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# **The Psychology of Climate Change Communication**

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**A Guide for Scientists, Journalists,  
Educators, Political Aides,  
and the Interested Public**

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# The Principles of Climate Change Communication in Brief

## 1 KNOW YOUR AUDIENCE

- **Mental models** represent a person’s thought process for how something works. They help shape risk perceptions, actions, and behavior; influence what people pay attention to in complicated situations; and define how people approach and solve problems. Mental models serve as the framework into which people fit new information.
- A **confirmation bias** makes people look for information that is consistent with what they already think, want, or feel, leading them to avoid, dismiss, or forget information that will require them to change their minds and their behavior.
- People often exhibit a strong preference for their existing mental models about climate change, making them susceptible to confirmation biases that lead them to misinterpret or even refute scientific data.
- Mental models are not static—people can update them by correcting misinformation, inserting new building blocks, and/or making new connections with existing knowledge.

**Tip:** • Discover what misconceptions the audience may have in their mental models about climate change. “Disconnect” the erroneous climate change information from other parts of the model and replace it with new facts.

## 2 GET YOUR AUDIENCE’S ATTENTION

- **Framing** is setting an issue within an appropriate context to achieve a desired interpretation or perspective.
- Framing is not intended to deceive or manipulate people, but to make credible climate change information more accessible to the public.
- Framing can be a subtle art—even the choice of a single word can make the difference between winning and alienating an audience.
- People feel better and more positive about achieving their goals and are more likely to sustain their behavior when their goals are framed in a manner that feels naturally comfortable to them.
- People with a **promotion focus** see a goal as an ideal and are concerned with advancement. They prefer to maximize or increase gains.
- People with a **prevention focus** see a goal as something they ought to do and are concerned with maintaining the status quo. They prefer to minimize or decrease losses.
- People tend to discount the importance of future events. Many people count environmental and financial consequences as less important with every year they are delayed.
- People have a natural tendency to avoid losses rather than to seek gains. They tend to discount future gains more than future losses.



- Tips:**
- Consider the audience’s membership in specific subcultures (groups of people with distinct sets of beliefs, or based on race, ethnicity, class, age, gender, religion, occupation, etc.).
  - Select a frame/frames that will resonate with your audience.
  - Prepare numerous frames ahead of time (i.e., climate change as a religious, youth, or economic issue).
  - When framing climate change, be careful not to focus so intently on one particular aspect that the audience loses sight of the bigger picture.
  - Consider people’s goals when framing a message. Tailoring messages to people’s natural promotion and prevention orientations increases the level of response for both groups.
  - See Words That Appeal to Those With Either a Promotion or Prevention Focus on page 8 and include both types of wording when crafting messages.
  - Bring the message close to home. Highlight the current and potential impacts of climate change not only globally, but also locally to increase the audience’s sense of connection with the issue.
  - Leverage local extreme weather events, using them as “teachable moments” during which to relate climate change to the experience of your audience. (However, keep in mind that although climate change may increase the chance that a particular event will occur, it does not cause an event to take place.)
  - Tap into people’s desire to avoid future losses rather than realize future gains.
  - Present information in a way that makes the audience aware of potential current and future losses related to inaction on climate change instead of focusing on current and future gains.
  - Remember that audiences may be more likely to make changes to their behavior if climate change information is framed as “losing a little bit now instead of losing much more in the future.”

### 3 TRANSLATE SCIENTIFIC DATA INTO CONCRETE EXPERIENCE

- Attempts to convey the immediacy of the climate change challenge have fallen short of translating climate change into a near-term (as well as a long-term) danger on par with other imminent societal and personal threats.
- Many of the highly publicized graphs and charts showing global climate change data fail to inspire a sense of urgency in many audiences.

- Psychologically, distant risks do not set off the same alarms that immediate risks do. Human minds are not designed to immediately react to threats like climate change that seem to manifest themselves in the distant future.
- The human brain has two different processing systems: the experiential processing system, which controls survival behavior and is the source of emotions and instincts, and the analytical processing system, which controls analysis of scientific information (see Table 2 on page 16).
- Despite evidence that the experiential processing system is the stronger motivator for action, most climate change communication remains geared towards the analytical processing system. Personal or anecdotal accounts of negative climate change experiences, which could easily outweigh statistical evidence, are rarely put into play.
- Low comprehension of or interest in communications laden with scientific language may also contribute to the public’s lack of response to climate change messages.

- Tips:**
- When creating presentations on climate change, use experiential tools such as:
    - Vivid imagery, in the form of film footage, metaphors, personal accounts, real-world analogies, and concrete comparisons and
    - Messages designed to create, recall, and highlight relevant personal experience and to elicit an emotional response.
  - A message that combines elements that appeal to both the analytical and experiential processing systems will best reach and resonate with an audience.
  - Avoid using jargon, complicated scientific terms, and acronyms when talking to the general public. Instead, use words that will make sense to the audience (see Examples of Simplified Scientific Terms on page 19).
  - Sometimes only a scientific term is sufficient for getting a point across. In that case, thoroughly define the term for the audience. Remember that stringing together too many scientific terms and acronyms, even if well-defined, may cause the audience to spend their time and mental energy deciphering vocabulary instead of absorbing the overall point.



## 4 BEWARE THE OVERUSE OF EMOTIONAL APPEALS

- Although an emotional appeal may increase an audience's interest in a climate change presentation in the short run, it may backfire down the road, producing negative consequences that often prove quite difficult to reverse.
- The **finite pool of worry** refers to the limited capacity people have for worrying. As worry increases about one type of risk, concern about other risks may lessen. People have a limited capacity for how many issues they can worry about at once.
- Appeals to the emotional system may work in the short term, but it is hard for people to retain that level of emotional intensity. People's attention can easily shift to other issues unless they are given additional reasons to remain engaged.
- The effects of worry can lead to **emotional numbing**, which occurs after repeated exposures to an emotionally draining situation.
- Individuals reacting to a threat are likely to employ only one response, even when it provides only incremental protection or risk reduction and may not be the most effective option. People often take no further action, presumably because their first response succeeded in reducing their feeling of worry or vulnerability. This is called the **single action bias**.

**Tips:** ● See *How to Avoid Numbing an Audience to Climate Change* on page 21.  
● See *How To Counteract the Single Action Bias* on page 23.

## 5 ADDRESS SCIENTIFIC AND CLIMATE UNCERTAINTIES

- Although scientists have gained significant insight into how the climate system functions, they do not have 100% confidence in their climate change projections—and they never will. What they can do is make predictions based on the best available data, quantifying the uncertainties associated with those predictions.
- Because humans have a great need for predictability, uncertainty can be uncomfortable.

- Climate science uncertainty often conveys the mistaken impression that scientists are hopelessly confused about this complicated subject, when in fact scientific uncertainties about exactly how much warmer the planet will be in 100 years does not change the very high confidence scientists have that human-made greenhouse gas emissions are warming the planet and are likely to continue doing so.
- Climate change uncertainties vary in type and significance and are difficult to convey without seeming to minimize the importance or understanding of the issue.
- People may understand probabilistic information better when it is presented to a group, where members have a chance to discuss it, rather than as individuals who have to try to understand it alone.
- Group processes allow individuals with a range of knowledge, skills, and personal experience to share diverse perspectives and work together to solve a problem.
- Group discussion provides a greater chance that multiple sources of information—both experiential and analytic—will be considered as part of a climate-change related decision-making process.
- People devote more energy to implementing solutions after participating in a group discussion.
- Group context increases awareness of social support and activates social goals (see Section 6 for more about the dynamics of group information processing and decision making).

**Tips:** ● Put uncertainty into context and help an audience understand what scientists know with a high degree of confidence and what they have a relatively poor understanding of.

- Overstated uncertainty or poorly worded explanations of uncertainty can easily undermine a message.
- Suggesting either more or less scientific certainty than actually exists can confuse an audience.

● See *Words with Different Meanings to Scientists and the General Public* on page 27 to ensure your words are precise and convey what you intended.

- Invoke the precautionary principle by addressing the potential harms of climate change that lack full scientific certainty.
- Whenever possible, present climate change information to informal groups where people are free to ask questions and discuss issues with the speaker and each other.

## 6 TAP INTO SOCIAL IDENTITIES AND AFFILIATIONS

- **Commons dilemmas** describe conflicts resulting from free access to and unrestricted demand for a finite natural resource. This ultimately threatens the resource and leads to exploitation. The benefits of exploitation go to individuals, each of whom is motivated to maximize his or her use of the resource, while the costs of exploitation are distributed among all who share the resource.
- In environmental decisions, an individual's benefit may or may not be the same as what benefits society.
- In any given situation, an individual may call into play multiple identities (parent, CEO, etc.), even when the goals of the various identities may conflict with each other. To resolve that conflict, an individual has to decide which identity is most relevant in a situation.
- The strength of affiliation that someone feels toward other members of a group can determine which identity that person chooses to apply in a particular situation.
- Affiliations with smaller groups can be stronger than those with larger groups.
- Local messengers may get a stronger response to calls for action on climate change than emissaries from more distant locales. People are more likely to take action when they feel a sense of affiliation with the individual or institution making the request.

**Tips:**

- Tap into the multiple identities represented by your audience; bolster audience members' sense of affiliation with each other, the environment, and the society that enjoys the benefits of its natural resources.
- If communicating as an "outsider," enlist the aid of someone locally known to introduce you.

## 7 ENCOURAGE GROUP PARTICIPATION

- Many environmental decisions are group decisions, so it is important for communicators to understand how people participate in group settings.

- Norms about what happens in meetings are important because they determine who speaks when, how information is presented, and how people should disagree.

**Tips:**

- Eliciting participation from various stakeholders is important when trying to broker environmental decisions. Stakeholders who feel like they were part of the decision-making process are more likely to support the outcome.
- Encourage early participation in the decision-making process to ensure the group identifies the key problems that require solutions.
- Presentations on climate change are often filled with dense information that may leave audience members with numerous questions and concerns. When organizing meetings with a diverse group of stakeholders, leave ample time for discussion.
- Breaking large groups into smaller groups can help initiate discussion.
- See *Ways To Encourage Group Participation* on page 36.

## 8 MAKE BEHAVIOR CHANGE EASIER

- Taking advantage of **default effects** (the human tendency to stick with the option that is selected automatically instead of choosing an alternate option) can encourage audiences to make changes in their behavior that will help mitigate the effects of climate change.
- When making decisions about consumption, people tend to be more patient when the default option is to wait vs. when the default option is to receive something now.
- Because the default option requires no action, it is always easier, and so people tend to accept it whether or not they would have chosen it if it were not the default option.

**Tips:**

- By making socially beneficial choices the default option, policymakers can positively influence individual decisions concerning natural resources.
- Giving people an immediate incentive, if possible, makes behavior change easier.