Review

So Close, Yet So Far Away: Exploring the Role of Psychological Distance from Climate Change on Corporate Sustainability

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Abstract: Despite some improvements and increasing social pressures, most organizations seem to be stagnating in a superficial implementation of sustainability practices despite the accumulation of climate change consequences. Research on corporate sustainability has shown that external pressures and psychological factors influence managers' environmental decisions. However, these psychological factors have been undertheorized in the management research field. The concept of psychological distance has shown promising results in studying environmental behaviors. This concept is rooted in the construal level theory and is defined as the subjective experience of feeling that something is close or far away from the self, the here and the now. Therefore, it represents a relevant path for exploration in research on corporate sustainability. The main goals of this integrative review are to explore how the concept of psychological distance has been employed in research on corporate sustainability and to explore related concepts from this research field. Additionally, concepts that are related to the four dimensions of psychological distance (i.e., temporal, spatial, social, and hypothetical) are critically discussed. The links between these concepts and their impacts on sustainability endeavors within organizations are then visually presented through a conceptual map, which forms the main contribution of this review. Further theoretical contributions are presented, the implications for managers are discussed, and future research avenues are proposed.

Keywords: psychological distance; construal level theory; corporate sustainability; sustainable development; climate change; organizational behavior

1. Introduction

Although decision-makers are making efforts to respond to the unfolding environmental crisis, sustainability practices remain superficially applied in many organizations. To understand the persistent underestimation of environmental issues, we must turn to the psychological aspects affecting decision-makers [1–4]. On this topic, Hoffman [5] states that the solutions to climate change within the organization must emerge from an alteration of the organizational system, reaching deep into the levels of the core beliefs and values that members hold toward the relationship among the organization, the market, and the natural environment. (p. 309)

Currently, managers tend to discount or disregard the long-term future [6–9] with planning rarely going beyond a five-year horizon [10]. Due to the delayed responses of the Earth's environmental systems [11] and the longer-term risks [12] and rapid, nonlinear changes [13] of climate change, global environmental issues are a unique and complex challenge that most managers have never dealt with. These issues present dilemmas as they involve tricky trade-offs between the well-being of present and future generations [14]. While managers have the job of dealing with choices that involve present and future interests simultaneously [15], climate change still seems to present them with particular difficulties.

Most people perceive the risks associated with climate change as psychologically distant [16,17]. As a concept, psychological distance finds its origins in the construal level theory developed by two American psychologists [18–21]. According to this theory, psychological distance can be defined as "a subjective experience that something is close or far away from the self, here, and now" [20] (p. 440). Logically, it is improbable that people will directly experience things that are not happening in the present and around them [22]. Since it takes the here and now as reference points, psychological distance is thus egocentric. Psychological distance involves four interrelated dimensions: temporal, spatial, and social distance, and hypotheticality [20]. The theory predicts that, as psychological distance increases, people use more and more abstract "mental representations" (hereafter referred to as construals) to represent an event or object [22]. Trope and Liberman [20] describe high-level construals as "relatively abstract, coherent, and superordinate mental representations, compared with low-level construals" (p. 441). Accordingly, people can move from low-level (more concrete) to high-level (more abstract) construals through the process of abstraction, which involves omitting detailed features of an event or object [20]. The tenets of the construal level theory and specific operationalization examples are presented in Table 1 below.

Table 1. The tenets of the construal level theory (adapted from Liberman & Trope, 2014).

Construal Level Theory	Operationalization	
Distance dimensions		
Temporal	Future (e.g., make a decision that would be implemented tomorrow versus a year from now; imagine an event in the near versus the distant future)	
	Past (e.g., an object that belongs to the present or to the past)	
Spatial	Nearby versus faraway place (e.g., the map represents a path from your office to the nearest cafeteria versus from an office in another city to the nearest cafeteria)	
Social	Self versus other (e.g., you describe or decide for yourself versus for another person)	
	Similar versus dissimilar other	
	Familiar versus unfamiliar other	
	Ingroup versus outgroup	
Hypothetical	High versus low probability	
	Real versus hypothetical (e.g., you play a demo of a game versus the real game)	
Construal levels		
	High-level, abstract	**Low-level, concrete**
Object construal	Gestalt, global figure	Details
	Wide categories	Exemplars, narrow categories
	Words	Pictures
	Primary features	Secondary features
Event construal	Large time segments	Small time segments
	Causes	Effects
Person construal	Traits	Behaviors
	Dispositions	Situational pressures
	Group identity, stereotypes	Individuating information
Action construal	Abstract action verbs (e.g., help or cheat)	Concrete action verbs (e.g., lift or talk)
	Why an action is performed	How an action is performed
	Ends, desirability	Means, feasibility
	Abstract goals, values, ideologies	Incidental or local considerations, situational demands

A great deal of evidence supports the notion that reducing psychological distance encourages pro-environmental attitudes, policy support, and personal engagement [17,23–25]. Research shows that most people perceive climate change consequences as psychologically distant [16,17] and that business executives prefer shorter-term, smaller-scale, and

simplified approaches [15,26–29]. This might explain why the stakes involved in climate change remain underestimated in most organizations. Despite the potential of psychological distance in explaining managers' superficial implementation of sustainability practices in organizations, research has thus far not linked this concept with environmental management practices. The objective of this integrative review is threefold: to explore the extent to which the concept of psychological distance has been used in corporate sustainability research, to identify other concepts from the field of corporate sustainability that we believe might be related to the dimensions of psychological distance (i.e., temporal, social, spatial, and hypothetical), and to present a conceptual map as a contribution to future theoretical developments in corporate sustainability. This last element forms the main contribution of the study.

2. Methods

The three stated objectives above are addressed through an integrative review [30–32]. Contrary to narrative reviews, an integrative review "enables the synthesis of knowledge from across research approaches in a fragmented field" [32] (p. 1). In addition, an integrative review is an appropriate vehicle with which to address a new, emerging topic [31]. The integrative review approach was chosen for this study because psychological distance has recently started gaining attention in the field of corporate sustainability and has been extensively used in various research fields.

The process started with an exploratory search in five different specialized databases: ABI/INFORM Global and Business Source Premier (administrative sciences), GeoBase (sustainable development), PsycNet (psychology), and Web of Science (multidisciplinary). Keywords such as "corporate sustainability," "corporate social responsibility," "psychological distance," "construal level theory," "action logics," "integrative logic," "short-termism," "environmental management," "environmental leadership," and "pro-environmental behavior" were searched in the articles' titles, abstracts, and keywords.

Articles were selected and studied if they used the concept of psychological distance directly or a concept related to one of its four dimensions (temporal, spatial, social, and hypothetical). The selection was not limited to a specific publication period. The reference sections of these articles were also examined to increase the exhaustivity of the review both in terms of the number of relevant articles and the variety of related concepts covered. Iteratively, this two-step process was repeated multiple times among newly added articles until no additional articles and concepts arose.

This process resulted in 67 management-oriented articles. Figure 1 shows the journals that contributed the highest number of articles to this study, that is with at least two articles each. A total of 34 of the 67 articles (51%) were published in these 12 journals. Furthermore, based on Clarivate's Journal Citation Reports, all 12 journals are at least in the first quartile (Q1) for the Journal Impact Factor (JIF) or Journal Citation Indicator (JCI) in categories such as "management", "business", "sustainable science", and "multidisciplinary." These journals are thus the highest ranked in their respective categories [33]. The only two exceptions are the journals Organization Science and Frontiers in Psychology, which are in the second quartile (Q2). Figure 2 shows the year distribution of all 67 management-oriented articles and illustrates a recent surge of interest in concepts related to PD, with 32 of the articles (48%) published in the last five years.

The rest of this article is structured as follows. The first section explores the literature that refers to psychological distance. This section starts by examining non-managerial research on climate change and ends by looking at non-environmental research in management. The next section focuses on studies from the field of corporate sustainability research that directly use the concept of psychological distance. Then, concepts related to psychological distance within research on corporate sustainability are covered. Finally, theoretical contributions, managerial implications, and future research avenues are discussed in the conclusion.
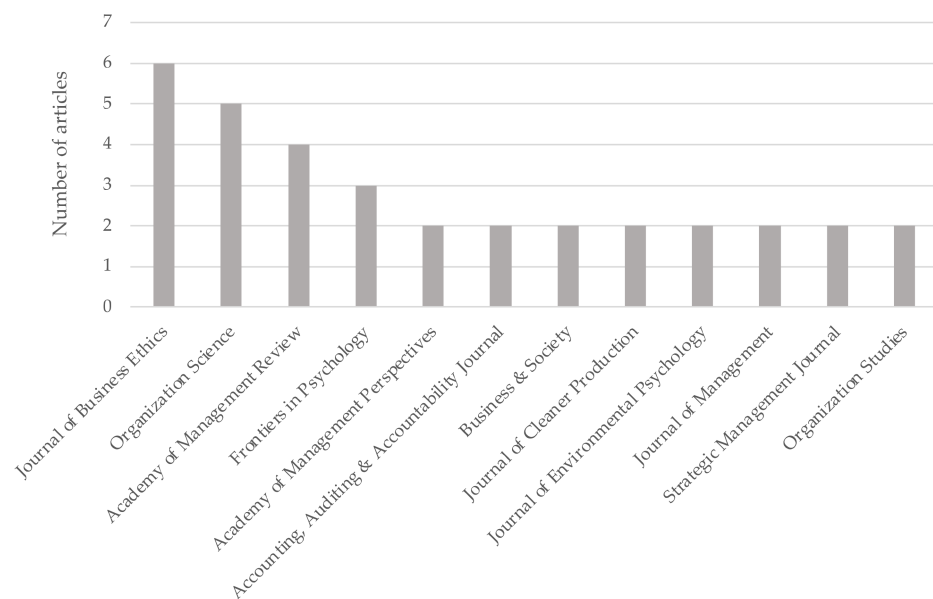
Figure 1. Journals that contributed the most to the study.
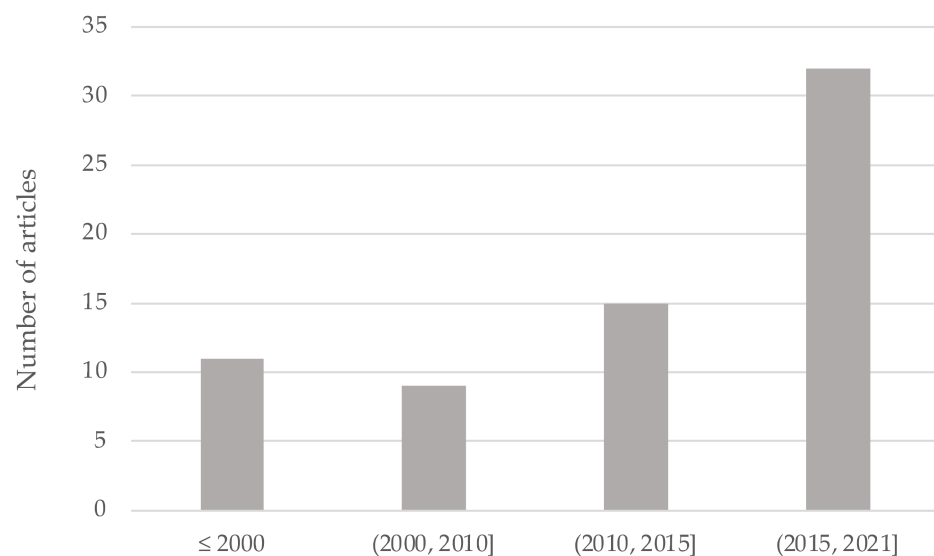
Figure 2. Year distribution of all management-oriented articles in the study.

3. Where Is the Concept of Psychological Distance Mainly Employed?

The relevant literature specifically using the concept of psychological distance revolves around three main axes: non-managerial research on CC, research in management that is unrelated to the environment, and emerging research on corporate sustainability.

3.1. Non-Managerial Research on Climate Change

The concept of psychological distance has been used extensively in the literature related to climate change. In the early 2000s, Böhm and Pfister [34] proposed that the mental construal of environmental threats would determine people's actions and emotional tendencies. Many researchers have conducted empirical studies on the influences of psychological distance on people's environment-related perceptions and intentions. Some of these researchers suggest that reducing psychological distance increases people's level of concern regarding the issue [35–37] (see Figure 3). For example, Singh et al. [35] have found that individuals who believe climate change to have distant or hypothetical impacts

showed lower levels of concern regarding these impacts and were less supportive of adaptation policies.
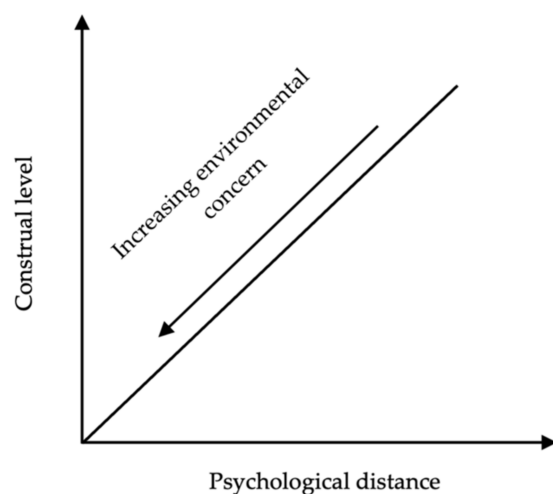
Figure 3. Construal level theory and environmental concern.

The significant influence of psychological distance on people's environmental perceptions is also supported by research on climate change in the field of communications [38–41]. Fortunately, according to Zwickle and Wilson [42], "individual construal levels can be easily changed by carefully framing and composing risk messages" (p. 226), and Wang et al. [25] found that reduced psychological distance is a precursor to increased climate engagement. These are similar tendencies as in research on environmental perceptions, and they indicate promising avenues for change.

However, specific nuances arise when we consider the four interrelated dimensions (i.e., temporal, spatial, social, and hypothetical distance) of the construal level theory [16,25,43–45]. For example, Chen [44] found that a decrease in overall psychological distance positively influenced participants' levels of environmental concern, while a decreased social distance positively influenced preparedness to act on climate change. For their part, Tvinnereim et al. [45] suggest that the effectiveness of public communication on climate change might be enhanced by highlighting local (geographical) aspects of environmental threats to provoke a sense of urgency and mobilization among the population. Even if these significant influences of psychological distance remain in the personal sphere, they might also have some impacts within organizations. Managers' perceptions of climate change might thus affect their organizational decisions and approaches to the issue. Overall, organizations are inclined to mirror their top managers' values and cognitive understandings [46].

Despite the relevance of using the concept of psychological distance to address environmental perceptions and behaviors, and the convergence of the results of many studies, the various nuances discussed above also bring their share of complexity and divergence. As summarized by Maiella et al. [47] in their systematic review on the role of psychological distance in climate change mitigation and adaptation behaviors, "although most of the results reported [. . .] showed that more pro-environmental and resilient behaviors are engaged through lower levels of psychological distance, the relationship between the two constructs is complex and still unclear" (p. 12).

3.2. Research in Management Unrelated to the Environment

Generally speaking, the environment and the concept of sustainability have barely been addressed through the lens of psychological distance in organizational research. However, the concept of psychological distance recently started being used in management research fields unrelated to sustainability [48]: risk management [49], strategic decision-making [50],

leadership [51–53], crisis management [54,55], and opportunity evaluation [56,57]. Interesting links can be drawn between these fields and corporate sustainability.

For example, Steinbach et al. [50] underline the importance of construal flexibility, which refers to construal shifts to fit the demands of a specific activity. Without such flexibility, executives might remain entrenched in a lower (more concrete) construal level whose narrow scope might not be appropriate for large-scale issues (such as climate change) [58]. As discussed by Wiesenfeld et al. [48], those who have the capacity to transition with more ease between construal levels will find the challenge of evaluating complex decisions and activities much less daunting.

Complexity is precisely one of the main characteristics of long-term climate change threats [13]. According to Kim et al. [54], organizations should have "further insight into future crisis threats, which can be more damaging than imminent ones" (p. 333). This is especially true regarding climate change consequences due to their considerable time delays [11]. In the same vein, Venus et al. [52] propose that high (more abstract) construal levels allow "leaders to focus on long-term collective goals representing idealistic values and meaningful purposes" (p. 2677).

Based on the literature covered in this section, psychological distance has been used extensively both in psychology- and communication-oriented studies about climate change as well as in different managerial research fields (except for environmental management). Most of them converge towards similar conclusions. More importantly, several of these studies have underlined the relevance of considering psychological distance in the analysis of managers' behaviors and decisions in situations that require longer-term and strategic approaches [50,52,55,56]. As time and uncertainty are two closely related factors [59] that are "fundamental attributes of virtually any decisions" [60] (p. 831), it is important to consider the influences of psychological distance on managers' decisions regarding long-term and complex issues, such as climate change and corporate sustainability in general.

3.3. Emerging Research on Corporate Sustainability

The concept of psychological distance seems to have been overlooked in the literature on corporate sustainability [48] with the exception of a few studies [61–68] that have applied it in a rather fragmented way (see Table 2 for further details). Despite this fragmented approach, however, similar results arose. One of these converging results is that the use of lower (more concrete) construal levels in communications about an issue triggers feasibility considerations regarding the response to the issue. Conversely, higher (more abstract) construal levels trigger desirability considerations [63,67]. According to Liberman and Trope [18], feasibility refers to more concrete construals related to the efforts in reaching an objective whereas desirability refers to more abstract construals as it focuses on the value of an objective. In other words, when a person begins to consider the immediate, practical, and concrete aspects of an issue, they are likely to also consider the concrete solutions that could be implemented to address it, while if they engage in abstract thinking about the issue instead, they are likely to debate whether or not it is worth addressing at all.

In that vein, research demonstrates that feasibility messages (e.g., in business campaigns to inform stakeholders on corporate social responsibility) represent a more effective engagement lever in the case of events or actions that are perceived as psychologically closer or more proximal [63] and desirability messages work best when an issue is perceived as distant [67]. On the other hand, Simpson et al. [64] suggest that a high psychological distance (and thus more abstract construals) might also influence decision-making differently, "as it can encourage individuals to rely more on predictions (rather than data), be more risk-averse, or believe events are less likely to occur" (p. 990).

Table 2. Descriptive summary of the studies found in the integrative review that used psychological distance in corporate sustainability.

Title and Authors	Type and Aim of the Study	Application of the Construal Level Theory	Main Findings
How fear of "looming megacatastrophes" alters entrepreneurial activity rates through psychological distance [61] (Bendell et al., 2020)	**Non-empirical (conceptual)** "[...] to explore whether entrepreneurship works the same way in the context of 'Big F' Fear [...] as it does under normal conditions." (p. 585)	**Psychological distance:** - Used as the main variable - Applied to environmental consequences	The more psychologically proximal looming megacatastrophes are, the more fear is generated, resulting in the reducing or modifying of entrepreneurial activities (adaptation, mitigation, and pivoting).
Environmental leadership and employees' organizational citizenship behavior towards the environment (OCBE): Psychological distance as a moderating variable [68] (Ju et al., 2015)	**Non-empirical (conceptual)** "[...] to propose that organizational employees' reactions to organizational citizenship behavior towards the environment (OCBE) depends on his or her perception of leadership greening encouragement and support" (p. 949).	**Psychological distance:** - Used as moderating variable - Applied to environmental consequences	Psychological distance interacts with environmental leadership to impact a person's environmentally friendly behaviors.
Promoting employee green behavior through the person-organization fit: The moderating effect of psychological distance [62] (Mi et al., 2020)	**Empirical (quantitative)** "[..] this study uses the psychological distance between employees and organizations as the moderating variable and explores the impact of different types of person-organization fit on EGB [employee green behavior]" (p. 12).	**Psychological distance:** - Used as moderating variable - Applied to employee-organization fit	The three complementary person-organization fits (i.e., values fit, needs-supplies fit, and demands-abilities fit) have different influences on the types of employees' green behaviors, and psychological distance has moderating effects on these influences.
The psychological distance and construal level perspectives of sustainable value creation in SMEs [67] (Mzembe, 2021)	**Non-empirical (review)** "This paper particularly highlights how owner/managers of SMEs may construe different dimensions of psychological distance and apply their understanding to their response to different antecedents of sustainable value creation" (p. 465).	**Psychological distance:** - Used as moderating variable - Applied to sustainable value creation	Psychological distance contributes to better understanding how the internal and external organizational antecedents influence SMEs in their commitment to sustainable value creation.
The effects of construal level and small wins framing on an individual's commitment to an environmental initiative [66] (O'Connor and Keil, 2017)	**Empirical (quantitative)** "[...] to understand whether construal level and small wins strategy might affect goal commitment toward a sustainability initiative" (p. 1).	**Psychological distance:** - Used as moderating variable - Applied to sustainable value creation	Combining construal levels and small wins strategy in a customized approach can significantly influence the level of environmental commitment of an organization's members.
Corporate social responsibility in Korea: How to communicate global issues to local stakeholders [63] (Park and Park, 2016)	**Empirical (quantitative)** "[...] to develop communication strategies that can be used to enhance the effect of CSR [corporate social responsibility] campaigns with various issues and purposes" (p. 78).	**Psychological distance:** - Used as the main variable - Applied to CSR campaigns	A distance-specific message strategy (emphasizing either desirability or feasibility) depending on people's psychological distance from CSR campaigns.
Recycling today, sustainability tomorrow: Effects of psychological distance on behavioural practice [65] (Schill and Shaw, 2016)	**Empirical (qualitative)** "[...] to understand the role and impact of psychological distance in explaining sustainable and recycling behaviours" (p. 349).	**Psychological distance:** - Used as the main variable - Applied to sustainable behaviors	To facilitate the resolution of feasibility (more concrete) concerns, the communication about the desired behaviors should be consistent and use a proximal psychological distance perspective.
The role of psychological distance in organizational responses to modern slavery risk in supply chains [64] (Simpson et al., 2021)	**Empirical (qualitative)** "[...] to explore how organizations' psychological distance from modern slavery risk affects their management of risk" (p. 989).	**Psychological distance:** - Used as the main variable - Applied to modern slavery risks	Increased psychological distance and abstraction are needed in decision-making processes; this is also associated with a lack of knowledge and experience and can be reduced through construal shifts.

Other researchers have highlighted the considerable influence of emotional factors in two distinct cases: the influence of psychological distance on emotional factors [62,66] and

vice versa [61]. With regard to the influence of psychological distance on emotional factors, O'Connor and Keil [66] conclude that students with a high level of environmental concern were committed to environmental goals only when these goals were presented to them through higher (more abstract) construal levels but that such higher construal levels had a negative effect for those who were less concerned about the environment. For their part, Mi et al. [62] found that greater emotional closeness between an employee and employer promotes pro-environmental behaviors on the part of the employee, among others due to emotional communication or enhanced sense of identity [62]. When it comes to the reverse, meaning the influence of emotional factors on psychological distance, Bendell et al. [61] suggest that, as entrepreneurs' psychological distance from looming megacatastrophes diminishes (thus increasing the emotional intensity), their strategies proportionally shift towards shorter-term adaptation [61] as opposed to longer-term mitigation [69].

These different studies provide interesting nuances on the diverse effects of psychological distance depending on how it is used and with which variable it is measured (i.e., environmental behaviors, climate change consequences, or relationships). However, a central conclusion can be drawn from these scattered results. Regardless of the type of event or action for which psychological distance was analyzed, it seems that to obtain the desired behavioral outcome (e.g., among students or stakeholders), the construal level at which people perceive an event (e.g., abstract construals of climate change consequences) should be matched by the construal level on which the corresponding action is presented (e.g., desirability-oriented educational approaches) [63–65]. On that matter, Schill and Shaw [65] underline the importance of message consistency between the construal level at which climate issues and pro-environmental behaviors (e.g., recycling) are presented to the public. Indeed, inconsistencies might create tensions and create direct behavioral barriers in general [65]. This is interesting especially given that research on corporate sustainability, dominated by institutional and stakeholder theories [70], often insists on the importance of pressures from outside the organization and tends to underestimate the role of "intrinsic drivers and deeper psychological aspects" (p. 398) in businesses' sustainability endeavors [71].

By respectively emphasizing either the feasibility or desirability of an action [18], research has shown that concrete and abstract construals have complementary effects on motivating environmental behaviors. Indeed, if concrete construals predominate, the corresponding predominance of feasibility considerations might keep organizations entrenched in their superficial implementation of sustainability practices. In contrast, if abstract construals take precedence, a dominance of desirability concerns might lead to a lack of pragmatism when addressing desired sustainability actions. From a solution-oriented perspective, construal flexibility could allow business leaders or managers to switch with more ease between higher and lower construal levels depending on the necessity of the task or issue [48,50,64].

In sum, this fragmented set of studies, each of which has employed the concept of psychological distance in a different specific context, together shows the various and sometimes diverging effects of psychological distance or construal levels on individual actions or intentions to act. In addition, three aspects stand out in particular. First, none of these studies address environmental management specifically. Second, Bendell et al. [61] are the only researchers to have linked psychological distance to climate change consequences. Third, three out of the eight studies found through this integrative review underline the relevance of either putting emotional factors in relation to the construal level theory [61,66] or extending the theory to additional psychological distance dimensions (such as emotional distance) [62]. The relevance of considering emotional factors (such as environmental concern) is supported by several studies from other research fields (see Figure 3).

It is thus noticeable that even in the general field of corporate sustainability, the concept of psychological distance has only been researched by organizational scholars in a limited way despite its relevance. Indeed, the nuanced outcomes covered above already suggest

the potential of customizing sustainability approaches not only from one organization to the next but also to address different sub-groups within organizations.

4. Exploring the Impacts of Psychological Distance on Corporate Sustainability

Although the exploration and use of psychological distance in corporate sustainability seem to be limited, different concepts related to psychological distance have been studied in sustainable development. Hence, this section critically summarizes the research on corporate sustainability that has not explicitly used the concept of psychological distance. The following five topics are covered: the centrality of time and uncertainty in sustainability, the role of nature connectedness and consciousness development in environmental management, the denaturing of environmental variables in organizational contexts, the processing of information by decision-makers in organizations, and postmodern critiques of corporate sustainability.

4.1. The Centrality of Time and Uncertainty in Sustainability

Time and uncertainty are respectively related to the temporal and hypothetical dimensions of psychological distance [20]. Just as they are interrelated through the construal level theory, they appear to also be essential and tightly bound variables in research on corporate sustainability.

To begin with, research has shown that an increase in managers' time horizon or perspective leads to an increased ability to deal with the complexities and uncertainties of climate change issues [72–74]. In contrast, short-termism, defined as "decisions and outcomes that pursue a course of action that is best for the short term but suboptimal over the long run" [15] (p. 826), has been proven to have a considerable negative impact on sustainability endeavors within organizations [7,8]. Indeed, firms facing and integrating intertemporal trade-offs and tensions, which are inherent to decisions related to climate change, see the true complexity of the issue through both its business and societal implications [7]. From a solution perspective, Slawinski and Bansal [7] suggest the usefulness of temporal ambidexterity, which can be defined as "an organization's ability to be aligned [with] and efficient in its management of today's business demands while simultaneously being adaptive to changes in the environment" [75] (p. 375). The extending of the time horizon necessarily implies increasing the temporal (psychological) distance and, consequently, dealing with increasing (more abstract) construal levels [20].

Through different concepts, these studies show the clear influences of time on managers' views and priorities. While Raisch and Birkinshaw [75] suggest further research on the organizational adaptations around ambidexterity, reviews on the topic have shown that psychological aspects have not been considered [76–78]. Indeed, although individual biases are mentioned, mechanisms are suggested, and calls for future research are made, a gap remains about the underlying psychological influences of temporal distance on managers' perceptions of large-scale, complex issues. From a temporal perspective, having the "now" as a reference point [18], psychological distance is thus automatically involved when it comes to future consequences of climate change and allows a more detailed understanding of temporal influences on managers' sustainability approaches.

As for uncertainty, related to hypotheticality [20], it is inseparable from time, as "anything that is delayed is almost by definition uncertain" [59] (p. 784). Due to their considerable temporal delays [11], climate change consequences necessarily involve hypotheticality, making them especially challenging for organizations to deal with. In the context of corporate sustainability, Slawinski et al. [74] affirm that "short-termism and a low tolerance for uncertainty reinforce each other" (p. 261). Furthermore, these authors suggest that managers' propensity for uncertainty reduction might be a reason why they lean towards short-termist practices as opposed to practices that would significantly reduce organizations' greenhouse gas emissions [74]. What might truly reduce this unwanted uncertainty are enhanced connections between people's daily lives and longer-term future issues (such as climate change) [73]. According to Slawinski et al. [74], due to a lack of

concreteness and certainty, climate change is excluded from managers' practices, which instead focus more on the market's logic, favoring short-term preoccupations (such as competitiveness). Indeed, managers seem to have an aversion to the abstractness that comes with uncertainty, which impacts their day-to-day practices. These levels of abstractness (construal), influenced by psychological distance, are precisely at the core of the construal level theory [20].

To sum up, time is directly linked to uncertainty. Although studies on managers' time-related perspectives offer interesting insights regarding their handling of corporate sustainability, these studies do not shed light on the psychological drivers that fuel these time-related perspectives. Indeed, individual biases are mentioned to explain decision-makers' preference for short-term options, and mechanisms are proposed to promote temporal ambidexterity, while remaining rather superficial and vague. Such individual biases can be related to the individual influences of psychological distance regarding long-term issues. Finally, research on the influences of uncertainty on managers' views of complex and large-scale issues brings up the topic of abstractness, which is central to the construal level theory [20]. Since time and uncertainty are two tightly associated dimensions, and both are deeply intertwined in the climate change issues with which managers struggle, it is relevant to tackle corporate sustainability through the concept of psychological distance for a better understanding of inadequate environmental management.

Although psychological distance has been undertheorized in corporate sustainability, other parallel concepts have been studied. For decades now, organizational researchers have studied the mismatch between organizations' decision-making and ongoing environmental issues through different concepts related to psychological distance. These concepts, explored in the following sections, include stages of consciousness development, nature connectedness, CASTRATED environment (an acronym representing a set of criticisms of unsustainable organizational practices), sociomateriality, cognitive framing, and organizational attention. All these concepts are covered below. This section finishes by examining postmodern critiques of corporate sustainability.

4.2. The Role of Nature Connectedness and Consciousness Development in Environmental Management

With their emphasis on the handling of complex and larger-scale issues (such as climate change) and personal experiences with nature, two theoretical concepts—stages of consciousness development and connectedness to nature—respectively address the two remaining dimensions of psychological distance (i.e., social and spatial dimensions).

To start with, the influence of consciousness development stages on corporate sustainability has been addressed by various scholars [1,71,79,80]. In their research, Boiral et al. [71] explore the influences of consciousness development stages on organizational citizenship behaviors for the environment (OCBEs), which are defined as "individual and discretionary social behaviors that are not explicitly recognized by the formal reward system and that contribute to a more effective environmental management by organizations" [81] (p. 431). Their results show that managers at post-conventional stages (as opposed to conventional stages), associated with weaker egocentrism and representing only 20% of the adult population, have an increased capacity to handle complex issues (such as climate change) [71]. This egocentric factor can be linked to the social dimension of psychological distance, which has the here and now as egocentric reference points [20].

Within the definition of OCBEs, the part concerning a lack of recognition through formal reward systems is interesting as it suggests that better environmental management would require reaching out of formal or standard management practices [82]. Since they tend to do exactly this, managers at post-conventional stages tend to better manage complex, long-term, and large-scale environmental issues. While Boiral et al. provide a partial explanation of the underlying influences on managers' handling of complex issues, their study only considers the psychological impacts of temporal and social distances. Complex issues such as climate change involve large scales across different dimensions, which

underlines the importance of studying managers' perceptions of the issue through all four dimensions of psychological distance.

As for the concept of connectedness to nature, which can be defined as "the sense of affiliation with nature and feeling of well-being resulting from increased contact with natural ecosystems" [83] (p. 228), it is mainly related to the spatial dimension of psychological distance and has been studied in the field of corporate sustainability by several scholars [83–85]. Its relevance lies in the fact that modern societies tend to limit people's contact with natural environments [83]. Through their research, Boiral et al. [83] propose that connectedness to nature influences employees' environmental concerns, potentially leading to behavioral changes "particularly when the impact of workplace practices on surrounding ecosystems is clearly perceived" (p. 234). The opposite of connectedness to nature implies a disconnection and thus a distance from nature. This would suggest that such a greater distance between employees and their natural environment has consequences on employees' environmental attitudes and behaviors.

Connectedness to nature can also be related to the social dimension of psychological distance. Indeed, research has demonstrated its links with various personality traits [86], such as empathy [87–89]. In their study, Di Fabio and Bucci [87] suggest that empathic individuals, who are sensitive towards other individuals, are also more connected to nature as they display a similar sensitivity towards nature. It is thus arguable that personal and proximal connections to nature make climate change consequences more psychologically proximate. However, the concept of connectedness to nature does not give insights or details on how distance from climate change consequences might psychologically impact business managers in their perceptions and decisions.

4.3. The Denaturing of Environmental Variables in Organizational Contexts

By focusing on the mismatch between the scales of the natural and organizational environments, and the abstraction of environmental processes, the concepts of CASTRATED environment and sociomateriality respectively address the two core tenets of the construal level theory (i.e., distance and abstraction).

In the 1990s, through the rise of organizational research focusing on environmental issues [90,91], Shrivastava [29] proposed the acronym of CASTRATED environment referring to competition, abstraction, shallowness, theoretical immaturity, reification, anthropocentrism, time-independent (ahistorical), exploitable, and denaturalized. Through this concept, the author criticizes unsustainable organizational approaches to the natural environment. More specifically, some of the acronym's components can be related to psychological distance (or one of its dimensions): reification (reductionism), time-independent, and abstraction. Reification refers to taking external, firm-unrelated forces (e.g., environmental forces) and reducing them to "economic, social and technological forces that impact financial performances" [29] (p. 713). Certain variables from the natural environment (such as time or geographical location) are thus not considered. For its part, "time independent" refers to organizational environments as being analyzed without historical connections to the past (as opposed to natural environments).

Abstraction is the component most closely related to the concept of psychological distance. Shrivastava [29] asserts that organizations convert concrete environmental consequences of organizational activities into abstract, barely acknowledged aspects. The natural environment is, therefore, more or less ignored. Relatedly, Milne et al. [92] address this omnipresent abstractness involved in corporate sustainability through the journey metaphor. By focusing less on precise outcomes, the journey metaphor reveals the double-edged sword of more postmodernist perspectives (further discussed below). By presenting sustainability as a blurred journey or as a work in progress, organizations "justify and reinforce incremental rather than radical efforts to change" (p. 823). Radical efforts are crucial in corporate sustainability [92]. There are thus consequences to the absence of specific details about where the sustainability journey leads in terms of longer-term, more concrete objectives. These nuanced influences described by different levels of abstractness are very

similar to the ones described by scholars in their research on psychological distance. The interplays between abstractness and concreteness are precisely what the construal level theory addresses [20].

Taking a slightly different angle, based on organizational research on sociomateriality [93,94], Bansal and Knox-Hayes [95] discuss the impacts of time and space compression in socio-material environments (such as organizations). Harvey [96] explains this time-space compression as a shrinkage in distances and acceleration in time influenced by the evolution of our means of communication and transportation (among other things). This compression affects the information that business practitioners retain from the natural environment and also how organizational instruments are created and used. For example, financial systems through which carbon credits are exchanged no longer fit carbon cycles and "cannot accurately account for the spatial and temporal scales at which carbon sinking actually occurs" [95] (p. 73). Consequently, these concepts demonstrate that there is a (psychological) disconnection or distance between the organizational and environmental (physical) worlds. A consequence of such a distance between these two worlds seems to be that business practitioners denaturalize the natural characteristics of the environment.

4.4. The Processing of Information by Decision-Makers in Organizations

With their focus on information processing and their emphasis on abstraction processes, respectively, the concepts of cognitive framing and organizational attention specifically address the abstraction component of the construal level theory, as well as the effects of such abstraction (related to construal levels) on decision-making.

Based on organizational research on cognition [97,98], Hahn et al. [99] developed a cognitive framing perspective with regard to corporate sustainability. To define a cognitive frame, the authors use the definition from Walsh [100]: "a mental template that individuals impose on an information environment to give it form and meaning" (p. 281). Through such frames, "managers reduce complexity and ambiguity by selectively organizing and interpreting signals from the organizational context" [99] (p. 465). This complexity reduction is similar to abstraction, as the abstraction process involves "omitting features that by the very act of abstraction are deemed incidental" [20] (p. 442). However, although this cognitive framing perspective relates to psychological distance through an abstraction process, the effects of (psychological) distances from climate change on managers' perceptions and behaviors are not addressed in the study.

Similarly, organizational scholars have tackled the concept of organizational attention [27,101,102]. This organizational attention is influenced by what Bansal et al. [27] call "grains" and "extent". Concerning the time scales involved in climate change, Bansal et al. [27] give the following example to explain the nuances between the two terms: "climate change is measured in years (grain) and over hundreds of years (extent). However, the grain would be too coarse and the extent too broad to identify weather events, such as tornadoes or floods" (p. 224). Just as tornadoes and floods slip through in the previous example, the same can occur with organizational issues if they are not dealt with using the appropriate grain size or extent [27].

In addition, Bansal et al. [27] mention that "organizational attention tends to be biased towards specific grains and extents, either deliberately or unconsciously through the attentional structures embedded in organizational routines" (p. 224). This is important as psychological distance would shed light on these unconscious biases. This is also in line, among others, with the concept of consciousness development stages, which suggests deeper mental structures that lead to biases for either broader or more egocentric views of reality [2,71]. Indeed, grains and extent can be referred to as abstraction and distance, respectively. Just as previously discussed, the abstraction process involves excluding more detailed information [20], consequently coarsening the grains. As for the extent, its broadening involves considering more (psychologically) distant events or issues.

4.5. The Postmodern Critiques of Corporate Sustainability

By respectively criticizing business practitioners' often-oversimplified perspectives regarding corporate sustainability and their disconnection with the reality outside of the organizational world, postmodernism and the concepts of simulacra and spectacle tackle the two tenets of the construal level theory (i.e., abstraction and distance).

By their very nature, postmodern approaches often stand in opposition to the functionalist perspective. In the functionalist perspective, rational measures play a central role in the evaluations that companies make as they can be manipulated to increase organizational performance [103]. This is also true for corporate sustainability, which emphasizes sustainability reporting using controllable, comparable, and precise metrics [26]. Based on their analysis of the postmodernist perspective, Boiral and Henri [26] advance that these metrics tend to oversimplify and thus reduce the complex nature of sustainability. Additionally, this focus on reporting can be a distraction from core sustainability objectives.

Järvinen et al. [104] share similar views about the quantification of corporate sustainability. These authors argue that the precision and persuasiveness that come with quantitative approaches to corporate sustainability make some organizations seem environmentally proactive while in fact they are lagging [104]. In contrast, the postmodernist perspective sheds light on the "fuzzy, elusive, and unmeasurable nature of sustainability itself instead of highlighting reporting technicalities" [26] (p. 309). However, there is a double edge to this sword of increasing abstractness, as discussed previously through the journey metaphor from Milne et al. [92].

Additionally, Boiral and Henri [26] suggest that this functionalist desire to measure sustainability might be a result of abstract perceptions of the concept of sustainability itself. These authors propose that through tangible and concrete indicators about sustainable development, sustainability somehow materializes, exists, and can thus be tackled [26]. This can be interpreted as a means to mentally proximate the concept of sustainability. This process of concretization through reducing the psychological distance is exactly what the construal level theory addresses [20].

Next, related to the distance tenet of the construal level theory, the concepts of simulacra and spectacle tackle the idea of distorting reality through disconnections (or distances). Regarding the first concept, Baudrillard [105] advances that the postmodern society is hyperreal as it is filled with disconnected or "unreal" information. In short, this society is a simulacrum that has no connection to the objective reality [105]. As for the concept of spectacle, it is brought by Debord [106] and also refers to the lack of connection with reality, although it places greater emphasis on the manipulation of society's needs and expectations, such as through advertising or politics, for example. Both of these concepts posit a hyperreality based on "signs, data and images without any reference to the real world," a framework from which sustainability reporting does not escape [107] (p. 1043).

In business, there is a bias toward order and coherence, which are sometimes artificially simulated or controlled [26]. Similarly, Boiral et al. [108] tackle this "fictional appearance of order, measurability and comparability" (p. 17) with regard to sustainability ratings by using the concept of moral fictionalism. This concept can be defined as "moral claims or judgments based on convenient fictions rather than objective descriptions of reality" [108] (p. 5). This concept involves a certain selectivity or complexity reduction regarding the construction of this fictional reality. This distortion of information in this "fake" reality creates a disconnection or distance from the "true" reality, potentially leading to the blurring of critical sustainability issues [109].

In addition, this distance between realities can be increased as the information on which the hyperreality is based increases in realism or even gets certified [109]. Connections can be drawn with psychological distance as consequences of climate change are (in reality) concrete but are erroneously perceived as abstract because of the considerable psychological distance involved. Hence, a distance or rupture is created between the two realities. However, this (psychological) distance dimension is still not explicitly mentioned or linked to the construal level theory.

5. Conclusions

This integrative review aimed to shed new light on research on corporate sustainability through the concept of psychological distance. In the last decade, scholars have shown the significant influences of psychological distance from climate change on people's environmental attitudes and behaviors [25,35–37,43]. Similar results arise from organizational research, in which psychological distance has been almost exclusively explored in organizational research fields unrelated to corporate sustainability [48,50,52]. From the scattered studies found through this integrative review, converging conclusions arise that would allow the development of sustainability approaches customizable to different organizations, but also to different subgroups within the same organization. This would thus increase the probability of success for sustainability endeavors, which, for now, seem to remain superficial in most organizations.

Despite this under-theorization of the connection between psychological distance and corporate sustainability, organizational researchers have explored related concepts that address the two tenets of the construal level theory (i.e., distance and abstraction), such as short-termism [7,8,74], cognitive framing [97–99], and connectedness to nature [83–85]. A conceptual map that visually presents all the concepts and relationships analyzed in this review is presented in Figure 4. The concepts are displayed at the bottom of the figure and their specific relations to the four dimensions of psychological distance are represented by arrows. On the way up, these interrelated dimensions of psychological distance are then linked to construal levels as suggested by the construal level theory. Finally, these construal levels are then linked to environmental attitudes and behaviors within organizations.
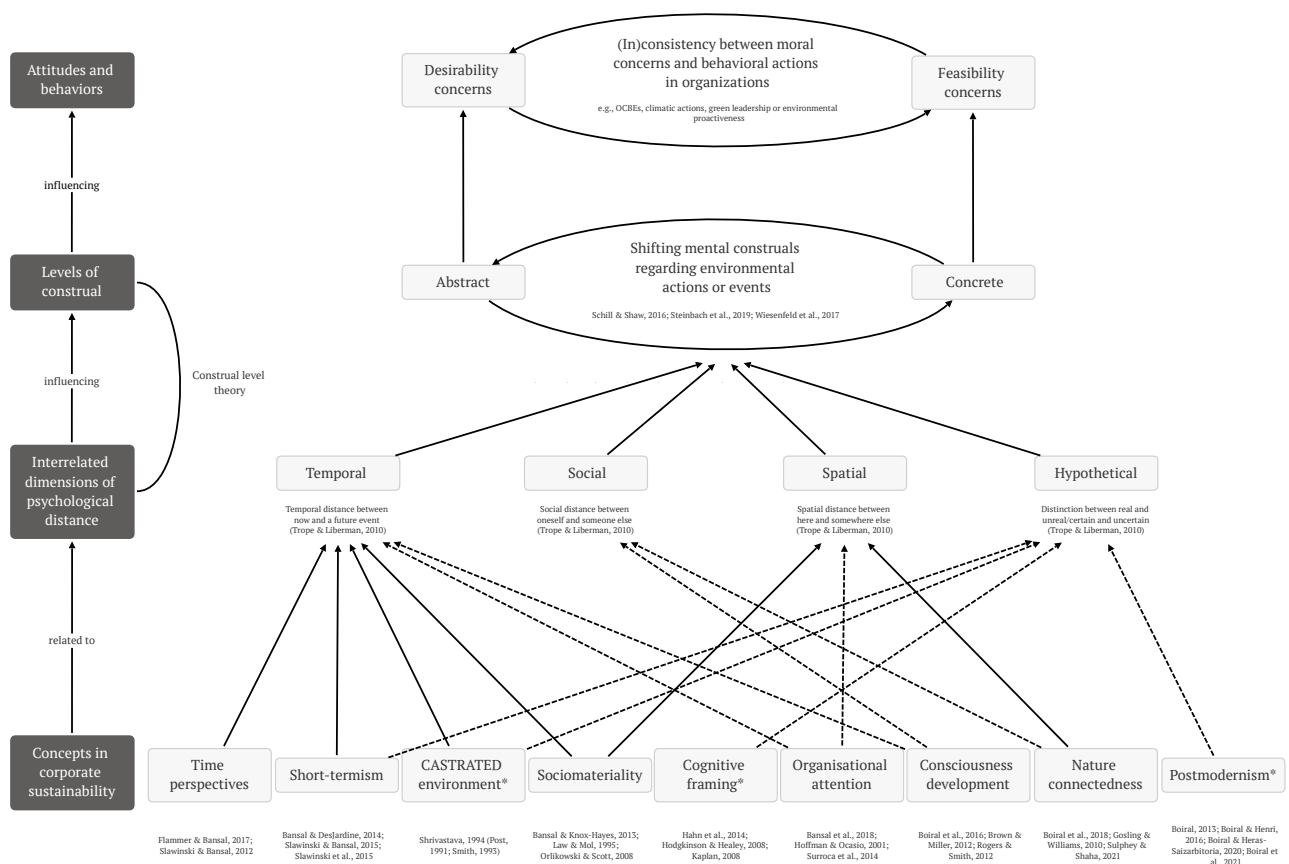
Figure 4. Conceptual map of the concepts covered in this study. Note: Relationships are neither positive nor negative. Solid arrows indicate a direct relationship and dotted arrows indicate an indirect relationship. * Indirectly refers to hypotheticality through uncertainty avoidance or complexity reduction (abstraction).

No matter what dimension they focus on, most scholars agree on the tendency in organizational contexts for decision-makers to take concrete (although complex and uncertain) issues, such as climate change, and underestimate their scope through a process of abstraction, which involves distancing and oversimplification. The analysis of the impacts and causes of changing levels of abstractness through psychological distance is central to the construal level theory [20].

5.1. Contributions of the Concept of Psychological Distance to Corporate Sustainability Approaches

Firstly, to our knowledge, the conceptual map presented in Figure 4 is the first to connect and map concepts from corporate sustainability that are related to the concept of psychological distance. Furthermore, it offers theoretical foundations on which organizational scholars will be able to further explore the psychological facets of corporate sustainability. Indeed, this research proposes a conceptual map that helps visualize the connections and influences between concepts from different research fields and suggests options on how to implement the concept of psychological distance in the field of corporate sustainability. Additionally, it clearly shows that all the concepts explored in this literature review offer partial or indirect explanations for managers' often abstract perception regarding climate change.

Secondly, the construal level theory could contribute to research in environmental management by completing our understanding of the intrinsic psychological factors underlying managers' motivations and engagement regarding climate change, which were partially uncovered through research on stages of consciousness development [1,79,80] and on organizational citizenship behaviors for the environment [71,81,82] (among others). By tackling this abstraction tendency, exposed by many organizational scholars through various related concepts, the construal level theory [20] contributes to the literature by offering a novel and integrative concept (i.e., psychological distance) to the field of corporate sustainability. In a context where consequences of climate change are increasing in number and intensity, and where organizations still do not seem to be doing enough environmentally, it is crucial to fill this knowledge gap. By reaching beyond the usual research frameworks used in corporate sustainability studies, psychological distance offers a promising angle of analysis.

5.2. Managerial Implications

Several studies support the assertion that reducing psychological distance encourages pro-environmental attitudes, policy support, and personal engagement for the environment [23–25]. Due to the considerable psychological distance involved in climate change approaches [16,17] and managers' biases toward short-term, smaller-scale, and simplified considerations [15,26–29], managers tend to limit sustainability practices to a superficial implementation in most organizations.

To address this problem, the conceptual map in Figure 4 also suggests various managerial implications. This model could be used to train business managers on sustainable development using construal flexibility that would allow them to shift more easily between lower (more concrete) and higher (more abstract) construal levels depending on their tasks or issue requests [48,50,64]. Such training would also help to reconcile economic and environmental realities by showing the positive impacts of sustainability on multiple levels and scales.

From a practical perspective, consultants and experts in sustainable development could integrate different aspects of this model into their diagnostic grids and intervention strategies. This would contribute to customizing their interventions between and within the organizations they work with and thus contribute to enhancing managers' environmental commitments.

5.3. Future Research

The first possible research avenue for future research arises from a limitation of this review. Inspired by the work of Maiella et al. [47], a first systematic or scoping review could be carried out in the field of corporate sustainability for a more exhaustive exploration of the literature related to the concept of psychological distance. In addition, the descriptive summary presented in Table 2 and the conceptual map presented in Figure 4 offer various research opportunities for furthering the exploration of psychological distance in corporate sustainability. For example, a first empirical study in the field of corporate sustainability could specifically analyze the influence of psychological distance from the consequences of climate change on the decision-making processes of executives within their organizations. This could be done by complementing the research framework with a theory or concept that is more activity-focused (e.g., theory of planned behavior or norm activation model). The empirical results found in research from the fields of psychology, communication, and management (unrelated to the environment) could then be further deepened and validated with qualitative and quantitative studies, respectively. Finally, future research could also explore the possibilities of extending the construal level theory to other psychological distance dimensions (e.g., hierarchical) that might be more suited to organizational contexts.

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