

On the accounting implications of the dilemma: who speaks for nature?

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Caterina Pesci

Department of Economics and Management, University of Trento, Trento, Italy, and

Lorenzo Gelmini and Paola Vola

*Department of Sustainable Development and Ecological Transition,
University of Eastern Piedmont, Vercelli, Italy*

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Abstract

Purpose – This paper draws on the thinking of the nineteenth-century Italian philosopher and poet Giacomo Leopardi and scholars who studied his thoughts on the relationship between nature and humans. Leopardi's philosophy of nature recognizes the alienness of nature in relation to humankind, thus challenging human governance of the planet. The poet's thoughts align with the dilemma identified in the Anthropocene literature: who speaks for nature? This dilemma has accounting implications in terms of the frameworks and disclosures to be adopted. Therefore, Leopardi's thoughts can become the basis for a more articulated and complex understanding of some key concepts and issues at the roots of SEA.

Design/methodology/approach – The paper utilizes content analysis to examine four essays by Giacomo Leopardi, which serve as the source of our data.

Findings – Leopardi recognizes the alienness of nature with respect to humanity and the voicelessness of nature as a generative of conflict. He also warned of the consequences of human governance that does not take nature's needs into account. These findings open a discussion on the complex accounting implications of the distance between humanity and nature. They can inspire SEA scholars to change the status quo by developing new accounting frameworks from the perspective of nature and adopting forms of governance of nature that recognize the need to protect it as a voiceless stakeholder.

Originality/value – Through Leopardi's humanistic and poetic philosophy, the perspective of nature can be infused into SEA studies, thereby promoting the need for a multidisciplinary and complex approach to the discipline.

Keywords Social and environmental accounting (SEA), Nature, Complexity, Anthropocene, Accounting frameworks

Paper type Research paper

1. Introduction

Social and environmental accounting (SEA) aims to record and disclose the impacts generated by the relationship between human society and nature, a relationship that has always been characterized by a complex equilibrium. The era we live in, where human activities are the main driver of climate change, requires us to rethink and reframe SEA and related disciplines to address this growing complexity (Bebbington *et al.*, 2020; Lövbrand *et al.*, 2015; Gray, 2002). Therefore, this paper proposes the philosophical poetry of Giacomo Leopardi and the interpretation of scholars who have studied his work (Binni, 2012; Ferri, 2019; Timpanaro, 2011) as a grounding of the relationship between nature and humanity to inspire future SEA endeavors.



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Complexity derives its lexical origin from the Latin word “complexus”, meaning surrounding, encompassing, encircling, and evoking non-linear movements (www.oed.com).

When referring to nature, SEA cannot fail to consider a biological world of wonder and complexity: from the delicate and strong growth of a flower, to the depth in time and space of a glacier, to the giant manta rays that float like giant hands across the oceans. In nature, the extraordinarily small and the immensely large (from cells to Betelgeuse) are in constant dialogue, and we live through vast intellectual and cultural richness and complexity.

Complexity is the measure of our existence: poets acknowledge it well, as in Shakespeare’s Hamlet, where things are more abundant in heaven and on the earth than in philosophy (Shakespeare, first ed. 1601, ed. 2013, 167-168), and so do scientists (Dawkins, 2006; Morin, 2008; Parisi, 2002).

Because SEA is intimately connected to human behavior and its interactions with nature, it must embrace the complexities that arise from this multifaceted relationship. The urgency to examine the human-nature relationship from a more complex perspective arises from the unprecedented time our planet is experiencing. Consider Gaia, the primordial deity and personification of the Earth in Greek mythology (Rodrigue and Romi, 2021); millennia of animal species on the verge of extinction, desertification and drought, increasingly frequent natural disasters, and the inability to manage or cope with extreme weather phenomena. These are the consequences of the Anthropocene (Bebbington et al., 2020), an epoch in which humans are constantly and profoundly altering the natural biological equilibrium. In such an unprecedented era, SEA is expected to make a difference in orienting decision-making towards sustainability (Gray, 2002; Laine, 2014), but has shown limitations as an instrument to push human habits towards a more sustainable lifestyle (Cho et al., 2015; Michelon et al., 2016; Rodrigue and Romi, 2021). SEA theories and normative practices have often flattened the numerous complexities arising from the relationship between people, human organizations, and the environment with the inevitable consequence of limiting the impact of recording and reporting activities (Lehman, 1999; Gray, 2002; Malsch and Gendron, 2013).

A key complexity that is only marginally addressed in SEA is related to giving a voice to nature as a pivotal stakeholder (Laine and Vinnari, 2017; Vinnari and Vinnari, 2022). This issue has been mobilized in the Anthropocene literature (Moore, 2015; Bebbington et al., 2020), which has helped to frame the criticalities arising from the idea that humans have exploited natural resources in pursuit of merely financial capital returns.

Yet, what remains underexplored in this stream of research (e.g. Bebbington et al., 2020) is the potential antagonism between nature and humans due to a conflict of interest fueled by the absence of nature’s voice. This lack of consideration leads to the main dilemma this article addresses: Who speaks for nature (Lövsbrand et al., 2015)?

SEA research should embrace less naïve and more complex discourses in order to recognize, analyze, and explain how humanity has to face the alienness of a subject like nature, which has a strong power but cannot speak. A change of pace, dissent and disruption of the dominant standard is needed (Parker and Kohlmeyer, 2005; McKernan and MacLulich, 2004).

Historical roots (Atkins and McBride, 2021), capable of depicting the relationship between humans and nature, mobilizing holistic, inclusive, and complex concepts, can offer insights into how to account for the deep alienness of nature in relation to humans. Therefore, we explore the philosophical and poetical thought of Giacomo Leopardi (*Dialogue between an Elf and a Gnome*, 1824; *Dialogue between Nature and an Icelander*, 1824; *The Night Song of a Wandering Shepherd in Asia*, 1831; *The Wild Broom*, 1845) as a source of inspiration for SEA studies. Leopardi’s poetry undeniably recognizes nature as an *alter* (a Latin word that incorporates the meaning of difference and distance), namely nature is alien in relation to humanity. This distinction entails thinking about a different equilibrium between society and nature, reshaping the idea of accounting towards giving a voice to nature, a voiceless stakeholder (Lövsbrand et al., 2015). Leopardi’s thought can animate profound, universal, and

disenchanted reflections to address the complexity embodied in the relationship between humans and nature.

This study contributes to the SEA literature stream that has demonstrated an awareness of the need to adopt a multidisciplinary and complex perspective (Carnegie and Napier, 2017; Espinosa and Porter, 2011; Bebbington *et al.*, 2020; Pesci *et al.*, 2023). Leopardi's poetry and philosophy can help foster an imagination capable of generating new insights for understanding and addressing the ecological crisis (Banerjee and Arjaliès, 2021; Contrafatto *et al.*, 2015; Mathevet *et al.*, 2018; Costa *et al.*, 2023).

Leopardi's poetry, which touches deep human emotions, can act on human feelings, not only on the intellectual awareness of the urgency of acting for the sake of the planet, motivating those who echo his poetry to substantial changes (Leopardi, first ed. 1824, ed. 2016; first ed. 1845, ed. 2003a). Above all Leopardi's philosophy, with its evocative, agonistic, and dialectical relationship between humankind and nature, can contribute to recognizing the complexity at the heart of SEA, starting from the *alienness* of nature as a central issue.

This perspective is rooted in the ideas of some scholars of Leopardi (Ferri, 2019; Binni, 2012; Timpanaro, 2011) who extend the poet's insights to their consequences in terms of contractual relationship between nature and humans. This extension makes it possible to lay the foundations for questioning such a form of contract in terms of both accounting and governance, and to propose original avenues of development in these disciplines.

The remainder of this paper is organized as follows: Section 2 examines the roots of SEA from its origins to highlight the need to address its many complexities from a multidisciplinary perspective. Section 3 presents the theoretical view of the relationship between nature and human beings from the thought of Giacomo Leopardi. Section 4 presents our methodology and Section 5 reflects on the role of Leopardi's thought in fostering a fruitful debate among SEA scholars. Section 6 offers additional insights, while Section 7 concludes.

2. Literature review: the relationship between nature and humans

The pioneers of the SEA school of thought were fully aware of the importance of changing the relationship between nature and humans, believing that accounting, as an instrument of decision-making and control, could play an important role in changing the behaviors of organizations (Gray, 2002; Walker, 2016). Over time, several alternative accounting approaches have been proposed, following pioneering scholars inspired by the idea that accounting could bring about a true "revolution" capable of influencing society and limiting the disastrous consequences of the exploitation of natural capital (Lehman, 1999; Gray, 2008). The accounting revolution toward the inclusion of social and environmental instances was originally intended to engender a new awareness from the perspective of investors and stakeholders (Burchell *et al.*, 1985; Gray, 1994, 2002; Gray *et al.*, 1997; Cooper *et al.*, 2011). Numerous initiatives and insights have been derived to record what was previously non-existent from an accounting point of view due to the lack of monetary manifestation, or the lack of control over resources consumed to generate revenues, or more generally, the limitations of accounting standardization (Gray, 2002; Moneva *et al.*, 2006).

The initial enthusiasm led to the development of several frameworks and proposals, which themselves became the subject of SEA studies in terms of adequacy, compliance, or limitations (Mathews, 1997; Chen and Roberts, 2010). The debate on the role of accounting in addressing environmental issues is still vibrant, pointing to the challenges associated with current attempts and approaches to develop effective tools (Jones, 2010; Rambaud and Richard, 2015; Boiral, 2016; Adams and Cho, 2020; Adams *et al.*, 2021; Abela, 2022; Pesci *et al.*, 2023). Some scholars have focused on the issues of inclusiveness and justice by proposing to reframe the discipline and reorient it towards a more dialogic approach based on forms of participatory democracy in the governance processes (Bebbington *et al.*, 2007; Blackburn *et al.*, 2014; Brown and Dillard, 2015; Deegan, 2017; Roslender and Dillard, 2003; Dillard and Vinnari, 2019). Dialogic accounting

views business and accounting practices as “citizenship issues” (Brown and Dillard, 2015) that aim to enable stakeholder participation in decision-making, accounting, and accountability processes. This approach to accounting has the merit of attempting to give voice to different stakeholders, including the less powerful (Laine and Vinnari, 2017; Vinnari and Vinnari, 2022; Atkins *et al.*, 2020; Atkins and Maroun, 2018; Bellucci *et al.*, 2018), but primarily addresses the issue of engaging in dialogue with stakeholders who have their own voices to express their information needs. Thus, although nature is an important stakeholder in the dialogic accounting literature, the fact that it cannot speak for itself is not sufficiently problematized.

A key issue is the awareness that nature’s interests are expressed by other stakeholders (managers, investors, or even society) due to nature’s inability to speak. Consequently, the need to proxy nature’s voice creates potential conflicts of interest, and the protection of nature’s point of view as an alternative other, an *alter*, can be questioned. In this regard, Russell *et al.* (2017) note that Latour’s (1998, p. 233) ecologist thought clearly expresses the idea that nature is a “being in its own right with its own freedom and its own ends” (p. 1445). This important and still unresolved dilemma in SEA studies is related to the core argument of this paper: *Who* speaks for nature? Such an open question highlights the need to (re) conceptualize the relationship between humans and non-humans. In a context where one stakeholder cannot avoid being represented by another who may have a potential conflict of interest, the equilibrium is delicate, and the very notions of fairness and justice are called into question (Mathevet *et al.*, 2018). Indeed, in such a scenario, agency problems may arise (Hill and Jones, 1992) and governance systems based on stewardship (Hernandez, 2012; Contrafatto, 2014) should be developed. Stewardship should be designed to manage potential conflicts of interest between society and nature, as suggested by Contrafatto (2014) and Contrafatto and Bebbington (2013), who illustrate different approaches in the stewardship framework. As these studies focus on the governance systems of organizations, the perspective of nature as a separate entity remains in the background.

In considering nature as an alien in respect to human beings two consequences that we could define as corollaries of the dilemma outlined above concern accounting and can be formulated as follows: What might be a conceptual *framework* for an accounting system that is able to embrace the complexity of the relationship between humans and nature? *How* should accounting be *disclosed and operationalized*?

Regarding the first question on the conceptual accounting framework, some solutions have been proposed, such as that of Rambaud and Richard (2015), who following Jones (2010), encourage the development of a model that includes the depreciation of natural capital in the accounting logic (for a critique of this model, see Taïbi *et al.*, 2020). While other conceptual frameworks have been proposed, they have received some criticism because they are seen as embracing the shareholder logic and systematic and constraining monetary measurement (Barter, 2016; Cuckston *et al.*, 2022), whereas other units of measurement may better reflect the complexity of nature (Russell *et al.*, 2017).

Moreover, a key issue of the development of accounting frameworks towards the inclusion of costs associated with the exploitation of natural resources is the impact on dividends, and consequently, on the decision-making of investors (Nicholls, 2020).

Another source of complexity is the short-vs long-term approach to accounting, where the debate concerns the need to reorient social and environmental accounting towards the short-term in order to focus on the urgency of the environmental crisis (Tregidga and Laine, 2022).

In addition, a number of SEA studies have investigated extinction accounting and accounting for animals. In this vein, extinction accounting has been developed (Maroun and Atkins, 2018) as an emancipatory tool used to visualize and operationalize the threats of mass extinction. Furthermore, Vinnari and Vinnari (2022) address an accounting framework for progress towards fundamental rights for non-human animals that clearly recognizes their ontological difference from both society and the environment.

Both of these innovative accounting frameworks constitute relevant and valuable efforts to expand the field of accounting, but at the same time fail to recognize the role of nature as a separate entity that needs its own records.

In the recent development of regulations that have made non-financial reporting mandatory, the framework topic has generated a lively debate on some fundamental issues, such as comparability (Adams and Cho, 2020), materiality (Adams *et al.*, 2021; Abhayawansa, 2022), control (Abela, 2022), and reporting boundaries (Antonini *et al.*, 2020). The unit of measurement adopted by current frameworks is another core issue, as it has led to the paradox of the commodification of nature (Martineau and Lafontaine, 2019) and the need to use market mechanisms to solve environmental and social problems caused precisely by the market itself (Deegan, 2013). However, an issue not yet addressed is the application of the accounting concept of counterpart, which is widely used in accounting (IFRS Foundation, 2011), to nature. Since the accounting system defines the values in terms of agreements between two counterparts, it is necessary to consider nature as a counterpart. This awareness implies giving nature a voice to express its interests in terms of the accounting values recognized by humans.

Summarizing the contributions on the conceptual frameworks, it seems clear that despite the theoretical and normative efforts, the complexities related to SEA seem far from reaching a common conceptual view.

What is clear in this dilemma is that if nature is an *alter*, there is a gap in current frameworks, which always take only the perspective of organizations. This focus on the exclusive organizational perspective is also reflected in the scarce dialogue with environmental accounting approaches (United Nations, 2021). In particular, fruitful insight may be found in the thought of scholars who adopted an integrated view combining radical ecological economics and accounting (Richard, 2022). As Russell *et al.* (2017) recall, indeed, there is an urgent need to “broaden the parameters of what constitutes (environmental) accounting” (p. 1443) and develop frameworks in the perspective of nature.

Regarding the second question (*how* sustainability accounting should be disclosed and operationalized), a critical stream of research in the SEA literature points to the limitations of organizational disclosure. This stream of research concludes that, regardless of the accounting framework adopted, SEA is mainly motivated by organized hypocrisy and organizational façades (Cho *et al.*, 2015; Michelon *et al.*, 2016; Brennan and Merkl-Davies, 2013). It appears that economic interests have guided the majority of organizations that disclose sustainability issues, and their reports have in many cases become mere tools for reputational gain (Deegan, 2014; Laufer, 2003). These studies, which mainly focus on large and medium-sized private and public companies, have led to the critical stance among SEA scholars who repeat the same mantra: organizations use SEA for impression management or legitimacy purposes, with few and rare exceptions (Rahaman *et al.*, 2004; Higgins *et al.*, 2020; Mahoney *et al.*, 2013; Boiral, 2016). Thus, the disclosure and operationalization of SEA could be considered more symbolic than substantive (Durand *et al.*, 2019). Subsequently, the idea of drawing inspiration from organizational plurality emerged, as if the mission or the legal nature of the organizations could change the role of SEA. Following this idea, scholars explored other organizational arrangements, such as co-operatives, B-corporations, and public sector entities (Laine, 2021; Feger and Mermet, 2017; Sullivan and Hammis, 2017; Costa *et al.*, 2023). The shift in focus to less market-oriented organizations, where stakeholders other than investors are at the core of the mission, suggests that in such arrangements, the operationalization of SEA can become more substantive than symbolic. In this regard, studies focusing on the sustainability disclosure of nonprofit organizations managed by indigenous people with a solid link to the local territory have shown that they were able to develop more substantive than symbolic SEA through a stewardship governance model (Contrafatto *et al.*, 2015; Pesci *et al.*, 2020; Banerjee and Arjalies, 2021; Bebbington and Rubin, 2022; Costa *et al.*, 2023). Thus, participatory governance

models involving indigenous peoples with strong emotional connections to nature may be critical to reducing conflicts of interest (Costa *et al.*, 2018; Banerjee and Arjaliès, 2021).

Nevertheless, the corpus of studies on local organizations could provide insights into SEA studies that do not yet sufficiently address the gap that lies in the potential conflict of interest between humans and nature, a conflict that may induce the most influential stakeholder among them (the one who has a voice) to adopt accounting frameworks that are instrumental in legitimizing current societal structures.

The complexities outlined above regarding the SEA frameworks and the disclosure and operationalization of accounting information need to be combined with the recognition that measuring social and environmental impacts arguably requires multiple and interdisciplinary competencies (Guthrie *et al.*, 2019).

Drawing on the thoughts of other disciplines to better frame the complexities of the human-nature relationship and to foster new approaches, some scholars have combined the critical stances of social science with the Anthropocene literature (Löwbrand *et al.*, 2015; Bebbington *et al.*, 2020). In particular, Löwbrand *et al.* (2015) introduced the concept of the Anthropocene (Crutzen and Stoermer, 2021) into the conversation with the social sciences, namely the epoch in which *anthropos* altered the biological equilibrium to the point of profoundly affecting the planetary life support system. In the Anthropocene (Löwbrand *et al.*, 2015), nature “is domesticated, technologized and capitalized” (p. 213). Consequently, there is an urgent need to shift to a different paradigm characterizing the relationship between humans and nature. Löwbrand *et al.* (2015) proposed socializing the Anthropocene concept by mobilizing a holistic and complex perspective that includes political ecology and political action (Castree, 2014; Baldwin, 2003), science and technology studies (Latour, 2004; Jasanoff, 2004), and alternative ways of living with nature embedded in local cultural practices (Hulme, 2010; Rose *et al.*, 2012; Baskin, 2014). The Anthropocene approach has also been embraced by SEA scholars recognizing the importance of understanding Earth’s history and the workings of the cosmos (Bebbington *et al.*, 2020; Rudwick, 2014).

A similar perspective can be found in Spence (2009) and Brown and Tregidga (2017), who promoted the SEA engagement debate by provoking intellectuals. The former, building on Antonio Gramsci and on corporate social accounting, draws attention to some of the different frameworks of social accounting practices of civil society organizations. The latter, moving from Jacques Rancière’s writings to insights on emerging political demands, stages an opposition to political logic. In addition, Rodrigue and Romi (2021) argue the importance of recognizing that as humans we are saviorless, and that “the emancipatory potential of accounting might lie in providing individual, local, and experiential knowledge of the influence on and consequences from our Gaian crisis, ultimately empowering individuals to act holistically” (Rodrigue and Romi, 2021, p. 1).

These briefly illustrated thoughts help to recognize that SEA mitigates the core issue of nature’s *alienness* with respect to humans, and despite claims of justice and inclusiveness, focuses primarily on the *anthropos* in developing the frameworks and disclosures, while recognizing the deep *alienness* between humans and nature requires a complex and holistic approach.

The next section presents an idea of Leopardi’s thought as an alternative philosophy that can shed light on the relationship between humans and nature, and thus provide a foundation for crafting new ideas to face the dilemma (who speaks for nature?) and its accounting corollaries.

3. Theoretical underpinning: Leopardi’s thought and the natural contract

Giacomo Leopardi (born in Recanati in 1798, died in Naples in 1837) is one of the most important poets and philosophers in the Italian tradition. Walter Binni, one of the giants of Italian literary criticism who devoted his intellectual energies to Giacomo Leopardi, stated

that “Ginestra” (The Wild Broom - one of the two poems chosen for our essay) is by far “the greatest poem of the last two centuries, the most significant for the nascent problematic of the modern world” (Binni, 2012, p. 15).

For Binni, this poem represented a kind of culmination of Leopardi’s “anti-idyllic” tendency. At the heart of his interpretation is the idea that Leopardi was not only a sublime poet, the creator of poetic works to which the adjective “consolatory” is inappropriate, but also one of the most important philosophers in Italian history, and this closer connection between thought and poetry reached its highest union in his final manuscripts (Binni, 2012).

Beyond the extraordinary literary excellence of his works, he succeeded in developing a dialectic that, starting from the premises of materialism and atheism, finally found in the solidarity of human beings the very reason for existence. In his work, nature is seen as an *alter*, an agent operating outside the human sphere.

In Leopardi, the brutal side of nature is revealed, which, no longer beneficent and generous, expresses a potential for open opposition to human beings (Binni, 2012, p. 83 and 99): all to demystify those who, as apologists of nature, idolize it and fail to understand its intimate wearing dynamics (Timpanaro, 2011, p. 78).

Leopardi was critical of all technological triumphalism and developed an anti-providentialist thought in which humankind does not find itself at the center and at the end of the world, and even less of the universe. In Leopardi’s view, humans are a simple fragment of living nature that, by accepting its condition of finiteness and fragility, can bear the most authentic witness of its own “virtue” (Binni, 2012).

The opposition between humans and nature should induce dialectic internal to the human field that promotes a new social praxis, an alternative to the capitalist drift, based on solidarity and on a free, equal, open, and inclusive society (Binni, 2012, p. 85 and 91). The depiction of the conflict and tension between man and nature in his work is innervated not only by extreme natural phenomena (catastrophes), but also as a result of the biological and physical causes of human nature, consumption, disease, and physical degradation (Timpanaro, 2011, p. 79).

As a very modern thinker, Leopardi is aware that humans cannot bend nature to their will, and that nature is fundamentally hostile to humanity (Binni, 2012, p. 93; Harrison, 2019). Nevertheless, Leopardi’s ideas introduce a call for reengineering the relationship between nature and humans as Harrison (2019) explains: “This broader ontological perspective only strengthens Leopardi’s contempt for a broad series of social faiths of the Europe of his time, which will gravitate even more strongly to America: the cult of happiness, pragmatism, and utilitarianism; the certitudes of science, technology, and progress; the predilection for big city dwelling; the extolling of information and enlightenment as ends in themselves; the notion that humans, in their privileged position at the heart of the universe, are also entitled to re-engineer it; the culture of mass media and of mass opinion” (Harrison, 2019, p. 128).

Ceccagnoli (2019) goes further in interpreting Leopardi’s philosophical thought and connects it with the concept of the Anthropocene: “There is an underlying ambiguity in the notion of the Anthropocene, the new designation for the geological era in which we live, which seems to be characterized more than ever by anthropic action and its potentially catastrophic consequences. With the emphasis on human action, to many it seems that the solution can only come from anti-anthropocentric positions, in part similar to those with which Leopardi mocked the will of dominance of men, often ending up being misunderstood by his contemporaries” (p. 12).

In sum, in the light of Leopardi’s philosophical perspective, nature is an *alter* in relation to humans, and this fact generates a conflict that, as interpreted by scholars who deepen his thought (Harrison, 2019), must be addressed in terms of governance in order to avoid catastrophic consequences, which the poet depicts as human extinction. At the heart of a form

of governance that could avoid the extreme consequences of the conflict between nature and humankind could be the concept of care (in Latin “cura”).

In this sense, [Ferri \(2019\)](#) reads Leopardi’s work in light of [Serres \(1995\)](#), stating that “Leopardi reframes the idea of a natural contract by interrogating the relationship between humans and nature in terms of cura, or worry and solicitude” (p. 73), and in so doing, is able to “reconcile the antagonism between humans and nature at the core of his philosophy with an approach that sees humanity and social life as inextricable from their place in the natural world” (p. 73).

Accordingly, for Leopardi, contrasts within individual human groups must be mitigated, as they are secondary, so as to form a common front against nature ([Timpanaro, 2011](#), p. 67). In this sense, it is widely recognized that Leopardi referred to the concept of cura as a sort of social contract that could bind humans together to mitigate the imbalance of forces between nature and humans ([Ferri, 2019](#)). In this understanding, cura is the solidarity bond between humans and the naive and false representation of nature as a good mother. Leopardi’s philosophy of nature in such a view is based on the antagonistic relationship with humanity, which must be recomposed in order to avoid its extreme consequences. Nevertheless, [Ferri \(2019\)](#) in reading the last Leopardi extends the notion of cura towards a further contractual dimension, recalling the thought of [Serres \(1995\)](#), who recognized the importance of including nature as an actant. In this regard, Serres explains that the “social contract is unaware of nature” (1995, p. 109), so there is a need to recognize nature through a natural contract. In this understanding, the notion of cura recalls that of stewardship ([Hernandez, 2012](#)) and can be the starting point to face the problem of caring for a stakeholder without a voice based on a natural contract ([Ferri, 2019](#)). Accepting the idea of a natural contract means abandoning a paternalistic representation of the steward as an individual always moved by an intrinsic ecological ethic, whereas in a natural contract, the steward should be an agent empowered to represent the interest of an alien subject, nature.

To conclude, Leopardi’s readings ([Timpanaro, 2011](#); [Binni, 2012](#); [Ceccagnoli, 2019](#); [Ferri, 2019](#); [Harrison, 2019](#)) suggest separating humans and nature as opposite parts in the natural contract, recognizing their divergent interests; this awareness introduces the need to represent both parties as separate entities.

Based on this specific stream of notable Leopardi scholarship, we examine the content of four of Leopardi’s works (two essays and two poems), explore their core arguments, and situate them within the field of SEA.

4. Methodology

In this paper, we adopt an interpretive constructivist approach ([Hines, 1988](#)), starting from Leopardi’s philosophy and thoughts on nature, linking these with some issues identified in the field of SEA regarding the relationship between humankind and nature.

In particular, we examine four of Leopardi’s essays and poems, which constitute our primary data source. [Table 1](#) summarizes these works.

We analyze these works based on the thoughts of scholars who studied Leopardi as a philosopher of nature ([Timpanaro, 2011](#); [Binni, 2012](#); [Ceccagnoli, 2019](#); [Ferri, 2019](#); [Harrison, 2019](#)). We then link the philosophical concepts in these essays to the dilemma at the heart of our literature review of sustainability and SEA studies (who speaks for nature?) and its main accounting implications (regarding the framework and how accounting is disclosed and operationalized).

Using content analysis ([Krippendorff, 2018](#)), we codify ([Unerman, 2000](#); [Pesci and Costa, 2014](#)) the four works to isolate elements that could be related to the dilemma of who speaks for nature and the accounting corollaries. Specifically, we identified four core codes ([O’Dwyer, 2004](#)) related to the following themes:

Type	Essay	Poem	Poem
Title	Dialogue between an Elf and a Gnome ("Dialogo di un Folletto e di uno Gnomo")	Night Song of a Wandering Shepherd in Asia ("Canto Notturno di un Pastore errante dell'Asia")	The Wild Broom ("La Ginestra")
Period	1824	1831	1834
Summary	An elf and a gnome mock human's belief that the world is made for his exclusive use and consumption. The world, on the other hand, could exist and survive even if humans became extinct, as in effect occurs in the Dialogue	Inspired by Voltaire's "History of Jenni or the Wise Man and the Atheist" (Andrews, 1981). An Icelander travels the world, fleeing nature. Having arrived in Africa, he encounters nature itself in the form of a gigantic woman. The Icelander voices a long indictment against nature but his questions remain unanswered, as he is suddenly either devoured by two starving lions or buried alive in a sandstorm	The Wild Broom begins with the depiction of the slopes of Vesuvius brightened exclusively by a wild broom shrub, solitary in the scenery. After some impressive stanzas (against false notions of progress; a description of the cosmic space from petrified Mount Vesuvius after a massive lava eruption, a dramatic scenery of an anthill disrupted by falling fruit), the poem ends with the broom again, its fragrant shrubs embellishing the deserted countryside

(continued)

Table 1.
The selected Leopardi
essays and poems

Table 1.

Type	Essay	Poem	Poem
Notable points	<p>The world proceeds even in the absence of humanity. Without calendars, the days can be counted thanks to the course of the moon</p> <p>Humankind has become extinct partly by waging wars against each other, partly by being idle, partly by leading disorderly lives, partly by harming nature and ruining their existence</p> <p>All animal species believe that the world was created for them</p> <p>More than any other species, it is man who believes that the world was created for him, and that it is therefore his property. Man refers to everything that exists and happens in nature to himself, so much so as to feel master even of species unknown</p> <p>Humankind thinks that even the universe is his prerogative, but now that man is extinct, we should not believe that the planets have stopped turning and are mourning for him</p>	<p>Human life is nothing more than a frantic journey towards death</p> <p>The moon is intact, in the sense that it reveals a substantial disinterest in the shepherd's questions, but fully aware of the dynamics that govern human events, despite the silence and apparent indifference</p> <p>Having raised his eyes to the celestial vault, the shepherd becomes desolately aware of the immensity of the cosmos</p> <p>The shepherd does not know what benefit this boundless and proud universe brings, nor is he aware of the reason why stars and planets continue their coming and revolving</p>	<p>The broom is a gentle flower, which although aware of its fragility, does not shirk its destiny</p> <p>Nature is not a friend of humankind; on the contrary, the only possible form of true progress lies in a confederation of humans who, despite their unhappiness, support each other to survive</p> <p>Cosmos, anything but idyllic, offers the opportunity to resume the debate against optimistic ideologies, believing in an absurdly anthropocentric vision of the world that humankind was designed to dominate the universe</p> <p>Nature, in its substantial indifference to earthly affairs, cares neither for man nor for ants, guided by a benevolent design</p> <p>The universe is guided by the mechanistic aspects of nature aimed at perpetuating existence in a long process of birth, development, and death, without being inspired by a benevolent design aimed at making the individual happy, whether animal or human</p>

Source(s): Table created by authors

- (1) The idea that nature is an *alter* with respect to humankind (code: “A”, as “alter”)
- (2) The tension between human governance and nature (code: “T”, as “tension”)
- (3) The extreme consequence of human governance that does not take nature into account (code: “EC”, as “extreme consequences”)
- (4) The idea that there is space for human collaboration that must necessarily take into account the relationship with nature, namely the concept of *cura* and natural contract (code: “C”, as “cura”).

The tone of the poems and essays, which is elusive, evocative and not always immediately intelligible with a literal interpretation, word by word, develops and argues its reasoning through, among other things, rhetorical figures and linguistic juxtapositions. Thus, the aforementioned codes in Leopardi’s work are not necessarily to be found in specific words of sentences or verses, but rather emerge from a holistic and comprehensive interpretation of the verses and sentences as a whole. Accordingly, the unit of analysis (Milne and Adler, 1999) is a sentence/verse or their aggregation based on meaning.

We coded the four works by validating the coding among the researchers and discussing inconsistencies to arrive at a common final code (O’Dwyer, 2004). An example of the coding is shown in Table 2.

Based on this methodology, the next section presents the results of the analysis, linking the poet’s thought to the dilemma of who speaks for nature. We then offer a discussion that relates the analysis of Leopardi’s thought to the SEA corollaries.

5. Leopardi’s thought addressing the dilemma: who speaks for nature?

The essays selected for our analysis clearly show that Leopardi’s philosophical poetry portrays nature as an *alter*, an extraneous subject that lives its course of time separately from human beings, “The stars and planets still rise and set; nor have they gone into mourning” (Leopardi, *Dialogue between an Elf and a Gnome*, first ed. 1824, ed. 2016, p. 30).

Code	Source	Line	Example
A	Dialogue Nature and Icelander	8	(Icelander speaking) I am a poor Icelander, fleeing from Nature; I have fled from her ever since I was a child, through a hundred different parts of the world, and I am fleeing from her (e.g. Nature) now
T	Poem Night Song	22–29	And old man, gray, infirm,/Half-clad, and barefoot, he,/Beneath his burden bending wearily,/O’er mountain and o’er vale,/Sharp rocks, and briars, and burning sand,/In wind, and storm, alike in sultry heat/And in the winter’s cold,/His constant course doth hold
EC	Dialogue Elf and Gnome	17–20	(Gnome speaking) But how is it these rogues (e.g. men) have disappeared? (Elf speaking) Some killed themselves with fighting; others were drowned in the sea; some ate each other: not a few committed suicide[. . .] In short, they have arrived at their end, by endeavoring, as long as they lived, to violate the laws of nature, and to go contrary to their welfare
C	Poem Wild Broom	146–155	If such thoughts were revealed/to the crowd, as they used to be,/ along with the horror that first/brought men together in social contract/against impious Nature,/then by true wisdom/the honest, lawful intercourse/of citizens would be partly renewed,/and justice and piety, would own/to another root than foolish pride

Table 2.
Examples of content
analysis and coding

Source(s): Table created by authors

This separation between man and nature is taken to extremes in Leopardi's work by means of a fascinating artifact: the poet gives nature its own voice, and this voice is in profound contrast to those of the humans in dialogue with it. The following exemplifies the voice of nature and its separation from humans:

Thinkest thou then that the world was made for thee? It is time thou knewest that in my designs, operations, and decrees, I never gave a thought to the happiness or unhappiness of man. If I cause you to suffer, I am unaware of the fact; nor do I perceive that I can in any way give you pleasure. What I do is in no sense done for your enjoyment or benefit, as you seem to think. Finally, if I by chance exterminated your species, I should not know it (Leopardi, *Dialogue between Nature and an Icelander*, first ed. 1824, ed. 2016, p. 51).

Moreover, Leopardi seems to anticipate the dilemma that scholars of various disciplines have recognized in the Anthropocene (Lövsbrand *et al.*, 2015; Bebbington *et al.*, 2020; Ceccagnoli, 2019): the fact that nature cannot speak with its own voice. For Leopardi, poetry and poems are occasions to express his philosophy of nature and give it words.

In this philosophical vision, humans are portrayed as thinking that they can use nature to satisfy their needs, as if nature were a pure commodity (Martineau and Lafontaine, 2019). In Leopardi's essays, nature accuses humans of appointing themselves as "master of all things". The following excerpts are significant:

What do you seem like, then, in my thoughts, O children of mankind? And mindful of your state here below, of which the ground I stand on bears witness, and that, on the other hand, you believe that you've been appointed the master and end of all things: and how often you like to talk about the creators of all things universal, who descended to this obscure grain of sand called earth, for you, and happily spoke to you, often (Leopardi, *The Wild Broom*, first ed. 1845, ed. 2003a, pp. 45-46).

The idea expressed in these verses is that humans are mastering the planet, and this introduces a governance issue, with the words of nature challenging human governance of the planet. This conception is exacerbated in the following passage, where humans are seen as governing nature as if at their service:

I do not wonder at that, since they (men) not only imagined the things of the world were at their service, but they also regarded them as a mere trifle compared to the human race. They called their own vicissitudes "revolutions of the world", and histories of their nations "histories of the world", although the earth contained about as many different species of animals as living individual human beings. Yet these animals, though made expressly for the use of men, were never conscious of the so-called revolutions of the world (Leopardi, *Dialogue between an Elf and a Gnome*, first ed. 1824, ed. 2016, p. 29).

These passages again show the lack of recognition of nature as otherness, with its own needs and rights. In this excerpt, anyhow, the fact that humans do not recognize any other agent on the planet except to be at their service legitimizes their governance. For the argumentation of this paper, it is worth noting that the idea of humans appointing themselves as masters and justifying their position in relation to nature is in line with capitalist thinking (Deegan, 2013) and its accounting frameworks.

Leopardi emphasizes that humans neglect the fact that nature has its own rights and rules, which do not necessarily follow those of humanity that claims to govern it. In the thought of the author, the respect of a natural order is essential for the preservation of the universe, as the following words show:

Thou forget that the life of the world is a perpetual cycle of production and destruction, so combined that one works for the good of the other. By their joint operation the universe is preserved (Leopardi, *Dialogue between Nature and an Icelander*, first ed. 1824, ed. 2016, p. 52).

This vision coincides with the fact that the overexploitation of natural resources occurring in the Anthropocene (Lövsbrand *et al.*, 2015; Bebbington *et al.*, 2020; Ceccagnoli, 2019) endangers

the preservation of the planet. Leopardi seems to be aware of the disastrous consequences of an anthropocentric view and warned about them. Taking these consequences to an extreme, Leopardi imagines the end of human life on earth. Various excerpts from the selected works reveal the author's deep concerns for the future of the planet:

Yet now that they are all gone, the earth is none the worse off. The rivers still flow, and the sea, although no longer used for navigation and traffic, is not dried up (Leopardi, *Dialogue between an Elf and a Gnome*, first ed. 1824, ed. 2016, p. 30).

Whilst they discussed these and similar questions, two lions are said to have suddenly appeared. The beasts were so enfeebled and emaciated with hunger that they were scarcely able to devour the Icelander. They accomplished the feat, however, and thus gained sufficient strength to live to the end of the day. But certain people dispute this fact. They affirm that a violent wind having arisen, the unfortunate Icelander was blown to the ground, and soon overwhelmed beneath a magnificent mausoleum of sand. (Leopardi, *Dialogue between Nature and an Icelander*, first ed. 1824, ed. 2016, p. 52).

In both these excerpts, Leopardi's words put in evidence that the extreme consequence of human governance that does not take nature into account could be the extinction of humankind. Nature, in its eternal dynamics of life and death, is indifferent to man's ultimate fate and is not interested in his becoming. The extinction of the human species as described by the poet is therefore a consequence of nature's reaction to humans who have governed the planet without taking into account natural rules. Thus, in reaffirming its alienness, nature responds by protecting its own interests against human governance. In this sense:

Nature has no more love or care for the seed of man than for the ants: and if the destruction of one is rarer than that of the other, it's for no other reason than that mankind is less rich in offspring (Leopardi, *The Wild Broom*, first ed. 1845, ed. 2003a, p. 47).

In the Anthropocene literature (Lövbrand *et al.*, 2015; Bebbington *et al.*, 2020), the natural equilibrium has been altered by humankind, giving rise to reactions such as climate change. The fact that nature cannot speak to express its disagreement with human governance of the planet may lead to a strong, powerful reaction on the part of silent stakeholders. Nature's reactions are to protect its interests, and in doing so, it does not care about humans.

So, indifferent to man, and the ages/he calls ancient, and the way descendants/follow on from their ancestors, Nature, always green, proceeds instead/by so long a route/she seems to remain at rest. Meanwhile empires fall, peoples and tongues pass: She does not see (Leopardi, *The Wild Broom*, first ed. 1845, ed. 2003a, p. 49).

Nature cannot speak, but it can act, and when it acts, it does not care about those who have a voice (humans) but have no regard for natural interests: it is a matter of self-interest, of protecting equilibrium and the balance of power governing the relationship between nature and humans. The proposal of a natural contract (Ferri, 2019) as a solution to the antagonistic relationship between nature and humans raises a question about the models of governance (Hernandez, 2012; Contrafatto, 2014; Mathevet *et al.*, 2018).

Nevertheless, Leopardi focuses on humans, and his philosophy expresses extreme disillusionment with the possibility of giving meaning to the human condition, as these words exemplify:

Such is the human condition, inviolate Moon. But you who are not mortal, care little, maybe, for my words. Yet you, lovely, eternal wanderer, so pensive, perhaps you understand this earthly life, this suffering, the sighs that exist: what this dying is, this last fading of our features, the vanishing from earth, the losing all familiar, loving company. And you must understand the why of things, and view the fruits of morning, evening, silence, endless passing time. (Leopardi, *Night Song of a Wandering Shepherd in Asia*, first ed. 1831, ed. 2003b, p. 20).

Leopardi's focus on humans is not limited to depicting despair and abandonment to which nature is indifferent, on the contrary, the author calls for humankind to face the issues of establishing equilibrium in the relationship with nature. These moving words are emblematic:

They call her enemy: and consider the human race to be united, and ranked against her, from of old, as is true, judge all men allies, embrace all with true love, offering sincere, prompt support, and expecting it in the various dangers and anguish of the mutual war on her (Leopardi, *The Wild Broom*, first ed. 1845, ed. 2003a, p. 43).

Ferri (2019) proposes a contemporary reading of these Leopardi verses, emphasizing not the antagonistic relationship between humans and nature, but the call for a social contract that can govern their different instances. This understanding embeds the idea of a natural contract that gives nature the dignity of an agent capable of acting as a counterpart to humans (Mathevet *et al.*, 2018).

In conclusion, Leopardian scholars argue that the recognition of nature's alienness can be interpreted as the need to conceive both a social and a natural contract, thus balancing the needs of profoundly different stakeholders whose interests may conflict (Ferri, 2019).

6. Discussion

Leopardi's complex, articulated, and agonistic vision challenges the naive, unnecessarily bucolic stance of representations of the human-nature relationship, which must be uprooted when the latter is seen as a beneficent entity, mother and positive subject. Leopardi never idealizes nature, instead constituting a "harsh arrangement for individuals of every species, an incessant struggle and battle" (Harrison, 2019, p. 126).

At the heart of this work are the challenging, intense, insightful concepts that Leopardi has passed down to us. Nature, benevolent or not, is beyond human control, it is an *alter*, a different subject, a stakeholder with its own interests that are arguably, and increasingly in the Anthropocene (Löwbrand *et al.*, 2015; Bebbington *et al.*, 2020; Ceccagnoli, 2019), contrary to those of humans.

The recognition of nature's *alienness* with respect to humankind is related to the accounting corollaries (accounting frameworks and disclosure/operationalization) of the dilemma mentioned in the literature review section of this paper.

Therefore, we next situate Leopardi's philosophical conception of the relationship between humans and nature within the SEA debates and then we examine how the *status quo* in the field of non-financial reporting can be challenged by the implications of Leopardi's thought and how SEA studies could be enriched.

Scholars have recently discussed the potential (and negative) impacts on natural capital of thinking about and measuring nature using current accounting systems (Cuckston *et al.*, 2022). A more holistic and comprehensive approach is needed to address the urgency and complexity of changing the status quo of SEA (Sullivan and Hannis, 2017), as well as the development of multidisciplinary views that encompass the complexity of the issue (Carnegie and Napier, 2017; Espinosa and Porter, 2011; Bebbington *et al.*, 2020; Richard, 2022). In this regard, the emergence of non-financial reporting as an important development of the traditional accounting system is an opportunity to recognize nature's alienness and to give it voice.

In any case, non-financial reporting is fragmented among different regulatory bodies and standards, including the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), European Sustainability Reporting Standards (ESRS), International Sustainability Standards Board (ISSB), various national standards and laws (Adams *et al.*, 2021; Abela, 2022; Abhayawansa, 2022). Even in the context of one of its

metamorphoses (integrated reporting), it is not immune to criticism, especially on the issue of natural capital and the environment (Boiral, 2016). In fact, the currently dominant SEA approaches, some of which are becoming mandatory due to new regulations (Adams and Cho, 2020; Adams *et al.*, 2021), seem to perpetuate the accounting tradition based on the predominance of a single stakeholder with a voice, the investor, over others. This supports the idea that sustainability is only relevant if it is financially visible (Kamp-Roelands, 2015).

The main criticism of existing SEA frameworks is that they do not truly integrate sustainability information, but merely add details about different forms of capital to financial information (Nicholls, 2020). Therefore, there are still open questions, both ontologically and pragmatically.

For example, the notion of natural capital (is it an asset or a liability?) and its necessary and inevitable translation into numerical-monetary terms (Richard, 2022) belong to the first category (ontological), as well as the notion of boundaries and control within the accounting frameworks (Antonini *et al.*, 2020; Abela, 2022).

The second type of question (pragmatic) involves the need to broaden the scope of stakeholders so as to include the stake implicitly held by the natural environment (Laine and Vinnari, 2017; Rodrigue and Romi, 2021). But, who will speak for the rivers, the blue jays, and the earth? And will our future generations, for whom the capital must be preserved, have a voice?

By focusing on the distance between humans and nature, Leopardi's philosophy inspires meditations on the shortcomings of the current non-financial reporting frameworks, and thus becomes a resource for their effective modification in the future (Cho *et al.*, 2015; Michelin *et al.*, 2016; Higgins *et al.*, 2020; Jauernig and Vladislav, 2019). The distance between humans and nature is also reflected in existing accounting solutions, which mainly interpret reality through monetary metrics (Rambaud and Richard, 2015), whereas qualitative and quantitative parameters and different skills and competencies (Carnegie and Napier, 2017; Espinosa and Porter, 2011; Bebbington *et al.*, 2020; Pesci *et al.*, 2023; Richard, 2022) are essential to encompass both perspectives of the complex human-nature relationship.

Furthermore, Leopardi's philosophy suggests that it is necessary to listen to the voice of nature, which in accounting terms could mean developing accounting from an alternative point of view to that of human organizations, namely that of nature. Indeed, the current frameworks and the idea of their development as proposed thus far (Nicholls, 2020) always adopt the perspective of human organizations. In this respect, the double-entry system, even when extended to the recognition of credited liabilities associated with the exploitation of nature (Rambaud and Richard, 2015; Richard, 2022), does not find an opposite debited account in the statements of the stakeholder (nature) to which organizations are indebted. Hence, the values associated with the exploitation of nature are calculated by individual organizations, without the creditor being able to speak and verify the correctness of these values with its own statements. This *status quo* characterizes all the current proposals and frameworks for extending measurement to non-financial items, such as GRI and ISSB. Although these frameworks have developed measures and conceptual ideas to extend accounting to non-financial items, the values disclosed are calculated by the organizations themselves. This fact is at odds with the recognition of the importance of counterparts in defining values in accounting (IFRS Foundation, 2011). Indeed, accounting systems based on the power of the double-entry methodology are based on the recognition of a counterpart. The lack of recognition of the *status quo* of counterpart to nature affects the possibility of double-checking the values recorded by humans. This issue, even though not sufficiently addressed in the literature, has generated many of the arguments used to strongly criticize non-financial accounting and reporting (Laine and Vinnari, 2017; Vinnari and Vinnari, 2022; Michelin *et al.*, 2016). In the *status quo* of current SEA frameworks, nature does not exist in its own right, but as a projection (if not an appendix) of humans. Additional efforts are needed to develop

frameworks from the point of view of nature as an *alien* that requires its own statements, measures, and values to double-check those recorded by human organizations.

Leopardi's vision emphasizes the otherness and indifference of nature toward humans (represented by the Icelander) through the power of Vesuvius, which does not care about humanity and other species: "Nature has no more love or care for the seed of man than for the ants: and if the destruction of one is rarer than that of the other, it's for no other reason than that mankind is less rich in offspring" (Leopardi, *The Wild Broom*, first ed. 1845, ed. 2003a, p. 47). Thus, nature proceeds as an entity in its own right and sufficient in and of itself, without concern for a notion of justice as intended and elaborated by humans (Walker, 2016; Parker and Kohlmeyer, 2005; McKernan and MacLulich, 2004) and establishing its justice (climate change). It is here that the concept of the Anthropocene gains momentum (Bebbington *et al.*, 2020), as humans neglect to give voice to less powerful stakeholders, such as the environment, animals, and the planet (Vinnari and Vinnari, 2022; Brown and Dillard, 2015). However, it is also true that a full reconnaissance of the silent voices of minorities in terms of the representation and governance of voiceless stakeholders is still a long way off.

Acknowledging that nature does have a voice, there is an urgent need to conceive revolutionary rather than evolutionary proposals (Pesci *et al.*, 2023), including the development of a double-entry system that recognizes all silent stakeholders, such as nature, as counterparts that must contribute to the evaluations of different items. In this regard, the potential of a double-entry system, which implies double checks (internal and external), should be fully exploited by developing an accounting framework that also captures nature's point of view. Therefore, a disruptive change in the valuation of corporate assets and liabilities (Gray, 2002; Nicholls, 2020), capable of overcoming the current limited boundaries of the reporting entity, and a new notion of liabilities, while also taking into account the needs of future generations, seem inevitable. Consequently, a change as described above should address an innovative and comprehensive principle of conservation (and not just restoration). As long as nature creates, destroys, regenerates, and creates again, human beings must have the courage and tenacity, both scientific and technical, to preserve what is not theirs (precisely, nature) with a view to passing it from one generation to the next.

It is certainly true that the regulatory landscape, especially in Europe, will evolve significantly and expand the playground to double materiality, thus to the explicit, parallel, and multifocal inclusion of stakeholders at large (Burchell *et al.*, 1985; Gray, 1994, 2002; Gray *et al.*, 1997; Cooper *et al.*, 2011; Bellucci *et al.*, 2018; Richard, 2022). But again, the double materiality, like reporting and frameworks, is conceived only from the human perspective that determines what is considered material.

Moreover, a profound reflection on the complexities and possible logical contradictions arising from challenging the accounting *status quo* and recognizing nature's dignity as an autonomous stakeholder is unavoidable. The recognition of nature as an autonomous stakeholder in fact implies a mechanism of representation in which humans are called to give a voice to another subject (Löfbrand *et al.*, 2015; Hernandez, 2012). Accounting frameworks, disclosure, and operationalization have been developed using codified rules that trigger agency problems (Hill and Jones, 1992), which may be amplified when agents represent a stakeholder who cannot speak.

In the end, nature is an autonomous stakeholder, outside the sphere of human beings, and the main questions related to a necessary mechanism of representation are: Who will represent it as a stakeholder? Will it be for future generations?

Recognizing that developing a different framework for giving nature a voice means defining who might be the human subject who, through a human system such as SEA, can act as a representative of nature and give it a voice. It also means raising the question of governance where an agent (Hill and Jones, 1992) who acts as a steward (Mathevet *et al.*, 2018) could be appointed as the guardian of nature's interests. In this regard, some forms of

indigenous governance have shown their effectiveness in conserving the commons over time (Costa *et al.*, 2023). The strong ties that some communities have developed with nature promote a process of identification that makes them stewards interested in protecting nature (Pesci *et al.*, 2020).

The experience of governing the commons has sometimes also been translated into basic forms of accounting, which seem able to partly overcome the problems related to the misuse of SEA disclosure (Contrafatto *et al.*, 2015; Laine and Vinnari, 2017). Indeed, it seems that communities with strong ties to nature are more inclined to adopt a dialogical approach to accounting and mitigate impression management tactics (Vinnari and Vinnari, 2022; Brown and Dillard, 2015). These experiences could become a basis for designing new forms of governance and accounting from nature's perspective.

We argue that the substantive adoption (Durand *et al.*, 2019) of SEA, leading to meaningful disclosure and true operationalization, could be the result of recognizing nature's dignity as an autonomous stakeholder, then appointing a steward to manage its interests and, consequently, developing frameworks to show values from nature's point of view and not just from that of the organizations that exploit it, and finally adopting substantive disclosure.

In addition, Leopardi's works beautifully depict the inner meaning of complexity: the perennial cycle of growth, destruction, and regrowth that involves nature and all the beings that inhabit it, far from outlining the relationship between nature and man in a childish, weak, affected, and fragile lyricism, instead expresses the ultimate and true meaning of living in nature, peaceful, human fellowship, aware of human finitude and the beauty of resistance, passing from one to the other the torch of life temporarily lent to us. In so doing, human beings, in a continuous and effective succession of roles, become at the same time the output, the outcome, and the input (the fate of the Icelander, for example) of the eternal cycle of life and nature. This calls into question our understanding of how generations of humans are bound to each other in a constant and active coalition, so that it becomes inescapable to express the debt that present generations owe to the next in terms of the consumption and destruction of resources, including natural and social (Lövbrand *et al.*, 2015).

In sum, avoiding the extreme consequences of misunderstanding nature as an autonomous stakeholder, which Leopardi foresaw in terms of the possible extinction of the entire human race, may depend on the decision to appoint stewards (Mathevet *et al.*, 2018) who give voice to nature through new forms of accounting and disclosure based on a contract with nature. As Ferri (2019) suggests, Leopardi's philosophy of nature warns of the need not only for a social contract, but also for a natural contract that regulates the relationship between humanity and nature, in other words, "to rethink the relationship between humanity and nature in terms of a legal contract, which involves connection, interdependence, and a balanced relation" (p. 68). The idea of a natural contract could be put into practice by identifying who could be appointed as a steward and defining the responsibilities that this agent should have. Adopting such an approach is of primary human interest because "whereas nature – the earth and the cosmos – can exist and have meaning without humanity, as in *Dialogue between an Elf and a Gnome*, human existence can only be understood as it unfolds within nature" (Ferri, 2019, p. 81). How to recognize nature as an autonomous stakeholder and to develop statements from its point of view, so that values can be agreed upon by the two counterparts (humans and nature), is a complex issue that must necessarily be faced in future to operationalize our proposals.

7. Conclusion

The Anthropocene literature (Bebbington *et al.*, 2020), starting from the natural sciences, extends to social science and its concerns about the fact that nature does not speak (Lövbrand *et al.*, 2015). As such, this paper builds on this research stream and follows a well-established

tradition among critical accountancy scholars of drawing on and fertilizing ideas from other disciplines (Lehman, 1999; Spence, 2009).

The role of philosophy herein is crucial because it has the merit of being rooted in logic, but when expressed in poetic terms (Hines, 1988; Morrison, 2021), it can touch the deep strings of emotion that move people to action to change not only what they see and recognize as lacking, but also what they perceive as unjust and in need of improvement. Thus, this paper offers a contribution to the critical stance of SEA studies by reiterating Leopardi's philosophy as a powerful call to rethink the relationship between humans and nature, recognizing the otherness of nature as a stakeholder claiming its independence.

Recognizing the need to root the foundations of SEA in inspiring thoughts and feelings, we have commented on some passages of Giacomo Leopardi's work in a multidisciplinary logic, with an emphasis on the complex issues that SEA must face in its future endeavors.

Leopardi challenges the simplistic anthropocentric view of humankind (Ceccagnoli, 2019; Harrison, 2019), but his eyes see and reach much further. Through his work, and the comments of the scholars who studied his thought, we understand the finiteness of humanity, the importance of coming to terms with nature (Binni, 2012; Ferri, 2019), the need to develop governance and accounting from nature's perspective, and the meaning of human existence as a deep-rooted and profound network of solidarity.

The contributions of this paper are at the intersection of the literature on the Anthropocene (Bebbington *et al.*, 2020) that mobilizes environmental stewardship (Mathevet *et al.*, 2018), the SEA literature on stewardship (Contrafatto, 2014), and the literature that studies Leopardi as a philosopher of nature proposing a natural contract (Ferri, 2019).

By emphasizing that nature is something other than human, this paper contributes to highlighting the urgency of a radical revolution (Gray, 2002; Richard, 2022) of the current SEA approaches, where substantial changes are required to answer the complexity of the dilemma: Who speaks for nature?

This intellectual shift challenges the current accounting paradigms, which in this paper are recalled as corollaries (accounting frameworks and disclosure/operationalization) to the main dilemma and their links to governance issues.

Consequently, the two main contributions of our paper are, firstly, the assertion that the consequence of considering nature as an autonomous stakeholder implies for the design of a natural contract that establishes a stewardship mechanism for the governance of the commons; secondly, the necessity to develop accounting frameworks from nature's perspective, which entails developing nature's statements as those of a counterpart of human organizations.

The relevance of Leopardi's work to the SEA themes is therefore manifold: from understanding the limited, weak, and contested role of human beings within the expansion of nature, to the agonistic and dissenting logic that guides the multiform and polyvocal experience of multiple actors in the stakeholder arena, to the solidarity of experiences between human and non-human beings (but also sentient), in the context of the complete and intricate life of Gaia, each unique as an individual but polymorphous in all its complexity.

The preservation of our existence, in the perspective of the continuity of our and all species, also implies preserving and respecting nature, not so much as an infantile element of affection and sympathy (a simplistic, trivial, exalted, and untrue concept of nature), but as an element that permeates us, that is indifferent to us, but with which we must come to terms and forge preservation and restoration alliances (Bebbington and Rubin, 2022).

A truly revolutionary approach to accounting requires not only an essential new technical approach but also an understanding of the narrowness of our species, human solidarity, and the (unavoidable) means for the continuation of humanity (Leopardi, first ed. 1824, ed. 2016). Thus, this revolutionary approach should be translated into practice by overcoming the currently dominating isomorphic approach in the SEA operationalization (Pizzi *et al.*, 2024) that induces companies to produce additional information whose informative value remains

scarce. In practice, if nature were considered a counterpart, it should produce its own records that would make it possible to double-check the records done by companies. This possibility could limit companies' opportunistic behaviors and camouflaging attitudes. Considering also that developing a double entry system from the point of view of nature entails appointing a steward who should take care of nature, an evolution in the current political and regulatory context is required. A similar evolution toward building and expanding institutions' duties toward representing nature could amplify the awareness of human beings concerning the alienness of nature and the exigency to give voice to it.

Future studies could shed light on the complex consequences of adopting a multidimensional view in measuring and defining SEA, while Leopardi's thought could help maintain a profound awareness of humanity's role in relation to the planet. Therefore, we call for additional interdisciplinary efforts (Rodrigue and Romi, 2021; Richard, 2022) in the field of SEA, believing that other disciplines, such as philosophy and poetry, could enable the continuous fertilization of ideas necessary to embrace SEA in all its complexity. Many questions remain unanswered, such as: How to solve the agency problems? What is the right approach to the measurements and metrics? Future studies could shed light on how to identify who might be appointed as stewards and how to contractually regulate the relationship between nature and humans. Similarly, further attention should be given to the operationalization of an accounting system capable of representing nature as a counterpart. These endeavors involve many complexities, so other studies should complement our argument. Thus, rooting the foundation of SEA in the relationship between nature and humans means recognizing the need to interrogate the key concepts we consider in our disciplines, in full awareness of their complexity.

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Corresponding author

Caterina Pesci can be contacted at: caterina.pesci@unitn.it

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