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Author(s):
Meuer, Johannes; Koelbel, Julian; Hoffmann, Volker H.

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On the Nature of Corporate Sustainability

Johannes Meuer
Group for Sustainability and Technology
ETH Zurich
Department of Management, Technology and Economics
CH-8092 Zürich
jmeuer@ethz.ch

Julian Koelbel
University of Zürich
Institute for Banking and Finance

Volker H. Hoffmann
Group for Sustainability and Technology
ETH Zurich

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On the Nature of Corporate Sustainability

ABSTRACT

Scholarly and managerial interest in corporate sustainability has increased significantly in the last two decades. However, the field is increasingly criticized for failing to effectively contribute to sustainable development and for its limited impact on managerial practice. We argue that this criticism arises due to a fundamental ambiguity around the nature of corporate sustainability. To address the lack of concept clarity, we conduct a systematic literature review and identify 33 definitions of corporate sustainability. Adopting the Aristotelian perspective on definitions, one that promotes reducing concepts to their essential attributes, we discern four components of corporate sustainability. These components offer a conceptual space of inquiry that, while being parsimonious, offers nuanced understanding of the dimensions along which definitions of corporate sustainability differ. We discuss implications for research and practice and outline several recommendations for how advancements in construct clarity may lead to a better scholarly understanding of corporate sustainability.

Keywords

Corporate sustainability, construct clarity, Aristotelian perspective, Sustainable Development Goals

INTRODUCTION

Corporate sustainability is an increasingly important goal for managers across all industries. In a recent large-scale survey among managers, 90% indicate that corporate sustainability is important to their business (Kiron, Unruh, and Kruschwitz 2017). Policymakers, too, recognize the importance of corporate sustainability in addressing global challenges such as climate change and poverty. In accordance with the real world importance of corporate sustainability, academic publications on corporate sustainability have skyrocketed in the past decade, including in the most highly ranked management journals (e.g., Eccles, Ioannou, & Serafeim, 2014; Hahn, Preuss, Pinkse, & Figge, 2014; Kim & Lyon, 2014). Likewise, articles in practitioner journals explain how managers might embed corporate sustainability in their firms and why doing so will allow their firms to generate long-term benefits (e.g., Bhattacharya & Polman, 2017; Kramer & Porter, 2011; Whelan & Fink, 2016).

Yet despite the increased attention to corporate sustainability, this research has recently been increasingly criticized for not effectively explaining how firms can contribute to sustainable development (e.g., Bansal, Bertels, Ewart, MacConnachie, & O'Brien, 2012; Dyllick & Muff, 2016; Montiel & Delgado-Ceballos, 2014). Some scholars argue that this lack of impact results from the failure of researchers to integrate findings from the natural sciences into research on corporate sustainability (e.g., Howard-Grenville, Buckle, Hoskins, & George, 2014; Whiteman, Walker, & Perego, 2013). Others have criticized research on corporate sustainability for drawing primarily on concepts that were not developed with reference to organizational theories (e.g., Busch & Lewandowski, 2017; Gao & Bansal, 2013; Gond & Crane, 2010).

In this article, we argue that this central criticism and the ambiguous impact of corporate sustainability research relates to a more fundamental issue, namely a lack of clarity among researchers and practitioners around the essence of corporate sustainability. Such a lack aggravates communication since potentially every corporate activity can be labeled as sustainable. Unless researchers have instruments that allow for clearly distinguishing corporate sustainability from *non*-corporate sustainability, they will find it difficult to evaluate, for example, whether firms are merely green- or whitewashing (Bowen & Aragon-Correa, 2014). This lack of clarity is problematic for managers as well because it results in uncertainty when deciding how their firms can effectively incorporate sustainable practices into their activities.

To improve clarity around the concept of corporate sustainability, this article therefore addresses the following research question: how have scholars conceptualized the essential attributes of corporate sustainability? Through a systematic literature review, we identify 33 original definitions of corporate sustainability and—drawing on philosophical debates on definitions—deconstruct the concept into its essential components. Adopting the Aristotelian perspective on definitions, one that advocates the reduction of concepts to their essential attributes (Berg, 1982; Cohen & Nagel, 1934), allows us to discern four essential attributes of corporate sustainability: the *genus* as the family of objects to which corporate sustainability belongs (e.g., is it a practice or a paradigm), and three *differentiae*: the specificity of sustainable development, the level of ambition, and the level of integration.

Together these conceptual components allow us to develop a conceptual space that we label the "corporate sustainability cube", in which all definitions of corporate sustainability can be allocated and systematically compared. This corporate sustainability cube not only corroborates the findings of hitherto disconnected strands of the literature but also offers a shared, and improved understanding of what corporate sustainability is—or can be—should facilitate communication among researchers and managers involved in corporate sustainability and thereby help identify means for firms to effectively contribute to sustainable development.

We structure our article as follows. Section 2 reviews the literature on the concept of corporate sustainability. Section 3 describes our approach for identifying and coding definitions of corporate sustainability. Section 4 reports our findings. Section 5 concludes with implications for research and practice and directions for future research.

CONCEPTUAL (UN)-CLARITY AROUND CORPORATE SUSTAINABILITY

Since the concept of "corporate sustainability" was introduced into the academic literature, it has received more and more attention, from researchers and practitioners alike. Research on corporate sustainability originates from several scientific fields, such as environmental engineering, environmental economics, and management research. The concept of corporate sustainability is related to, yet markedly distinct from, concepts such as corporate social responsibility (CSR) and corporate citizenship. Corporate sustainability emphasizes the embeddedness of firms in larger systems, and their roles in stabilizing or eroding these systems (Bansal & Song, 2017). This contrasts with CSR, which emphasizes the moral responsibilities of firms and the norms guiding business behavior (e.g., Heikkurinen & Mäkinen, 2018; Okoye, 2009; Scherer & Palazzo, 2011). Thus, while corporate sustainability and CSR often circumscribe the same concrete actions, research on corporate sustainability stems from a different perspective, namely that firms contribute to outcomes at the level of the systems in which they are nested.

The growing interest in corporate sustainability can largely be attributed to the increasing salience of global problems (e.g., climate change) and a shift in public perception that firms will have to provide solutions to these problems. Managers, too, are becoming aware of the potential benefits of aligning operations with the principles of sustainable development (Accenture & UN Global Compact, 2013; Kramer & Porter, 2011; We are still in, 2018). Nowadays, most large corporations engage in sustainability initiatives, report on environmental and social matters in sustainability reports, and are evaluated in the context of corporate sustainability indices. From 2019 onwards, the EU legally requires large firms to disclose non-financial statements in their annual reports. The existence of the Sustainability Accounting Standards Board (SASB), and the burgeoning industry of sustainability consulting, provide clear evidence for the increasing managerial relevance of corporate sustainability.

Accordingly, the number of academic publications on corporate sustainability has skyrocketed during the last five years, and researchers now publish on corporate sustainability in the most highly ranked management journals (e.g., Eccles et al., 2014; Hahn et al., 2014; Kim & Lyon, 2014). Moreover, articles in practitioner journals explain how managers can embed corporate sustainability into their organizations and why this will allow their firms to generate long-term benefits (Bhattacharya & Polman, 2017; Kramer & Porter, 2011; Whelan & Fink, 2016). Yet, since 2014 concerns about the lack of construct clarity of corporate sustainability have grown louder (e.g., Bansal & Song, 2017; Dyllick & Muff, 2016; Landrum, 2018). For example, Montiel and Delgado-Ceballos (2014, p. 2) note that "a common definition of corporate sustainability is lacking"—a finding corroborated by Hahn, Figge, Aragón-Correa, and Sharma (2017, p. 4), who observe that "different approaches to define corporate sustainability still exist."

Several scholars have attempted to reduce conceptual ambiguity, greatly improving our scholarly understanding of corporate sustainability. Typologies have both significantly contributed to capturing the variety of conceptualizations of corporate sustainability and also raised awareness of different understandings (e.g., Benn, Dunphy, & Griffiths, 2014; Dyllick &

Muff, 2016; Van Marrewijk, 2003). Moreover, researchers have either identified important underlying dimensions in which conceptualizations differ or have offered insights into specific aspects of corporate sustainability, highlighting, for example, the importance of how strategically firms pursue sustainability (e.g., Baumgartner & Rauter, 2017) or how strongly sustainability is integrated into firms' operations (e.g., Hahn et al., 2014; Van der Byl & Slawinski, 2015).

Yet, the concept of corporate sustainability remains vague. Many studies adopt an overly broad perspective on corporate sustainability, including notions such as CSR, sustainable environmentalism, sustainability, or sustainable development (e.g., Bansal & Song, 2017; Heikkurinen & Mäkinen, 2018; Montiel, 2008; Van der Byl & Slawinski, 2015). While such a broad scope is useful for fostering dialogue between fields, it also risks importing conceptual foundations more relevant to other fields than to corporate sustainability. Additionally, many studies adopt interpretative, unsystematic methodologies for coding and understanding conceptualizations, making it difficult to understand how the researchers have reached their conclusions. As a result, the remaining and "bewildering range of options now on offer can provide business with an alibi for inaction" (Elkington, 2018). In this article, we therefore ask, what are the essential attributes of corporate sustainability and how have scholars conceptualized these attributes in defining corporate sustainability.

METHODS

As much as concepts constitute the building blocks of solid theories, a robust conceptualization of corporate sustainability constitutes the nucleus for making the roles of firms tangible in effectively contributing to sustainable development. To advance our scholarly understanding of the conceptual foundations of corporate sustainability, more clarity around the definition(s) of corporate sustainability is central. According to Aristotle, "a definition is a phrase signifying a thing's essence" (cited in Cohen & Nagel, 1934, p. 235). Definitions designate the essential attributes of a concept and the interrelations among its defining attributes.

From a semantic perspective, definitions follow a clear structure, beginning with the *definiendum*, i.e., what is to be defined (e.g., corporate sustainability) and followed by the *definiens*, i.e., what defines it (Berg, 1982; Robinson, 1963). The *definiens* in turn is composed of two elements[1]: the *genus* specifies the family to which the concept belongs (e.g., "wine glass" belongs to the family of glasses); and the *differentiae* are those components that set the object apart from other species of the same family (e.g., the word "wine" sets the "wine glass" apart from other "glasses"). Thus, definitions contain two terms, the *genus* and the *differentiae*.[2]

Our Search Strategy for Identifying Definitions of Corporate Sustainability

To identify definitions of corporate sustainability, we conducted a systematic review of that involved three steps: (1) define the scope of the literature, (2) select *seminal* publications, and (3) screen these publications for *original* definitions[3] of corporate sustainability.

Determining the scope of the literature on corporate sustainability. To identify the relevant body of literature, we searched the Web of Science and Google Scholar[4] for academic publications[5] through April 2018 that contained the term "corporate sustainability." We found

[1] Definitions may also contain extensional attributes (for nominal definitions) and "accidental properties" (Gupta, 2015; Robertson & Atkins, 2016). These extend a definition beyond its essential components. For example, properties follow necessarily from the definition and are thus something that "belongs to that thing alone" (Cohen & Nagel, 1934, p. 237). The explanatory power of properties is thus equivalent to, the essence of the *definiens*. In contrast, an accident is something that may or may not belong to the *definiens*, it is thus a nonessential attributes. We excluded properties and accidents because both components unnecessarily extend the definition beyond its essential attributes.

[2] This generic structure applied to all types of definitions except for ostensive definitions.

[3] With "original definition", we refer to those definitions that appeared in the literature for the first time (in contrast to citing earlier definitions).

[4] For the Web of Science, we searched specifically in the title, abstract, or keywords. When searching in Google Scholar, we used the standard search.

[5] We also systematically searched for definitions of corporate sustainability in practice. To this end, we searched for definitions of corporate sustainability on webpages and public documents of (1) seven leading rating agencies, (2) five international management consultancies, (3) three business associations, and (4) several multinationals recognized as sustainability leaders in their industries. Because we found only very few

1,113 publications in Web of Science and 980 publications in Google Scholar[6], with 223 articles appearing in both searches. In total, for publications between 1983 and 2018, we identified 1,870 that directly deal with, or significantly relate to, research on corporate sustainability.

Figure 1 displays publications on corporate sustainability in the Web of Science.[7] It shows that research on corporate sustainability has significantly increased since 2013. Some of the most influential publications (as measured by the average number of yearly citations) appeared around 2003, accounting for about 10% of all citations in this body of literature. For example, the most highly cited article according to both Web of Science and Google Scholar is Van Marrewijk (2003), and the second and third most highly cited publications appeared in 2004 and 2005 (Figge & Hahn, 2004; Steurer, Langer, Konrad, & Martinuzzi, 2005). Clearly, research on corporate sustainability has grown significantly and has matured enough to gain recognition in highly influential journals in the past two decades.

Insert Figure 1 about here

Selecting seminal publications in the literature on corporate sustainability. We then defined criteria to identify seminal publications, i.e., those that are important either for the historical discussion on corporate sustainability or for the current scholarly understanding of the concept of corporate sustainability. We considered a publication seminal when it met one of the following three criteria: (1) the publication appeared as one of the 10 most frequently cited

practitioner definitions of corporate sustainability and because those that we found were very similar to those in the academic literature, we chose not to expand the focus of our systematic literature review.

6 Although the Google Scholar search returns about 1,410,000 results, its search engine limits downloading results to less than 1,000 records.

7 Although the two databases use different approaches to measuring citations, the patterns in terms of number of publications and average citations per year are similar.

publications in the Web of Science or in Google Scholar; (2) the publication appeared in one of the five most influential general management journals (i.e., *Academy of Management Journal*, *Academy of Management Review*, *Administrative Science Quarterly*, *Organization Science*, and *Strategic Management Journal*); (3) the publication was among the 10 most cited articles of the four most influential specialist journals, ranked by the number of publications within our initial search, and by the average citations (i.e., *Organization & Environment*, *Journal of Cleaner Production*, *Business Strategy and the Environment*, *Journal of Business Ethics*).

Additionally, to ensure that we did not omit any important academic publications in determining the scope of the literature, we also contacted 21 leading scholars who conduct research on corporate sustainability, and asked them to identify the three to five most seminal publications on corporate sustainability. We received 16 answers, with 57 recommended articles. With the exception of 23 publications, our search in Google Scholar and Web of Science covered 34 (59.6%) of the recommended articles. Overall, by applying the three criteria to identify seminal publications in the two literature databases and by including the suggestions from the leading scholars, we identified 101 publications as seminal to the literature on corporate sustainability.[8] The Appendix provides an overview of these 101 publications.

Identifying original definitions of corporate sustainability. We screened these 101 publications to identify definitions of corporate sustainability. We searched every publication for statements that would clarify the scholars' understandings of corporate sustainability by

[8] We excluded four publications because their primary focus was on different (albeit related) concepts, such as sustainable entrepreneurship, sustainable business models, or CSR (exclusively). Two of these four publications contained definitions of their core construct. However, including these definitions in our analysis would have blurred our focus on corporate sustainability. For example, Dean and McMullen (2007) define sustainable entrepreneurship as "the process of discovering, evaluating, and exploiting economic opportunities that are present in market failures which detract from sustainability, including those that are environmentally relevant." Clearly, their definition draws primarily on the concept of entrepreneurship and only remotely relates to the concept of corporate sustainability.

searching for terms such as “we define,” “defined,” “definition,” “concept,” “understanding,” or “corporate sustainability”. Because we expected definitions of central constructs to appear primarily in the abstract, introduction, or discussion sections, we also read these sections of each article in detail. Following the generic structure of definitions, we looked for explicit and concise statements that would not cross multiple paragraphs.

We documented whether scholars provided their own definitions of corporate sustainability (an *original* definition), adopted an existing definition by citing an earlier publication, or did not include a definition. In 52 publications (52%), we were unable to identify a definition of corporate sustainability and, although some scholars circumscribed corporate sustainability at great length, most appeared to take the concept for granted. In 15 publications, scholars drew on existing definitions by citing earlier publications.[9] The remaining 33 publications provided original definitions of corporate sustainability (i.e., a definition that appears for the first time in the literature). Table 1 chronologically lists these 33 definitions.

Insert Table 1 about here

Coding definitions of corporate sustainability

Definitions follow a clear grammatical structure, beginning with the *definiendum* (i.e., what is to be defined, for example, “corporate sustainability”) and followed by the *definiens* (i.e., what defines it) (Berg, 1982). The *definiens* may contain four building blocks: (1) the *genus*, the category to which the *definiendum* belongs (e.g., an apple is a fruit); (2) the *differentiae*, the attributes that set the concept apart from other types of the same genus; (3) *propria*, non-essential

[9] Most publications cite Dyllick and Hockerts (2002) or Van Marrewijk (2003).

attributes of the *definiendum* that follow necessarily from the definition and are thus something that "belongs to that thing alone" (Cohen & Nagel, 1934, p. 237); and (4) accidents or attributes that may or may not belong to the definiens (Robertson & Atkins, 2016).

In our analysis, we follow the Aristotelian perspective on definition, one that draws on reductionist thinking to identify and focus on the essential attributes of definitions (i.e., the *genus* and the *differentiae*) of corporate sustainability. According to this perspective, non-essential attributes (*accidents* or *propria)* are less informative because they (at best) needlessly extend a definition with are logically redundant elements or (at worst) harm the explanatory power of a definition by importing vagueness or illogical elements (e.g., circular arguments, tautologies) (Robertson & Atkins, 2016). The Aristotelian perspective aims at complete definitions, assuming that a phenomenon can be defined in its entirety.

In analyzing the 33 original definitions of corporate sustainability, we seek to identify the *genus* and the *differentiae*, thus focusing on those attributes "signifying a thing's essence" (Aristotle, cited in Cohen & Nagel, 1934, p. 235). Adopting the Aristotelian perspective is useful for our purposes because it is transparent and systematic and treats all definitions as equally valid, thereby providing solid grounds for comparing definitions. Also, by identifying the denominators common to all definitions, the Aristotelian perspective promises a definition that researchers and practitioners may effectively use for discerning "real" corporate sustainability from "fake" corporate sustainability.

A framework for analyzing definitions. Our process for developing the framework was iterative. We went back and forth between developing and defining sets of components, testing and validating our framework with colleagues, embedding our coding within the literature on definitions, and sharpening our coding rules and guidelines. For example, after a first screening of the definitions, we noticed differences in how extensively scholars circumscribed sustainable development or how they conceptualized the potential benefit that firms may enjoy through the pursuit of corporate sustainability. During this first screening, we remained open to any aspect of the definitions that appeared important. Our first discussions provided important insights into conceptual differences between definitions.

To test and validate our initial insights into the components in which definitions of corporate sustainability differ, we organized a workshop with about 20 researchers, all with expertise in research on corporate sustainability. We introduced the participants to the purpose of our study and outlined the steps we had taken thus far towards finding original definitions of corporate sustainability. We then divided the participants into six groups, each receiving four definitions of corporate sustainability. We asked every group to compare and contrast the definitions and to document their insights and findings. Together, we then aggregated the insights into topics and, when comments were unclear, asked for further clarifications.

The workshop helped us identify six broader topics (e.g., level of integration), some of which overlapped with our initial reading, others that we had not noticed during our initial reading (e.g., the time dimension of sustainable development). Drawing both on our initial ideas and on the insights from the workshop, we developed a first coding scheme that distinguished 10 conceptual components. For example, we coded for "flexibility/trade-offs" because, whereas some definitions of corporate sustainability require firms to meet several objectives simultaneously, others require firms to balance several objectives at once, suggesting a higher level of managerial flexibility. We also coded the ways in which scholars conceptualize the notion of "time," initially distinguishing between no conceptualization of time, a short-term temporal perspective, and a long-term one.

We went back and forth between coding definitions, sharpening our coding guidelines, and eliminating and adding some conceptual components. For example, we initially coded "manifestation" as a specification in definitions of either how corporate sustainability manifests itself (e.g., practices, activities, strategies) or as the category of classes to which corporate sustainability belongs (e.g., corporate sustainability is a business approach). Because some definitions separated "manifestation" from the category component, our initial coding showed strong deviations. We subsequently added a conceptual component and separately coded for both "manifestation" and for "*genus*."

Some codes also proved difficult to code reliably. For example, we initially coded for "valence," to capture a definition's underlying style as carrying a positive (attractive) or a negative (averse) connotation. We distinguished between "negative," "no-harm," "neutral," and "positive" valence. Yet, even after multiple rounds of re-coding and discussing our views of the valence of a definition, we realized that the valence is a complex combination of interconnected conceptual components and that—in many cases—definitions simply did not exhibit a clear valence. We therefore discarded "valence" as a component in our framework.[10]

The* genus *and the three* differentiae *of corporate sustainability. Our final coding framework comprised four conceptual components in which definitions of corporate sustainability differed: the *genus* and three *differentiae*. We identified the *genus* by documenting the central noun in each definition. We adopted an open coding because the Aristotelian perspective on definitions primarily specifies the location of the *genus* in a definition, in that it directly follows the *definiendum* (e.g., "corporate sustainability is [*genus*]"). The open coding was also useful because it allowed us to account for the variety of *genera* that scholars drew on

[10] In addition to "valence," we also eliminated what we had labeled "flexibility" and "mechanism," because coding them proved likewise difficult.

for their definition of corporate sustainability and for definitions that did not follow the prototypical structure of the Aristotelian perspective.

In coding the *differentiae*, we first documented the term that scholars use to specify each *differentia*. Then each author individually evaluated whether the term indicated a low, medium, or high inclusion threshold. The higher the inclusion threshold, the more difficult it would be for a firm to satisfy the conditions set in a definition of corporate sustainability. Table 2 provides an overview of the four conceptual components of definitions of corporate sustainability, including a description of each component and our coding guidelines.

Insert Table 2 about here

We labeled the first *differentia* the "level of ambition" and documented the terms that scholars used to indicate how ambitious firms should be in setting certain objectives. After we had collected the specific terms used in each definition, each author separately evaluated the range of terms about the actual level of ambition. We distinguished three levels of ambition: low, medium, and high. We labeled the second *differentia* the "level of integration". Following our earlier procedure, we first documented the term that scholars used for indicating the extent to which firms should integrate sustainability into their operations. We then focused on the range of terms indicating the level of integration, independently assessing whether a specific term indicated a low, medium, or high level of integration.

Finally, we labeled the third *differentia* the "specificity of sustainable development." We identified four dimensions of sustainable development: the environmental, the social, the economic, and the intergenerational and, for each definition, coded which dimensions of sustainable development were included in the definition. Moreover, because scholars differently specified each of the four dimensions, we also distinguished between a low, medium, and high level of specificity. Our coding for the specificity of sustainable development thus contained one indicator of breadth (i.e., how many dimensions does the definition include) and of depth (i.e., how clearly the dimensions are described). Together the *genus* and the three *differentiae* allow us to comprehensively assess definitions of corporate sustainability.

FINDINGS

We find that the scholarly community offers a plethora of ideas about the fundamental nature of corporate sustainability. Using the Aristotelian perspective on definitions, we identified the *genus* of corporate sustainability by documenting the first and central noun of a definition. The three *differentiae* capture logically consistent attributes that experts agree on (i.e., no hidden propositions, no logical fallacies). In line with Aristotle's ideas on categorical schemes, the three *differentiae* are mutually exclusive and collectively exhaustive for capturing our scholarly understanding of the nature of corporate sustainability. Figure 3 displays both the variety of families and the three *differentiae* in the form of a "corporate sustainability cube".

Insert Figure 3 about here

***Genus*: The variety of families of corporate sustainability**

Scholars offer an astonishing array of families to which corporate sustainability may belong, for example considering corporate sustainability a firm's specific "ability," "capacity," or "response" but also "strategies and activities"; "products, policies, practices"; or "an approach," "concept," or "new paradigm". Two broader families emerge from this array: corporate sustainability belongs either to a family of specific components of a firm's design (e.g., practices, processes, strategies) or to ways of doing business (e.g., approach, concept, paradigm).

Not surprisingly, how scholars conceptualize the *genus* of corporate sustainability also influences how strictly they define inclusion criteria. Definitions that classify corporate sustainability as merely a species of business practices are less strict than definitions that consider corporate sustainability as a new management paradigm. Arguing that corporate sustainability constitutes a new paradigm carries wide-ranging implications not only for the design and implementation of business practices but also for the underlying philosophical perspectives on the nature and the role of the firm within society.

***Differentiae*: Different "species" in the same family of corporate sustainability**

We also identified three *differentiae*; attributes that help explain how a specific conceptualization of corporate sustainability differs from other variants in its family. First, the "level of ambition" specifies the extent to which firms must exert effort. About half (15) of the definitions of corporate sustainability include a very high level of ambition, requiring firms to "achieve, enhance, maintain," and "use efficiently and contribute effectively". We coded these wordings as a high level of ambition because they require firms to not only plan for change but to also make an actual change (achieve) in a particular way (e.g., efficiently, effectively.) The remaining definitions include medium (7) to low (11) levels of ambition. They demand that firms, for example, "pursue," "apply," or "respond" (medium) or "contribute," "find ways," or "demonstrate" (low). These definitions include less restrictive inclusion criteria, in that firms merely need to show that they have adopted something or are looking for ways to find solutions.

Second, in defining corporate sustainability, researchers demand different "levels of integration," the extent to which corporate sustainability is woven into a firm's core activities. A high level of integration exists when sustainability is the guiding principle in the main functional areas of a firm (areas such as strategy, operations, finance and human resources) and—more importantly—whether it is a key factor in a firm's core business. In contrast, a low level of integration exists when corporate sustainability is separated from its core business (e.g., philanthropic activities). Scholars proposing a definition that demands a high level of integration would not likely consider an approach that structurally separates a firm's commercial and philanthropic activities as satisfying the requirements of corporate sustainability.

About half (15) the definitions of corporate sustainability demand full integration, a high inclusion threshold indicated by signaling words such as "full-cost accounting" or, simply, "integrate." In these instances, a firm satisfies the criteria of corporate sustainability only when the entire firm is organized in a sustainable manner. Only seven definitions have a medium inclusion threshold for the level of integration, that is, asking firms to "include" sustainability considerations. The remaining 11 definitions have low inclusion thresholds by requiring firms to (merely) pursue sustainability parallel to its profit-driven operations (as indicated by terms such as "while," "simultaneously," and "also").

Third, definitions of corporate sustainability differ in their "specificity of sustainable development". In coding different conceptualizations of sustainable development, we documented whether scholars include the social, economic, ecological, and intergenerational dimensions of sustainable development. Moreover, we distinguished among three inclusion thresholds (low, medium, and high) for the level of specificity. The lower the level of specificity, the more room for interpretation and thus the less restrictive a definition. In turn, the more dimensions of sustainable development included in a definition, and the more specifically these dimensions are defined, the more restrictive a definition.

Overall, scholars have selectively included different dimensions of sustainable development into their definitions. Only five definitions include all four dimensions of sustainable development. One notable exception is Benn, Dunphy, & Griffiths' (2014) conceptualization of sustainable development, which is highly specific in conceptualizing each dimension. Most definitions (22) include the social and ecological dimensions of sustainable development, although most definitions only briefly mention these dimensions rather than specifying or expanding upon them. Other scholars only emphasize one dimension, for example the ecological (e.g., Marshall & Brown, 2003) or do not mention any of the four dimensions (e.g., simply referring to "a desirable future state").

The economic and the intergenerational equity dimensions are most frequently ignored. Most definitions (25) do not mention the notion of intergenerational equity when defining corporate sustainability, a finding that suggests that the "Triple Bottom Line" (Elkington, 1997) has received more attention in the academic literature than the Brundtland Report (United Nations, 1987). Furthermore, 17 definitions do not explicitly mention the economic dimension. While at first glance many definitions appear to include economic factors, a more careful look reveals that many of these factors relate to potential benefits that a firm may enjoy when pursuing corporate sustainability (e.g., profits, revenue growth) rather than actual (macro-) economic factors (e.g., economic growth, fair taxation, or economic welfare).[11] In sum, how scholars specify sustainable development in defining corporate sustainability differs widely, with important implications for both the theoretical understanding and practical use of the concept.

[11] Most definitions of corporate sustainability promise some sort of corporate benefits, such as improved profitability, performance, growth, or competitive advantages. Rather than informing about the nature of corporate sustainability, such attributes should rather be considered an embedded proposition because it specifies a specific relationship between two construct (corporate sustainability and performance), a relationship that studies on "does it pay to be green or good" address (e.g., Barnett & Salomon, 2012; King & Lenox, 2001).

Table 3 provides examples of terms that scholars have used in defining corporate sustainability for low, medium, and high levels of ambition, integration, and specificity of sustainable development.

Insert Table 3 about here

DISCUSSION

During the past 20 years, scholars have defined the concept of corporate sustainability in many ways. However, there is substantial ambiguity around this concept, with scholars occasionally identifying this ambiguity as an obstacle hindering the progress of theoretical development and the formulation of effective managerial recommendations. Our review has allowed us to identify 33 definitions that have appeared in some of the most seminal publications on corporate sustainability. Drawing on writings on the structure of definitions, we have developed a framework for systematically comparing and contrasting definitions of corporate sustainability. Our framework breaks definitions down into four essential attributes. These components specify the *genus* (i.e., the family to which corporate sustainability belongs) and three *differentiae* as essential attributes of corporate sustainability (i.e., the components relevant for differentiating between different shades of corporate sustainability).

Our findings not only corroborate but also integrate prior work aimed at strengthening the conceptual foundations of corporate sustainability (Landrum & Ohsowski, 2018; Lankoski, 2016). The *genus*, for example, resembles research on the relevance of organizational processes and structures, as well as strategic management, in the context of corporate sustainability (e.g., Baumgartner & Rauter, 2017; Eccles et al., 2014; Morioka & de Carvalho, 2016). The *differentia* "level of integration" mirrors Byl and Slawinski's (2015) review of different types of tensions that arise from reactive, integrated, and strategic forms of corporate sustainability. Moreover, "specificity of sustainable development" closely matches Lozano (2008) in its holistic perspective, by combining the three pillars of sustainable development with intergenerational equity. Finally, notions similar to what we have labelled the "level of ambition" appear in both the academic and practitioner literature. Van Marrewijk and Werre (2003, p. 107) argue that "[e]ach organization should choose its own specific ambition" and, more recently, the Sustainable Development Goals (SDG) Compass (GRI, UN Global Compact, & WBCSD, 2015, p. 18) concludes that "ambitious goals are likely to drive greater impact and better performance than more modest goals."

Thus far, however, researchers have largely treated the elements that we place in our corporate sustainability cube in isolation from one another (see, for an exception, Lankoski, 2016). By identifying the essential attributes of definitions of corporate sustainability, we not only offer conceptual clarity but also place different definitions into a single framework, thereby converting a seemingly fundamental problem into a theoretically attractive space of inquiry.

Implications for research on corporate sustainability

We contribute to research on corporate sustainability in three ways. First, the corporate sustainability cube raises awareness of the various interpretations that scholars currently subsume under the term "corporate sustainability." Understanding how definitions differ from one another is particularly helpful for interpreting existing work on corporate sustainability because a particular understanding of corporate sustainability may significantly influence the results and implications of a study. By placing various definitions in a single framework may also help researchers to situate their definitions in the larger family of concepts shared within the scholarly community. We thus make it easier for others to both grasp the cumulative insights and to make sense of the literature as a whole. Thus, with the corporate sustainability cube, we offer a framework that helps to establish a common understanding and language, and therefore facilitates communication among researchers interested in corporate sustainability.

Beyond showing *that* definitions are different, our findings also clarify *how* they are different. Our definitional space thus gives researchers the flexibility to comparing alternative conceptualizations and investigate a precisely defined concept of corporate sustainability. For example, a lenient definition may define corporate sustainability as "*a firm's attempt to respond to environmental and social issues*." In contrast, a stringent one may define corporate sustainability as "*a bundle of activities fully integrated into a firm's overall strategy that contribute effectively to the welfare of current and future generations through protecting and enhancing the resilience of the biosphere, social equity and cohesion, and economic prosperity.*" Clearly, these two definitions differ, illustrate the range of options in defining corporate sustainability, and carry different implications for research.

Second, our framework is an instrument to distinguish what corporate sustainability is and what corporate sustainability is *not,* thereby allowing nuanced insights into the extent to which firms may be considered sustainable.[12] Such a clear conceptualization is particularly important because, unless one has an instrument that allows clearly distinguishing corporate sustainability from *non*-corporate sustainability, one cannot know whether firms are, for example, effectively

[12] Note that the definitions in our review may have been developed to define corporate sustainability in the context of a specific organizational form, namely one that follows the paradigm of profit maximization and the obligation to grow. Both issues are contested in the discussion on corporate sustainability and appear as principle tensions for defining corporate sustainability. Defining corporate sustainability for other organizational forms, such as non-for profit organizations or hybrid organizations (Haigh & Hoffman, 2012), may not involve these difficulties to a similar extent.

contributing to sustainable development or merely greenwashing (e.g., Bowen & Aragon-Correa, 2014; Marquis, Toffel, & Zhou, 2016). “Green building” or “fair workplace” policies are important instruments for addressing specific sustainability issues. Yet, as individual indicators, they do not provide information on how central green buildings or fair workplaces are for a firm (level of integration) nor do they offer insights into how ambitiously or effectively firms pursue these objectives (level of ambition).

Many firms already provide information on the relevance of certain activities for their operations, set objectives for the future, and report on the extent to which they have achieved sustainability objectives. Similarly, many commercial datasets, such as KLD (e.g., Gao & Bansal, 2013) or RobecoSAM (e.g., Eccles et al., 2014), provide more nuanced information than the aggregated sustainability indicators that researchers have used in the past for research on corporate sustainability (Chatterji, Durand, Levine, & Touboul, 2016). By integrating the three essential attributes in a single framework, we emphasize the importance of developing more nuanced measures for corporate sustainability.

Third, we raise awareness of the potential limitations concerning the external validity among empirical studies on corporate sustainability. The dramatic differences in how scholars define corporate sustainability suggest that the external validity of empirical research on corporate sustainability is much more limited than it first appears. For example, a number of studies examine the link between corporate sustainability and financial performance (e.g., Eccles et al., 2014; Flammer, 2015). Yet the plethora of different definitions prevents scholars from conclusively answering the questions of whether and how corporate sustainability contributes to financial performance.

Indeed, one implication of our study is that meta-reviews may risk comparing results that are essentially non-comparable, because the reviewed studies are likely based on fundamentally different understandings and measurements of corporate sustainability (Margolis & Elfenbein, 2008; Orlitzky, Schmidt, & Rynes, 2003). Moreover, stringent interpretations of corporate sustainability may also relate differently to financial performance than lenient interpretations. The conceptual clarity that our framework offers allows future research to systematically compare and contrast concepts, and increase the external validity of their findings. Ultimately, the corporate sustainability cube we present in this article should provide researchers with the opportunity to develop robust empirical findings as a foundation for important managerial recommendations.

Implications for practice

Our cube also offers several managerial implications. Clearly, it helps managers focus attention and resources on those aspects of corporate sustainability that presumably matter most. Managers may find it useful to focus on setting or adjusting levels of ambition, and we offer means that not only focus attention to this attribute but also evaluate different levels of ambitions. It matters if IKEA (only) *aims* to increase the share of certified wood over the next five years or if the firm actually *uses* certified wood only. Moreover, managers may find it useful to decide which sustainability activities to pursue by considering how strongly these activities will help embed sustainability across the organization. For instance, a bank claiming to be sustainable because it does not send paper Christmas Cards certainly saves resources and costs and contributes to sustainable development. Yet, if the bank continues investing in unsustainable industries, it fails to integrate sustainability into its core operations. These differences matter, which means that managers need to account for how integral such practices are for the firm when they compare and evaluate alternative sustainability practices.

Further, emphasizing the scope of sustainable development as an essential attribute raises awareness of how holistically managers perceive the range of issue they could address. For example, firms are increasingly reporting on how their sustainability activities relate to global sustainability frameworks, such as the SDG or Planetary Boundary Framework (Steffen et al., 2015). Yet the range of issues remains selective thus far in that firms prioritize certain practices and only consider how they contribute to sustainability as a second step. However, recently managers and consultants have explicitly linked sustainability topics in the materiality matrix to the SDG, thereby increasing the specificity in both breadth and depth of their understanding of sustainable development. Increasing the level of specificity in definitions of corporate sustainability might be accompanied by significant changes in how, and how extensively, firms report on their sustainability efforts.

Beyond channeling attention to its findings, the comprehensive overview of three essential attributes covered in our cube also offers a dynamic perspective on corporate sustainability activities that managers may find useful for developing strategies. Several scholars have argued for a spectrum of sustainable organizations in which firms move through several stages, ultimately reaching a level at which they (ideally) achieve high ambitions for all sustainability issues (e.g., Benn et al., 2014; Dyllick & Muff, 2016). Stage-models are useful for conceptualizing corporate sustainability, but because they depict stages in a linear and sequential manner and ignore that firms deal with multiple sustainability topics simultaneously, their managerial implications often remain unclear.

Instead, our framework offers managers an instrument for evaluating the variety of sustainability activities across a range of topics according to their level of ambition and integration. More importantly, it is also capable of reflecting the nuances among sustainability activities, which provides managers with opportunities to consider adopting different approaches to a target setting. Managers might, for example, strategically shift levels of ambition by moving away from organization-centric targets toward science-based targets (Haffar & Searcy, 2018). Moreover, by expanding the scope of sustainability objectives and by systematically setting and increasing targets, managers may find new and effective ways of integrating sustainability across the organization. Lastly, by directly linking firm-level aspects of integration and target setting with system-level aspects of sustainable development, our cube promises a systematic perspective for bridging the micro- and macro-level aspects inherent to corporate sustainability.

Limitations

We have identified two aspects that limit our implications and provide avenues for future research. First, when reviewing seminal publications on corporate sustainability, we adopted relatively stringent criteria for identifying definitions and only searched the English literature. However, scholars might express their understandings of the essence of corporate sustainability in different ways and these differences could be language-specific. Given that the scholars whose work we reviewed come from various countries and different language backgrounds, focusing on English publications appears unproblematic. Yet, some researcher may prefer to define corporate sustainability less explicitly, describing and outlining their understanding over multiple sentences or paragraphs. Our “selection strategy”, which presumed that definitions appear as short and concise statements, ideally introduced with statements such as “our definition” or “we define”, may have led us to omit definitions that were formulated in different ways.

Second, throughout the article we have adopted an essentialist, Aristotelian, or—as Suddaby (2010) labels it—"catholic" view of concepts and definitions (Berg, 1982). This perspective is appropriate for non-ostensive definitions and advocates reductionism in identifying concepts' essential attributes. Despite the long tradition and dominance of the essentialist perspective, not all philosophers and social scientists adhere to this perspective. For example, Wittgenstein argued that concepts do not necessarily share essential attributes although they may nonetheless closely resemble one another. Based on this argument, he proposed "ostensive" definitions, a list of examples that closely resemble the meaning of a certain phenomenon, as a contrast to the Aristotelian definition.

In the context of corporate sustainability, a scholar may have chosen to define corporate sustainability by outlining three specific instances (e.g., off-setting all CO_2 emissions; consuming no more wood than can be regenerated in a timely manner; or raising salaries and workplace safety conditions in overseas factories). Such an ostensive definition would be more useful than a non-ostensive (i.e., Aristotelian) one if corporate sustainability were an emergent and transient phenomenon whose use and meaning are subject to conceptual contestation (as in the case of essentially contested concepts), rather than conceptual confusion.

Yet, given that all 33 definitions we identify in the literature are descriptive and essentialist rather than normative or ostensive and that our findings are strongly reflected in the literature on corporate sustainability, the scientific community appears to prefer succinct conceptualizations of corporate sustainability. Moreover, by measuring the levels of stringency of each of the three *differentiae*, the corporate sustainability cube offers structured flexibility in the concept of corporate sustainability. Nonetheless, definitions are ultimately not evaluated on their correctness but primarily on their scientific utility, i.e., how useful they are for researchers' scientific enquiries (Cohen & Nagel, 1934). For certain purposes and contexts, ostensive definitions of corporate sustainability may prove to be more useful.

CONCLUSION

Few scholars would disagree that a certain level of consistency in the understanding of concepts is important for scientific progress, at least within a scientific field. Construct clarity remains an essential element in any scientific enquiry, irrespective of whether a field unites around a single definition or agrees on multiple, different, yet equally valid, definitions. Our corporate sustainability cube not only offers additional conceptual clarity but also allows for informed flexibility in the conceptualization of corporate sustainability. A better understanding of the essence of corporate sustainability should help managers to more effectively contribute to sustainable development. Ultimately, meaningful progress can be achieved only if firms around the globe—large or small, public or private, new or established—change their core business so that it aligns with the long-term objectives of sustainable development.

TABLES AND FIGURES

Figure 1
Number and average citation of academic publications on corporate sustainability in the Web of Science from January 1999 to April 2018

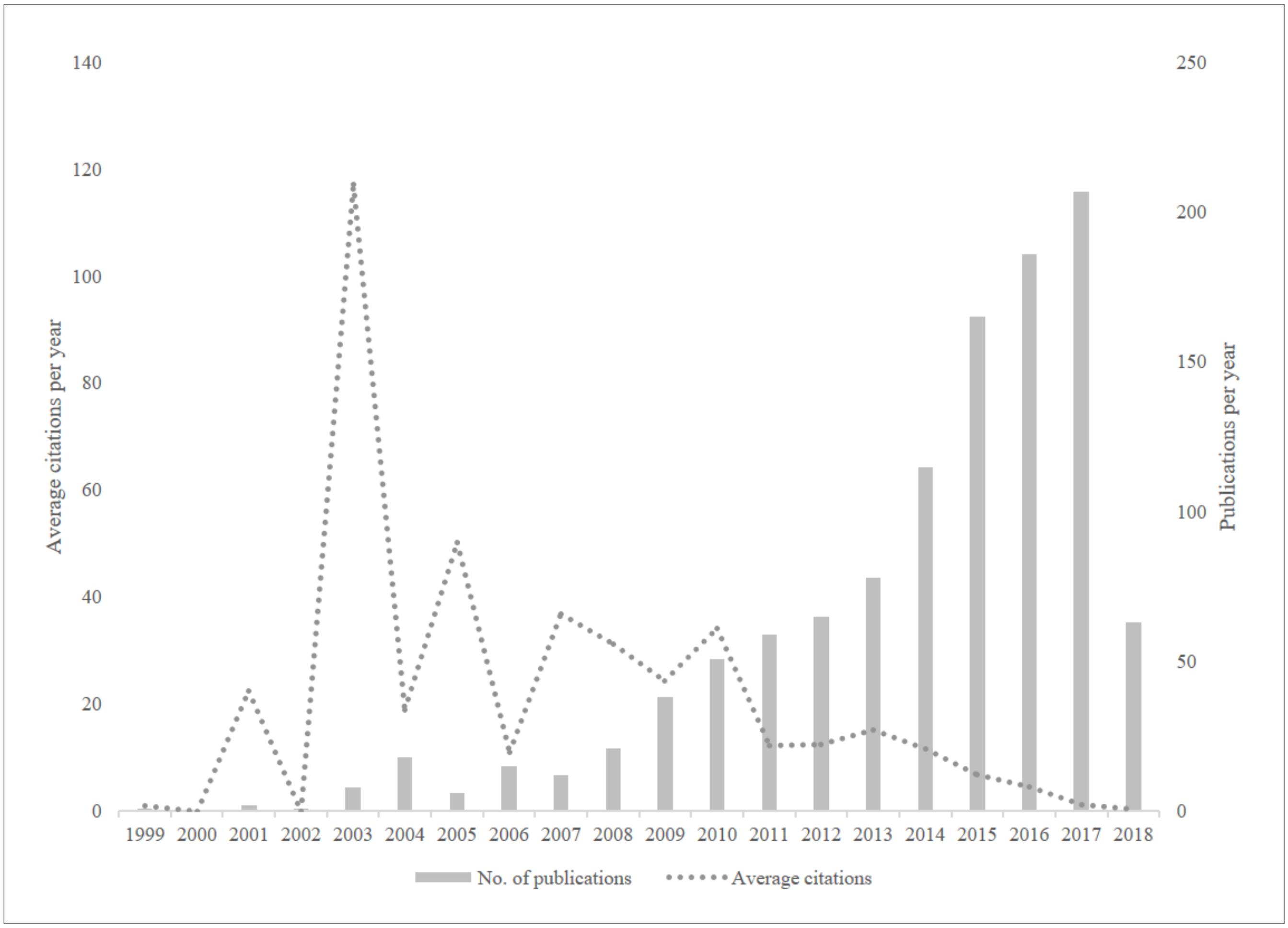


Table 1
Chronological list of 33 definitions of corporate sustainability

	Author(s) (Year)	Definition
1	Elkington (1997)	The attempt by firms to balance social, economic, and environmental goals.
2	Atkinson (2000)	Corporate sustainability means full-cost accounting with regard to all externalities caused by the firm - based on the idea that corporations contribute or inhibit sustainable development.
3	Bansal and Roth (2000)	A set of corporate initiatives aimed at mitigating a firm's impact on the natural environment.
4	Dyllick and Hockerts (2002)	Corporate sustainability can be defined as meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities, etc.), without compromising its ability to meet the needs of future stakeholders as well.
5	Funk (2003)	A sustainable organization is one whose characteristics and actions are designed to lead a "desirable future state" for all stakeholders.
6	Hart and Milstein (2003)	Contributes to sustainable development by delivering simultaneously economic, social, and environmental benefits. Sustainable development is the process of achieving human development in an inclusive, connected, equitable, prudent and secure manner.
7	Marshall and Brown (2003)	An "ideal" sustainable organization will not use natural resources faster than the rates of renewal, recycling, or regeneration of those resources.
8	Van Marrewijk (2003)	In general, corporate sustainability and CSR refer to company activities – voluntary by definition – demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders.
9	Wilson (2003)	A new and evolving corporate management paradigm that recognizes that corporate growth and profitability are important, it also requires the corporation to pursue societal goals, specifically those relating to sustainable development — environmental protection, social justice and equity, and economic development.
10	Figge and Hahn (2004)	Corporate sustainability is the efficiency with which a company uses resources relative to other companies together with the effectiveness with which it contributes to the three dimensions [environmental, social, economic] of sustainability.

11	Steger (2004)	The myriad of environmental and social actions that go beyond regulatory compliance and have an economic reason, a business case.
12	Bansal (2005)	Corporate sustainability means applying the principles of economic integrity, social equity, and environmental integrity simultaneously to products, policies and practices.
13	Salzmann, Ionescu-Somers, and Steger (2005).	A strategic and profit-driven corporate response to environmental and social issues caused through the organization's primary and secondary activities.
14	Steurer et al. (2005)	Business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future.
15	Székely and Knirsch (2005)	Corporate sustainability involves sustaining and expanding economic growth, shareholder value, prestige, corporate reputation, customer relationships, and the quality of products and services as well as adopting and pursuing ethical business practices, creating sustainable jobs, building value for all the stakeholders and attending the needs of the underserved.
16	Neubaum and Zahra (2006)	The ability of a firm to nurture and support growth over time by effectively meeting the expectations of diverse stakeholders.
17	Russell, Haigh, and Griffiths (2007)	Working towards long-term economic performance; working towards positive outcomes for the natural environment; supporting people and social outcomes; adopting a holistic approach.
18	Hahn and Figge (2011)	The pursuit of environmental, social, and economic goals in order to achieve long-term prosperity of the firm (organizational target level) or to contribute to the long-term prosperity of society and humankind (societal target level).
19	Porter and Kramer (2011)	Policies and practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which operates.
20	Lozano (2012)	Corporate activities that proactively seek to contribute to sustainability equilibria, including the economic, environmental, and social dimensions of today, as well as their inter-relations within and throughout the time dimension while addressing the company's system (including Operations and production, Management and strategy, Organisational systems, Procurement and marketing, and Assessment and communication); and its stakeholders".

21	Valente (2012)	A step toward a proactive orientation to sustainability. Firms need to find ways to interconnect social, economic, and ecological systems using “coordinated approaches social, ecological, and economic stakeholders operating as unified network or system.”
22	Milne and Gray (2013)	Incorporating an entity’s economic, environmental and social performance indicators into its management and reporting processes.
23	Schaltegger, Beckmann, and Hansen (2013)	The successful market-oriented realization and integration of ecological, social and economic challenges to a company.
24	Bansal and DesJardine (2014)	The ability of firms to respond to their short-term financial needs without compromising their (or others’) ability to meet their future needs.
25	Benn et al. (2014)	Sustainable organisations engage in activities that a) extend the socially useful life of organisations, b) enhance the planet’s ability to maintain and renew the viability of the biosphere and protect all living species, c) enhance society’s ability to maintain itself and to solve its major problems, and d) maintain a decent level of welfare for present and future generations of humanity.
26	Eccles et al. (2014)	Integrating social and environmental issues into a company’s strategy and business model through the adoption of corporate policies.
27	Hahn et al. (2014)	A concept that "refers to a company’s activities […] demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders.”
28	Sharma (2014)	The achievement of a firm’s short-term financial, social, and environmental performance without compromising its long-term financial, social, and environmental performance.
29	Sterman (2015)	Sustainability initiatives that are framed as (also) helping to heal the world.
30	Dočekalová and Kocmanová (2016)	A key concept for companies to achieve long-term benefits by integrating activities associated with sustainability into their strategy.
31	Dyllick and Muff (2016)	A truly sustainable company understanding how it can create a significant positive impact in critical and relevant areas for society and the planet.
32	Schaltegger, Hansen, and Lüdeke-Freund (2016)	Sustainability management refers to approaches dealing with social, environmental, and economic issues in an integrated manner to transform organizations in a way that they contribute to the sustainable development of the economy and society, within the limits of the ecosystem.

33	Upward and Jones (2016)	A sustainable firm is an organization that creates positive environmental, social, and economic value throughout its value network, thereby sustaining the possibility that human and other life can flourish on this planet forever. Such a firm would not only do no harm, it would also create social benefit while regenerating the environment ("doing good") to be financially viable ("doing well").

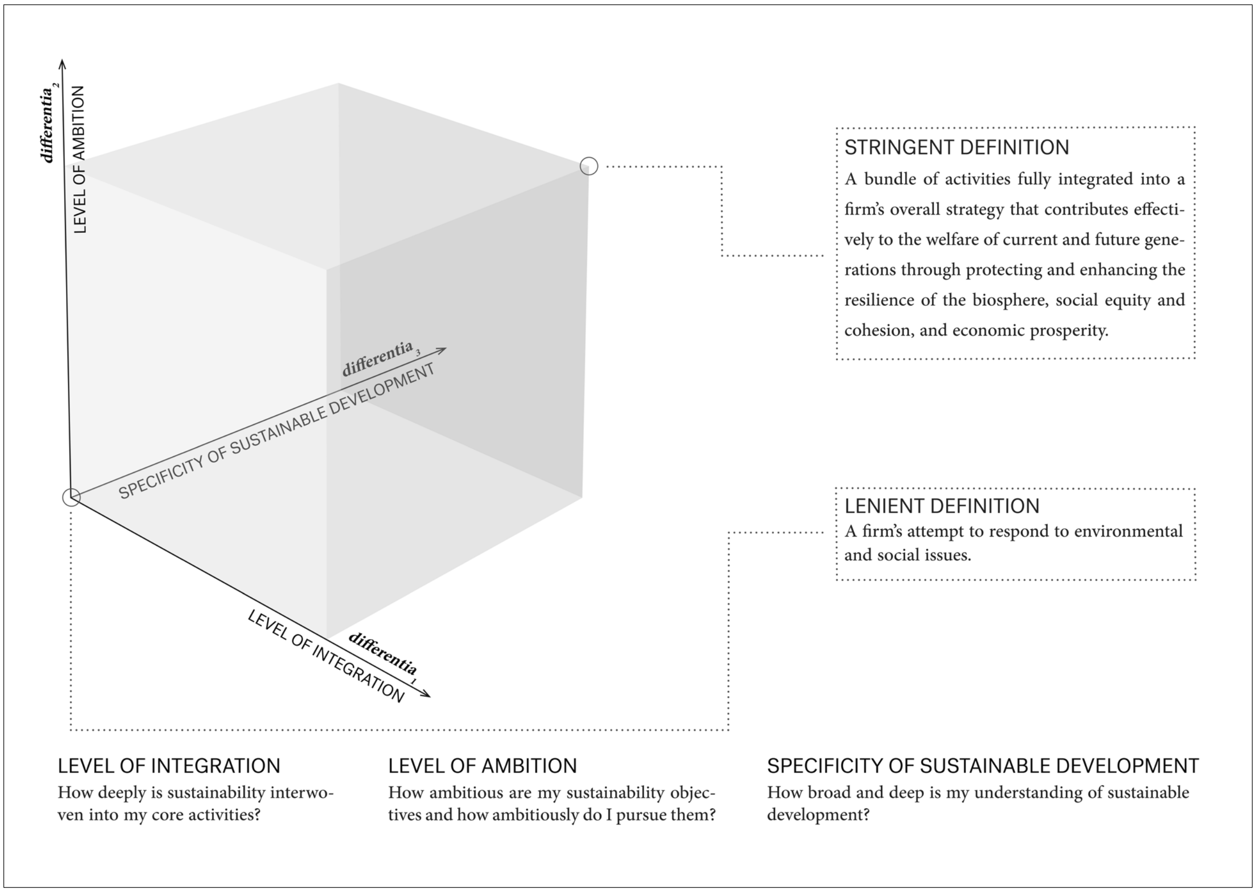
Table 2
Types and inclusion levels of components of corporate sustainability definitions

Component	Description	Coding approach
Genus	The "genus" of a definition specifies the family of things to which a concept belongs (e.g., a wine glass belongs to the genus of glasses). We captured the variety of genera by documenting the central noun that appears in a definition.	o Open coding, first noun in the definition
Differentia (1): Level of ambition	Definitions differ in the levels of achievement they require for firms to be considered sustainable (e.g., seek, demonstrate, achieve). First, we documented the term that indicates the level of ambition. Second, focusing exclusively on the indicating term, each author assessed how ambitiously scholars define corporate sustainability. We coded for high, medium, and low level of ambition.	o Open coding o Subjective assessment of how ambitious the definition is (low, medium, high)
Differentia (2): Level of integration	Definitions of corporate sustainability differently conceptualize the level of integration of the corporate and the sustainability dimensions. To capture a definition's "level of integration," we first documented the term that scholars use to indicate how much firms needed to integrate sustainability. Second, each author assessed whether a definition demanded a low, medium, or high level of integration.	o Open coding o Subjective assessment of the level of integration (low, medium, high)
Differentia (3) Specificity of sustainable development	To conceptualize sustainable development, most definitions draw on the triple-bottom-line or the Brundtland definition of sustainable development. To capture how specific scholars conceptualize sustainable development, we distinguished between (1) the economic, (2) the social, and (3) the ecological, and (4) the intergenerational dimension of sustainable development. We documented whether a definition explicitly mentions each of these four dimensions. If so, we coded how specifically a dimension is included, distinguishing between a low level of specificity (merely mentioned), a medium level of specificity (briefly described), and a high level of specificity (elaborately described).	For each of the four dimensions (economic, ecological, social, intergenerational) we coded: o Not mentioned o Low level of specificity o Medium level of specificity o High level of specificity

Table 3
Exemplary terms for varying levels of inclusion in differentiae

	High	Medium	Low
Differentia (1): Level of ambition	• Account for all externalities • Lead to/ achieve • Use efficiently and contribute effectively	• Contribute • Proactively seek • Advance conditions	• Attempt • Respond • Find ways
Differentia (2): Level of integration	• Designed characteristics • Highly integrated through multiple activities • Integrated into strategy	• Inclusion • Full-cost accounting • Coordinated, interconnected approach	• Also/ parallel • Simultaneous • As well as, while
Differentia (3) Specificity of sustainable development	• Extend the socially useful life of organizations, enhance the planet's ability to maintain and renew the viability of the biosphere and protect all living species, enhance society's ability to maintain itself and to solve its major problems, and maintain a decent level of welfare for present and future generations of humanity.	• Societal goals, specifically […] environmental protection, social justice and equity, and economic development. • Economic integrity, social equity, and environmental integrity	• Sustainability • Sustainable development • Sustainability equilibria • Protecting, sustaining and enhancing the human and natural resources that will be needed in the future

FIGURE 3
The “corporate sustainability cube”



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Appendix

This Appendix provides an overview of the 101 publications we identified as core readings in the literature on corporate sustainability. We both order the publications alphabetically by the first author's last name and indicate whether we have identified the publication through the systematic literature search (*), the expert survey (§), or both (§,*).

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