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Chapter 2: Create Cognitive Distance

Leveraging Principles of Cognitive Science to Reduce Critical Weight

"Odd as it may seem I am my remembering self, and the experiencing self, who does my living, is like a stranger to me." ~ Daniel Kahneman, Thinking Fast and Slow, 2011

Creating cognitive distance is an established strategy for increasing psychological clarity and reducing cognitive load. It involves exiting what accomplished cognitive scientist and economist Daniel Kahneman calls the “inside view” of a problem, situation, experience, emotion, or cognitive experience to acquire an “outside view” of a situation.

Externalizing an experience allows human beings to view problems more objectively. Oftentimes, according to cognitive behavioral therapists, human beings are too close to a situation to analyze it objectively.

The process of analyzing our own AI interactions - as you will see in this book – leverages this concept to allow for a more fair and holistic critical review of our inputs and our process of breaking down a set of LLM outputs. Each author was asked to analyze their own use as if it were someone else, or from the external perspective looking back on the “self” of the past.

Creating cognitive distance also allows us to engage in what Kahneman calls System 2 Thinking, or “thinking slow.” Pulling a transcript of our own interactions from, say, a month or a year ago and devoting an extra layer of attention to its analysis provides a new perspective of our own use and an additional metacognitive layer of AI Literacy.

Behavioral therapy relies on similar principles. Grief counselors and therapists are known to rely on a process of externalization, wherein a patient imagines that a problem is not their own.

Some of the most well-known applications of this strategy can be summarized in a series of questions that are often tabbed as useful mechanisms for problem-solving or emotional processing:

- *What would I advise a friend to do in this situation?*
  Giving the problem to an imaginary friend removes the emotional and psychological weight of the problem from the thinker’s shoulders. It

becomes significantly easier to diagnose a problem and provide potential solutions when the consequences no longer affect the subject.

- *What would I think about this a year from now?*
  In this example, we create “time distance.” The subject is not offloading the problem to an imaginary friend, but themselves in the future. We intuitively understand that our future selves will be different from our present selves, and will look back on a previous experience with more clarity. Once again, the subject offloads the psychological burden to increase clarity.
- *What would you think about this if it were someone else’s problem?*
  Similar to the first hypothetical, this question instead hands the problem to a stranger.

This book seeks to apply these principles to the development of AI Literacy. By increasing cognitive distance between the GenAI or LLM user and their own interactions, we remove the burden of self-analysis and increase the ability to clearly identify certain principles attached to “right” or “wrong.”

As such, I encouraged each author in this book to look at their own AI interactions **as if the user was actually their student**. I asked them to consider; **What feedback would you give to this user if it were not you?** Even if the reviewer is not entirely clear on their own principles at the outset of the endeavor, the simple process of **imagining the user on the page as someone else** can facilitate a step towards a deeper understanding of responsible AI use.

Taking it a step further, imagining that the user is a student under our supervision can shine a different light on usage via an inherent sense of responsibility. Said differently, this process increases a user's (read; teacher’s) desire for safety, and allows the user to critique their own usage without fear of reprehension or embarrassment.

Below is a further exploration of the value of creating cognitive distance:

1. **Cognitive Distance Enhances Critical Thinking**: By shifting focus from personal involvement in an AI interaction to a more distanced perspective—viewing it as if it’s someone else's work or an abstract transcript—students can engage in higher-order thinking. Kahneman's approach encourages *System 2* thinking, which is slower, more deliberate, and analytical, allowing for better judgments about safe and effective AI use. Stepping outside of “the moment” allows us to more objectively analyze our own thinking.

2. **Therapeutic Techniques and Emotional Distance**:This mirrors practices in Cognitive Behavioral Therapy (CBT), where clients are encouraged to view their thoughts as just "thoughts" rather than reflections of reality. This is also reflected in the therapeutic practice of *externalization,* which means imagining our problems as separate from ourselves. By analyzing an AI transcript as if it belongs to someone else, students can adopt a more neutral and critical perspective, which can lead to insights about AI safety and effectiveness that they might miss when they are too close to their own work.
3. **Educational and Reflective Practices**: Educational theorists like John Dewey have long argued that reflection is a core component of learning. Dewey's idea of "reflective thinking" involves looking at experiences from a distance, considering alternative explanations, and making informed judgments. When students analyze AI interactions that are not their own - or view their own interactions as if they are someone else's – they can reflect without the biases they might apply to their personal work, leading to clearer insights about the principles of responsible AI use.
4. **Mimicking Professional Objectivity**: This technique also mirrors practices used by professionals, such as journalists or researchers, who are trained to maintain objectivity by distancing themselves from the subjects they study. By encouraging students to adopt this cognitive distance, you are preparing them to interact with AI more like an investigator than a passive user.
5. **Cognitive Load and Objectivity**: Daniel Kahneman also discusses how reducing cognitive load can help improve decision-making and critical thinking. By transferring AI interactions into a neutral, external format (such as a printed transcript), you are reducing the cognitive complexity that students associate with navigating the AI platform. This creates the "distance" needed for clearer thinking and analysis.

The transcripts you will see in this book represent interactions from the past between the authors and the LLM system. They inherently built in distance by separating from the usage sample for a significant time period before critically reviewing and analyzing their own use.

Each transcript aims to achieve a different goal in the context of teaching, curriculum development, and education at large. Within the transcripts, you will see educators engaged with AI with the aim of achieving some of the following goals:

1) Generating rubrics and learning activities for a High School English class (Kentz)
2) Preparing Study Abroad materials and curriculum (Cummings)
3) Shifting a college essay assignment into a project-based learning activity (Gulya)

4) Preparing for a Mathematics Tutoring session (Kennedy)
5) Designing a College-Level writing curriculum for High School students (Potkalitsky)
6) Drafting a curriculum for an experiential entrepreneurship class (Winkel)

As a reader, you will likely be drawn to the areas wherein you already have expertise and experience. In truth, these transcripts are easier to digest when the reader is starting from a place of expertise. However, in some cases we can learn even more from transcripts and use cases with which we are not familiar, as it allows us to compare and contrast these experiences against ones we intuitively understand. This leads us to the next core piece of educational theory and cognitive science that supports this approach.