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Primer

# Construal-level theory and psychological distancing: Implications for grand environmental challenges

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https://doi.org/10.1016/j.oneear.2021.03.009

## SUMMARY

Research in social and cognitive sciences has used the construal-level theory (CLT) of psychological distance as a framework for understanding environmental challenges, such as climate change. This primer explains how psychological distance and construal level theory can help to understand responses to environmental challenges, from the perceptions and social construction of environmental issues as distant and abstract, to implications for decision making and action toward long-term targets. We also reflect on areas where the theory and concepts are less useful, when assuming that psychological distance and construal level can be easily reduced or altered to promote lasting changes to environmental action.

## INTRODUCTION

Overcoming grand environmental challenges is central to our continued life on Earth. A key example is climate change, where changes to global climate patterns are drastically altering our planet's habitability. Related challenges, such as biodiversity loss, deforestation, and air and water pollution all imperil the global human population and how we live. Many of these environmental issues involve serious consequences that are not immediately visible. The biophysical causes and effects of environmental challenges are often inherently difficult to grasp, from the complexity of their scientific basis, feedback loops, and interactions of different systems, to the fact that often we cannot see, hear, smell, or experience the effects directly. Furthermore, grand environmental challenges are typically global problems, a product of global and societal economic processes—everyone is responsible for solving them, which means no individual is responsible for solving them. Their resolution requires coordinated collective action.

Understanding how best to deal with abstract, distant, environmental challenges is important for planning effective action. Coordinated global action to address these issues tends to involve setting distant goals and targets. For instance, at the Conference of Parties to the United Nations Framework Convention on Climate Change, countries plan commitments for the decades ahead on climate change and emissions, land use, deforestation, and more. At an individual level, the relationship between our actions and their consequences on a global level is difficult to construe, and their effects are delayed.

One concept that captures the cognitive ramifications of abstract, distant phenomena is "psychological distance": the idea that events, people, and objects can be experienced at varying subjective "distances" from the self and that this perception shapes our attitudes, emotions, and actions. Research in social and cognitive sciences often uses the construal-level theory (CLT) of psychological distance as a framework for understanding the concept. This primer outlines both CLT and psychological distance and their relevance to grand environmental challenges.

## WHAT IS PSYCHOLOGICAL DISTANCE?

The idea of "psychological distance" has been around in the social sciences for over 50 years, first emerging in Kurt Lewin's field theory. The central ideas are that humans can only experience the world "right here, right now," our experience of all other objects occurs at some mental distance from the self, and these perceived distances can shape our behavior. Psychological distance is typically spoken of in terms of four dimensions: temporal distance (*when* something happens), spatial distance (*where* it happens), social distance (to *whom* it happens), and hypothetical distance (whether it is *likely* to happen; see Figure 1).

Psychological distance plays a role in different aspects of our life, from evaluating threats to choosing how to interact with other people. For instance, when we speak to strangers rather than friends, we often use more polite language as a form of social distance. In each moment we can also navigate psychological distances—as a sort of mental time travel—by imagining events years into the future, reliving past memories, picturing people we have never met or places we have never been to, and imagining things that may or may not happen. Furthermore, when we imagine distant phenomena, they are often distant along more than one dimension—dimensions of psychological distance tend to be related to one another. For instance, when we imagine things happening in the distant future, they also tend to feel more uncertain. Even literary tropes ("a long time ago, in a land _____") suggest that dimensions of distance can be connected.

 

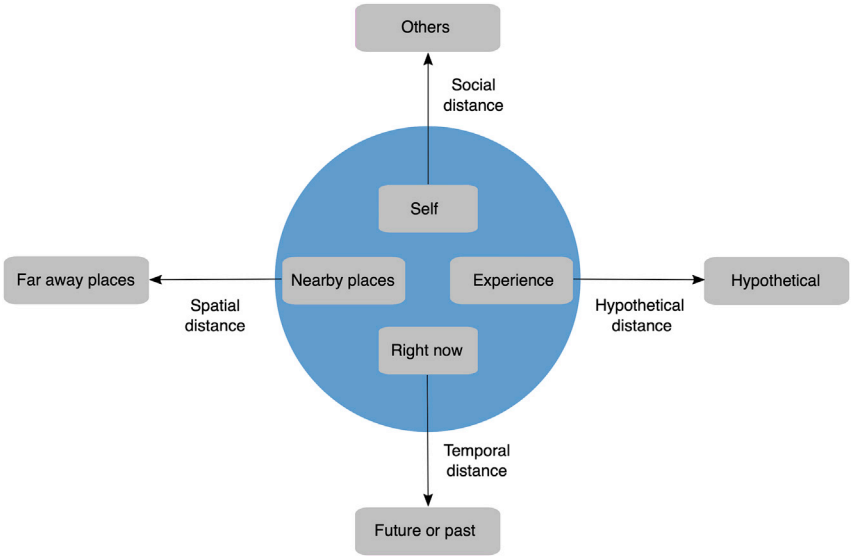


**Figure 1. Illustration of four dimensions of psychological distance**

## WHAT IS CLT?

Often when we think about things that are distant, we also perceive them more abstractly than things that are close. This is the key idea behind CLT, the main theory used to study psychological distance put forth by Trope and Liberman. CLT argues that greater psychological distance is accompanied by an increase in mental abstraction. At a higher level of construal, we focus on abstract, superordinate, and central features of objects (e.g., chairs), and at lower levels of construal, we focus on concrete, specific, and peripheral features (e.g., wheelchairs).

There are various consequences of abstract or concrete construal on our perception: things construed abstractly also tend to be viewed as distant and are evaluated with an eye to the big picture, where enduring and stable properties are more important than specific details. On the other hand, things construed concretely tend to be seen as psychologically close, and are evaluated based on transient and circumstantial properties. To illustrate, when agreeing to attend a public protest a year from now, we might consider abstract, stable factors that do not vary much over time, such as how much we care about the issue, when making our decision. By contrast, if that protest were to happen tomorrow, we may instead attend to specific features, such as whether the protest is in a convenient location. Some experimental evidence has shown that when a single piece of data deviate from a wider global trend, people tend to give more weight if it is geographically close to them (i.e., with a concrete and circumstantial mindset) than if it is geographically distant (i.e., with an abstract and stable mindset).

## WHERE IT MIGHT APPLY

### Understanding perceptions of distance

Psychological distance and construal level may be useful for understanding how the public perceive environmental challenges. One common finding is that climate change is perceived to be a distant phenomenon, where consequences are seen to occur in distant places, to other people, beyond our lifetimes (notably, this could be changing in some parts of the world—where people are increasingly recognizing that climate impacts are happening now).

Those who feel psychologically closer to climate change also tend to acknowledge anthropogenic climate change and feel concerned about it. On the other hand, greater psychological distance is linked to lower engagement in pro-environmental actions, and lower support for environmental policies—reasonably, people who believe that an environmental threat is distant or uncertain are less likely to support action to address the threat. In fact, psychological distance from climate change is also highly correlated with skepticism about its existence, and it is possible that it is an expression of denial or skepticism that is more about one's lived reality than a view of whether it exists at all ("it's not real, and even if it is, it'll be in the distant future and it won't affect me").

### The portrayal of environmental challenges as distant and abstract

Psychological distance can also be used to understand the construction of environmental challenges as socially distant issues. Often global challenges are portrayed in the media as problems for large international organizations, national governments, or scientists to solve. Reports on the status and progress of environmental commitments are often written in unemotional, scientific language, couched in uncertainties, wide time windows, and projections of the distant future or data from the distant past, and specifying only abstract spatial regions. The visual depiction of many environmental challenges tends to be removed from many people's daily lives, from melting ice and megafauna, to denuded landscapes. Relatedly, the images that come to mind when people think of climate change tend to be abstract and psychologically distant—devoid of specific geographic, social, or temporal details—and typically do not feature people.

Showing identifiable, relatable people can lead to greater engagement, concern, and motivation to act, yet depictions of humans are infrequent, and of "ordinary citizens" even rarer. Specific people can become "iconic" of environmental issues, and part of how society sees those issues, personified by images of politicians at international meetings, celebrities, or prominent activists, such as Greta Thunberg. For those who do not personally identify with these icons, and who do not see people like themselves, this may increase social distance and lead to alienation from the issue.

Crucially, whether it is the people who are depicted in the media, journalists and photographers, politicians and decision-makers, or researchers, the way environmental issues are portrayed often does not evenly represent our world, with disparities

along gender, ethnicity, nationality, class, and other lines of marginalization. This matters not only for the public representation of environmental issues, but also their outcomes. A recent analysis by the ECIU of global entities that have made net zero commitments shows that, of all indicators, only 10% have explicitly taken equity into account.

### Decision making and distant targets

Temporally distant targets are common for globally coordinated action to address environmental issues. For instance, many countries have set targets for carbon neutrality by 2050 or 2060, and the Convention on Biodiversity similarly outlines goals for 2030 and 2050.

Agenda setting that focuses on distant targets may imply that environmental challenges are also psychologically distant, with negative consequences for individual and collective decision making. When people think about outcomes that are distant in time, they tend to discount the value of rewards (e.g., people would generally rather receive $100 today than $120 in a year). This research shows that individuals and groups prefer smaller-sooner benefits over larger-later benefits, a phenomenon known as temporal discounting. Importantly, responding to large-scale environmental issues, such as climate change, requires incurring costs now (i.e., reducing emissions) to obtain benefits in the future (i.e., a safe climate).

Aside from being distant in time, global targets for climate change also tend to be abstract and uncertain. The objective of the Paris Agreement is to limit global average temperature increases to well below 2°C, yet the agreement contains no mechanism to enforce countries to set specific emissions targets and timetables—it only specifies that emissions should be reduced "as soon as possible." However, responding to climate change requires relatively *certain* costs (i.e., those associated with achieving net zero emissions) to obtain *uncertain* benefits (i.e., depending on when this goal is achieved, we may or may not prevent a climate emergency). Yet, research shows that people prefer small-certain benefits over large-uncertain benefits, a phenomenon known as probability discounting. Uncertainty can reduce the credibility of the threat (of environmental disaster, and of failing to reach the targets), and this has been shown to hinder cooperation. Furthermore, temporal and hypothetical distance are related—our perception of events in the distant future tends to be more uncertain than those in the near future. This means decisions to act now for a distant benefit suffer from both temporal and probability discounting, with regrettable consequences for environmental action.

CLT suggests that an abstract mindset and abstract goals can improve goal attainment by leading people to focus on their central and core aims. However, the goal-setting literature shows that successful goal attainment depends more on making specific, detailed goals than abstract higher-order goals. This difference highlights the gap between abstract, higher-order goals and specific, concrete roadmaps—international cooperation has led to agreement to limit global temperature increases to less than 2°C, yet no single country that agreed to this has emissions-mitigation plans that are on a trajectory to achieve this goal. Although targets for climate change action are set in the distant future, one way to reduce psychological distance may be by establishing intermediate climate targets, which have been shown to catalyze cooperation, thereby establishing and agreeing upon *both* the goals and the *means* to achieve those goals. These goals can be more concretely construed but also retain the ambition and long-term oversight of the larger end goals. Poor mapping of action with outcome can lead to undesirable outcomes—for instance, Europe's drop in emissions since 1990 have occurred mostly in lower income households.

Altering the psychological distance at which events are communicated may promote more future-friendly decision making in general. This might be achieved by changing how time delays or goals are described (e.g., in terms of days, rather than years), by providing a richer context for future environmental impacts (e.g., describing the damages to one's hometown and community of failing to act on climate change), or by making the future costs of inaction more concrete and the present benefits of failing to act more abstract.

Many environmental challenges also involve behavioral and lifestyle changes from citizens. These include individual actions, and the policies and environments that facilitate lifestyle changes. Public support for policies to enable a transition away from fossil fuels may be complicated by uncertainty about how those policies translate to concrete actions that affect their lives. In other cases, the policies to protect against water or air pollution, biodiversity loss, or deforestation may not be visible at all in people's daily lives. For the public, this may mean establishing a more concrete connection between actions at a personal or group level, and consequences to the environment, and establishing clear and understandable metrics for conveying the impact of meaningful lifestyle and policy changes. This does not necessarily mean detailed measurements of personal carbon footprints, but rather more widespread knowledge of what actions and policies can make the biggest difference, and how they are connected to solving environmental problems.

It is worth noting that individual differences also come into play, where those who give greater consideration for future consequences and are less swayed by immediate rewards also perceive climate change as psychologically close. A large body of work links an individual's "time perspective," or the extent to which they prioritize long-term outcomes over short term outcomes, with support for environmentalism.

## WHERE AND WHY IT MIGHT NOT HELP

As with all theories, there are certain areas where construal level and psychological distance can offer insights on climate change, and some areas where its utility is limited.

### Improper use of CLT

One fundamental shortcoming of CLT in this context is that construals are inherently flexible, transient mental representations, rather than stable beliefs about risk. Construals are mental representations that change depending on the context, and each person can construe any object in both abstract and concrete terms. In one moment, we can think of biodiversity loss as the extinction of the Western black rhino (concrete) and, in the next, we can think of it as ecological degradation (abstract).

Understanding the construal level of environmental issues is complicated by the application of a low-level cognitive

representational approach to a high-level subject. The studies upon which CLT was developed typically involve relatively simple stimuli that tap low-level cognitions. However, perceptions of environmental challenges involve higher-level features of cognition, and usually include other factors, such as value judgements, emotional associations, and perceptions of source credibility, to name a few. Altering construals could lead to temporary focal shifts, but one of the defining characteristics of construal level is its flexibility. Momentary changes in construal can be related to perceptions of psychological distance, but there is no clear evidence that construal messaging has longer or broader effects, such as changing climate change perceptions, or bringing about the implementation of stronger environmental protection policies.

## Changing public opinion by reducing psychological distance

Does making people feel psychologically closer to environmental problems lead to more action to prevent them? Many studies suggest that the correlational link between perceived psychological distance and environmental action also implies that communicators should emphasize how environmental problems are affecting people in the here and now, by drawing attention to local impacts, and by highlighting relevant personal experiences using narratives, metaphors, and vivid imagery. However, the correlation does not suggest a causal relationship—or that perceived psychological distance can be used as a "lever" to shift people's views.

In the absence of significant and urgent mitigation, climate change is necessarily becoming less hypothetical and more experiential. The experiential distance between it and us is narrowing, although there remains room for many to attribute current changes in climate, ecosystems, and so on to anything *but* climate change. While some have used "personal experience of the impacts of climate change" as a proxy for psychological closeness or distance to the issue, the link between personal experiences of climate impacts and perceived psychological distance is not always clear. In some cases, actual physical proximity to environmental threats (e.g., coastal erosion, drought) is linked to support for action, and personal or second-hand experience of extreme weather events can lead to more concern about climate change, less uncertainty, and greater confidence that people's actions can make a difference. In other cases, people can care very much about distant places, and nothing at all for nearby strangers.

It is problematic to think of psychological distance to an issue like climate change as a product of individual differences at the psychological level that, once rectified, remains fixed. Psychological distance is better thought of as fluid, responding to both cultural context and individual circumstances. For example, the transition to parenthood does not, as one might suppose, result in increased pro-environmental attitudes and behaviors (in fact, the reverse has been found), but rather brings the more immediate wellbeing of the child into sharper focus, pushing other concerns into the distance.

Reducing the distance from catastrophic environmental issues, such as climate change, can also have paradoxical effects. Bringing climate change closer to people by giving proximal climate change cues, for example, may exacerbate attitudinal polarization along political lines. Motivated reasoning limits the success of "bringing climate change closer" in shaping desirable outcomes. When faced with troubling issues, such as climate change, people search their existing bank of rules and beliefs to form new beliefs about the issue. This search can be motivated by the desire to reach an accurate conclusion but, frequently, the search can be biased to reach a pre-desired conclusion. The tendency to go down one path or the other is determined in part by the individual's particular needs and goals, which span the intra-psychic, social, and cultural. Psychological distancing may perform an important adaptive function for many individuals. Distancing the impacts of climate change might function to reduce negative emotions, mortality salience, and feelings of moral culpability and responsibility to act. It may also function to maintain feelings of identity and group belongingness. If an individual is sufficiently motivated to distance the causes and impacts of climate change from the self, then attempts to reposition those problems as proximal conveys information at odds with the individual's needs and goals. This incongruence could result in attitudinal "backlash," the most extreme of which is the denial of the problem's existence.

Overall, there is limited experimental evidence showing that people are more likely to act when they are given messages about impacts that are close to them, indicating that simply telling someone climate change is happening close to them is not enough to change behavior. Such approaches fall into the trap of assuming that people will respond in the same way to the same messages, and that there may be a magic combination of communication strategies that will work for all. In reality, different people will differ in response to any communication strategy.

However, those in leadership can shape broader changes in public opinion by setting a positive example. There is a relationship between a country's ambition and public concern: unconditional emissions reduction targets tend to predict public awareness of climate change in that country. Whether governments take strong, concrete action to effect systemic change may influence people's sense of the importance of the problem and their willingness to support further action. In this way, a virtuous cycle is produced: when governments treat environmental problems as serious and describe them in concrete terms, affecting people here and now, community perceptions may shift accordingly, and continue to prompt societal and systemic action.

## Other ways of conceptualizing psychological distance

For addressing grand ecological problems, there is value in both abstract and concrete construals, and it is not clear that either approach is better than the other. For this reason, some researchers have used alternate approaches. Another way of looking at psychological distance or closeness is in terms of a state of connection to the issue at hand: whether people care about the issue, and find it important for preserving their "objects of care." Importantly, this approach separates psychological distance from construal level because one's core values are both abstract and psychologically close. Relatedly, it also accounts for the link between psychological distance and emotional intensity. We tend to feel more intense emotions when events are close than when they are distant, when close friends hurt us, compared

with when strangers do—things that are closer to us are more likely to evoke emotional responses.

The relationship between construal and psychological distance was established in the context of emotionally neutral content, whereas issues such as weather disasters and pollution are likely to be associated with a range of different emotions. As global environmental challenges can affect people's lives in complex ways, emotions and "care" are important features of psychological closeness that are not accounted for by CLT. Issues such as climate change or air pollution can be polarizing and sensitive topics, linked to people's political and social identities, their individual and group values, and perceptions of danger and worries about the future.

## CONCLUSION

It is tempting to conclude that interventions should be developed and implemented to bring climate change closer to people temporally, spatially, socially, and experientially, and that doing so will spur more individual and collective action on climate change. The temptation should be resisted. The literature does not support such inferences, and important contextual and cultural factors will likely limit the generalizability of results from the lab to policy and practice. There is no royal road from psychological distance to climate action.

In considering the psychological distance between each of us and climate change, everything hinges on how we each construe "self." For some, articulating global climate change pushes climate change away as something that may affect other people in other places at other times. For others, though, global effects are no less personal and immediate than are local effects, owing to salient identification with humanity, or endorsement of self-transcendent values, or a commitment to biospheric rather than egocentric values. It is objects of care that connect climate change to an individual, and those objects can be near or far in time, space, or experience.

Global coordinated action on environmental challenges needs time—not only for regions and countries to implement changes on the scale needed, but also for the effects to be visible. Time is also needed for actions to accrete or cascade, since a single action will always be insufficient to achieve the changes needed. Distant targets are inevitable, and big picture thinking and planning are necessary. Ultimately, psychological distance can help us understand the level of public concern about environmental issues, and whether the issue is part of people's lived reality. It can help us understand that the way environmental challenges are constructed can be socially distant to many people around the world—with consequences to public engagement and buy-in—as well as to the outcomes of policies, where the absence of voice for disadvantaged groups can lead to greater inequity and harm. Finally, understanding psychological distance and construal can aid decision making to refine processes for coordinated action, such as establishing and agreeing upon intermediate and concrete goals, as well as the means to achieve them.

## AUTHOR CONTRIBUTIONS

Conceptualization, S.W.; writing – original draft, S.W., M.H., Z.L., I.W., and C.L.; writing –review & editing, S.W., M.H., Z.L., I.W., and C.L.

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