USING THE BODY TO THINK
An Analysis of the Cognitive Mechanisms Underlying Thinking at the Edge and Tibetan Monastic Debate

Marieke van Vugt, University of Groningen
Jampa Tashi, Jampa Gyaltsen, Kalden Gyatso, Thabkhe, Lobsang Phuntsok, Lobsang Donyo, Jampa Thakchoe, Jampa Khechok, and Ngawang Norbu, Sera Jey Monastic University
Amir Moye, University of Bern
Sudhakar Mishra, Indian Institute of Technology Kanpur

Keywords: *Tibetan monastic debate, cognitive mechanisms, Thinking at the Edge, embodied practices, embodied cognition*

Abstract: *Thinking at the Edge is a philosophical method for systematically deepening thinking and exploring concepts from many different angles. The cognitive mechanisms through which Thinking at the Edge works are less clear. To explore these, this article will place Thinking at the Edge alongside another method that uses the body to think critically: Tibetan monastic debate. Tibetan monastic debate is a systematic way to explore topics focused on uncovering contradictions, and it does so in a way that uses the body as a method of expression and possibly also thinking. The neural and cognitive mechanisms underlying Tibetan monastic debate have recently begun to be elucidated. This article will start to analyze Thinking at the Edge, another embodied method, in a similar way. To do so, we will first describe each of these practices individually, and then describe their similarities and differences in terms of associated cognitive and affective mechanisms, including memory, attention, empathy, and reasoning. We will give suggestions for a concrete research agenda that can verify the hypothesized cognitive mechanisms, and thereby clarify how both of these practices shape thinking.*

INTRODUCTION

Although in general cognitive science only pays attention to the brain as the source of thought and cognition, the movement of embodied cognition proposes that cognition also depends upon the body.[1] The exact way in which it depends upon the body is still strongly debated. One reason that these debates ensue is that we have very few concrete examples where embodied cognition comes into play. In this article, we will examine two different practices in which cognition strongly depends upon the body, which may help to better understand the roles the body plays in cognition and thinking. First of all, we will examine Thinking at the Edge (TAE), a practice in which information in the body is incorporated in the critical thinking process. Another practice that could arguably be thought of as embodied critical thinking is Tibetan monastic debate, in which the interlocutors try to uncover inconsistencies in their thinking, accompanied by vigorous gestures and movements. Since these practices both involve critical thinking and embodiment, it is

Published by the *Journal of Contemplative Studies*

April 23, 2026, Issue #02, pp. 77–89.
DOI: https://doi.org/10.57010/MOQF4792
Website: https://contemplativejournal.org/

Journal of Contemplative Studies

interesting to do an in-depth comparison and analysis of their cognitive and affective components. These practices vary in how conceptual they are: from high in conceptuality (monastic debate) to more experiential (TAE) and from physically vigorous (monastic debate) to more not physically vigorous (TAE). Both practices are united in that they are social practices—necessarily requiring a partner. Before exploring similarities and differences between these practices, we will first describe each of them, focusing in particular on their cognitive mechanisms.

THINKING AT THE EDGE

TAE was developed by Eugene Gendlin as a systematic method for theory formation. It makes use of the body to explore the pre-explicit dimensions of thought in a systematic manner.[2] One can say it is very much an exploratory exercise, where one starts to develop an initially vague idea in more detail and, over the course of a series of steps, gradually refines this topic, idea, or concept, and finds language for it. For example, this very article was born from a process of applying the TAE steps with a focus on understanding TAE in the language of cognitive science. One of the things that emerged through this systematic exploration was that it is helpful to contrast it with the somewhat similar but also critically different practice of Tibetan monastic debate, which we will also describe in this article.

It should be pointed out that all the steps of TAE described below are done in the presence of a collaborator, who facilitates the process by (1) providing an attentional anchor, since one does not stray so easily when another human being is listening to you, and (2) helping the practitioner to go deeper by repeating things back to you and asking questions. Accordingly, although the practice relies heavily on memory and imagination, in conjunction with logical and more-than-logical reasoning, it also relies on tuning into social connections.

TAE, as described by Donata Schoeller,[3] starts with felt sensing, where the TAE practitioner explores in their body how the idea resonates—the often taken-for-granted experience of whether the idea feels right, or evokes subtle tensions. This embodied exploration helps individuals to go deeper into the concept because it zooms in, as it were, on subtle intuitions or subtle ideas that people may have about a particular topic. From a cognitive perspective, one could explain that as follows. In general, our ideas are connected to a web of concepts. It is thought that whatever thoughts appear in our minds are selected from a set of subconscious possibilities.[4] These possibilities are largely determined by what is foregrounded in memory at that time.[5] Consequently, the next ideas that appear are those that are either linked semantically or through an episodic context.[6] Such context is mostly provided by the time and place, but can also be based on the emotional valence.[7] One can easily imagine that tuning into the body changes the context of our thoughts as well, and thereby makes a different set of memories available for retrieval. For example, normally, one may have mostly visual memories present, but tuning into the body, one could have associations with memories based on the amount of physical tension or other bodily sensations associated with them. This could be the mechanism through which one could obtain different viewpoints on the concept one is exploring.

In this step of felt sensing, one then tries to formulate the idea into "a language without losing the intricate quality of the *felt sense*" and share this with their TAE partner.[8] This languaging step plays an important role in TAE as a whole, since one is invited to pay close attention to the kind of language used to describe experience. More specifically, in this process, there is a constant

back-and-forth between the experience and the language used to describe this experience.[9] One is encouraged not to be shy to use language in new ways to express new meanings during the TAE process. Another very important component of TAE is listening. Listening should be done with tremendous supportiveness and without judgment. This nonjudgmental dimension is also important because it is known that people can be more creative and feel freer to explore in nonjudgmental environments.[10]

In addition, what is crucial is to avoid making any suggestions or advice in the listening process, to avoid derailing the creation process of the other. Instead, the role of the collaborator is to listen carefully, to make notes, and to repeat back what was said, especially when the speaker is a bit stuck. This repeating back has various purposes: It helps to slow down the process, but also allows the speaker to find the best language to describe their experience by checking how this language resonates with them. One is further encouraged to find what feels like the crux of the matter—the most important thing. For example, in the TAE process about TAE and monastic debate mentioned earlier, it became clear that building bridges between these practices was the most important thing that emerged out of the process.

In a second step, one then tries to elaborate on the crux that has been identified. One tool is to connect with the meaning of words, and then explore whether there is a different and potentially better way to express the underlying concept. In this move, one is also encouraged to go beyond the ordinary meaning of words and instead connect to the felt meaning of words.

The step that follows involves the invocation of what is called instances, real-life experiences that connect to the original felt sense. One is invited to choose two instances that feel connected in some way, even though logically there may not be an obvious connection. The idea is that each instance gives you a different vantage point on the idea that you are working with and trying to deepen. This can likely again be explained from the human memory perspective, where each instance would be considered a memory situated in a spatiotemporal context that it evokes.[11] This means that every instance is associated with a different set of memories that are the most accessible in this spatiotemporal context. Such a vantage point can then give new insight into the topic at hand. In the next move, one then looks for connections between the two instances one has identified, drawing on broader connections and contrasts by further exploring the semantic connections associated with each of the two instances or experiences.

The last step of the process is about drawing relationships between the different instances that have been evoked in the preceding phases. This is done through a process that focuses more on reasoning. Specifically, one tries to make explicit logical relationships between the concepts *a*, *b*, and *c* that one has identified, which may so far have remained implicit. These connections are uncovered by finding relationships such that $a = b$, $b = c$, and $a = c$. For example, if one has identified *a* as TAE, *b* as monastic debate, and *c* as mindfulness, then one tries to find ways in which TAE is equal to monastic debate ($a = b$), for example, in that they involve the body in thinking. Similarly, in $a = c$, one tries to find ways in which TAE has similarities with mindfulness, for example, in that both often involve a process of slowing down. This equation process can seem very strange, as in most cases it is necessary to build an intermediate variable that can explain the relationship, showing in what aspect *a* and *b*, for example, are the same. This process serves to build a theoretical framework around the core concepts that were identified in the preceding steps.

MONASTIC DEBATE

Another practice that involves embodied thinking is Tibetan monastic debate. In contrast to TAE, where one is encouraged not to restrict oneself to logical thinking, this practice relies strongly on logical reasoning. Tibetan monastic debate is a key practice in the curriculum of many Tibetan monasteries, especially those in the Geluk tradition of Tibetan Buddhism—a more scholastic Tibetan Buddhist tradition that originates from fifteenth-century Tibet.[12] It is in current practice a physical form of philosophical reasoning, whose purpose is to find inconsistencies in philosophical positions by exploring those through a highly disciplined and at the same time vigorous dyadic practice.[13] The logical structure of the practice has similarities with practices in other traditions, such as *obligatio*, a turn-based logic game that was practiced in Europe in the Middle Ages.[14]

Just like in TAE, in monastic debate, the two interacting individuals have two distinct roles. In this case, one person serves as a challenger, while the other is the defender. The defender is required to affirm only statements that are mutually consistent, while the challenger can say and do whatever they like to try to push the defender to contradict themselves. This practice thus serves to explore the implications of adopting a certain position. This debate practice is a complement to the other components of monastic education, including memorization, reading, attending classes, and solitary contemplation. Memorization is particularly crucial due to the fact that debate is very challenging without a solid body of knowledge—otherwise, debaters cannot sufficiently plumb the depths to encounter contradictions.

The first thing one notices while watching the monastic debate is its physical form—at first sight, it may even look like a fight. In this type of debate, the challenger is standing up, towering over the defender, who is seated. The challenger frequently intersperses their phrases with clapping—sometimes even stronger movements such as jumps and stomping on the ground.[15] The claps punctuate the end of statements, sentences, and questions, and prompt the defender to answer. Traditionally, the clap reflects the bringing together of wisdom and compassion.[16] Once they get into it, the debaters may also end up shouting at each other, but before it gets too serious, they also frequently burst out in laughter. Georges Dreyfus, the first Westerner to complete the monastic debate curriculum, suggests that monastic debate has this specific physical form because it is a very active form that can keep the debaters attentive and able to continue for hours on end, even in the cold climate of Tibet.[17]

The debate starts with a phase in which the two debaters establish a common ground by recalling definitions and enumerations (e.g., the two types of *bodhicitta* or the two types of colors). This is mostly done by the challenger posing questions such as “What is the definition of mind?” or “What are the two types of colors?” Once a certain common ground has been established, the debaters proceed to the logical reasoning section of the debate. In this phase, the challenger decides the topic that will be debated—typically a philosophical position based on the text that is currently being studied. They then posit syllogisms that the defender can either agree or disagree with. For example, they may state, “Take mindfulness—it follows that it is contradictory to ‘mind-wandering.’” If the defender agrees, the challenger will proceed to posit additional syllogisms, aiming eventually to prove that the position is problematic. For example, they may point out that when a person practices mindfulness, they will inevitably be mind-wandering at some point. This then clarifies that there is not only a mental state of mindfulness, which probably is contradictory

to mind-wandering, but also a mindfulness practice, which incorporates both periods of the mental state of mindfulness and periods of the mental state of mind-wandering.

If the defender disagrees, which is done by responding with the question "Why?" then the challenger has several options. The challenger can just move on, posit the opposite syllogism ("Take the subject mindfulness—it follows that it is not contradictory to 'mind-wandering'"), or provide a reason to support this position. When a reason is given, the defender can either declare the reason is invalid or argue that there is no pervasion of the reason given ("It is a valid reason; it just does not apply to the subject"). For example, in the debate on mindfulness, one may say: "Take the subject attention to the breath—it follows it is mindfulness because it is a cognitive state attending to an object." However, not all cognitive states attending to an object are mindfulness (e.g., concentration, orienting to a traffic light, or attending to a daydream). So, this represents a case of "no pervasion." If the defender accepts the reason, then they in fact contradict their earlier disagreement with the syllogism. Yet such contradictions are typically only minor, allowing the debate to still proceed. Once a substantial contradiction with the main position defended in the debate has been found, then the debate ends, and debaters can move on to a new position to explore.

It is important to know that it is possible to take any position one wants. This means that one day an individual can advocate a position and the next day adopt a different position. A monastic member in our research team has suggested that he sometimes explores extreme positions to see what the implications of those positions are. Consequently, monastic debate can be a systematic research tool with thought experiments.

As is obvious from the above description, both memory and logical reasoning play a key role in monastic debate. What we have not mentioned yet is that monastic debate also likely relies strongly on emotional control. This is because in the process of getting the defender to contradict themselves, the challenger may try to tease the defender or make them angry. Indeed, simply getting your ideas challenged can be quite an emotional experience. Moreover, while monastics are required to remain calm and composed in all other aspects of life, in the debate courtyard they are even encouraged by their teachers to be arrogant and tease each other. This happens especially when the defender does not answer quickly enough. The challenger, or observing friends, may tease and make fun of them, calling them stupid and so on—everything to try to make them lose their temper such that they are more likely to contradict themselves. It is only with strong emotional control that clear thinking can be maintained. It is therefore not unlikely that monastic debate is at least in part also a training in emotional regulation.

COMPARISON

Both TAE and Tibetan monastic debate rely on the body as a tool, but in very different ways. Whereas in monastic debate the body is more of a tool to strengthen expression, in TAE it is a source of information. Both practices rely on strong attentional focus,[18] which is required to be able to tune fully into the other person and into the joint discovery process. Such attentional focus is likely being trained by the practices themselves, so the practitioners become more and more able to dive deeply into the process. Both practices also rely on and train creativity—not least because they are social practices in which the other person helps facilitate seeing things from a different perspective, which, as described above, may rely on switching the context associated with the practices.

Furthermore, both practices also involve the development of critical thinking, although critical thinking here is conceived differently from what it is often taken to be. In folk psychology, critical thinking is exclusively conceptual, and frequently giving criticism is confused with critical thinking. In fact, criticizing can also consist of uncritically repeating others' criticisms, as happened so often in the debates around vaccines during the COVID-19 pandemic. The sense of critical thinking to which we refer here is what Christopher J. May and colleagues call the development of a more refined sense of something not being right and needing further investigation.[19] In that definition, critical thinking involves a deep sense of questioning what was previously conceived of as evident. In TAE, this feeling of something not being quite right is derived from subtle sensations in the body. In monastic debate, the feeling of something being amiss may be used as a basis for the challenger to decide the direction in which to prod the defender through questioning and what definitions to request. However, to what extent this bodily feeling is used in monastic debate remains to be discovered. Both practices rely on shifting context to evoke different sets of retrievable memories, which are what help participants to see things from different perspectives and angles, thereby obtaining new insights.

The practices also exhibit some differences. For example, although TAE and monastic debate rely heavily on language, even a highly precise awareness of language, TAE allows for the use of metaphorical language, whereas monastic debate requires the use of established definitions, usually in a precisely detailed manner. This is because the debate centers on memorized texts and is intended to deepen the understanding of the positions proposed in those texts. Nevertheless, debate can also explore the various meanings of particular concepts, taking at times a sophistic turn.[20]

The practices also rely differentially on working memory, which is the ability to maintain and manipulate information in the mind for short periods. Such maintenance of information is critical for monastic debate, in which it is not possible to write down what was said, and usually bringing books is not even allowed.[21] In TAE, much of working memory is off-loaded onto paper, where the listener makes detailed notes to repeat back to the speaker. These notes also serve to provide the speaker with a detailed record of the discussion later. Thus, monastic debate constitutes a much more serious training of working memory than TAE, and also presupposes excellent long-term memory, given its emphasis on precise memorization of texts and definitions.

The two practices also involve some level of training in empathy, although they may differ in the type of empathy that they invoke. It is important to know that one can distinguish between cognitive and affective empathy.[22] Whereas cognitive empathy is the ability to understand cognitively another's emotions, affective empathy is the ability to feel what another feels. TAE likely requires both cognitive and affective empathy, especially for the listener to enable the creation of an appropriate space for the process of the speaker. Yet monastic debate most likely relies predominantly on cognitive empathy, since it is important for the debaters to try to maintain emotional detachment from their opponent to challenge them in areas where they lack certainty. Such emotional disconnection also makes it easier to tease the other to increase the likelihood of self-contradiction.

Furthermore, the practices differ in the level of speed required. Whereas in monastic debate, quick thinking is emphasized,[23] TAE instead relies critically on slowing down. This means that both practices train different cognitive faculties. Whereas debate enhances the ability to make

quick inferences, TAE instead cultivates the ability to pause and avoid jumping to conclusions prematurely. Similarly, the practices differ in the definitiveness of the concepts with which they engage. In monastic debate, everything discussed is required to have a definition. In TAE, in contrast, it is encouraged to explore concepts that have yet to be defined or remain ambiguous.

A final distinction that can be made between these practices is the phase in the thinking process in which they take place. TAE could be considered a more exploratory process that allows us to find new angles on the particular concept or topic we are exploring. In this stage, definitions can be fuzzy, and one is in fact encouraged to explore these murky spaces. Monastic debate, by contrast, is more of a confirmatory practice, in which definitions are clear ahead of time. While it does allow new insights, it is typically most productive when the debaters already have a thorough understanding of the topic. It then allows them to test detailed hypotheses about this topic in the thought experiments that are part of the debating process.

When debaters lack such deep knowledge, the debate will be difficult because the challenger may not know what questions to ask. Having said that, we have tried to use monastic debate in the context of basic cognitive science concepts for which no singular definition exists, such as mind-wandering or mindfulness. In that case, monastic debate allows for a systematic exploration of what adopting a particular definition of mind-wandering means: what consequences does it have, and what assumptions does it entail. Thus, it is a very efficient way to find problems with definitions.

TESTABLE HYPOTHESES FOR FUTURE EXPERIMENTS

TAE and monastic debate are likely to make use of, and therefore also train, different cognitive and affective faculties. These cognitive and affective qualities suggest testable hypotheses for future experiments intended to track the effects of these practices. For example, if indeed these practices train the ability to sustain attention over time, then this should be testable with tasks such as the one developed by Katherine MacLean and colleagues to measure the effects of concentration meditation practices.[24] Indeed, we found that Tibetan monastic debate is associated with an increase in frontal midline theta oscillations,[25] which are also found in other meditation practices and are thought to reflect attentional focus. Moreover, we found that more experienced monks spend less time being distracted than less experienced monks during monastic debate.[26] This suggests that monastic debate, or any of the other practices done at the monastery, helps to cultivate sustained attention.

We further hypothesize that both practices should be associated with an increase in specific components of creativity. During TAE, participants develop creativity through asking questions like “Is there more?”—which allows them to search deeper for ideas. In addition, sharing with another person can also help to shift their perspective on their own ideas, and increased awareness of sources of thought inside the body opens up new possibilities. In monastic debate, the search for alternative definitions of concepts and unexpected implications that allow a debater to detect inconsistencies helps to enhance creativity.

There is no agreement in the literature on how to measure creativity, at least in part because creativity is not a singular construct. One of the laboratory measures commonly used for one aspect of creativity, divergent thinking, is the unusual uses task.[27] Divergent thinking reflects the ability to generate many different original ideas. Such divergent thinking is operationalized in the unusual

uses task, where participants are asked to come up with various ways to use common household items. Both monastic debate and TAE should be associated with an improvement on this task. Another measure that could be relevant is a chain-free association task, which captures word associations. Word associations are relevant since the beginning of idea generation in verbal creative processes involves the creation of word associations.[28] I would expect both TAE and monastic debate to lead to increased variability in the associations produced. Another aspect of creativity is insight, the ability to solve problems in innovative ways.[29] I would also expect both TAE and monastic debate to lead to increased insight, as both of these practices are associated with an ability to stay with uncertainty and look at things from many different perspectives.

A cognitive capacity whose use by TAE and monastic debate is likely to prove different is working memory. As detailed above, working memory performance should increase after practicing monastic debate, but it is likely not to change much after TAE because TAE does not rely as strongly on working memory, as part of what has to be remembered is off-loaded onto paper and to the interlocutor. If this divergence is indeed present, then this should be testable in experiments such as the complex working memory task developed in Dr. van Vugt's laboratory by Stefan Huijser and colleagues.[30] Complex working memory reflects the capacity to keep information in working memory while dealing with interfering tasks. In this version of the complex working memory task, participants have to juggle remembering the location of stimuli on a screen with answering questions about words that move around on the same screen. We predict that after substantial practice of monastic debate, individuals improve in their ability to keep memory stimuli in mind in the face of interfering information, whereas substantial practice with TAE will not be associated with improvement.

A further capacity that may differ between the practices is cognitive speed. Monastic debate may increase cognitive speed, and thereby shorten response times; TAE may instead decrease response times or shift a speed-accuracy trade-off more in the direction of accuracy. Over a longer time scale, this slowing down is closely related to the creative thinking cultivated in TAE, where the idea generation is prolonged instead of quickly doubling down on the first interesting idea that comes up. This may then lead to enhanced idea generation through a similar mechanism as was shown to apply to psychedelics,[31] namely, the reduction of top-down constraints on ideas. Whereas in psychedelics such a reduction in top-down constraints is immediate, allowing a broad range of associations to emerge that may in part be illogical, in TAE it is a reduction in top-down constraints over time. Allowing ideas to emerge for a longer duration also results in the less obvious ideas to appear. In that sense, this is a form of idea generation that may be more similar to Daniel Kahneman's slow system 2 thinking.[32] The slow system 2 thinking contrasts with system 1 thinking that is very rough but much less accurate.

Another area in which the practices are likely to differ is measures of empathy—whereas monastic debate is more likely to increase cognitive empathy, TAE is more likely to increase affective empathy. One way to measure this is via a self-report questionnaire.[33] Yet like all self-report questionnaires, this measurement tool is subject to self-report biases. Another option to track empathy is provided by behavioral measures, such as the EmPaToM task (Empathy, Perspective Taking, and Theory of Mind),[34] which can distinguish cognitive and affective empathy while being less prone to biased reporting. Previous work has found that compassion meditation could increase affective empathy, whereas a mental training focused on perspective taking increases cognitive

empathy.[35] Of course, other tasks and methods can assess these cognitive and affective qualities, but the aforementioned approaches form a starting point, especially since they systematically index both cognitive and affective empathy, which have been found to be dissociable.[36] Given that these two types of empathy are dissociable, they are also likely to have different real-world consequences for interpersonal understanding, making it particularly important to examine the effect of TAE and monastic debate on them both.

It is important to mention that the cognitive science research agenda is limited to tasks that measure different aspects of cognitive and affective processing. It is likely that this misses many significant features of the effects of both TAE and monastic debate. TAE especially relies strongly on processes that are beyond the conceptual and are therefore difficult, if not impossible, to capture in cognitive tasks.[37] For example, TAE cultivates the ability to sustain this state where concepts are not yet clear or where new meanings of concepts are explored. Since cognitive tasks focus on measurable processes, such subtle processes are not captured by these tasks.

CONCLUSION

In short, we have examined two embodied thinking practices—TAE and Tibetan monastic debate—from a cognitive/affective perspective. We have shown that, in some aspects, the associated cognitive faculties, such as the cultivation of critical thinking and creativity, overlap, even though there may be subtle differences. In other cognitive faculties, such as the reliance on working memory and empathy, they differ more substantially. Future research programs should test these hypotheses to allow for a clearer idea of how these practices can be incorporated into education, something that has already begun to happen with both TAE and monastic debate, albeit very sparingly.[38] Research on the cognitive mechanisms can help to more accurately tailor these practices to the communities that would benefit most from them.

NOTES

[1] Wilson, "Six Views of Embodied Cognition."
[2] Gendlin, "Introduction to Thinking at the Edge."
[3] Schoeller, "Thinking at the Edge."
[4] Ellamil et al., "Dynamics of Neural Recruitment."
[5] Ellamil et al., "Evaluative and Generative Modes of Thought."
[6] Howard and Kahana, "Distributed Representation of Temporal Context."
[7] Van Vugt et al., "Effects of MBCT on Affective Memory."
[8] Schoeller, "Thinking at the Edge," 293. Italics in the original.
[9] Petitmengin, "Anchoring in Lived Experience as an Act of Resistance."
[10] Buchel and Edwards, "Characteristics of Effective Clinical Teachers"; Dyche and Epstein, "Curiosity and Medical Education."
[11] Howard and Kahana, "Distributed Representation of Temporal Context"; Tulving, "Episodic Memory."
[12] Dreyfus, *Sound of Two Hands Clapping*; Perdue, *Debate in Tibetan Buddhism*.
[13] Van Vugt et al., "Chapter 10—Tibetan Buddhist Monastic Debate."
[14] Uckelman, "Interactive Logic in the Middle Ages."
[15] Liberman, "Logic Is Made to Dance."
[16] Dreyfus, *Sound of Two Hands Clapping*; Perdue, *Debate in Tibetan Buddhism*.
[17] Dreyfus, *Sound of Two Hands Clapping*.
[18] Van Vugt et al., "Inter-Brain Synchronization."
[19] May et al., "Provoking Thought."
[20] Liberman, "Sophistry in and as Its Course."
[21] Dreyfus, "What Is Debate for?"
[22] Blair et al., *Psychopath*; Reniers et al., "QCAE."
[23] Dreyfus, "What Is Debate for?"
[24] Maclean, "Intensive Meditation."
[25] Van Vugt et al., "Inter-Brain Synchronization."
[26] Kaushik et al., "Decoding the Cognitive States."
[27] Silvia et al., "Assessing Creativity with Divergent Thinking Tasks."
[28] Benedek et al., "Associative Abilities Underlying Creativity."
[29] Girn et al., "Updating the Dynamic Framework of Thought."
[30] Huijser et al., "Wandering Self."
[31] Carhart-Harris and Friston, "REBUS and the Anarchic Brain."
[32] Morewedge and Kahneman, "Associative Processes in Intuitive Judgment."
[33] Reniers et al., "QCAE."
[34] Preckel et al., "Interaction of Social Affect and Cognition."
[35] Trautwein et al., "Differential Benefits of Mental Training Types."
[36] Kanske et al., "Are Strong Empathizers Better Mentalizers?"
[37] Gendlin, "Thinking Beyond Patterns."
[38] Schoeller, "Micro-Phenomenology as a Practice"; Perdue, *Course in Buddhist Reasoning and Debate*.

WORKS CITED

Benedek, Mathias, Tanja Könen, and Aljoscha C. Neubauer. "Associative Abilities Underlying Creativity." *Psychology of Aesthetics, Creativity, and the Arts* 6, no. 3 (2012): 273–281. https://doi.org/10.1037/a0027059.

Blair, R. J. R., D. Mitchell, and K. Blair. *The Psychopath: Emotion and the Brain*. Blackwell, 2005.

Buchel, Tamara L., and Frederick D. Edwards. "Characteristics of Effective Clinical Teachers." *Family Medicine* 37, no. 1 (2005): 30–35.

Carhart-Harris, R. L., and K. J. Friston. "REBUS and the Anarchic Brain: Toward a Unified Model of the Brain Action of Psychedelics." *Pharmacological Reviews* 71, no. 3 (2019): 316–344. https://doi.org/10.1124/pr.118.017160.

Dreyfus, Georges. *The Sound of Two Hands Clapping: The Education of a Tibetan Buddhist Monk*. University of California Press, 2003.

Dreyfus, Georges B. "What Is Debate for? The Rationality of Tibetan Debates and the Role of Humor." *Argumentation* 22, no. 1 (2008): 43–58. https://doi.org/10.1007/s10503-007-9079-2.

Dyche, Lawrence, and Ronald M. Epstein. "Curiosity and Medical Education." *Medical Education* 45, no. 7 (2011): 663–668. https://doi.org/10.1111/j.1365-2923.2011.03944.x.

Ellamil, Melissa, et al. "Dynamics of Neural Recruitment Surrounding the Spontaneous Arising of Thoughts in Experienced Mindfulness Practitioners." *NeuroImage* 136, no. 1 (2016): 186–196. https://doi.org/10.1016/j.neuroimage.2016.04.034.

Ellamil, Melissa, Charles Dobson, Mark Beeman, and Kalina Christoff. "Evaluative and Generative Modes of Thought During the Creative Process." *NeuroImage* 59, no. 2 (2012): 1783–1794. https://doi.org/10.1016/j.neuroimage.2011.08.008.

Gendlin, Eugene T. "Introduction to Thinking at the Edge." *The Folio* 19, no. 1 (2004): 1–8.

Gendlin, Eugene T. "Thinking Beyond Patterns: Body, Language and Situations." In *The Presence of Feeling in Thought*, edited by B. den Ouden and M. Moen. Peter Lang, 1991. https://www.focusing.org/gendlin/docs/gol_2159.html.

Girn, Manesh, Caitlin Mills, Leor Roseman, Robin L. Carhart-Harris, and Kalina Christoff. "Updating the Dynamic Framework of Thought: Creativity and Psychedelics." *NeuroImage* 213 (2020): 116726. https://doi.org/10.1016/j.neuroimage.2020.116726.

Howard, M. W., and M. J. Kahana. "A Distributed Representation of Temporal Context." *Journal of Mathematical Psychology* 46, no. 3 (2002): 269–299. https://doi.org/10.1006/jmps.2001.1388.

Huijser, Stefan, Marieke K. van Vugt, and Niels A. Taatgen. "The Wandering Self: Tracking Distracting Self-Generated Thought in a Cognitively Demanding Context." *Consciousness and Cognition* 58 (2018): 170–185. https://doi.org/10.1016/j.concog.2017.12.004.

Kanske, Philipp, Anne Böckler, Fynn-Mathis Trautwein, Franca H. Parianen Lesemann, and Tania Singer. "Are Strong Empathizers Better Mentalizers? Evidence for Independence and Interaction Between the Routes of Social Cognition." *Social Cognitive and Affective Neuroscience* 11, no. 9 (2016): 1383–1392. https://doi.org/10.1093/scan/nsw052.

Kaushik, Pallavi, et al. "Decoding the Cognitive States of Attention and Distraction in a Real-Life Setting Using EEG." *Scientific Reports* 12, no. 1 (2022): 20649. https://doi.org/10.1038/s41598-022-24417-w.

Liberman, Kenneth. "The Logic Is Made to Dance: Rhythm in Tibetan Debating." *Etnografia e Ricerca Qualitativa*, no. 3 (2015): 383–398. https://doi.org/10.3240/81722.

Liberman, Kenneth. "Sophistry in and as Its Course." *Argumentation* 22, no. 1 (2008): 59–70. https://doi.org/10.1007/s10503-007-9070-y.

Maclean, Katherine A. "Intensive Meditation Training Improves Perceptual Discrimination and Sustained Attention." *Psychological Science* 21, no. 6 (2010): 829–839. https://doi.org/10.1177/0956797610371339.

May, Christopher J., Ryan Wittingslow, and Merethe Blandhol. "Provoking Thought: A Predictive Processing Account of Critical Thinking and the Effects of Education." *Educational Philosophy and Theory* 54, no. 14 (2022): 2458–2468. https://doi.org/10.1080/00131857.2021.2006056.

Morewedge, Carey K., and Daniel Kahneman. "Associative Processes in Intuitive Judgment." *Trends in Cognitive Sciences* 14, no. 10 (2010): 435–440. https://doi.org/10.1016/j.tics.2010.07.004.

Perdue, Daniel. *The Course in Buddhist Reasoning and Debate: An Asian Approach to Analytical Thinking Drawn from Indian and Tibetan Sources*. Snow Lion, 2014.

Perdue, Daniel. *Debate in Tibetan Buddhism*. Snow Lion, 1992.

Petitmengin, Claire. "Anchoring in Lived Experience as an Act of Resistance." *Constructivist Foundations* 16, no. 2 (2021): 172–181.

Preckel, Katrin, Philipp Kanske, and Tania Singer. "On the Interaction of Social Affect and Cognition: Empathy, Compassion and Theory of Mind." In "Emotion-Cognition Interactions," special issue, *Current Opinion in Behavioral Sciences* 19 (2018): 1–6. https://doi.org/10.1016/j.cobeha.2017.07.010.

Reniers, Renate L. E. P., Rhiannon Corcoran, Richard Drake, Nick M. Shryane, and Birgit A. Völlm. "The QCAE: A Questionnaire of Cognitive and Affective Empathy." *Journal of*

Personality Assessment 93, no. 1 (2011): 84–95. https://doi.org/10.1080/00223891.2010.528484.

Schoeller, Donata. "Micro-Phenomenology as a Practice of Critical Thinking." *Constructivist Foundations* 16, no. 2 (2021): 195–197.

Schoeller, Donata. "Thinking at the Edge in the Context of Embodied Critical Thinking: Finding Words for the Felt Dimension of Thinking Within Research." *Phenomenology and the Cognitive Sciences* 22, no. 1 (2023): 289–311. https://doi.org/10.1007/s11097-022-09861-3.

Silvia, Paul J., et al. "Assessing Creativity with Divergent Thinking Tasks: Exploring the Reliability and Validity of New Subjective Scoring Methods." *Psychology of Aesthetics, Creativity, and the Arts* 2, no. 2 (2008): 68. https://doi.org/10.1037/1931-3896.2.2.68.

Trautwein, Fynn-Mathis, Philipp Kanske, Anne Böckler, and Tania Singer. "Differential Benefits of Mental Training Types for Attention, Compassion, and Theory of Mind." *Cognition* 194 (2020): 104039. https://doi.org/10.1016/j.cognition.2019.104039.

Tulving, Endel. "Episodic Memory: From Mind to Brain." *Annual Review of Psychology* 53, no. 1 (2002): 1–25. https://doi.org/10.1146/annurev.psych.53.100901.135114.

Uckelman, Sara L. "Interactive Logic in the Middle Ages." *Logic and Logical Philosophy* 21, no. 4 (2012): 439–471. https://doi.org/10.12775/llp.2012.020.

Van Vugt, Marieke K., et al. "Chapter 10—Tibetan Buddhist Monastic Debate: Psychological and Neuroscientific Analysis of a Reasoning-Based Analytical Meditation Practice." In *Progress in Brain Research*, edited by N. Srinivasan, vol. 244, Meditation, 233–253. Elsevier, 2019. https://doi.org/10.1016/bs.pbr.2018.10.018.

Van Vugt, M. K., et al. "Inter-Brain Synchronization in the Practice of Tibetan Monastic Debate." *Mindfulness* 11 (2020): 1105–1119. https://doi.org/10.31231/osf.io/f2ept.

Van Vugt, M. K., et al. "The Effects of MBCT on Affective Memory Associations in Depression: Measuring Recall Dynamics in a Randomized Controlled Trial." *Frontiers in Human Neuroscience* 6 (2012): 257. https://doi.org/10.3389/fnhum.2012.00257.

Wilson, Margaret. "Six Views of Embodied Cognition." *Psychonomic Bulletin and Review* 9, no. 4 (2002): 625–636. https://doi.org/10.3758/BF03196322.