because it would remove much reworking when you get a person and explain that you have not cheated him/her."* (Interview, OM4)

The worry that people may feel that they have been cheated that concerns this manager highlights that the fame order, with its focus on public opinion, is an important moral principle within BLUE's deliberations. To facilitate the understanding of what water sustainability entails, BLUE's managers criticised extant reporting practices *in-vogue* in the Italian water sector (including BLUE's), deploying tests and notions of (un)worthiness from the market (economic drawback), industrial (efficiency and effectiveness of the water network) and civic orders (lack of transparency). As demonstrated by Ejiogu, Ambituuni, and Ejiogu (2019), how transparency is enacted is itself central to the process of legitimation. They highlight the importance of the understandability of information disclosed as a key requirement of transparency. In the opinion of the BLUE's managers, the citizens need to know and understand that the water services have some costs that must be paid, otherwise there is a risk that the quality of water services will slip and water will not be protected and conservated. Such understanding, however, was questioned by the managers, who criticised the lack of transparency for many years and the related absence of sensegiving processes within the Italian water sector as highlighted before concerning the benchmark with others European countries.

Some managers, nonetheless, were somehow concerned that an excessive positive tone of communication could be counterproductive for BLUE's reputation, further highlighting the controversial nature of the *in-vogue* reporting practices:

> *"In my view, our company is a positive case in the Italian landscape of water utilities, but we need to be aware that emphasises too much our results could be the object of critics, so the issue is to find a balance between transparency, the performance achieved and perception by the stakeholders."* (Interview, DIR3)

The Head of Technical Investments and Efficiency here alluded to the decisions on whether or not to emphasise the sustainability performance in their external disclosures. As the manager tentatively suggested, such an emphasis could raise

rather than slash stakeholders' scepticism of BLUE's attitude towards water sustainability on the grounds of "too good to be true", hindering the process of legitimation (Vanhamme & Grobben, 2008). Moreover, according to some managers, too much emphasis on positive sustainability performance might also generate a clash of worths between the fame order, as the expression of BLUE's moral legitimacy, and the civic order, as the expression of stakeholders' moral legitimacy. In this context, the sustainability report is not always a valid test of moral legitimation, in that it cannot provide proof to support this option (Milne & Gray, 2013; Tregidga, Milne, & Kearins, 2018).

Nevertheless, the sustainability report became the main accounting object that provided the narrative to prepare other actors to understand the BLUE's version of the common good of water sustainability. One example of this narrative was the description of a stakeholder engagement programme, known as the 'water awareness initiative', concerning the sustainable use of water. The programme was developed in conjunction with several local elementary schools and ran continuously from 2002 to the time of this research. The programme focused predominantly on water stewardship and included visits to BLUE's industrial facilities where BLUE's staff organised discussion groups and performances, where the children were directly involved. As a manager explained:

> *"These years, we have involved around 5,500 children and teachers in raising awareness regarding the natural and technological cycles of water that we drink and use in our homes. We try to raise awareness regarding the world of water through plant visits, workshops, and theatre activities."* (Interview, DIR2)

This initiative was directed at promoting societal well-being and shaping the public interest in water use and management (civic worth). To legitimise its stance of providing enhancements to the public good, such as education, BLUE engaged in the process of sensegiving through its external reporting, where the company ultimately positioned itself in terms of the civic good of facilitating sustainability. Another example of the sensegiving process was the account of the engagement programme known as 'High-Quality Water' that aimed at offering free, chilled, still and carbonated water to everyone through several free high-quality drinking fountains, evenly distributed across the geographical area served by BLUE. The narrative of the sustainability reports highlighted the success of the project with a profusion of quantitative performance indicators in support. These indicators provided a wide range of technical, social, environmental, and economic information, that included, among others: the chemical composition of water distributed; the number of residents supplied daily; the economic benefits for the residents compared to an average and hypothetical consumption of bottled mineral water; the carbon savings related to CO2 emissions and the tonnes of oil used to make plastic; and the benefit in terms of reduced energy consumption and waste production, etc. In this context, the report constituted the accounting object mobilised by the managers as a test of worth within the civic order, to justify water management as a service situated in the local community:

> *"Our company provided many high-quality drinking fountains in the area […]. In the end, there is a high awareness that we do not own water. We manage it, that is all."* (Interview, OM8)

The sustainability reports included several more (although minor) examples of sensegiving, such as the campaign known as 'Taste the Water', aimed, on the one hand, at encouraging the introduction of tap water consumption in school canteens to neutralise the environmental impact caused by the consumption of mineral water (green worth), and on the other hand, at investing the savings obtained in 'good deeds' (civic worth) in order to achieve forms of alignment between the different orders of worth. This held together moral principles consistent with civic and green aspects under the umbrella of water sustainability.

7. Discussion

This paper aimed to increase the understanding of how accounting is implicated at a micro-level in the processes of justification and critique of moral legitimacy in pluralistic contexts. To achieve this aim, this paper examined how accounting was used by the individuals to establish the moral legitimacy of water sustainability practices after the enactment of a controversial reform of the Italian water sector. The paper directly responds to Annisette et al., 's 2017 call for more work examining on a micro-level, accounting objects that give rise to agreements and discord. Through the case study of an Italian water utility, codenamed BLUE, the analysis focused on how managers mobilised and used accounting and reporting, seeking to gain support for the water sustainability practices implemented among two internal and external stakeholders. In doing so, this paper shows how accounting and reporting was implicated in establishing moral legitimacy when multiple moral principles coexist and compete.

By identifying four processes of moral legitimation at a micro-level (i.e. neutralising, enlisting, summoning, and sensegiving) within a macro-management's aggregate concept, such as the legitimacy of sustainability practices, the findings showed that the use of accounting both stabilises and transforms the way in which the various components of BLUE – actions, behaviours and institutional structures - work together to facilitate water sustainability outcomes in two ways. Firstly, by performing "tests of worth", accounting (such as the elaboration and implementation of the water stress framework) legitimates specific orders of worth, showing their underlying principles of moral legitimacy, and justifying decisions and actions. Secondly, by acting as a "qualified object", accounting contributes to the management of the two controversies: water pricing and operational investments.

This paper contributes to accounting scholarship by providing a nuanced interpretation of how moral legitimacy is established and unpacked within organisations. The analysis based on the EoW framework shows that the process of moral legitimation unfolds internally at a micro-level, on a continuum. The actions and outcomes are legitimated depending on their state of worthiness as established by the managers, who referred to different moral principles to justify them. While prior literature suggests a dichotomous view of legitimacy, underlining that it is gained, maintained or repaired by highlighting favourable external activities being undertaken by the companies (Brown & Deegan, 1998; Duff, 2017), the evidence of this paper supports arguments that legitimacy is not dichotomous but dynamically established by managers thorough different micro-processes of justification and critique, anchored and expressed by a plurality of moral argumentations. The mobilisation of the four different micro-processes to justify and critique the specific actions of the company's managers has revealed the micro nature of the legitimation process. This adds to the literature that underlines the importance of individuals in establishing moral legitimacy (Deephouse et al., 2017; Demers & Gond, 2019; Drori & Honig, 2013; Kuruppu et al., 2019; Suddaby et al., 2017), and to accounting literature, which has begun to investigate the role of the individuals in legitimation processes (Milne & Patten, 2002; O'Dwyer, 2002; Vesty et al., 2018).

Another main contribution of the paper is to illuminate the various ways in which accounting and reporting practices were mobilised to establish moral legitimacy. Accounting was used as a test of worth to legitimise, manage and govern resource allocation and external relations. Framing accounting as a test of worth that operates as a qualified object, contributes to an explanation of how accounting can become controversial (or conciliatory). The case analysis shows the multiplicity of orders of worth (market, industrial, civic, green, and also fame) implicated in establishing moral legitimacy, and the use of accounting and reporting practices as tests of worth in arranging the competing moral priorities involved in the two controversies analysed. The conceiving of accounting and reporting as tests provides an understanding of how accounting is mobilised at a micro-level within controversial situations, a topic that, thus far, has not been analysed specifically by the sustainability accounting literature.

The controversy that surrounded the water tariff is a notable example of disagreement involving various moral principles that are at play in the market, industrial and civic orders of worth for the (de)legitimisation of the rationale and the method used to assign a price to water. By observing how accounting is viewed by managers as an (in)appropriate test, the case illuminates the nature of the controversy that is involved in a clash of worths (Boltanski & Thévenot, 2006). As managers and civil right activists disagree about the order in which the test is carried out, accounting as a test and object of industrial and market worth is challenged on the grounds of a civil worth orientation (namely, public water supply). The outcome of this controversy was increased information in the report, through special sections within the annual report and sustainability reporting that used forms of non-financial accounts to offer external stakeholders further insights in to the complexities (hence the cost) involved in the provision of urban water services.

Further, most managers criticised the tariff determination process, but not the principle of the tariff itself, which they consistently justified. They argued that the tariff was not appropriately set to allow the compensation of the multiple moral principles involved in the provision of water services by BLUE. To support to their criticism, they produced exemplar stories concerning water network renovation - consistent with an industrial worth orientation – and favoured an adjustment in the determination of the tariff, what Boltanski and Thévenot (2006) refer to as “tightening the test”. Also, in this case, the outcome of this controversy was the elaboration of the accounting and reporting practices to reflect the internal struggle into the external communication, that also comprised - in this instance - the water regulator, in addition to the local community and citizens. The paper enhances the understanding of the dynamic interplay between “humans, their organisations and non-human worlds” (Russell et al., 2017, p. 1428), by highlighting the dynamic role of accounting and, specifically, its crucial role in supporting the judgement of managers seeking compromises and alignments between multiple moral principles.

In addition to the above contributions, this paper adds to the sustainability disclosure literature by critically analysing how the internal delineations and the external reports interacted each other in order to establish the moral legitimacy of the sustainability practices implemented. This paper offers insights into the unfolding of the moral legitimation process of sustainability, showing that the market, industrial, civic and green orders of worth were both used by the individuals and communicated by the external reports to establish moral legitimacy. While Spence (2007) concern is that social and environmental reporting, as propounded by business itself, tends to obscure conflicts between business, society and the environment, the case analysis has revealed that BLUE's external reporting practices reflected the internal tensions between the coexisiting orders of worth involved in the controversies related to water sustainability. In this regard, the paper offers empirical evidence of the link between internal deliberations and external reports contributing to debate concerning the potential consistency of internal and external organisational practices and reporting (Laine, Järvinen, Hyvönen, & Kantola, 2017; Maroun, Usher, & Mansoor, 2018; Passetti, Cinquini, & Tenucci, 2018).

To sum up, the results suggest that managers may use accounting, not just to legitimate their operations and performances, but also to underline the moral principles of the decisions taken and the related worldview of the common good that, in the case of BLUE, was expressed in terms of market, industrial and civic orders. The analysis adds to the studies of the micro plurality of rationalities within organisations and the related role of accounting (Annisette et al., 2017; Annisette & Richardson, 2011). The company and its managers used their moral ‘toolkit’ to face the institutional complexity of the contested water sector reform, which was objectified thorough the different micro-processes, the accounting objects and the external reporting practices. This paper shows that moral legitimacy was both internally established by the managers, and externally communicated, revealing the complexity of the moral legitimation process.

8. Conclusions

This paper has implications for the understanding of the worthiness of accounting in practical, everyday modes of organising. Specifically, this paper provides insights into how accounting connects senior management thinking and decision-making in practice. The findings of this paper provide insights into how individuals can take advantage of the possibilities afforded by drawing on the multiplicity of rationalities when seeking viable pathways towards water sustainability. The results may inform organisational decisions and resource allocation in the water sector, evidencing that specific accounting objects might be designed and mobilised to promote a more sustainable use of water, balancing operational efficiency, water equitable access and distribution, and water conservation. Accounting objects might shape and support transparent water decision-making, support negotiations between multiple actors, and help to build trust. The analysis of the continuum of legitimation shows that the battle must first be won to establish the case for an industrial order of worth - i.e. that investment in infrastructure is necessary in order to provide water - before accounting plays a decisive role - i.e. how much investment is required and therefore what is an appropriate charge. From this perspective, part of the legitimation campaign established by the case study organisation might be seen as legitimating the order of worth so that accounting can be deployed. An example of this was the project to raise the awareness of school children about the "natural and technological cycles of water". The reference to the 'technological' water cycle provided by one interviewee, epitomises the centrality of water infrastructure, so that (as the public become 'better' educated) accounting-based arguments were accepted.[6]

Further, a continuous engagement and problematisation of the controversies surrounding water sustainability is also required to manage the trade-offs between the economic, social and environmental issues, and accounting objects may inform situations where the common good is taken into consideration (Pesci, Costa, & Andreaus, 2019). As water sustainability continues to be a significant challenge for socio-economic progress and human health in developed countries such as Italy, this study provides insights into how progress might begin to be supported.

The results may inform public policy debate, evidencing that institutional reforms, instruments and public investment decisions, like water tariffs, should be carefully balanced, with the aim of aligning industrial, green and civic aspects with market priorities. Public policy and regulatory approaches need to open up the tensions and trade-offs between the multiple rationalities and principles of evaluation related to water sustainability. Managing the trade-offs might develop more inclusive decision-making processes that involve institutional actors, water public utilities and informed civil actors. Examples of inclusive decision-making might concern the development of new investment plans, priority programs for catchment management, traditional water supply infrastructure renovation, and new green water infrastructure. Also, effective water governance requires transparent policies and decisions to strengthen the concept of water sustainability as the common good. Finally, this case study has implications for corporate water accounting and accountability more generally, as its shows the importance of monitoring, using and disclosing a large set of water data to inform society and stakeholders on how water is managed, and the presence of controversies involved in achieving water sustainability. The requirement to disclose additional details of operations in water-stressed areas is probably the major change of the updated Global Reporting Initiative standard on water. This case study suggests that disclosure and use of water information is a very sensitive issue which requires placing at the center of the decision-making process, the security and the sustainability of water for society, the local community and population, and not the profit maximisation of companies and water financialisation (please see Bayliss, 2014; Jaffee & Newman, 2013; Jermier & Forbes, 2016).

This study has limitations which open up avenues for future research. An important limitation is that the analyses outlined in this paper are specific to the setting analysed, which limits the generalisability of findings to other institutional settings. As prior accounting research has shown the importance of national cultures, legal and regulatory contexts in the pursuit of practices and institutional responses to sustainability (Moore, 2013), future studies could add to this research by including other geographical areas and sectors. Additionally, while this paper is based on an extensive body of empirical material, it focuses mainly on organisational decision makers within a single organisation. While care has been taken to balance the perspectives of managers who have different roles in BLUE's activities, this is necessarily a subjective process. The identification of BLUEs respondents could disregard the opinions of other relevant actors not identified as associated with BLUE's decision making.

Future research could extend this literature to include groups of stakeholders and extend the time period of analysis to discover how and whether, over time, water sustainability demands change. Another direction for further research would be to study the historical contingency of water sustainability through the EoW framework. This avenue of inquiry could provide an essential contribution to understanding the functionality and evolution of alignments and compromises, through accounting, in a context where best practices have not yet been consolidated into a norm. Additionally, how the multiple rationalities of water sustainability are reflected in the external reporting practices could represent a further avenue of research. It could deepen the understanding of the present findings and of the role of external reporting in shaping the reality of water (un)sustainability, its management, assessment, and reporting. The analysis of the micro-processes relating to sustainability accounting is a further important avenue of research, as micro-processes deepen the understanding of how and why certain decisions and actions occur and unfold within organisations. The analysis of micro-processes is also related to psychology which might be a further perspective to understand sustainability accounting (Gond & Moser, 2019).

A final important direction of future research would be to further explore the relationship between commensuration, justifications and decision-making. The performative role of commensuration is demonstrated by the repeated efforts of

[6] The authors are grateful to a referee for raising this point.

social and environmental scientists to model and quantify visions of sustainable development that resulted in governance models such the Planetary Boundaries model (Rockstrom et al., 2009; Steffen et al., 2015) and the Sustainable Development Goals (SDGs) (United Nations UN, 2015). These models, in various guises and through a range of means, have as their common denominator a process of commensuration that occurs at several levels of analysis. More focused examination of the role of accounting and accountability in the processes, either that precede commensuration or occur during the various levels of analysis, are likely to add significantly to the understanding of the development of these practices.

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Appendix A. Schematic overview of the orders of worth

Orders of Worth	Market	Industrial	Domestic	Fame	Civic	Inspirational	Green
Higher Common Principle	Competition, rivalry	Efficiency	Tradition, familiarity, hierarchy	Public opinion	Civic duty	Inspiration	Greenness
Mode of evaluation	Price	Productivity, efficiency	Trust	Renown	Collective interest, verdict of the vote	Innovation, creativeness	Environmental friendliness
Test	Completion of deals, transactions, contracts	Test, control	Family ceremonies, celebration, social events, distinction, nomination	Presentation, press conference	Demonstration in favour of a moral cause, assembly, movement	Adventure, quest, journey	Sustainability, renewability
Form of relevant proof	Monetary value, prices, benefit payback	Measurable statistics	Oral examplary, anecdote	Semiotic	Formal official	Emotional	Ecological, eco-systemic
Qualified subjects	Competitor, clients, buyers	Professionals, specialists	Superiors and inferiors	Stars and their fans	Collective persons and their representative	Visionaries	Environmentalist
Qualified objects	Wealth (goods and services, luxury items)	Methods, tools, graphs	The rule of etiquette, good manners, proper behaviour, rank titles, gifts, habits, customs, traditions	Sign media (brand, bulletin, public relations)	Legal forms (rights, decree, legislation)	Emotionally invested body (mind, dream, unconscious, drug)	Pristine, wilderness, healthy environment, natural habitat
Time Formation	Short-term flexibility	Long-term planned future	Customary path	Vogue, trend	Perennial	Rupture, revolution	Future generations

Source: Boltanski and Thévenot (2006), Thévenot et al. (2000), and Annisette et al. (2017)
Higher common principle: indicates the core principle an order of worth refers to, influencing decisions, choices and the reference by which the concept of worth is measured. *Principles of evaluation*: indicates the characteristics that help to define what is most "worthy" or not "worthy" and therefore (not) valued in a given order. *Test*: a means for assessing the worthiness and the relevance of a given order of worth. A test of worth can create or resolve conflicts and controversies, and be involved in compromises. *Form of relevant proof*: indicates a symbol that captures the "essence" of a given world. *Qualified subjects*: refers to the critical actor(s) present in a given order of worth, which contributes to define and express the relevance of the order of worth itself. *Qualified objects*: refers to the instrument present in a given order of worth through which value is unfolded and fixed, and social interaction and coordination is promoted. *Time formation*: indicates the time orientation and duration of a given order of worth.

Appendix B. Interviews protocol structure

- What does sustainability mean to your company?
- What is the relationship between water and sustainability?
- Which processes and instruments for water sustainability have been implemented in the last 3/5 years?
- What accounting and reporting practices for water have been implemented in your company over the last 3/5 years?
- What are the main criticalities (internal and external) associated with the current management of water?
- What are the main challenges (internal and external) associated with the future management of water?
- How is the information concerning water used in decision-making?
- Are stakeholders involved in decisions concerning the management of water? If yes, how they are involved?

Appendix C. The list of semantic markers used for each of the orders of worth (in italics are reported the specific semantic markers added compared to the original list of Boltanski & Thévenot, 2006)

Market	Competition, rivalry, value, saleable, interest, desire, selfishness, market, wealth, luxury, opportunism, liberty, opening, attention to others, detachment, distance, possess, contract, deal, price, money, benefit, result, competition, management, conversion, *calculation, liberalisation, profit, allowance, economy, profit maximisation, success, compensation, services, business processes, forfeit, dividends,* calculation, finance, payment, wages, oligopoly, monopoly, commerce, price, politics, saving, margin, asset, ownership, demand, supply, economy, production, millionaire, winner, competitors, client, buyer, salesman, independent worker, employee (worker), investor, supplier, buy, get, sell, economically
Industrial	Efficiency, performance, future, functional, predictability, reliability, motivation, work energy, professionals, experts, specialists, operator, person in charge, means method, task, space, environment, axis, direction, definition, plan, goal, calendar, standard, cause, series, average, probability, variable, graph, time models, goals, calculation, hypothesis, solution, progress, dynamic control (security, opposite of risk), machinery, interact, need, condition, necessary, integrate, organise, stabilise, order, anticipate, implant, adapt, detect, analyse, determine, light, measure, formalise, standardise, optimise, solve, process, organise, system, trial, setting up, effectiveness, measure, instrumental action, operational, *measurement instrument, technology, system, installation, sewerage, treatment, water channel, conduct, irrigation, water quality, storage, engineering, economic efficiency, costs*
Domestic	Engenderment, tradition, generation, hierarchy, leader, benevolent, trustworthy, honest, faithful, determination of a position in a hierarchy, inscription of signs of worth (titles, heraldry, clothing, marks), punctuality, loyalty, firmness, honest, trust, superior, informed, cordial behaviour, honest, trusting, good sense, leaders, family, rejection of selfishness, duties (even more than rights), loyal, harmonically, respect, responsibility, authority, subordination, honour, shame, hierarchy, cooperation, celebrations, family ceremonies, responsibility, transparency, duty, task
Fame	Public opinion, public, audience, public attention, reputation, desire to be recognised, *public debate, boycott, public pressure, public legitimisation*, opinion leader, journalist, PR agent, sender, receiver, *media contact, communication strategy, banner headlines, reporting, standard, personality, advertising, brand, message, campaign, recognition*, *camouflage,* public image, persuasion, influence, propaganda, promotion, mobilisation, down playing, misleading
Civic	Collectives, collective will, legal, rule, governed, official, representative, common objectives, unitary concept, participation, rights and obligations, solidarity, moral beings, democratically, legislation, formality, code, statement, organisational goals, membership, mobilisation, unification, freeing people form selfish interest, escape from chaos (division) and isolation, aspiration to civil rights, renunciation of the particular, transform interests of each into a collective interest, gathering for collective action, exclude, join, assemble, association, recruiting, extending, active mobilisation, liaising, constant contact with organisation, the legal text, republic, state, democracy, assembly, movement, election process, consultation, corporatism, rules, law, legal and formal steps, actions, processes, decisions and orders
Inspirational	Anxiety of creation, passion, dream, fantasy, vision, idea, spirit, religion, unconscious, emotional, feeling, irrational, reflex, invisible, unmeasurable, magic, myth, ghost, anthroposophy, super-human beings, affective relationships, warmth, creativity, escapism, intuition, fantastic, dreams, memories
Green	*Environment, influence or danger on environment and human beings, ecological, environmental protection, protection of the nature, plants, climate, environmental pollution, water pollution, waste, rescue of the planet, sustainability, protection of nature, protection of water, fauna and health, adaptation, drought, river basin, groundwater, aquifers*

Appendix D. European Water Charter 1968 (summary)

I	There is no life without water. It is a treasure indispensable to all human activity.
II	Fresh water resources are not inexhaustible. It is essential to conserve, control, and, wherever possible, to increase them.
III	To pollute water is to harm society, life and other living creatures which are dependent on water.
IV	The quality of water must be maintained at levels suitable for use to be made of it and, in particular, must meet appropriate for public health standards.
V	When used water is returned to the environment, it must not impair the further use of the environment itself, both public and private.
VI	The maintenance of an adequate vegetation cover, preferably forest land, is imperative for the conservation of water resources.
VII	Water resources must be carefully inventoried.
VIII	The wise management of water resources must be planned by the appropriate authorities.
IX	Conservation of water calls for intensified scientific research, training of specialists, and public information services.
X	Water is a common heritage, the value of which must be recognised by all. Everyone has a duty to use water carefully and economically.
XI	The management of water resources should be based on their natural basins rather than on political and administrative boundaries.
XII	Water knows no frontiers: as a common resource it demands international co-operation.

Appendix E. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.bar.2020.100907.

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