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Reformists, Decouplists, and Activists: A Typology of Ecocentric Management

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Abstract

Ecocentric management has grown in interest in business sustainability research, driven by recent debates on sustainability-as-flourishing and novel nature-based business approaches. While relevant and promising, examination and explanations remain anchored in conventional dualistic thinking and piecemeal logics. In this article, we seek to understand *what conditions or combination of conditions enable the formation of ecocentrism in business management*. Drawing on deep ecology and ecocentric philosophy, we develop a conceptual framework for ecocentric management, comprising ecological sensing, envisioning, and enacting. Leveraging this framework and fuzzy-set qualitative comparative analysis, we map the responses of 160 small business owners and managers in Chile. Our analyses reveal three configurations of conditions, forming a typology of ecocentric management: *Market Reformist, Legitimated Decouplist, and Self-Centered Activist*. The article offers a new conceptual apparatus and systemic characterization of ecocentrism in business sustainability. It shows what matters and when for the formation of ecocentric thinking and decision-making in management.

Keywords

ecocentrism, deep ecology, typology, nature-based management, configurational analysis, Chile

Introduction

Research on nature-based management has grown in interest at the intersection of environmental and organization studies, mostly driven by recent debates on sustainability-as-flourishing (Ehrenfeld & Hoffman, 2013; Schaefer et al., 2015) and novel discussions regarding the role that businesses might play in regenerating and sustaining natural ecosystems (Branzei et al., 2017). In practice, new breeds of enterprises are advancing sustainability efforts by building stronger links with nature. This includes sustainable enterprises promoting new forms of environmental accountability (Muñoz et al., 2018), circular business models (Schneider & Clauß, 2019), and industrial symbiosis (Walls & Paquin, 2015). Also, "neo-farmers" (Vlasov, 2019) and "carbon cowboys" (Byck, 2020), who are leading revolutionary movements aimed at tackling climate change and restoring nature through holistic business activities (Branzei et al., 2018; Good & Thorpe, 2019).

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To advance this debate and develop an understanding of these emerging phenomena, authors have called for a deeper engagement with alternative theoretical approaches (Jennings & Hoffman, 2019) and a departure from anthropocentric values and thinking (Heikkurinen et al., 2016). Ecocentrism (Lynch & Norris, 2016; Purser et al., 1995) offers a way forward as it defies the linear, siloed, and dualistic understanding of human–nature relationships, which still prevails in environmental management and business sustainability more broadly (Heikkurinen, Ruuska, et al., 2019). By situating nature at the center, ecocentrism invites a rethinking of the current understanding of human needs and freedoms facing ecological systems. It also challenges the modern lifestyle and the role that markets and businesses may play in the pursuit of sustainability ambitions.

Despite the propelling force of early efforts (e.g., Purser et al., 1995; Shrivastava, 1995; Whiteman & Cooper, 2000, 2011), most of the current research remains scattered, providing piecemeal explanations as to why and how firms make decisions with nature at the core. These include relational agency (Heikkurinen, Clegg, et al., 2019), environmental ethics (Mikkelson & Chapman, 2014), problem awareness and values (Nordlund & Garvill, 2002), ecological philosophy (Tyburski, 2008), ecocentric reflexivity (Allen et al., 2017), meaning making (Vlasov, 2019), transformational thinking (Hay, 2010), relatedness (Good & Thorpe, 2019), among others. While relevant, this scenario creates a theoretical puzzle and a holistic picture is yet to emerge. Moreover, most work is still conceptual in nature (e.g., Heikkurinen et al., 2016; Heikkurinen, Ruuska, et al., 2019) or grounded in a small number of exemplar cases (e.g., Slawinski et al., 2019; Vlasov, 2019). These are necessary to lay the ground and inspire new developments; however, management scholarship is yet to develop a comprehensive empirical understanding of what leads organizations to make decisions with nature at the center. In this study, we ask two interrelated questions: *What conditions or combination of conditions enable the formation of ecocentrism in business management?* and *What ecocentric types emerge as a result?*

Our examination of ecocentrism is informed by deep ecology (Naess, 2005, 1973). It emphasizes the inherent worth of living beings and calls for changes to modern lifestyle and the economic-centric view that dominates business management and environmental management more specifically. Given the many possible antecedents for the formation of ecocentrism, we examined and organized the literature on ecocentrism in management through the lens of Gosling and Case's (2013) ecocentric framework. Leveraging their ideas on social dreaming and future imagining, we elaborate a model that organizes potential explanations of ecocentrism formation into three categories, reflecting ecological sensing, envisioning, and enacting. Using configurational comparative analysis, we mapped the responses of 160 environmentally-minded small business owners and managers in Chile, who took part in the 2018 National Survey on the Environment and Climate Change. We focus on this group since they tend to have more steering capacity than their counterparts in large corporations, which are mostly driven by shareholders' interests and professional boards. In SMEs, individual thinking is likely to translate into organizational actions. Our analyses reveal three configurations of conditions explaining the formation of ecocentrism in a business management context. They form a typology of ecocentric management comprising three types: *Market Reformist, Legitimated Decouplist*, and *Self-Centered Activist*. Our findings also show that ecocentrism can emerge in the absence of factors so far assumed central within ecocentric ethics and philosophy and in the presence of combinations of factors so far neglected in business sustainability research.

Our work makes several contributions. First, we offer a conceptual framework and systematic characterization of ecocentric thinking and decision-making in business sustainability. Second, we provide an empirical typology comprising three distinct approaches to ecocentrism in business management, each of which constitutes a theoretical statement. They reveal that ecocentrism is indeed different, showing the unique ways in which it can materialize and how it distinctively departs from traditional anthropocentric logic. We show what matters and when for

the formation of a more radical approach to environmental thinking and decision-making. In doing so, we advance sustainability-as-flourishing research and emerging streams of research, such as strongly sustainable business models, regenerative organizing, and holistic management. The article is structured as following. First, we review literature on ecocentrism in business sustainability, reflect on deep ecology as an alternative theoretical perspective and map out potential antecedents. After introducing our configurational approach, sample, and data, we present the results and explain how, combined, they create a typology of nature-based management. We conclude by discussing contributions to business sustainability literature, limitations and directions for future research.

Theoretical Grounding

Ecocentric Management

Ecocentrism has grown in importance across the social (environmental) sciences, gaining traction in ecological economics, resource conservation, circular economy, sustainable entrepreneurship, and environmental ethics. At the core of ecocentrism is the idea that humanity is a subset of nature. Ecocentrism understands nature as a moral entity, with its own rights and value. It recognizes the inherent value of all life forms and ecosystems, irrespective of the utility they might have for humans. It thus rejects the conventional dualistic worldview, still prevalent in management practice, where humans and their activities remain separated from nature (Washington & Maloney, 2020). Not surprisingly, literature on ecocentric management is relatively scarce.

In management research, advocates of ecocentrism have called for a reconsideration of the human–nature relationship in the management of the firm (e.g., Heikkurinen et al., 2016; Shrivastava, 1995; Wolff, 1998). Underlying this criticism is the need to move away from anthropogenic business-as-usual, because it seems to value other life forms insofar as they are valuable to human well-being and wealth creation (Nordlund & Garvill, 2002; Vlasov, 2019), which is commonly seen as the underlying cause of the current ecological crisis.

The transition from anthropo- to ecocentrism is seen as essential to regenerate and protect ecosystems. It entails going beyond environmental management (Muñoz & Cohen, 2018), in terms of what the "environment–management" conjunction means in philosophical and practical terms. Philosophically, embracing ecocentrism requires adherence to biospheric egalitarianism. This means that, at the core of the business, there will be an equal recognition of the needs and rights of other species and ecosystems, and thus organizations have no superior value over nature. As such, one would expect to find ecocentric businesses demonstrating a coherent and respectful environmental behavior, constrained by the rights of nonhuman living beings (Nordlund & Garvill, 2002). This includes other ecosystems and environments, wilder and more distant to us, beyond the common conception of what counts as nature (Kortenkamp & Moore, 2001). Alongside the recognition of inherent value; ecosystem embeddedness and dependency are recognized as central premises in ecocentric management (Whiteman & Cooper, 2000). Here, like individuals themselves, organizations are seen as a subset of larger and complex ecosystems (Waddock & Kuenkel, 2020). Organizations depend on them for their activities and processes, and they are not the only source of intrinsic value (Heikkurinen et al., 2016).

While conceptually appealing, these businesses and their practices seem to remain in the periphery, perceived as radical environmentalists trapped in the world of permaculture, biodynamics, biomimetics, holism, and so on. It is not surprising then that mainstream management research has largely neglected these ideas. Theory and practice seem to widely embrace ecological systems and the services they provide (B. S. Thompson, 2018; van den Belt & Blake, 2015), but a more pronounced publicly-expressed deep ecology position tends to be, at best, dismissed

(Kopnina 2012). This creates a triple problem in any attempt to examine ecocentrism in business sustainability research and management scholarship more broadly. First, business sustainability research still places humans needs and freedoms at the core of the debate, restricting our view and potential explanation of the phenomenon. Second, the phenomenon—outcomes and antecedents—might be more complex than previously thought. Third, we lack an appropriate conceptual apparatus to deal with complex explanations of biospheric egalitarianism in business management. This requires crossing disciplinary boundaries (Shrivastava et al., 2013) and exploring a new approach in the delineation of outcomes and potential antecedents.

Reconsidering Outcomes: An Alternative View From Deep Ecology

Deep ecology is an ecological philosophy that emphasizes the inherent worth of living beings, regardless of their instrumental utility to human needs, and promotes the restructuring of modern human societies in accordance with such ideas. While seemingly disruptive, deep ecology does not seek a radical shift in fundamental values (Glasser, 2011). It rather proposes a reevaluation of the understanding of human nature within the environmentalist movement. This, since much more was needed in terms of environmental protection and conservation (Naess, 1973). In his seminal article, Naess (1973) stressed that " . . . ecologically responsible policies are concerned only in part with pollution and resource depletion. There are deeper concerns which touch upon principles of diversity, complexity, autonomy, decentralization, symbiosis, egalitarianism, and classlessness" (p. 95). Instead of focusing on the well-being of the individual organisms that an ecosystem contains, deep ecology values the ecosystem as a whole, which includes the well-being of its parts as well the properties of the ecosystem regarding biological diversity and ecological integrity (Mikkelson & Chapman, 2014). As such, Naess's ecological philosophy nurtured new ideas about humans and the natural world. His thoughts encouraged social dreaming on which an alternative ecological vision of the future was conceived (Tyburski, 2008).

Naess's ideas have regained prominence today facing climate change, as they offer a counter to current business approaches and ways of living, which are widely recognized as ecologically damaging (Heikkurinen et al., 2016). However, embracing deep ecology in business management requires a rethinking of the economics of business and the logics underlying environmental management. Borland and Lindgreen (2013) argue that the adoption of an ecocentric epistemology involves necessarily the development of an alternative business approach; one that brings natural ecosystems to the fore as the source of well-being for humans and other species, as well as the source of all products and services. Clark and York (2005) go one step further to argue that a departure from "industrialization as usual" is central to the deep ecology agenda, which involves fundamental changes to the prevailing economic-centric view that conceives the natural environment as a reservoir of resources available for human exploitation.

In this vein, deep ecology offers an alternative worldview, contrary to "managing the environment." In environmental management, nature is an external entity that can be manipulated and controlled for human benefit (Booth, 2013). Since dualism is rejected in ecocentrism and deep ecology, there is nothing to be managed or controlled. Deep ecology sees interactions between people and the environment as co-constitutive, where each element influence the other, that is, where people and organizations are not the same without the environment, and the environment is not the same without people and organizations (Booth, 2013). This lays the ground for ecological equality, which is both a central point of contention and a key principle of deep ecology (Jacob, 1994; Spash, 2013). A second principle (and point of contention) involves changes to the way modern human societies live, particularly concerning the current understanding of what human needs and rights are and allow humans to do. Advocates of deep ecology emphasize the need for moral restrictions aimed at rebalancing needs and rights between humans and nature. This requires limiting individual freedoms and protecting ecological rights and needs (Grey,

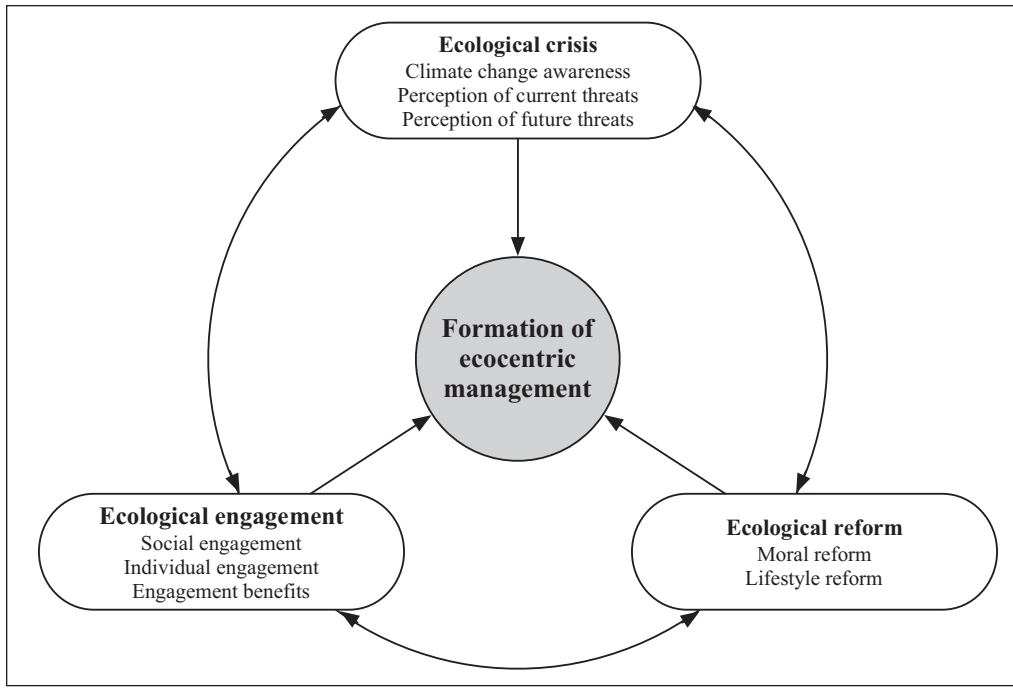

Figure 1. Map of conditions.

1993). While radical, these principles of equal rights and changes to modern lifestyle can resolve the intractable environmental sustainability tension of either to "economize the ecology" or to "ecologize the economy" (Clark & York, 2005; Drengson, 1995; Scerri, 2016).

Mapping Out Potential Antecedents

To answer our research question, we first need to explore and organize the range of possible conditions that can potentially explain ecocentrism in business management. Despite the theoretical relevance of deep ecology, its applicability to managerial practice remains problematic, lacking a cohesive framework to guide the identification and organization of antecedents. To address these issues, we leverage Gosling and Case's (2013) ecocentric framework and their ideas of social dreaming and future imagining. This, since ecocentrism involves individuals imagining alternative environmental futures and working toward paradigmatic changes. Facing the restrictions of modern rationalities, the authors propose these ideas as a new way of sensing, thinking, and talking about climate change. In their view, these ideas can trigger "non-anthropocentric sensibilities and organize responses to an impending crisis" (p. 705).

Gosling and Case (2013) articulate their arguments along three dimensions: (a) imagining climate change catastrophe, (b) new ethics and the role of dreaming–visioning, and (c) the collective seeing of the other side of the catastrophe. We organized our examination of potential antecedents leveraging these dimensions and derived three categories of antecedents, pertaining to sensing, envisioning and enacting, we label: *ecological crisis, ecological reform*, and *ecological engagement*. This represents a framework that can link different theoretical units into a coherent whole (Muñoz et al., 2020), thus central to our typology development efforts. In Figure 1, we provide a configurational framework showing elements and interdependencies.[1]

Ecological crisis refers to people's understanding of the causes and consequences of the ecological crisis, as well as reactions to it. There are two aspects to it. First, an awareness of our climate changing, which involves an appreciation of the degradation of natural ecosystems and biodiversity and also the potential shortages of critical resources (Lewis & Maslin, 2015; Molles, 2018; Steffen et al., 2015). Second, expressions of concern as to what an ecological crisis means for people's current and future well-being, as well as the effects of perceptions of threat.

Muñoz and Dimov (2017) argue that such perceptions influence business-related environmental action, as they increase moral commitment to act in the face the crisis, becoming drivers of proenvironmental thinking and action. In entrepreneurial contexts, both Patzelt and Shepherd (2010) and Hanohov and Baldacchino (2018) argue that entrepreneurs are more likely to discover sustainable development opportunities the greater their knowledge of the ecological crisis becomes, which is further augmented by perceptions of environmental threat and awareness of adverse consequences (Eller et al., 2019).

In a different vein, the literature suggests that environmental training and efforts to strengthen environmental awareness regarding ecological crisis can improve participation in environmental initiatives (del Brío et al., 2007), leading to long-lasting commitments (Cook & Seith, 1992; Perron et al., 2006; Rahman & Hughes, 2020). Looking at barriers to sustainability, Álvarez Jaramillo et al. (2018) found that lack the awareness of environmental issues restricts firms from integrating sustainability practices into the business structure and the adoption of strong sustainability more broadly (Bakos et al., 2019).

Environmentally aware consumers also play a role, as they demand businesses to be more environmentally-conscious, prompting, in turn, the development of proenvironmental initiatives, further transparency and stronger links between environmental and financial performance (Diehl et al., 2016; González-Rodríguez & Díaz-Fernández, 2020; Rahman & Hughes, 2020). These consumers are part of conscious consumer markets (Cohen & Muñoz, 2017), who value a lifestyle of health and sustainability and are generally more aware of human–nature relationships (Pícha & Navrátil, 2019). Borlu and Glenna (2020) complement this argument by pointing toward the role of local partnerships, where environmentally aware organizations, producers, and communities work together to visualize what a sustainable future might look like and engage in concrete actions to tackle climate change locally.

Pressure from stakeholders, legislation, and environmental groups also encourage the development of greater environmental awareness. This has led business managers, particularly in small organizations, to gradually move toward an ecocentric perspective, changing their business processes and environmental strategies (Gadenne et al., 2009). Perron et al. (2006) argue that environmental concern and awareness are at the core of proenvironmental action in business contexts, which derive from organizations that sense, dream, and transform the climate crisis into new purposes and ideas. If this is grounded in a more critical view on growth and productivism, environmental action can move beyond and reform anthropocentrism (Heikkurinen, Ruuska et al., 2019). This takes us to the next set of antecedents.

Ecological reform in ecocentrism involves the envisioning of philosophical and moral changes, propelled by a new environmental worldview (Zelenski & Nisbet, 2012). In ecocentrism, Tyburski (2008) argues, moral values represent a key driver regulating the relationships between humans and nature. Ethical principles and values, and a sense of environmental responsibility, are crucial for undertaking actions that lead to sustainability (Bakos et al., 2019; Tur-Porcar et al., 2018). Nordlund and Garvill (2002) emphasize that environmental values and personal norms, combined with problem awareness (of ecological crisis), positively influence proenvironmental behavior. This combination is important since solving ecological dilemmas requires higher forms of moral reasoning (Kortenkamp & Moore, 2001). In Nordlund and Garvill's (2002) view, people who give priority to collective or self-transcendent values are more willing to engage in different forms of altruistic, cooperative, or proenvironmental behavior than

people who give priority to individual or self-enhancement values. In a different study, Karpiak and Baril (2008) corroborated that indeed moral principles and values, central to ecocentrism, strongly predict respectful behavior.

Tezel and Giritli (2019) show that environmental values, beliefs, awareness, and proenvironmental behavior, all deeply integrated to the self, translate into workplace behavior and the individuals' managerial thinking and decision-making. Hay (2010) advances these ideas by connecting ecocentric philosophy to elements of personal development and transformational leadership, which involves the formation of an ecocentric worldview and a sense of ecological justice aiming at societal renewal (Washington & Maloney, 2020). These are essential elements in the formation of an ecocentric identity (Hay, 2010). This involves meaning creation through ecological imagination, which in turn fosters an ecocentric orientation and novel sustainability goals (Payne, 2010). Batavia et al. (2020) bring these elements together linking the strength of ecological envisioning and beliefs of inclusion to moral attitudes, intentions and proenvironmental behavior.

Envisioning is part of new environmental movements that promote lifestyle changes, particularly around consumption and (un)healthy living. Demands for deep reforms in lifestyle are signs of new ecological thinking that advocates in favor of a new ecological lifestyle of responsible consumption of locally sourced environmental products (Cholette et al., 2013). More radical consumers tend to reject the materialistic and reductionist lifestyle promoted by markets (Meissner, 2019) and consumption (Harris & Dacin, 2019). Their ecological beliefs and consumption patterns shape new identities based on consciousness, stabilization, and sharing. Manifestations include organic consumption, transformative proenvironmental behaviors, promotion of ecological activism and a green identity (Saraiva et al., 2020; Van Huy et al., 2019). Lifestyle reform ultimately involves an impulse for change in our understanding of natural resources (Sun et al., 2020), ageing in synch with nature (Zheng & Yang, 2019) and a new ecological identity (Longo et al., 2019; Smith, 2019). They all embrace biospheric egalitarianism, anticonsumption and limits to growth, which are constitutive parts of ecocentrism and deep ecology.

Ecological engagement refers to actions for change, social support guiding actions, and perception of benefits linked to such actions, so that action is not merely symbolic and a nonconducive revolution. Engagement is strongly related to individual awareness of local ecological problems (Cecconello & Koller, 2019), environmental attitudes and nature orientation (Otto & Kaiser, 2014). Indeed, Ernst et al. (2017) found that changes in the levels of environmental attitudes strongly predict concrete environmental actions. The latter involves decisive initiatives relating to e.g. environmental protection, environmental conservation and the adoption of ecological practices at organizational and industrial levels (Yen & Yen, 2012; B. Zhang et al., 2015), which can eventually mobilize structural changes in institutions and markets (Hirst & Brown, 1990). Good and Thorpe (2019) argue that such actions can strongly emerge from novel relations that mutually constitute organizational and natural phenomena, whereby organizations get entangled with nature (Muñoz and Cohen, 2017). This in turn can improve the performance of individual organizations and entire industries via inter-organizational collaborations (Kartadjumena & Rodgers, 2019). In this sense, individual engagement can have beneficial impacts at an aggregate level, particularly since it can guide long-term business objectives and influence social engagement (Mitra & Gaur, 2020).

The relationship with social groups and norms can move in both directions. As individual engagement mobilizes collective action, social support also enables individuals to engage and act. G. O'Neill et al. (2009), for example, argue that social context and culture are conducive to the creation of sustainable value in small firms. Likewise, consumption patterns and norms of conformity can affect the decision-making of small businesses toward engaging in environmentally responsible activities (Meek et al., 2010). Kornilaki and Font (2019) expand these ideas by

arguing that sociocultural and industrial norms firmly influence environmental behaviors toward ecological engagement and ecocentrism.

Engagement through decisive initiatives and social support are thought to deliver benefits. Environmental actions significantly influence ecological performance, consumer perception and subsequent purchase intentions (Li et al., 2017). Not surprisingly, evidence suggests that small businesses invest in environmental initiatives under the conviction that these can improve working conditions and compliance, and help redirect the business toward an ecocentric strategy (Masurel, 2007). In their study of small manufacturing firms, Andersén et al. (2020) found a strong relationship between green purchasing and growth, given the CEO's environmental orientation. Ren et al. (2020) also found a similar beneficial relationship. They show that CEO's ethical leadership and environmental commitment have an impact on green human resource management, ecological engagement, and environmental performance. Likewise, green HR practices can reinforce the organization's engagement to business strategy, green recruitment, and green training, having positive effects on sustainability (Yong et al., 2020). The list of studies showing a positive relationship between environmental performance and economic performance is vast. There is an overall agreement on that environmentallyactive firms, who are proactive or have already engaged in environmental action, have found that environmental protection can be an important source of competitive advantage (Lau et al., 2019).

Method and Data

Configurational Approach and Typology Development

Our research seeks to examine complex causal relationships between a set of theoretically organized conditions and the formation of ecocentrism. Typology development offers a way of organizing complex cause-effect relationships (Fiss, 2011), as the one delineated in our map of conditions (Figure 1). It allows us to simplify the complexity of the real world by pragmatically reducing an extensive set of features to a limited set relevant to ecocentric management. Typology development goes beyond simplistic classification systems. It involves "conceptually derived interrelated sets of ideal types . . . each of which represents a unique combination of attributes that are believed to determine the relevant outcome(s)" (Doty et al., 1994, p. 232). Therefore, far from viewing typologies as means for ordering and comparing groups of elements and clustering them into categories, we understand typologies as complex theoretical statements. These, unlike traditional linear or interaction models of causality, can accommodate multiple relationships between their constructs, thus considerable levels of causal complexity (Fiss, 2011).

To examine complex causal relationships and elaborate a typology that draws on principles of conjunctural causation and equifinality, we use fuzzy-set qualitative comparative analysis (fsQCA; Ragin, 2008). FsQCA is a set-theoretic method that allows for observing and analyzing complex causal relationships involving outcomes resulting from many possible potential antecedents and combinations thereof (equifinality). It enables making causal inferences based on the notions of causal sufficiency and causal necessity and is particularly well-suited for addressing research questions dealing with complex relationships (Misangyi et al., 2017).

Sampling and Data

Our data stem for Chile's IV National Survey on the Environment and Climate Change 2018, used by the Ministry of the Environment to assess and map the perception of citizens regarding the environment, their environmental behavior and their main environmental concerns. The survey informs policy around environmental responsibility, which involves minimizing the effects of people's behaviors on the environment and encouraging actions for environmental protection

and recovery. The survey design for the IV edition[2] draws on the American Environmental Values Survey, the Canadian Households and the Environment Survey and the European Union's survey on Attitudes of European citizens toward the environment.

Chile's 2018 survey includes a random selection of 7,600 participants[3] (18 years of age and older) from 113 representative communes in Chile, including participants across age groups and socioeconomic levels: students, pensioners, blue-collar workers, CEOs, board members, and founders of large corporations and active small business owners and managers. The selection of participants was probabilistic at the household level and used segment control at the individual level. Our study focuses on small business managers and owners, which composes 1,229 individuals. Our decision to focus on small business owners and managers stems from the fact that they normally have stronger agency and steering capacity than their counterparts in large corporations, particularly when it comes to setting goals and strategic direction for the firm. Ecocentric thinking, organizational decision-making, and actions are likely to be in close connection, unlike in large corporations where decisions are likely driven by shareholders' interests and professional boards. In addition, small business represent 96% of the firms in the country, being also the largest source of employment (~70% of the labor market). To capture the views of individuals with interest in the environment, we applied a second selection criterion to create a subsample of 192 individuals who think that the environment is (or should be) an aspect of national concern. Since our method is sensitive to missing data, we had to discard 32 cases for a final sample of 160 individuals. They represent a wide range of sectors, most notably: wholesale and retail, transportation, storage, repair shops, construction, and small manufacturing.[4]

To reduce the risk of confounding effect at the level of the firm, we checked that the businesses involved are not all focused on tackling environmental issues directly. This is a possibility given our selection of environmentally minded owners and managers, which can create an overrepresentation of "eco-enterprises" in our sample. We explored the managers' responses regarding the role of small and medium entreprises in tackling climate change, in terms of how effective they think the actions of small and medium entreprises can be in tackling climate change. This, under the assumption that if the sample comprises solely environmental firms, the vast majority of the participants will answer positively to this question, which in turn is likely to influence both the outcome and the other causal conditions. We observe strong variance and thus there is no risk of confounding effects, with 53% considering they can be effective or very effective, 27% considering they can be ineffective or very ineffective, and a 20% are undecided.

Data were collected using computer-assisted telephone interviewing. The data were weighted according to the region, sex, age and socioeconomic level of the respondents. To minimize risks of non-response and self-selection biases,[5] the research team used a number of techniques at both data collection and analysis stages. This includes recalling, discarding participants with $>10\%$ of missing responses, overrepresentation in several age groups and stratified sampling to maintain regional and demographical representation considering previous survey experiences across regions and age groups.[6] The survey instrument comprises five sections: (a) general attitudes and perceptions regarding the environment, (b) proenvironmental behavior are beliefs, (c) perceptions of climate change, (d) views on pollution and other related matters, and (e) demographics.

Measurement and Calibration[7]

Outcome Condition. While measurement of environmental behavior has advanced significantly in recent years, most of measures available draw on traditional conceptions of environmental management. Our outcome measure for the *formation of ecocentric management* seeks to capture something different, which is the presence of strong ecocentrism consistent with the two deep ecology principles outlined above: (a) the inherent worth of living beings regardless of their instrumental utility to human needs and (b) the need of restructuring modern human societies in

accordance with such ideas. To capture these principles, we aggregated the answers to two questions regarding the extent to which the participant believes that (a) *the needs of other animal species to be equal or more important than those of human beings* and that (b) *some individual freedoms must be limited to care for the environment*. Both questions use a 4-point agreement Likert-type scale. As a formative measure, we gave a score of 2 to those answers where the participant is in agreement or strong agreement with both statements, a score of 1 to those answers where the participant is in agreement or strong agreement with one of the statements and 0 if the participant is in disagreement with both statements.

Causal Conditions. Our research looks at conjunctural relationships between eight conditions and the outcome of interest. The eight conditions are drawn from the literature and organized using the three categories of antecedents (Gosling & Case, 2013, Figure 1), we label: *ecological crisis, ecological reform*, and *ecological engagement*. By drawing on Gosling and Case's (2013) ecocentric framework, we are able to provide a structured view of the theoretical puzzle.

Ecological crisis comprises three questions, pertaining to climate change and perception of threats. *Climate change awareness* assesses the extent to which the participants believes that climate change is presently happening. It gives the respondent four options: 4 (*Yes, it is occurring in the present*), 3 (*It might happen in the future*), 2 (*It already happened*), 1 (*It never will*). The assumption is that the higher the score, the higher the awareness over the climate change situation. To capture *perception of current environmental threats*, we inverted the scores to the question: *how would you assess the quality of the environment in your regio*n, with 5 (*being excellent*) and 1 (*being very poor*). So that the higher the score, the higher the perception of environmental concern in the present. To capture *perception of future environmental threats* we inverted the scores to the question: *how do you feel about the future of the environment in your region*, with 5 (*being very optimistic*) and 1 (*being very pessimistic*). So that the higher the score, the higher the perception of future environmental concern.

Ecological reform comprises two questions, pertaining to changes in moral values and views on necessary lifestyle changes. Our measure of *Moral Reform* uses a 4-point Likert-type scale to assess the extent to which the participant agrees with that engaging in actions to protect the environment is a moral duty. *Lifestyle Reform* uses a 4-point agreement Likert-type scale assesses the extent to which the participants believes that reducing the consumption of goods is necessary to take care of the environment.

Finally, *Ecological Engagement* comprises three questions pertaining to individual and collective engagement as well as benefits of such engagement. In terms of *Individual Engagement*, we used a 4-point agreement Likert-type scale to assess the extent to which the participant believes that s/he can execute concrete actions to protect the environment. Our measure of *social engagement* uses a 4-point Likert-type scale to capture the degree to which climate change is important to his or her friends and family. *Engagement Benefits* uses a 4-point Likert-type scale to assess the perceived benefits of engaging in environmental actions and solutions. Since our study looks at small business management, we frame the benefits in the context of markets and economic benefits and ask the participant the extent to which they believe that taking care of the environment (in relation to their own contexts) can grow the economy.

Calibration. Calibration is essential in configurational comparative studies as it enables systematic comparison, ensuring that the different measures conform to dependably known standards. Using substantive and theoretical knowledge (Ragin, 2007), the research team specifies the score that would qualify a case for full membership in the sets of social enterprises with formalized impact measurement practices, as well as in the set of each of the causal conditions. Also, the score that would completely exclude the cases from each of the sets. Theoretical knowledge refers to the existing knowledge base or known standards[8] relating to a particular construct,

Table 1. Descriptives and Correlations.

		M	*SD*	1	2	3	4	5	6	7	8
1	Engagement benefits	0.67494	0.24157								
2	Current threat	0.37367	0.284246	−.088							
3	Future threat	0.45001	0.382213	−.172*	.035						
4	Moral reform	0.7139	0.25256	.509**	−.015	−.041					
5	Individual engagement	0.65533	0.219808	.470**	.053	−.164*	.429**				
6	Social engagement	0.73623	0.298889	.132	−.047	−.174*	.05	.160*			
7	Climate change awareness	0.90191	0.18751	−0.01	−.025	.072	.003	.058	−.049		
8	Lifestyle reform	0.55624	0.276365	.444**	−.027	−.027	.314**	.336**	.09	.027	
9	Ecocentrism	0.74499	0.28455	.153	−.07	.011	.1	.103	.125	−.019	.182*

*$p < .05$. **$p < .001$.

which is used to set anchors for inclusion in and exclusion from sets. On the other hand, substantive knowledge is used in cases where theoretical knowledge is either not available or seems inadequate given the researchers' knowledge of the cases. It allows for fine-tuning theory-based calibration and normally involves an observation of the distribution of raw scores. This is particularly relevant in sustainability studies, where participants tend to report higher levels of internal attributes (Muñoz & Dimov, 2015; Roxas & Lindsay, 2012).

Calibration in fsQCA uses an estimation technique, automated in QCA 3.0 (Ragin & Davey, 2016), which transforms raw scores into set measures (Ragin, 2007) by rescaling the original measure into scores ranging from 0.0 to 1.0. Given the nature of our measures, both four-item and five-item scales were calibrated using 2 as a threshold for full exclusion, 3 as cross-over point, and 4 as a threshold for full inclusion. For the calibration of the five-item scales, we used scale distribution setting cross-over points in the middle of the scale, whereas for the four-item we prioritized strong membership setting the cross-over point above the virtual 2.5 middle-point. We use this strategy as it optimizes the configurational analysis and reduces the possibility of leniency effects and rating errors (Muñoz & Dimov, 2015).[9] Table 1 reports descriptives and correlations for our calibrated measures.

Data Analysis and Results

Necessary Conditions

The analysis of necessary conditions in fsQCA looks at which individual factors may be necessary or mostly necessary for the outcome to occur. It examines whether one of the configurational enablers is individually enough to enable the formation of an ecocentric approach. In this analysis, we test the subset relationships between the eight conditions and the formation of an ecocentric approach. The analysis evaluates the degree to which instances of an outcome agree in displaying the causal condition thought to be necessary (consistency) and the empirical relevance of each causal condition (coverage).[10] Results are shown in the Table 2.

Our analyses reveal three conditions with strong fuzzy subset relationship (>0.8) with ecocentrism in a management context: climate change awareness, social engagement, and moral reform. However, none of them is necessary for the outcome to occur. Worth noting the low consistency levels in the role of perception of the present and future threat, which is counterintuitive in light of current thinking. Alongside revealing degrees of necessity, this analysis allowed us to retain the six causal conditions with higher consistency levels (marked in gray shading) to be used in the subsequent configurational analysis. All conditions selected are also empirically relevant, which means that the constraining effect of each condition may be great. The use of six

Table 2. Analysis of Necessary Conditions.

Conditions tested	Consistency*	Coverage
Climate change awareness	0.950528	0.785157
Perception of present threat	0.446187	0.889575
Perception of future threat	0.501775	0.830685
Moral reform	0.811190	0.846521
Lifestyle reform	0.674930	0.903964
Social engagement	0.826089	0.835929
Individual engagement	0.770208	0.875588
Engagement benefits	0.785242	0.866747

*Shaded cells indicate causal conditions with higher consistency levels.

Table 3. Solution Table for the Formation of Ecocentric Management.

	Types of ecocentric management			
Configurations	1a	1b	2	3
Climate change awareness	●	●	●	⊗
Moral reform	●	—	●	●
Lifestyle reform	●	●	—	—
Social engagement	—	●	●	●
Individual engagement	●	●	●	●
Engagement benefits	—	●	⊗	●
Consistency	0.93	0.94	0.94	0.96
Raw coverage	0.602	0.557	0.340	0.1002
Unique coverage	0.057	0.015	0.030	0.023

	Market reformist		Legitimated decouplist	Self-centered activist
Approaches	Internally driven	Externally driven		
Overall consistency		0.92		
Overall coverage		0.672		

Note. In fuzzy-set qualitative comparative analysis, large black circles represent core conditions with small black circles being a reflection of peripheral conditions. Circles with an X are used to indicate the absence of the condition. No circle indicates that the condition is irrelevant for explaining the outcome of interest.

conditions in intermediate-*N*s studies allows for balancing parsimony and explanatory richness (Marx & Dusa, 2011). To corroborate the robustness of our selection of variables, we run an additional test using hierarchical cluster analysis, which shows that indeed the six selected conditions are closely connected (see results in the online Supplemental Appendix C).

A Complexity-Based Typology of Ecocentric Management

Once the measures calibrated, fsQCA 3.0 constructs a *truth table*, which shows all 64 (2^6) logically possible combinations of causal conditions along with the cases conforming to each combination. To reduce the truth table to simplified combinations, we used a frequency threshold of one and a consistency threshold of 0.94.[11] Based on the truth table analysis, fsQCA applies counterfactual analysis and logical minimization to reduce the truth table rows to a set of simplified combinations of conditions (Table 3).

Table 3 shows the different combinations of conditions that are linked to the formation of ecocentric management in terms of causal sufficiency, as well as the strength of the causal relationships between the combinations of conditions and the outcome. The Solution Table distinguishes core and peripheral conditions. This is based on how causal components are causally connected to a specific outcome. Core conditions are decisive causal ingredients that distinguish configurations, and peripheral conditions act as complementary ingredients that only make sense as contributing factors. The overall solution is highly consistent (0.92) and empirically relevant with a 0.672 of coverage (superior to the 0.65 standard), with individual solution terms exhibiting equally consistent results ranging from 0.93 to 0.96. Our configurational analysis reveals the salience of individual engagement across solutions and three distinct combinations of antecedents or unique recipes for the formation of ecocentrism, yielding three distinct types: we label: *Market Reformist, Legitimated Decouplist*, and *Self-Centered Activist.*

Market Reformist (Types 1a/b). This type is driven by ecological reform, particularly by the need to change our modern consumption-driven lifestyle to achieve environmental sustainability. Overall lifestyle reform is particularly relevant to ecocentrism, because of its nature as a paradigm-changing perspective. This type highlights the centrality of modern human life to the development of ecocentrism and the fundamental changes required to the prevailing economic-centric view. This type challenges the essential core of environmental management, decoupling, ecological modernization and other manifestations of ecoefficacy, where current markets, technology, and consumption patterns are still seen as reconcilable with environmental protection and restoration. Interestingly, there is no negation of the role and contribution of markets, but a different kind is required. A *Market Reformist* can be either internally driven (1a) or externally driven (1b). Type 1a, within the S1 superset, shows three internally driven factors: the presence of climate change awareness, moral reform and individual engagement as peripheral conditions accompanying lifestyle reform. Here, the market reformism underlying ecocentrism is mostly driven by environmental values and commitment to individual action. On the other hand, Solution 1b brings the presence of social engagement and engagement benefits to the fore, replacing moral reform and individual engagement. It is equally aware of climate change, but the approach is informed by cultural norms and the perception of collective benefits derived from individual action. In essence, we observe two distinct push and pull effects. While solution 1a pushes values toward ecocentrism through market reformism, solution 1b embraces the context to mobilize market reformism.

Legitimated Decouplist (Type 2). This type is driven by social engagement and the conviction that environmental protection is indeed decoupled from economic growth. This type is likely to embrace the ideas and discourse of the degrowth community, as an alternative approach to the green economy (K. O'Neill & Gibbs, 2016), since cultural norms appear as central in the formation of ecocentrism. Degrowth has indeed a "communitarian ethos," and ecocentrism and ecological ethics are a major focus of this approach (Washington & Maloney, 2020). This type is part of a challenger movement (Bertels et al., 2014), which at its core defies the dominance of neoliberal economic growth or consumption economies (Philips, 2013). As with deep ecology, the idea of degrowth is seen as ideologically driven thus criticized by mainstream economics and management due to its radical nature; difficult to materialize to most contributors. This type shows that it is indeed possible, to the extent it is supported by communitarian values. As such, collective support and legitimacy, emerging through the presence of social engagement as a core condition, are central to encourage and mobilize individual engagement and action.

Self-Centered Activist (Type 3). This type is unaware of the impending ecological crisis and the need of market reforms, yet it is actively engaged in actions to protect the environment as these

are seen as "the right thing to do" and can derive benefits to the individual. While this type defies the norm in terms of the absence of the two key factors (climate change and consumption reform), which ecocentrism seek to counteract, our analyses show that oblivious idealism can also lead to the formation of new ecological thinking in a management context. We observe that it is indeed possible that ecocentrism is not necessarily triggered by the causes and consequences of environmental degradation but can exist as an ecological philosophy, simply inherent to human beings as the new biophilia hypothesis postulates (Van den Born et al., 2001).

The Salience of Individual Engagement. While peripheral, individual engagement appears as a constitutive factor of all three solutions. This suggests that ecocentrism might be less naïvely idealistic and more action-driven than previously thought. The fact that those who have formed ecocentric convictions overwhelmingly believe that they can do something to protect the environment and execute concrete actions offers clear evidence in that direction. This resonates with J. W. Zhang et al. (2014), in the sense that the closer we get to nature, the stronger the connection and the engagement to it becomes. Closeness, relatedness, and engagement with nature are essential yet underexplored aspects of sustainable behavior.

Robustness Tests. We run several robustness and sensitivity tests to assess the validity and stability of our results. First, we run a hierarchical cluster analysis to further assess the proximity of conditions (see online Supplemental Appendix C). Second, we run two alternative configurational analyses using different frequency and consistency thresholds to observe whether the main results remain stable under different model specifications and test which set of findings offer a better balance between parsimony and empirical richness. Facing the possibility of interference from configurations with one case, potentially problematic in large-N QCA studies, we run a configurational analyses with a frequency threshold of three.[12] Our results remain stable, but losing significant empirical richness. The analysis with $f = 3$ atomizes solution 1a/b and drops Solutions 2 and 3 from the results. In doing so, it discards the positive contribution of outliers in the development of the typology, which we deem essential in a paper that deals with a (arguably) radical approach. We also run a configuration analysis with "super strong" membership, which is done by squaring the membership scores and pushing them in a downwards direction. Patterns of necessity and sufficiency remain relatively stable reinforcing the relevance of ecological reform and social engagement, as well as the absence of engagement benefits, in the formation of ecocentric management (Table D4). In a final test, we assessed the potential effects of irrelevant cases (false positives) on our findings. This, given the large number of cases included in our analysis. We conducted two tests. In a preanalysis step, we corroborated that neither the conditions nor the outcome scores are strongly skewed toward low membership. Following, we conducted two proportional reduction in consistency (PRI)-checks (proportional reduction in consistency), showing that all 13 truth table rows exhibit acceptable PRI scores (>0.77) for the presence of the outcome and they also show a considerable lower PRI score for the absence of a condition (<0.22).

Discussion

Ecocentrism has grown in importance in business sustainability research and practice. Yet so far, we have failed to explain what triggers its formation. There is a wide range of potential explanations in the literature, but none of the factors covered by these studies can by themselves explain the formation of ecocentrism in management. Thus, a holistic picture is yet to emerge. Our attempt to tackle the latter comes with a dual challenge: current theoretical frameworks and measurement seem ill-equipped to capture 1. the key principles of ecocentrism and 2. the complex set

of antecedents that can lead to it. In response, we turned our attention to deep ecology to make sense and conceptualize the outcome of interest. Given the theoretical puzzle, we mapped out potential antecedents and developed an explanatory framework with three pillars pertaining to sensing, envisioning, and enacting ecocentrism: *ecological crisis, ecological reform*, and *ecological engagement*. The development of this framework was grounded in Gosling and Case's (2013) ecocentric philosophy and the ideas of social dreaming and future imagining. To tackle the complexity of the phenomenon, we leveraged a configurational method to uncover what lies under ecocentric thinking across a large sample of small business managers and elaborate a set of empirical types which distinctively explain this complex reality.

Our analyses reveal three configurations of conditions explaining the formation of ecocentrism, forming a typology of ecocentric management: *Market Reformist, Legitimated Decouplist*, and *Self-Centered Activist.* The typology allows us to decompose and go deeper into our understanding of more radical ecological thinking, as applied to business sustainability. It also allows us to observe counterintuitive cases and that outliers can exist even within approaches that are conceived already as outliers. In particular, it invites us to reflect on how ecological reform, as a forward-looking dimension, interacts with ecological engagement in its outward-looking state. This suggests that ecocentrism is less value-centric and anchored in nostalgic idealism than traditionally considered. Our results suggest that this unique ecological philosophy can exist in the outskirts of management and has the possibility of inspiring ecoaction within small businesses, though they also imply that the chances of findings ecocentrism fused with mainstream management is fairly minimal.

As we look under the ecocentric hood, we make two interesting discoveries. First, the salience of climate change awareness in the necessity analysis, despite playing a peripheral role in the sufficiency analysis. This suggests that climate change is deeply integrated into ecocentric logic, but it is no longer a decisive factor in triggering ecological thinking. Second, the irrelevance of the perception of present and future threats, which seems to work alongside the aforementioned role of climate change awareness. Sustainable behavior research emphasizes that increasingly personal concerns about the environment will increase environmental engagement (Eom et al., 2016; Eom et al., 2018). However, against the current understanding of proenvironmental behavior, our results show that these perceptions are neither necessary nor sufficient for the formation of ecocentrism.

This also challenges our understanding of what triggers the recognition of sustainability opportunities in small businesses and entrepreneurship. For example, Patzelt and Shepherd (2010) and Hanohov and Baldacchino (2018) place awareness of ecological disturbances and perceptions of environmental threats front and center in the decision to pursuit sustainability-oriented business opportunities. Likewise, Muñoz and Dimov (2017) empirically show that perceptions of threat trigger moral commitment which in turn increases the intention to act. More recently, Eller et al. (2019) found that awareness of adverse consequences and entrepreneurial attitudes do indeed influence the process of sustainable opportunity identification. In the context of ecocentric management, we find no evidence to support such claims and the role of perception of threat appears as irrelevant at best when it comes ecocentric enterprising behavior.

While some people might have already overcome fears of ecological catastrophe, we believe that our results capture and explain a different type of environmental logic. Our results suggest that ecocentrism is less alarmist than other environmental movements, take the extinction rebellion for example. The call for attention and action seems to be informed, on the contrary, by understanding, conviction and desires of change, rather than by voiced concerns about ecosystem collapse. A veil of doubt nevertheless prevails, because we might be either witnessing a leap forward in proenvironmental behavior, liberating anthropocentric individuals from their mind-forged manacles, or a definite neglect of the seriousness of the current situation.

Contributions and Implications

Our work makes several contributions to business sustainability literature and management scholarship more broadly. First, the article elaborates a multidimensional framework grounded in ecocentric philosophy and deep ecology. We conceptualize, organize, and operationalize a set of antecedents and outcomes regarding ecocentric management. In doing so, the framework offers a systematic characterization of ecocentric thinking in business sustainability, laying the ground for a new appreciation and understanding of sustainable decision-making. The conceptual apparatus developed can inspire and guide future research efforts in this area.

Second, leveraging our framework, we provide an empirical typology capable of accommodating distinct ecocentric approaches in a management context. They reveal that ecocentrism is indeed different, exposing three unique ways in which it materializes and showing how it distinctively departs from traditional anthropocentric environmental thinking and decision making. In doing so, we show what matters and when for the formation of a more radical ecological approach in business management, thus providing insight into how "deep ecology radicality" might look like in a business context, beyond financial gain. The empirical types can inform our understanding of what might lie behind the development of strongly sustainable business models (Upward & Jones, 2015). This is important because most research remains conceptual.

Finally, we contribute to the growing sustainability-as-flourishing debate. By grounding our research in deep ecology thinking and ethics, our typology emerges aligned with the notion of planetary boundaries, overcoming this way some limitations in the extant literature as shown by Schaefer et al. (2015). In doing so, we offer a three-way view on how planetary boundaries might be understood by owners and managers and how business decision-making might be affected when ecocentrism is factored in. Resonating with Ehrenfeld and Hoffman (2013) the types uncovered by our analyses strive to create strong sustainability and are likely in pursuit of fundamental changes to our ways of living and doing business. In setting an agenda for future sustainability-as-flourishing research, Schaefer et al. (2015) argue that there is a limitation in existing research concerning complex systems and holistic thinking. While we do not tackle complex systems explicitly, our research constitutes one step forward in this direction, as it derives types of ecocentric management drawing on complex causality and thus letting a missing holistic picture to emerge. The multidimensional framework and typology can assist the development of new areas of research, for example regarding how change-makers and entrepreneurs make decisions in regenerative organizations (Branzei et al., 2017; Quarshie et al., 2019; Vlasov, 2019) or advance biomimicry practices (Fernhaber & Stark, 2019). It will also allow for an expansion of our understanding of purpose-driven behavior in sustainable enterprises (Muñoz et al., 2018), which has dominated the debate of the forces underlying sustainable business development, as in benefit corporations and community interest companies (Cho, 2017).

Our work also provides counterintuitive evidence on the irrelevance of causes so far deemed essential to ecocentrism whilst uncovering causally relevant conditions, and combinations thereof, largely ignored in the literature. Most notably, the effect of perception of environmental threats, so far assumed to be central to mobilize pro-environmental action. We offer empirical evidence that reinforces the uniqueness of ecocentrism as part of a larger set of environmental approaches.

Practical Implications. There are several practical implications from our research. First, our types can translate into managerial (eco)profiles or identities that can be encouraged, trained or sought after by organizations in pursuit of higher sustainability ambitions. Reformists, decouplists, or activists can distinctively lead the efforts and signal a way forward to develop, for example, regenerative leadership (Storm & Hutchins, 2019) or a regenerative organizational culture (Wahl, 2016). This, since strong managerial identities grounded in values and principles tend to wake up

collective interest and action and the construction of a distinct social identity (Bartlett, 2011) and eventually a new nature-based business category. In doing so, we open a space for the business community to develop more radical solutions that address environmental challenges (Jansson et al., 2010), which was previously thought of as idealistic and unreachable. Likewise, we provide evidence as to what factors to discourage if the aim is to promote ecological leadership and sustainable decision-making in the organization.

There are also implications at a policy level. By uncovering hidden mechanisms underlying ecocentric formation and how managerial types think and behave, policy agents can redirect efforts and develop counterintuitive policies for environmental management. The current set of incentives used to promote environmental practices might have little effect on the actions and decisions of reformists, decouplists, or activists, and the organizations they are leading. By understanding what matters and when for ecocentric managers, policy makers can begin to encourage a new and perhaps more promising sustainability-as-flourishing approach.

Limitations and Future Research

Inevitably, there are limitations to our research, which also open up several opportunities for future research. A first limitation pertains to the context of the study. While ecocentrism conveys relatively universal ideas regarding equal rights and radical change, unique social and cultural realities can influence both how people understand their relationship to the environment and the scope of the change needed. Over the past decades, individualization, consumption, and competitive markets have expanded in Chile, forming a Western socioeconomic model that is closer to the United States' capitalism than Europe's welfare states. It has the highest per-capita GDP in Latin America, yet exhibiting high inequalities, which seat at the core of the explosive social unrest experienced at the end of 2019. The rate of environmental degradation and pollution levels can also play an important role, as these are also context-specific. These are important boundary conditions, as responses to a similar survey might look different under other social, cultural and economic realities. This calls for cross-country comparisons, where new studies can test the role of context in the formation of ecocentrism.

A second limitation involves the selection of our outcome measure since we opted to use a formative, internally-conceived measure of ecocentrism, instead of an externally validated reflective proxy. Current approaches to measuring proenvironmental thinking and behavior focus mostly on ecocentric–anthropocentric distinctions at the level of attitudes and values (e.g., S. C. G. Thompson & Barton, 1994), environmental ethics (e.g., Mikkelson & Chapman, 2014), proenvironmental behavior itself (e.g., Markle, 2013), or the degree of relatedness to nature (e.g., Nisbet et al., 2008). These have been extensively used, but do not capture biospheric egalitarianism, restriction of human rights and radical change; all inherent to ecocentrism and deep ecological thinking. Our measure, while not reflective, it captures these two essential elements. This also constitutes an opportunity for future research and scale development, one that allows us to capture and assess reflectively these key ecocentric principles. Finally, we see a range of opportunities for future research to advance our knowledge of sustainability-as-flourishing in management research, particularly around: strongly sustainable business model, holistic thinking, natural embeddedness, relatedness, and regenerative organizing. Our findings have only begun to scratch the empirical surface of nature-based management and we hope they will inspire our research community to go deeper into this exciting and promising research space.

Author's Note

University of Liverpool, Liverpool, UK should be considered as the primary affiliation for Pablo Muñoz.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. A summarized view of the literature and the structure of the derived categories is available from the authors on request.
2. Methodological information and data is available at: https://mma.gob.cl/encuestas-nacionales-del-medio-ambiente/
3. The characterization of the sample is provided in the online Supplemental Appendix A.
4. The survey operates at the individual level and does not capture specifically the type of industry the business being managed by the participant operates in. Facing this limitation, we looked at the five most predominant economic activities at the commune level using revenue service data. We cross-matched the latter with the commune of the 160 participants and then assessed the likelihood of membership (67%) into one of those five industries.
5. Nonresponse and self-selection biases are common in the application of environmental surveys. People are normally not interested in taking part in national surveys, with clear differences across age groups and regions, and people with particular interest in environmental issues tend to self-selected into these studies.
6. The 18-34-segment is particularly problematic in this type of studies.
7. Full measurement details are available in the online Supplemental Appendix B.
8. The case of country development is illustrative of theory/standard-based calibration. Countries exhibiting a US$25,000 GDP per capita or more are considered to be part of the set of developed countries. This is an agreed income-based standard. The human development index offers an alternative approach, which, grounded in theoretical knowledge of standards of living, sets the inclusion threshold at 0.800 level for countries with strong human development.
9. The full calibration table is available from the authors on request.
10. A condition can be deemed necessary when it surpasses the 0.95 consistency threshold while exhibiting a relatively high coverage (~>0.8).
11. These two thresholds specify the minimum amount of cases to be considered in the analysis (frequency) and the minimum acceptable level to which a causal combination is reliably associated with the outcome (consistency).
12. Robustness test results are available from the authors on request.

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