

## Notes

### Introduction

1. One major factor in this strategy is that in a complex domain of explanation—which the phenomenon of conscious experience clearly is—ideal models that cover *all* the behaviors of the kind of system that interests us are often unavailable, but, as Richard Batterman (2002) has pointed out, “*highly idealized minimal models* of the universal, repeatable features [ . . . ] are often obtainable” (p. 36). These models may still possess great computational and explanatory power. Batterman quotes Nigel Goldenfeld, who describes a correct minimal model as being “that model which most economically caricatures the essential physics” (originally in Goldenfeld, 1992, p. 33; see also Goldenfeld, 2018, p. 36). The strength of a minimal model consists in giving us an understanding of what we actually want to understand, but without yet faithfully depicting fine-grained causal pathways or actual functional mechanisms on a micro-scale (Weisberg, 2012, chapter 6, section 6.1.2). So, minimal models are highly idealized descriptions of some target phenomenon; they may possess great explanatory power; and they do not yet represent the underlying, fine-grained causal mechanisms. A fourth important idea about minimal models is that the addition of details might actually *detract* from an understanding of the phenomenon of interest (Batterman, 2002, p. 22). One of my main points in this book is that what we call the “first-person perspective” is precisely one such superfluous detail, and adopting the minimal model approach therefore will dissolve the problem of subjectivity for the science of consciousness. I think that all four ideas listed here could also apply to a potential model for phenomenal experience, a model targeting only its absolutely essential and minimal form, namely MPE, the experience of “pure consciousness” as phenomenologically investigated in this book. I have said a little about minimal model explanations in this context in Metzinger (2020, section 1.2), but since this is a popular book aimed at a wider audience, I will refrain from any technical discussion. See Batterman and Rice, 2014; other discussions I found helpful are Lange, 2015; McKenna, 2021; Rice, Rohwer, and Ariew, 2019; and Wiese, 2023.

2. See Gamma and Metzinger, 2021. You can find updates and future publications at [mpe-project.info](http://mpe-project.info).

3. Baminiwatta and Solangaarachchi, 2021.

4. The concept was first used by Windt, 2015; for an introduction, see chapter 20 of this book and Metzinger, 2020.

5. Metzinger, 2020.
6. Gamma and Metzinger, 2021.
7. See Metzinger, 2020, for an example.
8. Bayne and Hohwy, 2016, p. 57.
9. Bayne and Hohwy, 2016, p. 72.
10. For more on the dimensional approach, see Bayne, Hohwy, and Owen, 2016.
11. For an example, see Bhikkhu, 2012, p. 95. For a detailed discussion and further references, see Higgins, 2013, pp. 207–211 and note 529.
12. Visit [mpe-project.info](http://mpe-project.info).

## Chapter 1

The epigraph is cited in Bricklin, 2006, p. 11.

1. You can find the original set of questions and a wealth of supplementary material on the companion website.
2. Killingsworth and Gilbert, 2010. For more on mind-wandering, see Metzinger, 2013, 2018a; an accessible introduction can be found in Metzinger, 2018b.
3. Not all authors agree with my categorization of bliss as not really being a feeling or an emotion; see, for example, Woods, Windt, and Carter, 2022a, section 2.6.
4. Metzinger, 2020.
5. Section II, (3) B; cf. Higgins, 2022, p. 154.
6. This is the translation by Sheng Yen, cf. <https://terebess.hu/english/hsin3.html#03> and Sheng Yen, 2006; many other and widely diverging translations exist, see <https://terebess.hu/zen/sengcan.html>.

## Chapter 2

1. Metzinger, 2015.
2. Metzinger, 2020.
3. In the original paper, this aspect of pure consciousness was labeled “PC2”; see Metzinger, 2020.
4. For an accessible introduction, see Wiese and Metzinger, 2017.
5. Laukkonen and Slagter, 2021. Another excellent recent example for the new computational phenomenology of meditation is Sandved-Smith et al., 2021. See also the pointers and figure 34.1 in chapter 34.

6. See Struhl, 2022, for an important analysis of the epistemological naiveté involved in ideas that are widespread in discussions of mindfulness and Vipassanā meditation, like “bare attention” and “seeing things as they are.”

7. This might also explain the observed divergence in responses to two control items, which occurred at different places in the questionnaire but were phrased nearly identically. In hindsight, it might have been better to phrase these items not just nearly but absolutely identically, in order to know that any intra-individual variation in responses must be wholly due to inconsistent reporting. As it was, divergent scores could also have been due to the slight semantic difference in the two items, one asking about nonvisual radiance only, while the other also asked about self-luminosity.

8. Metzinger, 2020, p. 14.

9. Nagel, 1974; Shear, 2007.

10. Lockwood, 1993; Metzinger, 1995a, pp. 3–37, 1995b, 2003, pp. 189–197; Sellars, 1956, pp. 253–329.

11. For a review, see Hymanjr and Loftus, 1998.

12. I first flagged this problem in Metzinger, 2003, p. 566. I recommend Raphaël Millière’s work as an excellent entry point into the debate; see Millière and Newen, 2022.

13. For important discussions, see Millière, 2020, and Fink, 2020.

14. This is one of the main points in Metzinger, 2003. The general idea is that we are biological organisms that—not only for the special case of recalling a selfless, nonegoic episode but also in most other situations—continuously embed low-level representations of the processes underlying their thoughts, feelings, and perceptions into a conscious self-model, thereby endowing them with the phenomenal properties of ownership and agency. Phenomenal selfhood is a post hoc confabulation; agency and ownership are useful high-level fictions.

15. As Wikipedia (2022) puts it: “Heterophenomenology is put forth as the alternative to traditional Cartesian phenomenology, which Dennett calls ‘lone-wolf autophenomenology’ to emphasize the fact that traditional phenomenology accepts the subject’s self-reports as being authoritative. In contrast, heterophenomenology considers the subjects authoritative only about how things seem to them. It does not dismiss the Cartesian first-person perspective, but rather brackets it so that it can be intersubjectively verified by empirical means, allowing it to be submitted as scientific evidence.” See also Dennett, 1993, 2003, 2007.

### Chapter 3

For the epigraph, see Buswell, 1991, p. 170.

1. Spackman, 2022.

2. Woods, Windt, and Carter, 2020.

3. See also Woods, Windt, and Carter, 2022a, 2022b, and Woods et al., 2023. A recent neuroscientific study is Winter, 2020.
4. For details about the absence and presence of specific types of emotions, see chapter 15 and Woods, Windt, and Carter 2022a and Woods et al., 2023.
5. Woods, Windt, and Carter, 2020, p. 10.
6. I found out after writing this chapter that my own ideas and findings strongly converge with those of Woods, Windt, and Carter; see Woods, Windt, and Carter, 2022a, 2022b. A particularly interesting recent study is Woods et al., 2023; here robust phenomenological differences in the reported experience of bliss, alertness, absorption, and depth are shown between different meditation techniques that are said to aim for “contentless” experience. For example, based on participant reports, mindfulness practice in the Thai Forest tradition was found to lead to significantly greater experiences of bliss and joy than classical Tibetan Buddhist Shamata practice. In contrast, Stillness Meditation, developed in Australia, produces states of consciousness that are clearly characterized by lower levels of wakefulness, but which have higher levels of absorption than the first two techniques mentioned, and are also more strongly characterized by a quality of pure being and the attainment of a ground state of mind.
7. Cobb and Comfort, 2023, p. 660.
8. Good entry points are Seth and Bayne, 2022; Doerig, Schurger, and Herzog, 2021; and Francken et al., 2021. See also Deane, 2021; Del Pin et al., 2021; Hanson and Walker, 2021, p. 2; Rorot, 2021; Signorelli, Szczotka, and Prentner, 2021.
9. Lewis, 1929, pp. 121, 131. See also Metzinger, 2003, sec. 2.4.
10. Nagel, 1974, p. 436.
11. Metzinger, 2003, 2008, 2009.
12. This is as cited in Nagel, 1995, p. 70.
13. I am grateful to Nihat Ay for stimulating discussions on this point.
14. Kleiner, 2020.
15. Shear, 2007, pp. 700, 702–703.
16. Cage, 1991, p. 64. I am grateful to Cyril Costines for pointing me to this specific example, as well as for many other excellent ideas and proposals.
17. Sandved-Smith et al., 2021.

#### Chapter 4

For the epigraph, see Namgyal, *Clarifying the Natural State: A Principal Guidance Manual for Mahamudra*, 2001, p. 29.

1. Metzinger, 2020; see also Woods, Windt, and Carter, 2022a, secs. 2.1 and 2.8.

2. For discussion, see Bayne and Hohwy, 2016, p. 73.
3. For some references, see Metzinger, 2019, 2020. There are also arousal-based meditation techniques, see Kozhevnikov, 2022. An important new perspective on the role of subcortical mechanisms is Solms, 2021.
4. Laureys et al., 2004, 2010; Sanders et al., 2012.
5. Munn et al., 2021, p. 5.
6. Sadaghiani and D'Esposito, 2015.
7. Posner, 2008, p. 193.
8. Sadaghiani and D'Esposito, 2015, p. 2763.
9. Sadaghiani and D'Esposito, 2015, p. 2764.
10. Mañjuśrimitra, 1987, p. xi.
11. Higgins, 2012, p. 447; 2013, p. 99. For a recent empirical study, see Costines et al., 2021.
12. Blanke and Metzinger, 2009, p. 7. See also Lenggenhager et al., 2007.
13. See the introduction of this book and Bayne and Hohwy, 2016.
14. Friston, 2018; Hohwy, 2016, 2021.
15. If you are, see Siderits, 2021; see also Buswell and Lopez, 2014.

## Chapter 5

For epigraphs, see Urgyen, 2001, p. 131 and Urgyen, 2000, p. 112.

1. Whenever I speak of conscious experiences as being a “model,” I am thinking of a probabilistic model encoded by the organism’s brain, a physically realized model of the hypothesized causes that generate its sensory observations—that is, a *generative model* (Parr et al., 2019). Even though this model is not based on concepts, words, or languagelike structures, it can (metaphorically) be described as a subpersonal “belief” that the organism now has about the world—an embodied inner image of reality, if you will. However, most of the organism’s “beliefs” are entirely unconscious and constantly updated as they interact with each other. To have a model in this sense means to physically embody a form of probabilistic knowledge. In addition, the organism is inferring the model’s “fitness.” If this knowledge is good and robust, close to optimal, then it can lead to the conscious experience of “realness” or “certainty.” In this sense, conscious probabilistic models are *epistemic* models (they process properties like “evidence” or “fitness”), but at the same time, they offer a conceptually clear way of understanding what it really means for human beings to “embody a reality” or “dynamically realize their own life-world.” My speculative idea is that, first, consciousness normally flags the specific model that the system will use for active inference involving global control of the body as a whole; it selects the appropriate level. As a consequence, the organism can actively change the external world to make it fit an inner goal-state—which is itself a form of knowledge acquisition. But, second, to be able to do this, the system has to know that epistemic gain, the acquisition of

new knowledge, is even possible. The organism can achieve this step only because a model of the organism's epistemic space as a whole has been embedded into this space itself, thus allowing the organism to know that something can be known in this specific way. For an introduction, see Wiese and Metzinger, 2017. The philosophical point about consciousness as a self-modeling epistemic space was first made in Metzinger, 2020.

2. This point is a slightly more abstract and nonagentive variation on the philosophical/computational idea of a system finding itself "poised over action space" or "knowing poise over an action space." See Ward, Roberts, and Clark, 2011; Nave et al., 2022, p. 1020.

3. Alexander, 1988, p. 3.

4. Severeide, 1990, p. 1570; as cited in Bachmann, 2014, p. 52.

5. Travis and Pearson, 2000, p. 81.

6. For a recent example, see Friquegnon, 2022.

7. Mañjuśrīmitra, 1987, p. 60; see also Laukkonen and Slagter, 2021.

8. Windt and Metzinger, 2007.

9. Ward and Wegner, 2013; see also Kawagoe, Onoda, and Yamaguchi, 2019. An important conceptual clarification is given in Fell, 2022.

10. Metzinger, 2020.

11. Meyniel, Schlunegger, and Dehaene, 2015; Meyniel, Sigman, and Mainen, 2015.

12. Woods, Windt, and Carter, 2022a also supports the understanding that full-absorption episodes involve subject/object nonduality; see section 2.3 in Woods, Windt, and Carter, 2022a.

## Chapter 6

1. Lockwood, 1993; Metzinger, 1995, pp. 3–37; 2003, pp. 189–197; Sellars, 1956, pp. 253–329.

2. For good philosophical discussions, see Kirk, 1994; Levine, 1996; Tye, 1997.

3. Seth, 2021, p. 187.

## Chapter 7

For the epigraph, see Plotinus, 2018, p. 887 (translation by Sybilla Pereira and Emily Troschianko).

1. Metzinger and Windt, 2015.

2. This thesis has been defended in one way or another by German philosophers including Johann Gottlieb Fichte (1762–1814) and Franz Brentano (1838–1917), and more recently by Dieter Henrich and Manfred Frank (Frank and Kuneš, 2022). It is also associated with the French philosopher Jean-Paul Sartre (1905–1980). A good entry point is Kapitan, 1999.

3. Metzinger, 2010.

4. Dennett, 1993, p. 401.
5. Millière and Metzinger, 2020.
6. For a recent review, see Tulver et al., 2023.
7. Metzinger and Windt, 2015, pp. 7–8.
8. Letheby, 2021.
9. Jopling, 2001; Letheby, 2021b, ch. 8. On the relationship between psychedelics and meditation, see Letheby, 2022.
10. Picard, 2013, p. 2497.
11. Picard, Scavarda, and Bartolomei, 2013.
12. For five case reports, see Picard and Craig, 2009.
13. Bartolomei et al., 2019, p. 1121 (authors' citations omitted).
14. For everybody interested in these issues, I strongly recommend Letheby, 2021. See also Letheby and Gerrans, 2017; 2024.
15. For an accessible discussion, see Metzinger, 2017.

## Chapter 8

For the epigraph, see Harding, 2000, p. 77.

1. Bachmann, 2014.
2. See Metzinger, 2003, 2008, 2010 for more.
3. Siderits, 2003.
4. Metzinger, 1995, p. 22.
5. I first formulated this principle in Metzinger, 2020.
6. For an example, see Abdoun et al., 2019.
7. Seth, 2021, p. 188.
8. As Antonio Damasio and I have argued, the phenomenal self-model of human beings is likely to be functionally anchored on *homeostatic* self-control. For the important new idea that the conscious sense of self may be intimately related to having an *allostatic* control model, see Deane, 2021.

## Chapter 9

For the epigraph, see Hinton, 2016, p. 36.

1. Higgins and Draszczyk, 2019.

2. The etymological root of the term *quidditas* (“whatness” or “essence”) is the Latin *quid*, meaning “what”; and that of the term *haecceitas* (“thisness”) is the Latin *haec*, meaning “this.”
3. Morard, 1956.
4. Burbea, 2014, S.212f.
5. “The epistemic salience of phenomenal content suggests that the transitivity of reflexive self-consciousness is not hidden or transparent. Rather, it is a kind of primitive and prereflective consciousness that is nonconceptual and self-presenting” (Coseru, 2022, p. 357). For another excellent discussion of nonconceptuality and the reflexivity of consciousness, see Spackmann, 2022.
6. Lamme and Roelfsema, 2000; Lamme et al., 2000; Lamme, 2006; Boehler et al., 2008.
7. Hohwy, 2016, 2021.
8. See also Hohwy, 2021.
9. Hohwy, 2021, see also Seth and Hohwy, 2020.
10. Wiese and Friston, 2021.
11. Sheehy and Mathes, 2020.
12. Weil, 1956, p. 554.

## Chapter 10

For the epigraph, see Barron and Fairclough, 2001, pp. 12, 23; Rabjam, 2014, ch. 2, p. 45.

1. Windt, 2015.
2. Kent and Wittmann, 2021; Wittmann, 2013, 2018.
3. Kelly, 2019.
4. I recommend Fasching, 2008, 2011, 2012, 2016, 2019.
5. See Fasching, 2021, pp. 680, 687; for more, see Fasching, 2022.
6. For more, see Davis and Steinbock, 2021.
7. I first presented this idea in Metzinger, 2020.
8. See Pliushch and Metzinger, 2015; an accessible and freely available overview is Metzinger, 2018.
9. I first understood this possibility when reading Schooler et al., 2011; an interesting computational model is Sandved-Smith et al., 2021.

## Chapter 11

1. Matthen, 2021, p. 197; Hinton, 2016, p. 8.
2. Graziano, 2018, p. 1.



3. Dijkerman and Medendorp, 2021, p. 92. See also Noel, Samad, et al., 2018.
4. See de Vignemont et al., 2021, p. 3.
5. Noel, Bertoni, and Serino, 2021, p. 17.
6. Masson et al., 2021.
7. Cardini et al., 2019.
8. Serino, Canzoneri, et al., 2015; Serino, Noel, et al., 2015.
9. Noel, Park, et al., 2018.
10. Guterstam, Gentile, and Ehrsson, 2013.
11. Guterstam, Gentile, and Ehrsson, 2013, p. 1097.
12. Guterstam, Abdulkarim, and Ehrsson, 2015.
13. Guterstam, Abdulkarim, and Ehrsson, 2015, p. 6.
14. Guterstam, Gentile, and Ehrsson, 2013, Guterstam, Abdulkarim, and Ehrsson, 2015.
15. Metzinger, 2020.
16. Baars, 1993; Mashour et al., 2020.
17. Kleiner and Tull, 2021; Tononi et al., 2016. See Bayne (2018) for a critical philosophical discussion. Good recent overviews and entry points into the current “marketplace” for theories of consciousness are Seth and Bayne, 2022; Doerig, Schurger, and Herzog, 2021; and the freely available special issue “Consciousness Science and Its Theories” of the journal *Neuroscience of Consciousness* at <https://academic.oup.com/nc/issue/2021/2>.

## Chapter 12

For the epigraph, see Rgyal-ba-g'yung-drung, 2017, pp. 94–97.

1. Kachru, 2022, p. 98.

## Chapter 13

1. Woods et al., 2023. See also Woods, Windt, and Carter, 2022a, 2022b.
2. Higgins, 2022, p. 78.

## Chapter 14

This translation of Wittgenstein is by Emily Troscianko. For the second epigraph, see Sextus Empiricus, *Pyrroneioi hypotyposesis*, book 1, chapter 12, section 28.

1. Vogt, 2021.

2. Sextus Empiricus, *Pyrroneioi hypotyposeis*, book 1, chapter 12, section 29.
3. Laukkonen and Slagter, 2021.
4. Aristocles and Eusebius *Praeparatio Evangelica*, book 14, chapter 18, Verses 2–4.
5. Dahl, Lutz, and Davidson, 2015; Lutz et al., 2015..
6. Wasson, Hofmann, and Ruck, 2008.
7. Hadot, 2002, p. 6.
8. Hadot, 1995, p. 90.
9. Hadot, 2002, p. 6.
10. Here is how Sonam Kachru (2022, p. 101) describes the more general point that I am drawing attention to at this time:

For the ancients, however, the gap between the person as a whole and the person *qua* philosopher presumably would not always (or ever) obtain. This is partly what it means to think of ancient philosophy as having been practiced as an encompassing *way of life*. For the ancient philosopher, self-transformation on the basis of contouring one's ways of being minded (including the shaping of attention no less than belief) was often linked to behavioral regimens thought to govern every aspect of one's life, down to the least details of gesture, diet, and comportment [ . . . ]. If the connection between ancient philosophy and meditation as metacognitive training is more direct, then the conception of philosophy is far more demanding than the profession it has become today.

For all those interested in the new debate about the relationship between philosophy and meditation, I recommend the *Routledge Handbook on the Philosophy of Meditation* as an entry point. In his own contribution, the handbook editor, Rick Repetti, writes: "I am convinced that meditation is thus the meta-mental and meta-philosophical virtue-epistemic art and practice of consciously sharpening the wisdom-cultivating tools in the philosophical toolkit, particularly for philosophers who consciously practice it as such." (Repetti, 2022, p. 65).

11. Hadot, 1995, p. 82.
12. Hadot, 1995, p. 131.
13. Lopez, 2017. I recommend Pigliucci (2022) as an excellent entry point to the debate.
14. Marcus Aurelius, *Meditations*, 7, 54; see also 3, 12; 8, 36; 9, 6 (quoted in Hadot, 1995, p. 84).

## Chapter 15

For the epigraph, see Weil, 1997, p. 117.

1. Terry, 2022, p. 390.
2. Streib and Hood, 2011. An important collection of texts can be found in Streib and Hood, 2016.

3. Metzinger, 2017.
4. Streib and Hood, 2011, 2016.
5. Thompson, 2020, p. 18.
6. See Woods, Windt, and Carter, 2022a.
7. Namgyal, 2019, sec. II, ch. 12, p. 366.
8. Namgyal, *Clarifying the Natural State: A Principal Guidance Manual for Mahamudra*, 2001, p. 62.
9. For relevant recent proposals, see Deane, 2021; Hesp et al., 2021.

## Chapter 16

For the epigraph, see Krishnamurti, 1956, p. 98.

1. This was semantic constraint PC2; see Metzinger (2020) for details.
2. Kleiner and Tull, 2021; Tononi et al., 2016.
3. Buswell and Lopez, 2014, p. 588. For recent studies of “cessation” events, see Laukkonen et al., 2023; Chowdhury et al., 2023.
4. Bayne, Seth, and Massimini, 2020.
5. For some descriptions, see Metzinger, 2003, pp. 101–103.
6. Alcaraz-Sánchez et al., 2022; see also chapter 20.
7. Alexander, 1988, p. 3.
8. Metzinger, 2013, n. 14.
9. Suzuki, 1949, p. 30.
10. Suzuki, 1949, p. 31.
11. Windt et al., 2016, Box 1; Windt, 2020.
12. Metzinger, 2020; Woods, Windt, and Carter, 2022a, 2022b; Woods et al., 2023.
13. Bayne, Hohwy, and Owen, 2016.
14. Wolfe and Ralls, 2019.
15. Moser et al., 2021.

## Chapter 17

For the first epigraph, see Namgyal, 2019, p. 520; for the third, see Padmasambhava and Lingpa, 2013, p. 11.

1. Frith and Metzinger, 2016; Metzinger, 2003, 2008.

2. For a little more about K and this conversation, see Metzinger, 2020.
3. See, for example, Frith and Metzinger, 2016.
4. Schnell, 2010, 2021.
5. Kelly, 2019, pp. 159, 181.
6. If we assume that the degree of theory contamination will change over the lifetime of a long-term practitioner, then it is interesting to think about the various developmental paths that such a hypothetical person could take. For example, he might start his regular practice in a rather innocent way, out of mere open-mindedness and curiosity, in a sincere attempt to live an examined life. But somewhat later—say after six to twenty-four months of regular practice—he becomes aware of the many positive effects that this practice actually has and naturally wants to understand where it all comes from. Thus, our hypothetical person begins to read books about meditation, listen to talks given by the so-called teachers on the internet, and maybe try one or two new techniques. He may even succumb to some belief system: an authority, or an ancient tradition or spiritual lineage. From then on, the degree of theory contamination at play whenever he speaks about his own experiences continuously increases. At the other extreme, we can imagine another hypothetical person born into a sinister cult that insists on regular meditation practice. She gradually liberates herself from the specific metaphysical background theory promoted by the cult, because for her, meditation has the desired effect of increasing intellectual honesty and mental autonomy, of achieving a certain degree of humility and a self-critical attitude. In this case, we can imagine how the degree of theory contamination *decreases* as time goes by.

My point is that the frequent implicit assumption that so-called advanced practitioners make the best participants for scientific experiments or for providing phenomenological reports may be mistaken. It is not a given that the degree of theory contamination is lowest in long-term practitioners, that their “expert reports” will be unadulterated and less biased. Often, in fact, the ideological noise in the signal may be much stronger than in beginners or others who are “merely experimenting” with meditation—those with a true “beginner’s mind” (to quote Shunryu Suzuki and his well-known book of the same title). There is no automatic accumulation of expertise (if there is anything like “expertise” related to the epistemic practice of meditation at all), and it may well be that the phenomenology of pure awareness is freshest, most pristine, and most pronounced in certain beginners. Accordingly, the optimal point to investigate MPE from a scientific perspective may be very different in every meditator’s life trajectory, and it certainly doesn’t depend on the length of their individual path or have to be the closest possible point to their death. This is another argument for always aiming at a large and heterogeneous sample.
7. Metzinger, 2003, 2008, 2009.
8. For a freely available introduction, see Wiese and Metzinger, 2017.
9. In his book *Consciousness Explained*, Dennett criticized the philosophical intuition of a “Cartesian theater,” which he described as a common symptom of “Cartesian materialism”: “Cartesian materialism is the view that there is a crucial finish line or boundary somewhere in the brain, marking a place where the order of arrival equals the order of ‘presentation’ in experience because *what happens* there is what you are conscious of [ . . .].” Dennett, 1993, p. 107.

10. Weber, 1947, p. 155.
11. Metzinger, 2016, 2021. A good entry point is Vinding, 2020.
12. Trivers, 2000, 2011; Von Hippel and Trivers, 2011.
13. Metzinger, 2016.
14. Wikipedia contributors, 2021.
15. Pyszczyński, Solomon, and Greenberg, 2015; Routledge and Vess, 2018.
16. Eidelman, Crandall, and Pattershall, 2009.
17. Metzinger, 2017a, 2017b.
18. Friston, 2010; see also the discussion and references presented in chapter 9.
19. Hohwy, 2016; see also Hohwy, 2021.
20. Hohwy, 2020.
21. Holland, 2020, p. 86.
22. Metzinger, 2016.
23. Friston, 2013, p. 11.

## Chapter 18

For the epigraph by Tulku Urgyen Rinpoche, see Urgyen, 2000, p. 163.

1. It is interesting to compare these reports with results reported in Woods, Windt, and Carter, 2022a, across the three practices of Shamatha, Transcendental Meditation (TM), and Stillness Meditation; see section 2.7 and table 1.
2. Beierwaltes, 1972; Renger, 2016.
3. Ataria, Dor-Ziderman, and Berkovich-Ohana, 2015, p. 138.
4. Hoffmann, 2017; Schütz-Bosbach, Musil, and Haggard, 2009. In case you're interested, Ataria, Tanaka, and Gallagher (2021) is an excellent entry point into the current debate. And I have said a little more about what I mean by a "conscious model" in note 3 in chapter 5.
5. See Lindström et al. (2023) and Nave et al. (2021) for recent studies.
6. Ataria, Dor-Ziderman, and Berkovich-Ohana, 2015, p. 142.
7. Ataria, Dor-Ziderman, and Berkovich-Ohana, 2015, p. 145.
8. Ataria, Dor-Ziderman, and Berkovich-Ohana, 2015, p. 145.
9. Metzinger, 2020, p. 17.

10. Lingpa, 2014, pp. 14–15.
11. See, for example, Rinpoche Thrangu., 2011, p. 36, n30.
12. Buswell, 1991, p. 138.

## Chapter 19

For the first epigraph, see Maharaj, 1973, p. 15. For the second, see Harding, 2014 [1961], p. 205.

1. Chatterjee, 1982, p. 339.
2. Fort, 1984, p. 287, n2; Gupta, 1998, p. 19.
3. Gupta, 1998, p. 18.
4. Albahari, 2009, 2020; Fasching, 2011, 2012; Timalsina, 2022.
5. Seager, 2020.
6. For some pointers, see Metzinger, 2017, n15, n21.
7. Fort, 1984, p. 278.
8. Williamson, 2010, p. 177.
9. Kennedy, 1976, p. 1327. See also Lindahl and Britton, 2019.
10. Huebner and Hayman, 2022, p. 274.
11. Castillo, 1990, p. 162f.
12. Castillo, 1990, p. 166f.
13. For introductory discussions, see Alcaraz-Sánchez, 2021; Thompson, 2015.
14. Williamson, 2010, p. 175.

## Chapter 20

For the epigraph by Ramana Maharshi, below the heading “White Nights,” see Venkataramiah, 2006, vol. 3, p. 583.

1. Forman, 1999, p. 20.
2. For an introduction to this idea, see Holecek, 2016; Wallace and Hodel, 2012; Wangyal and Dahlby, 1998.
3. If you are interested, I recommend Baird et al., 2018, 2019; Baird, LaBerge, and Tononi, 2021; Baird and Koroma, 2020.
4. For some case studies and references, see Metzinger, 2009, pp. 89–101.

5. Ugyen, 2000, p. 179. Helpful references to the relevant Indo-Tibetan meditation literature and further information about yogic sleep and the practice of “Yoga Nidra” can be found in Kavi, 2023.
6. Vilas, Auksztulewicz, and Melloni, 2021; Wiese, 2020; Wiese and Friston, 2021.
7. I will mostly use the two terms “wake sleep” and “clear light sleep,” but the term “lucid dreamless sleep” is also in use, such as in Wallace and Hodel, 2012, p. 58. For some philosophical reasons not to use it, see Alcaraz-Sánchez, 2022.
8. Thompson, 2015, p. 15.
9. Windt, 2015.
10. Windt, 2015, p. 3.
11. Windt, 2015, p. 1 (emphasis in original).
12. Windt, 2015, p. 22.
13. Metzinger, 2009, 2013.
14. Blanke and Metzinger, 2009.
15. Windt and Metzinger, 2014; Metzinger and Windt, 2015, sec. 3.1.
16. Woods, Windt, and Carter, 2022a, 2022b; Woods et al., 2023.
17. “Consider a phonograph system as an apparatus of experience. [. . .] Now let us do the equivalent of quieting thoughts, namely, removing the record, perhaps also turning off the speakers and the turntable. When only the amplifier is on (with no ordinary ‘objects of experience’ given it), what is the experience like? [. . .] It would be a mistake to think there is an unusual reality being encountered, when that merely is what it feels like when the experience-mechanism is turned on yet nothing is present to be experienced [. . .] None of the literature I know describes what experience the quieting meditative procedure would produce in the absence of an unusual reality or self, so we don’t know whether [it] is a revelation of an unusual reality or self, or instead an artifact of an unusual procedure of experiencing wherein most but not all functions are damped down.” (Nozick, 1983, pp. 158–159).
18. Churchland, 1989, p. 66.
19. Kachru, 2022.
20. Alcaraz-Sánchez, 2022. For two recent studies on objectless experience during sleep, see Alcaraz-Sánchez, 2021, and Alcaraz-Sánchez et al., 2022.
21. See Windt, 2010. If you would like to read more, I strongly recommend Windt and Metzinger, 2007; for recent work, see Windt, 2020, 2021.
22. Shear, 1983, p. 59 (emphasis in original).
23. Kühle, 2015.

24. Hesp et al., 2021, p. 403. For an important philosophical perspective, see Evan Thompson's (2010) classic *Mind in Life*.
25. See Friston, 2013; Kirchoff et al., 2018; Pezzulo, Parr, and Friston, 2022.
26. Luders and Kurth, 2019.
27. Metzinger, 2019, sec. 5–6.
28. Devor, Koukoui, and Baron, 2022.
29. Alcaraz-Sánchez et al., 2022; Alcaraz-Sánchez, 2021.

## Chapter 21

For the epigraph, see sermon 71; DW III, p. 543 (Eckhart, 1986); Eckhart, 2007, p. 140.

1. Good starting points are Baird, Mota-Rolim, and Dresler, 2019; and Voss and Hobson, 2015. See also Voss et al., 2013; and Windt and Voss, 2018.
2. Metzinger, 2009, 2017; Windt and Metzinger, 2007.
3. For a good discussion, see Maleeh and Konjedi, 2022.
4. Metzinger, 2009, pp. 82–101.
5. Blondiaux, Heydrich, and Blanke, 2021; Brugger, Regard, and Landis, 1997; a good entry point is Blanke, 2012.
6. Furlanetto, Bertone, and Cristina Becchio, 2013; Furlanetto et al., 2016.
7. Kelly, 2019, pp. 98–102.
8. I recommend Ursula Voss and Alan Hobson's contribution to the Open MIND collection, plus the ensuing discussion with Lana Kühle, as a freely available entry point into this important discussion. I also recommend Voss et al., 2013, 2014; Voss and Hobson, 2015; Windt and Voss, 2018.
9. Gyatru et al., 2002; Holecek, 2016; Wallace and Hodel, 2012; Wangyal and Dahlby, 1998.

## Chapter 22

The epigraph below the heading "The Emptiness of Time Experience" is from Harding, 2000, pp. 142–143.

1. Popper and Eccles, 1977, pp. 361–364.
2. Fink, Lyre, and Kob, 2021; Fink and Lin, 2021; Lepauvre and Melloni, 2021; Metzinger, 2000; Overgaard and Kirkeby-Hinrup, 2021.
3. Kim, 1984; Metzinger, 1985; Place, 1956.
4. Please note that mental imagery, which makes significant contributions to many kinds of cognition, actually has pronounced spatial and sensorimotor qualities and mechanisms. Therefore,



according to the old Cartesian distinction, it should belong more to the body than the soul, which obviously disrupts the assumption that reasoning is a nonbodily act. For more, see Gottschling, 2006; Kosslyn, 1996; Pylyshyn, 2002; and Thomas, 2021.

5. Clark, 2016. I have greatly profited from the work of Andy Clark ever since *Microcognition* (1989) came out; if you are new to his work, you might like Clark (1998) as an introduction. In *The Experience Machine* (2023, p. 209) he writes the following about meditation and the control of attention: “By clamping attention on to an unfolding present moment (such as the breath), we also temporarily shrink the time horizon of predictive processing. This implies a kind of freezing of longer-term anticipatory processes, preventing the kinds of counterfactual “looking ahead” that play such a large role [. . .] in daily behavior. This means that even internal “information foraging” (purposeful explorations of our own memory, for example) can be put on hold. This is awareness with minimal counterfactual and temporal depth.”

6. If you are interested in the relationship between the problem of pure awareness and Douglas Harding, I recommend the work of Brentyn Ramm (2017, 2018, 2019, 2021).

7. Melloni, 2015; Melloni et al., 2007.

8. Laukkonen and Slagter, 2021.

9. Krishnamurti and Bohm, 1997.

## Chapter 23

For the epigraph, see Krishnamurti, 1991, vol. 15, p. 63.

1. Guterstam, Gentile, and Ehrsson, 2013; Guterstam, Abdulkarim, and Ehrsson, 2015.

2. Blanke and Metzinger, 2009; Metzinger, 2008.

3. Nguyen et al., 2021.

4. Siegel, 2007.

5. Mañjuśrimitra, Simmons, and Namkhai Norbu, 1987, p. 60.

6. See also Metzinger, 2006.

7. The following passages have been excerpted from an as-yet-unpublished interview that I conducted on May 13, 1989 in Bad Homburg, Germany, with Albert Hofmann, the first person to synthesize and experience LSD (Metzinger, 1989). A short edit excerpt of this interview has been published as “Der Weltraum der Seele—Ein Gespräch mit Albert Hofmann,” *TAZ*, June 27, 1989, pp. 11–12. See also <https://taz.de/!1807810/>.

8. Hofmann, 2013, chap. 1.

9. Metzinger, 1989.

10. For more, see Letheby, 2021; Letheby and Gerrans, 2024.

11. Metzinger, 2023.

12. Krippner, 1990; Roberts, 2001; Schultes and Hofmann, 1979; Wasson, Hofmann, and Ruck, 2008; Wasson, Kramrisch, and Ruck, 2008.

13. For more, see Bublitz, 2013, p. 250ff; Bublitz, 2016, p. 322; and Metzinger, 2024.

14. See Wasson, Hofmann, and Ruck, 2008.

## Chapter 24

For the epigraph, see Plotinus, *Enneades*, V, 5, 9, 29–33; Plotinus, 2018, p. 593.

1. See Nave et al., 2021, and Lindström et al., 2023, for recent empirical studies.

2. Metzinger, 2005, 2009, 2013; Windt, 2015.

3. Windt, 2015, pp. 326–328, section 7.3.3 (emphasis in original).

4. Lipps, 1900, 1903.

5. Plotinus, *Enneades*, VI, 9, 8; Plotinus, 2018, p. 893.

6. Lipps, 1903, p. 188 (emphasis in the original): “Sie ist die Tatsache, daß der Gegensatz zwischen mir und dem Gegenstand verschwindet, oder, richtiger gesagt, *noch nicht besteht*.”

7. Metzinger, 2009a, 2009b, 2013, 2015, 2017, 2018.

8. Berrios and Luque, 1995; Metzinger, 2004.

9. Windt, 2021; Windt et al., 2016.

10. Johanson et al., 2008.

11. Deane, 2021; Letheby, 2021; Letheby and Gerrans, 2017; Millière, 2017; Nour and Carhart-Harris, 2017.

12. Fadiman and Gruber, 2020; Metzinger, 2003.

13. Metzinger, 2018.

14. Metzinger, 2018.

15. Song and Wang, 2012.

16. See, for example, Fox et al., 2015; Kam, Mittner, and Knight, 2022.

17. Limanowski, 2021.

18. MacKenzie, 2022, p. 250.

19. Millière and Newen, 2022.

20. For an example, see De Ridder et al., 2007.

21. I have been making this point for a number of years, but Jakub Limanowski and Karl Friston have now made it very clear (see Limanowski and Friston, 2018).

22. For an accessible introduction to this topic, see Seth, 2021.

23. Pezzulo, Parr, and Friston, 2022.

24. Sheng Yen, 2008, pp. 20-21.

## Chapter 25

1. For more, see Metzinger (2017) and Metzinger (2013b); for a computational model, see Sandved-Smith et al. (2021).

2. Gallup and Anderson, 2020, p. 50.

3. Friston et al., 2015.

4. Baird, Mota-Rolim, and Dresler, 2019; Windt, 2015; Windt and Metzinger, 2007.

5. Deane, 2020, 2021; Millièrè et al., 2018; Millièrè and Metzinger, 2020.

6. Metzinger, 2013, 2015, 2017, 2018.

7. The experience of veto control is, of course, intimately connected to the question of free will. I recommend reading Filevich, Kühn, and Haggard (2012), and Filevich et al. (2013) as entry points, and Filevich et al. (2015) for the connection to dream lucidity.

8. Metzinger, 2013.

9. For a perfect overview, see Fox and Christoff, 2018.

10. See also Metzinger, 2013, 2017.

## Chapter 26

For the epigraph under the heading “Seelengrund and ‘Groundless Ground,’” see Eckhart, sermon 42; Eckhart, 2007, p. 400. In Middle High German: “*Nû wizzet: alliu unser volkomenheit und alliu unser srelicheit liget dar ane, so daz der mensche durchgange und übergange alle geschaffeneit und alle zîtlicheit und allez wesen und gange in den grunt, der gruntlôs ist.*” (DW II, p. 696). “DW” means *Deutsche Werke*; the first reference is to the canonical German edition.

1. Rosenthal, 2016, pp. 238–239; quoted in Woods, Windt, and Carter, 2022a, section 2.14.

2. A good overview and entry point into the current debate is Millièrè et al. (2018); see Millièrè and Metzinger (2020) for a recent edited collection.

3. Millièrè, 2020; Millièrè et al., 2018.

4. Metzinger, 2003, 2008.

5. Translation from German by Thomas Metzinger; see Hadewijch and Hofmann, 1998, p. 151; Hadewijch and Plassmann, 1923, p. 101.

6. Hadwijch, Vision 14, l. 82; Hadewijch, 1924, p. 162.

7. Translation from German by Thomas Metzinger; see Hadewijch and Hofmann, 1998, p. 157; Hadewijch and Plassmann, 1923, pp. 101, 103.
8. Hadewijch and Plassmann, 1923, p. 37.
9. Hadewijch and Plassmann, 1923, p. 37.
10. Hadewijch and Plassmann, 1923, p. 37.
11. Translation from German by Thomas Metzinger; see Hadewijch and Plassmann, 1923, p. 37.
12. Eckhart, sermon 12; DW I, p. 194, l. 5; see also Ueda and Benz, 2018. See also McGinn, 2001.
13. Eckhart, sermon 12; DW I, p. 235, l. 24; see also Ueda and Benz, 2018.
14. Translation from German by Thomas Metzinger; see Hadewijch and Plassmann, 1923, p. 141.
15. Dietsche, 1960; Waldschütz, 1989.
16. Eckhart, sermon 7; DW I, p. 122, l. 10.
17. Eckhart, sermon 7; DW I, p. 123, l. 5; Waldschütz, 1989, p. 194.
18. Eckhart, sermon 5b; DW I, p. 90, l. 8.
19. Eckhart, sermon 17; DW I, p. 283, l. 15.
20. Dietsche, 1960.
21. Eckhart, sermon 72; DW III, p. 252, l. 1 et seq.
22. Eckhart, sermon 48; DW II, p. 415, l. 20.
23. Eckhart, treatise 2; DW V, p. 80, l. 8.
24. Eckhart, sermon 48; DW II, p. 415, l. 22.
25. Pfeiffer, [1845]1962, p. 349, p. 20 et seq.; as cited in Egerding, 1997, p. 552.
26. Eckhart, sermon 42; DW II p. 307, l. 3; as cited in Egerding, 1997, p. 553.
27. Eckhart, sermon 42; DW II p. 307, l. 3; as cited in Egerding, 1997, p. 553.
28. Eckhart, sermon 18; DW I, p. 299, l. 2–4.
29. In Middle German: *“Dv solt got minnen nichgeistliche, de ist: De din sel sol nichgeistig sin vnd entplözet aller geistekteite; wand die wile din sel geistformig ist, so hat si bilde; die wile si bilde hat, so [so] hat si mittel; Die wile si mittel hat, so hat si nit einikeit noch einberkeit;”* (Eckhart, sermon 83; DW III, p. 447, l. 12–p. 448, l. 3.) In High German: *“Du sollst Gott ungeistig lieben, das heißt so, daß deine Seele ungeistig sei und entblößt aller Geistigkeit; denn, solange deine Seele geistförmig ist, solange hat sie Bilder. Solange sie aber Bilder hat, solange hat sie Vermittelndes; solange sie Vermittelndes hat, solange hat sie nicht Einheit noch Einfachheit.”* In English, using “mind” for Geist: “You should love God nonmentally: that is to say in a way that the soul is nonmental and is stripped of all mentality. For as long as your soul is in mind-form, it has images. But so long as it has images,

it has mediation; so long as it has mediation, it has neither unity or simplicity.” (Eckhart, 2007, pp. 464–465)

30. Mechthild von Magdeburg, 1990, V 5, 10 et seq.; as cited in Egerding, 1997, p. 167.

31. Pfeiffer, [1845]1962, p. 391, l. 23 et seq.; as cited in Egerding, 1997, p. 168.

32. Pfeiffer, [1845]1962, p. 324, l. 16; as cited in Egerding, 1997, p. 169.

33. Eckhart, sermon 23; DW I, p. 407, l. 9; as cited in Egerding, 1997, p. 170.

34. Mechthild von Magdeburg, 1990, VII 59, l. 6; as cited in Egerding, 1997, p. 168.

35. Pfeiffer, [1845]1962, p. 352, l. 92 et seq.; as cited in Egerding, 1997, p. 416.

36. Heinrich von Nördlingen, Brief LII; Strauch et al., 1882, p. 264; as cited in Egerding, 1997, p. 434.

37. Eckhart, sermon 21; DW I, p. 361, l. 3.

38. Eckhart, sermon 27; DW II, p. 53, l. 1; as cited in Egerding, 1997, p. 28.

39. Eckhart, sermon 1; DW I, p. 18, l. 6 et seq.; as cited in Egerding, 1997, p. 419.

40. Eckhart, sermon 35; DW II 181, l. 7; as cited in Egerding, 1997, p. 421.

41. Eckhart, sermon 102; DW IV, p. 412, l. 39 et seq.

42. Eckhart, sermon 10; DW I, p. 165, l. 9 et seq.

43. Waldschütz, 1989, pp. 111, 132.

44. Mechthild von Magdeburg, 1990, II, p. 19, l. 55; as cited in Egerding, 1997, p. 510.

45. Tauler, 1910, p. 164, l. 8 et seq.; as cited in Egerding, 1997, p. 518.

46. Eckhart, sermon 10; DW I, p. 165, ll. 8–12.

47. Eckhart, treatise 21; DW V, p. 275, l. 35.

48. Tauler, 1910, p. 55, l. 24–26; as cited in Egerding, 1997, p. 29.

49. Seuse, [1907]1961, p. 219, l. 11; as cited in Egerding, 1997, p. 31.

50. Seuse, [1907]1961, p. 15, l. 6; as cited in Egerding, 1997, p. 31.

51. Seuse, [1907]1961, p. 360, l. 6 et seq.; as cited in Egerding, 1997, p. 31.

52. Eckhart, sermon 83; DW III, p. 442, l. 1 et seq.; as cited in Egerding, 1997, p. 550.

53. See “Seelengrund,” 2021.

54. Morard, 1956, p. 170.

55. Morard (1956, p. 173) connects it to the *esse purum per se subsistens* (pure existence subsisting of itself) of Thomas Aquinas.

56. Eckhart, sermon 83; DW III, p. 443, ll. 5–7; translation from German by Emily Troschianko.
57. Morard, 1956, p. 173. Note that German also offers the option to play on the homonyms *sein* (to be) and *sein* (his), as Eckhart does here with “*sinesheit*” and “*sin*” building up to the final “*istikeit*.”
58. Eckhart, sermon 102; DW IV, p. 408.
59. Koran, 50, 16. This theological motif seems to be an invariant, repeating itself across the centuries. Compare a recent text on the practice of meditation in a Christian context: “Christian meditation and its corresponding contemplative exercises are the fruitful expression of a perceived call to the Unconditioned, to draw closer to the One who is infinitely closer to the practitioner than she is to herself” (Terry, 2022, p. 390).
60. Morard (1956, p. 175) comments: “*Nach all den zitierten Stellen aus Eckhart dürfen wir füglich schließen: istikeit ist von ist abgeleitet und kommt im vollen Sinn nur allein dem einzigen ist zu, das Gott allein ist, indem Gott allein, als wesenhaftes Sein, aus dem Eigenen Sein hat, ja eigentlich Sein ist.*” (“According to all the quoted passages from Eckhart, we may reasonably conclude: *Istikeit* is derived from *is* and applies in its fullest sense only to the single *is* that is God alone, while God alone, as essential being, has being from itself, indeed actually is being.”)
61. Waldschütz, 1989, p. 124.
62. Eckhart, sermon 15; DW I, p. 246, ll. 9–10; as cited in Egerding, 1997, p. 288.
63. Pfeiffer, [1845]1962, p. 372, l. 39; as cited in Egerding, 1997, p. 292.
64. Tauler and Vetter, 1968, p. 251.
65. Tauler and Vetter, 1968, p. 175 et seq.
66. Pfeiffer, [1845]1962, p. 66, l. 7 et seq.; as cited in Egerding, 1997, p. 297.
67. Seuse, Little Book of the Truth, V
68. Seuse, [1907]1961, p. 446, l. 11 et seqq.; as cited in Egerding, 1997, p. 306.
69. Tauler, 1910, p. 68, l. 7 et seq.; as cited in Egerding, 1997, p. 26.
70. Seuse, [1907]1961, p. 16, l. 8; as cited in Egerding, 1997, p. 527.
71. Astigarra et al., 1990, p. 854.
72. Jetté, 1964.
73. See Higgins, 2013, p. 173 et seq., for a discussion of the terms “foundationless” (*gnas med pa*) and “groundless” (*gzhi med pa*). I also recommend Higgins and Draszczyk, 2016, pp. 319, 398, 428; and Higgins’s comments on *kun gzhi tsam*, as well as the idea of a groundless subject (*gzhi med kyi yul can*) of experience in David Higgins and Martina Draszczyk’s impressive work on Buddha nature (2019, pp. 230, 251). Alternatively, see Higgins (2012, 2020) for a freely available introduction.

74. Higgins, 2013, p. 173.

75. Higgins, 2020, p. 264; see also Higgins and Draszczyk, 2016, p. 319.

76. Higgins, 2020, which contains a quotation by the twelfth-century master Zhang rin po che (1122–1193), one of the earliest Tibetan descriptions of groundless ground (though he does not explicitly use the term itself). His main point is that the absolute imputed by scholars is, despite their assertions, neither a ground nor groundless, neither a source nor devoid of source. Mi bskyod rdo rje (the Eighth Karmapa, 1507–1557) took Zhang's statement that the absolute is neither ground nor groundless as support for his own idea of a groundless ground, and may then have become the first to give it conceptual articulation. Higgins (personal communication) points out that one can find some mentions of the term *gzhi gzhi med* (or *gzhi'i gzhi med*) in the writings of other Tibetan scholars, like the Rnying ma pa Tshe dbang nor bu (1698–1755) and the Sa skya pa Ngag dbang Kun dga' bsod nams (1597–1660), but they all come later than Mi bskyod rdo rje.

77. Higgins, 2013, p. 172; 2020, p. 263.

78. Ray, 2001, pp. 280–282. 'Ba' ra ba Rgyal mtshan dpal bzang (in *Heartfelt Advice*; see Higgins, 2022, p. 199) says this: "When you no longer find fault with appearance, then amidst whatever appears, you don't analyse and judge forms as being nice or not nice but leave them just as they are without grasping them. Letting them be in this way, just as things continue appearing of their own accord, let them range freely where they like. There is no need for a meditation that tries to give up appearances, taking them as something extraneous. Rather, during this appearing, one remains loosely poised in the state, prior to grasping, in which you don't have to meditate, yet are not distracted. This is known as 'the many having one flavour.' [ . . . ] At this point, things have become open-ended and unbounded and there is a coming together of what was fragmented. For it has been taught that the impediment of dualistic phenomena is overturned from its very foundations. In this very instance, it is said that I do not see anything apart from me. And in this very instance, it is stated: "*Then everything flows into the stream of the single taste meditation.*" Line 39 of *Song of the Seven Direct Introductions*; see Higgins, 2022, p. 154. For more on the "yoga of one flavour" and "one flavour meditation," see Higgins, 2022, part II, II:5 (pp. 195–199). I am grateful to David Higgins for personal correspondence on the meaning of *ro gcig*, which I draw on in this paragraph.

79. Hadewijch, *Vision* 14, l. 82; Hadewijch, 1924, p. 162.

80. Huxley, 1945; Schuon, 1975; Taves and Asprem, 2017.

81. For a related discussion, see Woods, Windt, and Carter, 2022a, 2022b; Woods, et al., 2023.

82. The following discussion ties in with the point critically addressed in Woods, Windt, and Carter, 2022a and Woods et al., 2023: the widespread claim and highly popular philosophical background assumption that all contentless experiences are identical. I am grateful to Alex Gamma and Toby Woods for critical discussion.

83. Komarovski, 2015, p. 68 et seq.

84. See Ramstead et al., 2021; Sandved-Smith et al., 2021.

## Chapter 27

For the first epigraph, see Eckhart, sermon 6; Eckhart, 2007, p. 332. In Middle High German: *Sumliche einveltige liute wænent, sie süln got sehen, als er dâ stande und sie hie. Des enist niht. Got und ich wir sint ein* (DW I, p. 113, ll. 6–7). For the second and third epigraphs, see James, 1904; and James, 1892, p. 467.

1. This is a new translation by Emily Troscianko and Thomas Metzinger. See also Rilke, 1969, p. 369, as cited in Bricklin, 2006, p. 227.
2. “But this state of nothingness is not an ideal to be pursued. It has nothing to do with the inventions of the mind. [. . .] When the mind is silent, there is the coming into being of this sense of complete nothingness which is the very essence of humility. It is only then that there is a radical transformation in the quality of the mind, and it is only such a mind that is creative” (Krishnamurti, New Delhi 4th Public Talk, February 18, 1959; Krishnamurti, 1991, vol. 11, p. 177).
3. On “pure humility,” see Eckhart, sermon 54a; DW II, p. 551.
4. Kelly, 2019.
5. Millière and Metzinger, 2020.
6. Blackstone, 2007, p. 10.
7. Blackstone, 2007, p. 10.
8. Dunne, 2011, p. 73.
9. Metzinger, 2020.
10. Metzinger, 2003, p. 161, section 3.2.3.
11. Clark, 2017; Wiese and Metzinger, 2017. For an accessible introduction to this topic, see Seth, 2021.
12. On the body as structuring the space of perception and conscious experience, I recommend the work of Adrian Alsmith (2011, 2015, 2017, 2021).
13. This may sound like a simple and self-evident phenomenological statement on my part, but if we move on to a more rigorous conceptual level, there are many philosophical intricacies and complexities to discover. I recommend Wiese (2018) and Bayne (2010) as entry points.
14. Sullivan, 1995, p. 53.
15. James, 1950, p. 273.
16. As an ethicist, I have strongly argued against even risking the *potential* creation of artificial consciousness before we really know what we are doing; see Metzinger, 2021.
17. Full, Walach, and Trautwein, 2013.
18. Josipovic and Miskovic, 2020.



19. Bayne, Hohwy, and Owen, 2016.
20. Kühle, 2015.
21. Metzinger, 2020, n. 2.
22. Karmapa, 2017, p. 223.

## Chapter 28

For the epigraph, see Moore, 1903, pp. 446, 450.

1. I highly recommended his magnum opus, *Inner Presence* (Revonsuo, 2009, p. 118).
2. Williamson, 2010, p. 175.
3. Dowman, 2003, p. 193, n. 101.
4. Spinoza, *Ethics V*, 29.
5. Seli et al., 2018.
6. A more detailed analysis, with more direct quotations from Moore, can be found in Metzinger, 2020a. For more on transparency, see Metzinger, 2003a, 2003b.
7. For a little more detail, see Metzinger, 2020a, sec. 2.2.
8. Moore, 1903, p. 450 (emphasis in original).
9. Moore, 1903, p. 449.
10. Moore, 1903, p. 449.
11. Dunne, Thompson, and Schooler, 2019.
12. Sandved-Smith et al., 2021, p. 2.
13. Metzinger, 2020.
14. For a first example of a computational model, see Sandved-Smith et al., 2021.
15. Metzinger, 2009, 2018.
16. Metzinger, 2018; Slater, 2009.
17. For some introductory references, go to Center for Human Technology, “How Social Media Hacks Our Brains,” <https://www.humanetech.com/brain-science>.
18. For a similar idea, see Humphrey, 2011.
19. Metzinger, 2018.
20. For many philosophers, the computer metaphor implied that psychological properties can be exhaustively described by a Turing machine table (Boden, 2006; Churchland, 2005; Putnam, 1967, 1975, 1992).

21. Metzinger, 2021.
22. Metzinger, 2003a, p. 140.
23. Metzinger, 2004, p. 52.
24. Seth, 2021; Wiese and Metzinger, 2017. A good recent overview of theories of consciousness is Doerig, Schurger, and Herzog, 2021.
25. Clark, 2016; Hohwy, 2013; Wiese and Metzinger, 2017.
26. Wiese, 2017.
27. Madary and Metzinger, 2016; Metzinger, 2019.
28. Madary and Metzinger, 2016, p. 20.
29. deVries, 2021.
30. See Konkoly et al., 2021.
31. Namgyal, 2001, p. 81.
32. Namgyal, 2001, p. 62.
33. See David Higgins's new and excellently documented translation in *Heartfelt Advice* (Higgins, 2022, p. 199).
34. Higgins, 2022, p. 199.
35. See also Higgins, 2022, n. 429.
36. Dowman, 2003, p. 204.
37. Laukkonen and Slagter, 2021; see also Fleming (2020) on a simple second-order "awareness state" that guides our decisions if some perceptual stimulus is present or absent.
38. A good, freely available entry point is Beyer, 2020.
39. See Husserl, 1989, pp. 125–126; Hanna, 1995; Hanna et al., 2017.
40. Rilke, 1997, p. 243. The untitled poem by Rainer Maria Rilke was written in the early autumn of 1914, probably in Munich or Irschenhausen; translated from the German by Emily Troscianko. Compare an experiential report given by a Zen meditator, a participant in a study conducted by Jared Lindahl and Willoughby Britton (2019, p. 170): "The boundary between me and my environment began to break down. A bird flew in front of me, but it didn't fly in front of me—it flew through me."

## Chapter 29

For the epigraph, see Nagel, 1986, p. 61.

1. The philosopher John Spackman puts the point about actually participating in what I have called the "self-knowing field of awareness" like this: "[. . .] no belief can achieve this, because

there is one feature of experience the nature of which no belief will allow one to apprehend, namely the reflexive nature of consciousness itself, which transcends the act-object distinction. A belief can only represent consciousness as an intentional object, which does not capture its nondualistic nature. On the present account, the only way of capturing the reflexive nature of consciousness is by being in that state of awareness, which is nonconceptual. The non-reifying attitude must thus itself include a nonconceptual component; it must itself participate in the awareness of the reflexive nature of consciousness” (Spackman, 2022, p. 147).

2. For a discussion of this point, see Siderits, Thompson, and Zahavi (2011) and Metzinger (2011). To bring out the philosophical issue, here is one interesting argument about the selflessness of pure awareness based on its phenomenological impermanence, put forward very simply and clearly by Sheng Yen (1931–2009):

In terms of the existence of self, how should we understand entering *samādhi*, the meditative state of deep absorption? Does the practitioner enter a state of timeless, permanent self? If there is a fixed self, then when you enter *samādhi*, you will be transformed permanently to that state. How would you ever return from *samādhi*? If you can enter and leave *samādhi*, then that means *samādhi* is impermanent, empty of a fixed substantial essence. Therefore, going in and out of *samādhi*, one would understand that there is no selfhood even in *samādhi*. Someone in *samādhi* may feel as if they are experiencing something permanent, but the mere fact that they can come out of *samādhi* tells us that what is experienced in *samādhi* is not [sic!] impermanent. So, when you experience *samādhi*, please do not identify that as self. The correct view is to understand it in terms of no-self.

See Yen, 2008, p. 33. **Author’s note:** The passage cited here, published by Shambala in 2008, contains a small but significant mistranslation. Instead of “not impermanent,” the Chinese original says “impermanent,” so the penultimate sentence should read: “Someone in *samādhi* may feel as if they are experiencing something permanent, but the mere fact that they can come out of *samādhi* tells us that what is experienced in *samādhi* is impermanent.” I am grateful to Dr Emily Troscianko (Pembroke College, Oxford) for spotting this error, and to Professor Ying-Tung Lin (Institute of Philosophy of Mind and Cognition at National Yang Ming Chiao Tung University in Taipei City, Taiwan) for helping me verify it. For an interesting phenomenological contrast, compare the quote of Douglas Harding that I presented at the beginning of the second half of chapter 19.

3. MacKenzie, 2022, p. 253.

4. For valuable discussions of this, see Fasching, 2012, 2016.

5. Blanke and Metzinger, 2009.

6. Metzinger, 2011; Seth, 2021; Wiese and Metzinger, 2017.

7. Nagel, 1986, p. 61.

8. Nagel, 1986, p. 57.

9. Nagel, 1986, p. 61 (emphasis in original).

10. Nagel, 1986, chapter 4.

11. Ataria, Dor-Ziderman, and Berkovich-Ohana, 2015, p. 141, as cited in Metzinger, 2020, case study #12.
12. Nagel, 1986, p. 64.
13. Timalsina, 2022, p. 312.
14. Closely related figures of thought are also found in the philosophy of religion, such as in Meister Eckhart: “By recognizing itself as an image, the spirit becomes the living image of God” (Kreuzer, 2023, p. 128).

### Chapter 30

For the first epigraph, see Higgins, 2022, p. 129. For the second, see Sangs-rgyas-rdo-rje, Klongchen-pa Dri-med-'od-zer, and 'Jigs-med-gling-pa Rang-byung-rdo-rje, 2014, p. 133. For the third, see Namgyal, 2019, p. 302.

1. Dunne, Thompson, and Schooler, 2019; Maleeh and Konjedi, 2022. In traditional Western terms, the epistemological goal of meditation practice is to develop a kind of *knowing-how* rather than *knowing-that*. Christopher Gowans has termed this the “knowledge-how model of meditation” (Gowans, 2022, p. 161). For the wider context, related to the concept of *Bewusstseinskultur* that I discuss in the epilogue, see also Gowans, 2021.
2. Millière and Newen, 2022.
3. “Rang Rig Ye Shes,” 2021. See also the entry on *svasaṃvedana* in Buswell and Lopez, 2014, p. 882.
4. Frank et al., 2020; see also Frank and Kuneš, 2022.
5. For a substantial overview and a new model of nonrepresentational “self-acquaintance,” see Williford, 2019; see also Kriegel, 2009; Williford & Kriegel, 2006; Peters, 2013.
6. Williford, 2019.
7. Strawson, 2015.
8. Josipovic, 2019.
9. Blanke and Metzinger, 2009; Metzinger, 2003.
10. The existence of a fundamental, nonegoic form of reflexivity built into consciousness itself has been discussed for centuries by Buddhist philosophers (Finnigan, 2018; Williams, 1998). Following Brentano’s classic idea of a single state simultaneously directed at an intentional object and itself (Brentano, 1973, p. 153; 2012, p. 25), many fine-grained conceptual models have been developed in more recent analytical philosophy of mind (Peters, 2013). Currently, the topic is gaining increased attention (Ganeri, 2017; Josipovic, 2019; Kriegel, 2019; Spackman, 2022; Strawson, 2015; Thompson, 2011; Williford, 2019).

11. Vilas, Auksztulewicz, and Melloni, 2021; Wiese and Friston, 2021.
12. In earlier publications, I have called this the “phenomenal model of the intentionality relation” (or PMIR); see Metzinger, 1993, 2000, 2003: ch. 6, 2005, 2006, 2020; Metzinger and Gallese, 2003.
13. Gebauer et al., 2018.
14. Austin, 2009.

### Chapter 31

The first two introductory quotations are from the *Tractatus Logico-Philosophicus* by Ludwig Wittgenstein (1889-1951) and are found at 5.632 and 5.633. The third quotation is from Chinul (1158-1210) and is included in Robert Buswell’s book *Tracing Back the Radiance*; it is from *Secrets on Cultivating the Mind*, written between 1203 and 1205. On this point, see Buswell, 1991, p. 103.

1. Batterman, 2002; Batterman and Rice, 2014. See Metzinger, 2020, sec. 1.2, for a short introduction.
2. Metzinger, 2017.
3. Hohwy, 2020; see also Hohwy, 2021.

### Chapter 32

For the first epigraph, see Dowman, 2003, p. 94; for the second, see Namgyal, *Mahamudra—The Moonlight: Quintessence of Mind and Meditation*, 2006, p. 332.

1. Urgyen, 2000, p. 188.
2. Urgyen, 2000, p. 85.
3. Letheby, 2022, p. 219.
4. For a recent example and related references, see Lynch and Troy, 2021.
5. For the example of conscious volition, see Haggard, 2019. An accessible psychological perspective on the conscious experience of will and its determining factors is Wegner, 2018; classical papers by Daniel Wegner on the paradoxical effects of attempting to suppress thoughts are Wegner, 1994; Wegner et al., 1987.
6. Tang et al., 2022.
7. Schooler et al., 2011, box 1; see also Smallwood and Schooler, 2015.
8. Metzinger, 2003, 2008, 2009.
9. Sandved-Smith et al., 2021, p. 9.

10. See Zedelius, Protzko, and Schooler, 2021, for more.
11. Swami Madhurananda has made exactly the same phenomenological point about the very early stages of object perception via the senses; see Madhurananda, 2010.
12. Paul, 2014.
13. Persinger, 2013, p. 69.
14. Importantly, new research shows that meditation techniques have varying—including negative—effects on the meditator’s moral self-model. For example, loving-kindness meditation appears to improve the emotional layer of a person’s moral self-model, but only parts of their behavioral profile, while mindfulness meditation seems to improve some behaviors, but may have a limited or even negative effect on moral intentions. See Berryman, Lazar, and Hohwy, 2023, for an important new initiative.

### Chapter 33

For the epigraph, see Namgyal, *Clarifying the Natural State: A Principal Guidance Manual for Mahamudra*, 2001, pp. 52, 60.

1. Bayne and Hohwy, 2016.
2. Metzinger, 2017.

### Chapter 34

The epigraph here is an ancient saying from the Shangpa Kagyu tradition of Tibetan Buddhism. I am grateful to Andrew Holecek and Elizabeth Callahan (personal communication) for the pointer that the “original” source for this could possibly be Niguma, which is found in Khyungpo Naljor’s “Amulet Mahamudra.” See also Harding, 2011, p. 146.

1. Metzinger, 2020; Wiese, 2020.
2. Metzinger, 2021, see also the epilogue.
3. See chapter 1, note 1.
4. Such episodes would be not “selfless memories,” but rather egoic, fully subjective memories of selfless states that occurred in the past. For an excellent discussion, see Millière and Newen, 2022.
5. Papineau, 2021.
6. As Karl Friston and colleagues (2015) say, “Epistemic value is the expected information gain under predicted outcomes. In other words, it reports the reduction in uncertainty about hidden states afforded by observations” (p. 192). My point is that (1) for human beings, the hidden state must be intimately related to the mechanism creating tonic alertness and wakefulness (chapter 4); and (2) phenomenologically, the process of expecting epistemic value itself creates an uncontracted, nondual signature of knowing (chapters 8 and 19).

7. For an excellent and accessible discussion of the question of whether pure awareness is contingent on the brain (and what the Dalai Lama really thinks), see Thompson, 2015, pp. 79–88.
8. Metzinger and Windt, 2015.
9. Metzinger, 2020; for more semantic analysis, I recommend Woods, Windt, and Carter, 2022a, 2022b.
10. Gamma and Metzinger, 2021.
11. This was PC3 in the original publication; see Metzinger, 2020.
12. Fink, 2020; Metzinger, 2003; Millière, 2020; Millière and Newen, 2022; Wiese, 2017.
13. Gamma and Metzinger, 2021; Metzinger, 2020.
14. Laukkonen and Slagter, 2021; Pagnoni, 2019.
15. Dunne, 2011.
16. Hasenkamp, 2018; Hasenkamp et al., 2012; Sandved-Smith et al., 2021.
17. Metzinger, 2018. For an example, see Glowacki et al., 2022.
18. Sandved-Smith et al., 2021.
19. Parr, Pezzulo, and Friston, 2022; Wiese and Metzinger, 2017.
20. The project is well under way; for early examples, see Laukkonen and Slagter, 2021; Sandved-Smith et al., 2021.
21. The boxed parameter **A** represents the beliefs about the likelihood of a particular state  $s$  given some input data (i.e., the *likelihood mapping*). Importantly, the confidence in this mapping can be modulated by the *likelihood precision*,  $\gamma_A$ . Together, **A** and  $\gamma_A$  represent the perceptual model being used at each level to infer the associated experience  $s$ . At the first level, inferred states represent sensory perception. Each higher level is inferred based on the likelihood precision of the level below it. If you are interested, you can find more detailed figures targeting some of the specific phenomenologies described in this book online at [mpe-project.info](http://mpe-project.info).
22. Friston et al., 2017.
23. Petitmengin, 2021; Petitmengin et al., 2017; Petitmengin, Remillieux, and Valenzuela-Moguillansky, 2019.

## Epilogue

1. Metzinger, 2023.
2. Metzinger, 1994, 1996, 1998, 1999, 2000a, 2000b, 2003, 2005, 2009a, 2016, 2017. For other interesting discussions, see Fink, 2018. See also the extended German version of *The Ego Tunnel* from 2014.

3. Cicero, 2007, bk. II, 5 (13), Cicero, *Tusculan Disputations*, 2007.
4. Hadot, 2002.
5. Just to give an impression of the current order of magnitude, at the end of 2021, the European Monitoring Centre for Drugs and Drug Addiction was monitoring around 880 new psychoactive substances, 52 of which were first reported in Europe in 2021; in 2014, there were more than 100 first-time detections of new substances (EMCDDA, 2022). None of them has ever been clinically tested, long-term side effects are unknown, and most emergency doctors never heard of any of these substances when they were in school. The *World Drug Report 2022* published by the United Nations Office on Drugs and Crime identifies 1,127 new psychoactive substances as having emerged worldwide between 2009 and 2021 (UNODC, 2022). For further discussion and references, see Metzinger, 2009a, ch. 9; Metzinger 2023b.
6. Metzinger, 2018; see also Madary and Metzinger, 2016.
7. A good entry point is <https://www.humanetech.com/>; see also S. Vöneky, P. Kellmeyer, O. Müller, and W. Burgard, eds., *Cambridge Handbook of Responsible Artificial Intelligence*, 2022, (open access at <https://www.cambridge.org/>).
8. Metzinger, 2021.
9. An “information hazard” is a risk arising from the spread of true information that may cause harm. See Bostrom, 2011.
10. See Metzinger, 2023b; for a philosophical discussion, see Letheby, 2021; Letheby and Gersans, 2024; Millière, 2017; Millière et al., 2018; Deane, 2020, 2021.
11. Metzinger, 2009a, 2021, 2023a.
12. Streib and Hood, 2011, 2016.
13. I have said more about this in an open-access paper that is freely available on the internet; see Metzinger, 2017.
14. Chignell, 2018.
15. Kant makes the point *ex negativo*, by speaking of the “impurity [*impuritas, improbitas*] of the human heart” (cf. Kant, Academy edition VI, 30; for an English translation, see 6:30 in Kant [2018, p. 53]). The notion that the special kind of “sincerity” discussed in the main text can help us to realize “the idea of the moral good in its absolute purity” and to counter the “corruption that lies in all human beings” can be found at 6:83 (Kant, 2018, p. 98). The second thought—that every man has an obligation toward himself to be truthful—is found in the *Metaphysik der Sitten* (Kant, Academy edition VI, 429); for an English translation, see part 2, chapter II, §9: “Man’s Duty to Himself Merely as a Moral Being” in Kant (1991, p. 225). This is where one also finds the concept of an “inner lie.”
16. See, for example, Namgyal, 2019, II (10).



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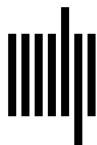
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