

Chapter 5: Exploring Metaphysics

BIG IDEAS

Background

Links can be made between this chapter and Unit 4: Epistemology. Are the sciences replacing epistemology and metaphysics? For example, in Chapter 11, students briefly explore (through W.V. Quine) whether the human sciences, like psychology, replace the philosophical field of epistemology (SE p. 272). And in this chapter, a question that is raised is whether cognitive science and computer modelling replace metaphysics as explanations for the workings of the human mind.

About Chapter 5

Using the fascinating scenario of a brain-damaged Russian soldier, living with a bullet still lodged in his head, the chapter investigates a variety of metaphysical thinkers' theories on the meaning of having a mind, consciousness, and a self. Artificial intelligence is also considered, leading us to wonder whether machines can think.

Features

In this chapter, the following features are included to help students make personal connections and/or deepen their understanding of metaphysics. You may use all or some of these features as explained below.

Feature	Student Textbook Page(s)	Opportunity for Assessment	Strategies for Classroom Use
Philosophers on Philosophy	128-129	Students can conduct further research on one of the philosophers presented in this feature, or bring in another thinker on the concept of the self. (e.g., What did Foucault say on the subject?)	See the Clive Wearing video clip (Teaching Plan 1, Teaching Strategy 4) and discuss whether he has a <i>self</i> . Also refer to Chapter Review question 9, SE p. 133.
World Views Across Time	118-119	Beyond the questions presented in the feature, see questions 3 and 4, SE p. 129, for rich assessment opportunities.	Show a video clip of Watson the computer on the TV quiz show <i>Jeopardy</i> and discuss whether it passes the Turing test. (It is the final video title listed in Teaching Plan 2, Teaching Strategy 2.)

- Throughout history, philosophers have had different views as to how they account for or model the human mind. (SE pp. 112-117)
- Philosophers have had trouble accounting for the self and personal identity, offering very different answers. (SE pp. 118-119)
- Cognitive science and computer models of the brain offer twentieth-century neuroscientific and materialist answers to old philosophical problems. (SE pp. 120-126)
- The division between monism and dualism is revisited (from Chapter 4) as we consider whether consciousness is separate from physical acts and if consciousness is beyond scientific understanding. (SE pp. 126-127)
- Whether machines can think is presented as an interesting test case as to what it means to be self-aware and/or conscious. (SE pp. 128-129)
- There may be a limit to how much humans can know about the human mind, restricting how far philosophical answers can go in answering the question "What is mind?" (SE p. 130)

Teaching Plan 1 (SE pp. 110-121)

Activity Description

Using the medical case of Lev Zasetsky, students are introduced to several philosophical views on the human mind and soul, including Islamic scholars al-Farabi and Ibn Sīnā, as well as European Renaissance and Enlightenment philosophers Descartes, Locke, and Kant. Students also investigate the difficult concept of the *self*, as presented by such diverse thinkers as Locke, Hume, Nagarjuna, Vasubandhu, and Ibn Sīnā.

Learning Goal

Students will gain an appreciation of the diversity of metaphysical thought on what constitutes the human mind, consciousness, the self, and the soul.

Assessment Opportunities for Chapter Questions

The table below summarizes assessment opportunities for selected chapter questions, which are relevant to this teaching plan.

Assessment Type	Assessment Tool	Feature Questions	Section Questions
Assessment for Learning	Textual analysis and translation	1-2, SE p. 119	
Assessment as Learning	Self-reflection; preparation for Chapter Review question 8 on SE p. 133	3, SE p. 119	
Assessment as Learning	Reflection and debate with partner; personal response; mind map		1, 3, and 4, SE p. 121
Assessment for Learning	Compare and contrast		2, SE p. 121

Timing

300 minutes
(four 75-minute classes)

Learning Skills Focus

- Responsibility
- Collaboration
- Independent work
- Organization
- Self-regulation
- Initiative

Resources Needed

Make copies of these Blackline Masters:

- BLM C Comparison Chart
- BLM J Journal Writing Guide

Possible Assessment of Learning Task

Consider asking students to write journal entries on the *self* (see BLM J). A second option is to use questions 1-3 from the “World Views Across Time” feature (SE pp. 118-119) and/or Chapter Review question 9 (SE p. 133) as opportunities for assessment of learning tasks.

Assessment (For/As Learning)

As teachers move through each chapter, opportunities will be highlighted to provide assessment for/as learning in preparation for assessment of learning at the end of each chapter.

Task/Project	Achievement Chart Category	Type of Assessment	Assessment Tool	Peer/Self/Teacher Assessment	Learning Skill	Student Textbook Page(s)	Blackline Master
Word wall	Knowledge	For	Vocabulary list	Teacher	Collaboration	88 and 110	
Diagnosing Zasetzky	Knowledge; Communication; Application	For	Placemat activity: sharing in small groups	Peer; teacher	Independent work; collaboration; organization	112-120	
Personal identity and the self	Thinking; Application	As	Personal reflection on Chapter Review questions 8 and 9 on SE p. 133	Self; peer	Independent work; initiative	118-119, 133	BLM 12.4 (on selfhood and subjectivity)

Prior Learning Needed

The Chapter 4 student textbook section “Common Metaphysical Theories” (SE pp. 90-92) serves as a backdrop for the presentation of various diagnoses of Zasetzky in Chapter 5, giving meaning to terms such as *dualism* and *materialism*.

Teaching/Learning Strategies

1. Contrast the visual acuity of Lev Zasetzky, who suffers from *right homonymous hemianopsia*, with savant Stephen Wiltshire (SE p. 238, Figure 10-2). For an explanation of this visual disorder, look up the following video title on YouTube:

Hemianopsia, An Introduction

2. Have students create a Unit 2 word wall, helping them to prepare for BLM 5.1 Chapters 4 and 5 Vocabulary Quiz: Matching, as well as the summative test in Chapter 6 (BLM 6.1).

When you assign the vocabulary matching quiz on BLM 5.1, you may wish to create a second version of it to help prevent students from copying one another. Do this by using the same descriptions that are provided on BLM 5.1., but then change the letters associated with each term, creating a new set of correct answers.

3. Diagnosing Zasetzky (SE p. 113): To generate rich discussion, ask students to form groups of six “metaphysicians.” Each member of each group should prepare to explain to the other members of their group one of the philosophical “diagnoses” (i.e., metaphysical theories related to different thinkers) described on SE pp. 113-121: al-Farabi, Ibn Sīnā, Descartes, Locke, Kant, and the cognitive sciences.

The task in this activity is to explain the model of the mind offered by each thinker and to convey the key concepts by applying them to this unusual medical case. Have each student write their notes about the diagnoses/theories on the bottom half of a legal-size sheet of paper. (Note: This is a modified placemat activity, with six instead of four sections.) When the groups conduct their meetings, each student can note on the top-left half of the sheet the common attributes shared among all the diagnoses/metaphysical theories. In this way, students will construct a basic (proto) model, useful in describing how they would create a mind “from scratch,” as suggested in section question 4, SE p. 121. (This activity will also assist students in answering Chapter Review question 1, on SE p. 132.) On the top-right half of the paper, students can record the aspects of each diagnosis/metaphysical theory with which they most agree, which will help students prepare to answer Chapter Review question 3 on SE p. 132.

An alternative way for students to do this activity is to use a poster-size sheet of paper. They can use a marker to section off each of the six diagnoses/metaphysical theories and a circle in the centre of the poster to list the common attributes among the diagnoses.

Acc Students may benefit from the background provided in the following online resources. For good resources related to Descartes and Lock, follow this link and click on “Philosophy Web Resources” in the left column:

http://highered.mcgraw-hill.com/sites/0073386685/student_view0/chapter7/philosophy_web_resources.html

For resources on the mind-body problem, follow this link and click on “Philosophy Web Resources” in the left column:

http://highered.mcgraw-hill.com/sites/0073386685/student_view0/chapter2/philosophy_web_resources.html

For information on al-Farabi and Ibn Sīnā, follow these links:

<http://www.muslimphilosophy.com/ip/rep/H021.htm>

<http://www.muslimphilosophy.com/sina/index.html>

Also, look up the following video titles on YouTube:

Western Philosophy Documentary Section [1/3] part 1/6

Philosophy and the Matrix - Descartes

Philosophy and the Matrix - Kant

For information relating to the cognitive sciences, look up these links:

http://www.ted.com/talks/dan_dennett_on_our_consciousness.html

http://www.ted.com/talks/dan_dennett_on_dangerous_memes.html

<http://ase.tufts.edu/cogstud/papers/computing.pdf>

On Daniel Dennett's concept of humans as *informavores* (SE p. 120), here is an excerpt from his book *Freedom Evolves*:

“We live in a world that is subjectively open. And we are designed by evolution to be ‘informavores’, epistemically hungry seekers of information, in an endless quest to improve our purchase on the world, the better to make decisions about our subjectively open future.”

4. Personal Identity and the Self (SE pp. 118-119):

- a) How important is memory to having a sense of *self*? This question is raised at the beginning of this “World Views Across Time” feature. The question is also raised in Chapter Review question 9 (SE p. 133), in which the example of Clive Wearing is considered. (Also see Chapter Review question 8, SE p. 133, on personal identity.) Share the Clive Wearing story by looking up the following video title on YouTube and showing the video to students:

The Man with a 30 Second Memory

With only a 30-second horizon of experience, Wearing cannot be said to have the kind of *self* that most people seem to experience, where we carry with us our memories of past events and anticipate future ones. The only person he recognizes is his wife, for whom he has an exaggerated reaction. That Wearing remembers language and how to play the piano shows the significance of his earlier training (he was a composer), giving him some foundation or anchor in an otherwise continuous stream of novelty. The case of Clive Wearing is a rich topic for a journal entry (see BLM J).

The following link takes you to a video clip of physicist Michio Kaku's documentary about “cosmic time.” Kaku discusses the connection between time and memory:

<http://www.youtube.com/watch?v=yjE5LHfqEQI>

DI Ask students to use creative means to portray Wearing's self and world. The link that follows shows an image from a set design for a (hypothetical) play based on Wearing's experience, showing different scenes such as his encounter with his wife:

[http://www.sketchbook.charlesmurdocklucas.com/uploaded_images/01-Clive-Wearing-Wedding-\(Large\)-774409.jpg](http://www.sketchbook.charlesmurdocklucas.com/uploaded_images/01-Clive-Wearing-Wedding-(Large)-774409.jpg)

- b) Use the “World Views Across Time” feature questions (1-3, SE p. 119) to generate small group or whole class discussion on different views about the problems of accounting for the *self*. In the feature, Hume critiques his predecessor, Locke, by showing that the empiricist notion of the self arising through sensation sets up an infinite regress problem, where Locke cannot arrive at any impression of the self that would be fundamental. Descartes' rationalist view is also unsatisfactory; even he was aware that his dualist notion of the self as separate from the body might be mistaken. (An analogy for Descartes' idea is along the lines of a pilot inside a ship, as though looking out through its pilot house window. But is this how we experience the world?)

In *Individuals: An Essay in Descriptive Metaphysics*, British philosopher P.F. Strawson succinctly summarizes the history of this metaphysical problem—how to account for the self—starting with Hume’s quandary that there is no primary ego substance (as Descartes claims) that he could find when he pretended to look inside himself:

“...and complained that he could never discover himself without a perception and could never discover anything but the perception. ... [I]t was this entity of which Hume vainly sought for the principle of unity, confessing himself perplexed and defeated; sought vainly because there is no principle of unity where there is no principle of differentiation. It was this, too, to which Kant, more perspicacious here than Hume, accorded a purely formal (‘analytic’) unity: the unity of the ‘I think’ that accompanies all my perceptions and therefore might just as well accompany none. Finally it is this, perhaps, of which Wittgenstein spoke, when he said of the subject, first that there is no such thing, and then that it is not a part of the world, but its limit.”

(By a *principle of differentiation*, Strawson means what separates us, ontologically as isolated and existent beings, from the multitude of things and other beings we perceive in the world around us.)

For ideas about the absence of the self in both Wittgenstein and Foucault, see Hans Sluga’s “Wittgenstein and the Self” in *The Cambridge Companion to Wittgenstein*. In later writings by both Wittgenstein and Foucault, the self might be thought of as a bundle of practices and language-games, or discursive and non-discursive practices.

In *Some Lessons in Metaphysics*, José Ortega y Gasset, following Heidegger, speaks of metaphysics as a way of finding our orientation in the world, but by first showing us that we are unaware of our disorientation:

“If I found myself in a room or, in general, anywhere in the world, my observation would first have to deal with the room, then with the world, and only after considering that world would I come upon myself. First one encounters the prison, then the prisoner within it. ...In living, I am always occupied with the things – material or personal – that surround me; I pay heed to the circum-stance, the surroundings, and in order to find myself, I suspend that normal attention to what lies about me and seek myself in it, hunt for myself among things, disregarding them, and focusing on myself. This discovery that a *consciousness* of myself comes essentially, and not by accident, after my *consciousness* of the world is very important.”

In addition, you may wish to look up the following video titles (on YouTube) relating to Jean Baudrillard’s and Charles Taylor’s notions of self and identity:

Jean Baudrillard. Identity, Changing and Becoming. 2002

Our Collective Identity Crisis: A Reading, Sources of the Self - Charles Taylor

A delightful illustration of finding oneself in the world is presented in the film *Being There*. It is a story of a gardener who is forced to leave his tiny enclave to experience the world at large, and with this discovery forge a new identity and life. Use this video title to look up the movie trailer on YouTube:

“Being There” Movie Trailer starring Peter Sellers and Shirley MacLaine

Sometimes cinema conveys alienation from and reintroduction to the world. The film *Koyaanisqatsi* was rather original in using images of our familiar world,

shown in an innovative way, to awaken us to our world and ourselves (with philosophical reflections from the director). Compare it to the film *Baraka*, suggested as an introduction to metaphysics in Chapter 4, Teaching Plan 1, Teaching Strategy 1.

Koyaanisqatsi - The Essence of Life (Part 1/3)

For Buddhist concepts of *ego death*, selflessness (altruism), and the *bardo* state (being adrift between islands of selfhood), look up “The Tibetan Book of the Dead,” by Annie Shapiro, at the following link:

http://ftp.buddhism.org/Publications/IABTC/Vol09_05_Annie%20Shapiro.pdf

Also look up this video title on YouTube:

TibetanLounge - The Tibetan Book of Living and Dying part 1

DI How could you convey ideas about the self through music? An example that draws on Buddhist thinking is “The Bardo for Orchestra,” by Cheon Wook Kim. It is available at the following link:

<http://drum.lib.umd.edu/bitstream/1903/202/1/umi-umd-1260.pdf>

DI Students can check out a free crossword puzzle on self and identity at this link:

<http://higherred.mcgraw-hill.com/sites/dl/free/0073386685/741320/ch04.html>

Acc Many of the online and text resources suggested above about identity and the self are rather heady, and the concepts may need exemplifying through more down-to-earth cases. Self-image and identity are familiar themes for adolescents. For example, do we have real grasp of who we are? False self-perceptions are *problematized* through these public service announcements on anorexia (available on YouTube):

Reality

Anorexia Bulimia Contact

Text Answers

Page 119: World Views Across Time

1. Locke describes people as thinking, intelligent, and self-aware beings who have reason and reflection. It is this thinking and perceiving consciousness that we call the self and recognize as our identity. Hume characterizes self and identity as what is called an infinite regress problem, where we fail to arrive at any single or generalized impression that gives rise to this idea of the self as a coherent entity. (See Hume’s related problem of induction in Unit 5, SE p. 342). Hume does appear to be targeting his predecessor, Locke, in the opening line, suggesting there is a fallacy in assuming that thinking and self-consciousness are inextricably linked and therefore not deserving of demonstration or proof. The sting here is that both are empiricist philosophers, and so Locke’s propositions should be supported by evidence instead of propped up by metaphysical thinking (such as Descartes’). A Venn diagram could be used to show overlap of ideas shared by empiricists, and yet division over the concept of the self (BLM A).
2. The exercise here calls for students to translate into their own words one philosopher’s statement on identity and self, and then share this with the class. Alternatively, two students could do a puppet show or skit to demonstrate the differences in thinking between two thinkers.

3. Students could develop their views on personal identity as a journal entry (BLM J). Look up the video title that follows on YouTube. It is an old but very good PBS documentary on feedback loops in identity formation, linking pop culture to teen preferences in dress and music:

The Merchants of Cool 1/6

Page 121: Section questions

1. Descartes' diagnosis that Zasetzky's mind is a perfect unity rests upon his dualistic assumption that the (unified) mind is a separate entity from the (damaged) material of Zasetzky's brain (see SE p. 101 on *thinking* versus *extended* substances). Cases of schizophrenia (think of the character Sméagol in Tolkien's *The Lord of the Rings*) suggest that not all human minds are unified, even if they are not reduced to their constituent material. Also see the classic study of Chris Sizemore's dissociative identity disorder by following this link:

<http://www.youtube.com/watch?v=9X3r49yamIE>

2. Comparing and contrasting two of the main philosophical views on the mind:
 - Kant saw the mind as containing *a priori* concepts (see SE pp. 255 and 271) that help to constitute our experience, which contrasts with Locke's model of the mind as a blank slate (*tabula rasa*; see quote on SE p. 252) possessing no innate ideas.
 - Ibn Sinā's model of the mind is that it is an immortal soul independent of the material body, as shown in his "floating man" thought experiment, where the mind detached from the body is still able to conceptualize the body and be aware of its own existence (see Figure 5-2, SE p. 114). His model is similar to Descartes' (see SE pp. 251 and 268-270), as the mind is conceptualized as something that can exist without a body (hence conceived dualistically).
3. Feminists like Butler deny that gender is a natural part of your personal identity, arguing instead that it is socially constructed. For more background on Judith Butler's concept of the *performativity* of gender, look up the following video title on YouTube:

Your Behavior Creates Your Gender

Feminist philosopher Linda Zerilli, in *Feminism and the Abyss of Freedom*, raises the troubling question of who qualifies as a female athlete, noting that the International Olympic Committee has reviewed its criteria three times. For example, look up the following video titles on YouTube about Caster Semenya's homecoming in South Africa:

Semenya's homecoming

Is 800 metres champ Semenya a woman?

Also look up the following video title on YouTube. The Yale lecture shown in this video is useful for the course instructor, raising questions of sexual identity with a university undergraduate audience:

13. Why Are People Different?: Differences

4. Building a mind from scratch, and identifying its properties in a mind-map or "blueprint" is a challenge and may be perplexing. For models, see the book *Maps of the Mind: Charts and Concepts of the Mind and Its Labyrinths*, by Charles Hampden-Turner. Drawing on Hampden-Turner's seminal text is the following online article (exemplar): "*The Superpower Faculties vs Maps of the Mind*," by Ingo Swann. It is available at the following link:

<http://www.biomindsuperpowers.com/Pages/FacultiesVsMindMaps.html>

Learning Goal

Students will explore the similarities and differences between humans and machines, investigating materialist philosophies and computer theories of the human mind.

Teaching Plan 2 (SE pp. 122-131)

Activity Description

After reading the text and viewing some stimulating cases of artificial life, students will conduct a debate on the use of robots in modern warfare. Can we hold a robot to be responsible for its actions? Does it (the robot) conceivably have the requisite consciousness and conscience, and can it think to resolve moral dilemmas, such as those required in battlefield situations where civilians may also be at risk?

Assessment Opportunities for Chapter Questions

The table below summarizes assessment opportunities for selected chapter questions, including questions in the Chapter Review, which are relevant to this teaching plan.

Assessment Type	Assessment Tool	Feature Questions	Section Questions	Chapter Review Questions
Assessment as Learning	Formation of personal opinions	1-4, SE p. 129		
Assessment as Learning	Self-reflection and creative response		1 and 3, SE p. 131	
Assessment for Learning	Writing, speech, or debate		2, SE p. 131	
Assessment for Learning	Graphic organizers; strengths and weaknesses comparison (T-chart)			2-7, SE pp. 132-133
Assessment as Learning	Graphic art, further research			1, 7-9, SE pp. 132-133

Timing

150 minutes
(two 75-minute classes)

Learning Skills Focus

- Responsibility
- Collaboration
- Independent work
- Organization
- Self-regulation
- Initiative

Resources Needed

Make copies of these Blackline Masters:

- BLM 5.1 Chapters 4 and 5 Vocabulary Quiz: Matching
- BLM 5.2 Chapters 4 and 5 Vocabulary Quiz: Short Answer
- BLM A Venn Diagram
- BLM B Pro/Con List: Points for Debates and Essays
- BLM G Debate Assessment Rubric

Possible Assessment of Learning Task

Use BLM 5.1 Chapters 4 and 5 Vocabulary Quiz: Matching. This BLM covers vocabulary terms for both Chapters 4 and 5. Also consider asking students to write a journal entry on artificial intelligence, using the “Philosophers on Philosophy” feature on SE pp. 128-129 (see BLM J).

Assessment (For/As Learning)

As teachers move through each chapter, opportunities will be highlighted to provide assessment for/as learning in preparation for assessment of learning at the end of each chapter. (See table on next page.)

Task/Project	Achievement Chart Category	Type of Assessment	Assessment Tool	Peer/Self/Teacher Assessment	Learning Skill	Student Textbook Page(s)	Blackline Master
Is love just biochemistry?	Thinking; Communication	As	Debate	Self; peer	Initiative	123	BLMs B and G
Compare and contrast: machines and humans	Thinking; Application	As	Venn diagram	Self	Independent work	126, 128-129	BLM A
Use of robots in warfare	Knowledge; Thinking; Communication; Application	For	Debate the ethical aspects; investigate the metaphysical underpinnings	Teacher	Responsibility; initiative; independent work	128-129, 214	BLMs B and G
Extensions: living matter, the technological future of Earth, animal and alien intelligence?	Thinking	As	Further research and discussion	Self; peer	Initiative	130	

Prior Learning Needed

The concept of *artificial intelligence* (AI) is used in this section, which may be new to some students and yet familiar through movies such as *Transformers* and *I, Robot* (based on the Isaac Asimov novel).

Teaching/Learning Strategies

1. The Mind and the Brain (SE p. 122):

- a) Materialism (SE p. 122): Materialism was introduced in Chapter 4, SE p. 91. Here, it is applied to the metaphysical question of whether the mind is something other than the brain. Basically, materialists say that mind and brain are the same. Here are materialist theories:
 - i) Identity Theory (SE pp. 123-124): The best way to get at this topic, other than the desire for cookies (Figure 5-6), is to make the connections to love and sexual desire. If you started this course in second semester, this makes a good Valentine’s Day topic for reading or debate. Is love reducible to biochemistry, or is there a difference between affection and higher emotions? Elderly couples (who are financially secure and therefore more free to split) who remain together may not be getting the chemical rush of so-called love drugs, but may have higher emotions of love, similar to familial love among siblings and between parent and child. Also, consider looking at Dr. Louann Brizendine’s books *The Female Brain* and *The Male Brain*; more specifically, look at the following chapters: “Teen Girl Brain” and “Teen Boy Brain.” Students may want to consider using this topic as a journal entry.

Also look up the following two video titles on YouTube:

An Evening with Dr. Louann Brizendine

The Female Brain in Love

Compare Dr. Brizendine's ideas to Lise Eliot's views in *Pink Brain, Blue Brain*. Also check out this Web link:

http://fora.tv/2009/09/29/Lise_Eliot_Pink_Brain_Blue_Brain

See also *National Geographic* (October, 2011) on the teenage brain and viewing the teenage brain positively at the following links:

<http://ngm.nationalgeographic.com/2011/10/teenage-brains/dobbs-text/1>

<http://ngm.nationalgeographic.com/2011/10/teenage-brains/teenagers-video>

ii) Eliminative Materialism (SE p. 124): When someone says they are learning or in love, are these words representations of neuromechanical processes in our brains? Canadian philosophers Paul and Patricia Churchland think so, and would suggest that, one day, neuroscience will replace these metaphors with a clear understanding of the mechanics, eliminating the folklore explanations we have typically relied on and instead giving a more accurate, materialist explanation of the biochemistry of our brain processes. Look up the following videos on YouTube for additional information on the Churchlands' ideas:

Patricia Churchland on Eliminative Materialism

Patricia Churchland on Neurophilosophy

iii) Functionalism (SE p. 126): Look up the following video title on YouTube for an interesting lecture by Daniel Dennett:

Daniel Dennett on Deflating Consciousness

b) Monism and Dualism (SE pp. 126-127): In Chapter 4, we encountered the distinction of monism versus dualism in relation to the basic substance of the universe, aligning Spinoza with monism (SE p. 102) and Descartes with dualism (SE p. 101). Here we introduce new nineteenth- and twentieth-century concepts of monism (SE p. 127): *neutral monism*, associated with pragmatist James, and logician Russell, holds that mental and physical states are really two ways of referring to the same thing (e.g., the declaration "I am infatuated" and the proposition "My body is experiencing a rush of hormones like oxytocin and dopamine" are equivalent); and *anomalous monism*, associated with neo-pragmatist Davidson, which is a concept that agrees that mental and physical states are equivalent, but denies that we will ever explain our concept or feelings of infatuation with such physical biochemistry.

Acc It might help to consider that these thinkers (James, Russell, and Davidson) are anti-idealist and generally atheistic, and therefore seek materialist and practice-based approaches to understanding the mind and brain instead of abstract metaphysical or religious explanations. Davidson, however, has less faith in science as a way of explaining how we think and feel, and relies more on the ordinary language philosophy of the later Wittgenstein (see SE pp. 280-284).

See also pragmatist philosopher Hilary Putnam's anti-dualist "brains in vats" thought experiment (SE p. 259), which asks us to consider how we know we are not simply brains hooked up to electrodes, imagining we have bodies. Also see Nick Bostrom's "Are You Living in a Computer Simulation?" by looking up the link that follows. It features a wealth of resources, including scholarly articles debating Bostrom's paper and Bostrom's replies.

<http://www.simulation-argument.com/>

c) New Mysterianism (SE p. 130): It might be helpful to connect this modern idea on the limits of metaphysical knowledge with skepticism in Unit 4: Epistemology

(SE p. 242). Another contemporary connection is neo-pragmatist Rorty's desire to stop pursuing the dead ends of philosophy (SE p. 287); traditional metaphysics is dead, he would say (if he were still alive).

- 2.** Do Machines Think? (SE pp. 126 and 128-129): Ask students to use BLM A and create a Venn diagram to show what humans and machines share, and also what they do not have in common. Then use the content of the feature to set up a debate on the limits of machines. In doing so, we also broach the topic of the limits of using computers as models for human reasoning, taken up again in Unit 4: Epistemology. There, (in Unit 4) we find Searle arguing that although our social reality—including money, marriage, customs, and language practices—operates on deep background, which includes our neuroprocessors, these physical substructures do not explain the meaning of our social reality. For that, we need deep contextualization, which is something machines may be able to simulate but not perform in the same way we do. The computer Watson wins the *Jeopardy* game, but does “he” understand what we mean by the highly nuanced and varied concept of *game*? (Wittgenstein used the idea of *game* in his *Philosophical Investigations* as an example of where we lack a specific definition, relying instead on “family resemblances” among related senses of the word *game*.) Look up the following video titles on YouTube for more background:

John Searle: Minds, Brains and Science (excerpt) - Thinking Allowed DVD w/ Jeffrey Mishlove

John Searle on Consciousness

On the Turing test for artificial intelligence, see the answer to question 2, on SE p. 129, in which the “cyber luring” case is discussed. Also look up the following video titles on YouTube:

Turing Test - Daniel Dennett

Turing Test and Chinese Room Experiment on Numb3rs

Look up the following video titles on YouTube, which offer poignant examples of the current state of artificial intelligence. The computers Deep Blue and Watson are, respectively, chess and *Jeopardy* champions:

Deep Blue beat G. Kasparov in 1997

Miles vs. Watson: The Complete Man Against Machine Showdown

- 3.** Activity: Ask student groups to debate this moral question: Can robots be held accountable for their actions in warfare? This question requires each side to consider the metaphysical aspects of whether the robot can or does have a self or be self-conscious, as requisites of having a moral conscience. (See also *just war theory* in Unit 3, SE p. 227.)

Look up the following video title on YouTube. It is a clip from an episode of *Star Trek The Next Generation*, which deals with the questions of whether the android character Data is a sentient being, as well as ethical issues of building robot armies:

Is Data Alive

What is the role of robots and drones in wars and how will they shape the future of the U.S. military? Look up on YouTube the following video title, in which the actual use of “unmanned systems in modern warfare” is explored:

Fault Lines: Robot wars

For robots trying to play soccer, follow this link to look up this *National Geographic* video:

<http://ngm.nationalgeographic.com/2011/08/robots/robocup-video>

Acc Look up the following link for a *National Geographic* article about robots that can “think, act, and relate to humans”:

<http://ngm.nationalgeographic.com/2011/08/robots/carroll-text>

4. Extension questions:

- a) Is cyberspace “murder” unethical?

Consider the cyber ethics case of someone murdering another person’s online avatar (SE p. 215).

- b) Can buildings in the future “care” for us? Can we create dwellings out of living matter?

Look up on YouTube the following video titles, in which artist and Associate Professor at University of Waterloo Philip Beesley explains his project *Hylozoic Ground* (a Canadian exhibit at the Venice Architecture Biennale, 2010):

CBC News “Future of Architecture” - Philip Beesley

Philip Beesley: Hylozoic Ground

DI Ask students to write a poem or lyrics or create a drawing to convey the idea of living matter—*Hylozoic Ground*—as they might conceive of it.

- c) Will Earth one day be a single megacity? Is it human nature to alter the environment, converting everything we touch into artifice? Is altering ourselves part of our nature, and is it therefore natural, in a sense, to convert ourselves into “cyborgs” (part human, part machine)?

To help students explore these questions, see Donna Haraway’s “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” quoted on SE p. 384 (Chapter Review question 4 and margin quote).

To generate reflection on our technological trajectory, look up the following video title on YouTube:

Earth: Year 3000

- d) Are humans the only sentient or intelligent species on the planet? Does intelligence come in different forms with these different life forms (see SE p. 284)?

Look up the following video titles on YouTube, which explore these questions:

The Intelligence of Dolphins (Part 1)

The Intelligence of Dolphins (Part 2)

- e) Is there good reason to believe there is extraterrestrial intelligence? How would we know of the existence of that intelligence, and how might that knowledge change our metaphysical assumptions about the mind and consciousness? Explore these questions by looking up the following video titles on YouTube:

NOVA scienceNOW | Cosmic Perspective | Intelligent Life

NOVA scienceNOW | Hello, this is Earth | PBS

Text Answers

Page 129: Philosophers on Philosophy

1. Descartes’ arguments about the mindlessness of machines stems from his separation of mind from brain: thinking substance is separate from material/extended substance (SE p. 115).

2. The Turing test is only satisfactory in showing that humans can be duped into responding to machines *as though* they were thinking (hence simulating human thought or responsiveness to inquiry), not in corroborating that they are in fact thinking. The Turing test replaces the act of thinking with its appearance or manifestation, which may be an illusion (or excessively behaviourist for some critics). Computers have been used to lure men on chat lines, duping them into thinking they are actually speaking to a female operator on the other end of the line. In this sense, these computers pass the Turing test, but we wouldn't say that much thinking is really being done.

Look up this article by Nick Carr about a Russian chat service (CyberLover) that passes the Turing test:

<http://www.guardian.co.uk/technology/2007/dec/13/internet.crime>

3. Searle's "Chinese Room" thought experiment demonstrates that computers are input/output machines, not thinking in the same creative sense as humans think. Perhaps the best defence of this response is that no machine has created such a thought experiment on its own. If a computer did write or reprogram its own software, as described in some science-fiction stories, things might be different.
4. Creating an imaginary dialogue between Alan Turing and John Searle may be difficult for students to do without knowing more about these thinkers. Both men studied Wittgenstein's philosophy to some degree (see SE pp. 280-283), and would understand that what we call *thinking* is not a reference to operations going on in the brain (an explanation that suffers from psychologism, or attributing physical processes to mental states). Instead, the meaning of what we call *thinking* is governed by its social use in language (practice), and for this there is extensive background or depth context that gives nuance to what we say. Uttering the phrase "Sorry, I shouldn't have turned here. I wasn't thinking" is qualitatively different from "I have been thinking that something cannot arise from nothing." A machine might be able to give the expected phrase in the first case, simulating human reactions to error, but not as likely to develop its own treatise on nihilism (unless given the inputs to do so).

Page 131: Section questions

1. If your experiences, memories, and sense of self really are no more than the sum of all the brain states and central-nervous-system states in your body, then we should be able to shut them down one at a time to isolate how each part works and how the person is diminished by the absence of these component parts. In a sense, that is what happens to people who have accidents, like Zasetky or Wearing. Most people would see the self as something more holistic, even if they don't believe in the idea of a soul or spirit separate from the body (as with Descartes and Ibn Sinā). It is something like a composition error (see SE p. 58) to reduce the whole to its parts when talking about the human mind or the self.
2. Examples follow for comparing and contrasting two or more theories about the mind-brain problem. In their explanations, students add why they agree or disagree with the theories:

Functionalism: The mind is to the brain as software is to hardware (SE p. 126). There are different kinds of processors (e.g., Mac versus PC), and so there are different kinds of brains (animal brains, computers, other hominid brains—larger Neanderthal and smaller *Homo floresiensis* or "Hobbit" brains). Follow this link to look up the article "The Brain of LB1, *Homo floresiensis*":

<http://www.sciencemag.org/content/308/5719/242>

Identity theory: Mental events (thoughts and emotions) are the *same type* of event as physical events in the brain. Thoughts are just brain states. Perhaps an advanced computer could think in such a way as to have a human-like brain state (SE p. 123).

3. The exercise of offering opinions on whether the mind-brain problem is an unsolvable mystery might benefit from adding into the investigation, or to the creative component, Thomas Kuhn's concept of *paradigm shifts* (SE p. 332). Will we forever be reaching for certainty in our models and theories, making improvements but never finally getting there, to absolute truth (see fallibilism, SE pp. 297, 331-332). Another way of considering this is through Heraclitus saying that all is in flux, including our ideas about reality (SE p. 93).

Pages 132-133: Chapter Review

1. In this creative activity, students offer their views on the question "What is the mind?" Students may consider using BLM C Comparison Chart and BLM D Argument Builder to help them construct their ideas.
2. Students recreate and complete the organizer shown on SE p. 132 to illustrate their understanding of each concept and key philosopher and/or school of philosophy. Note: the terms *identity theory* and *qualia* are not associated with specific philosophers in the student textbook. However, students can still describe these two concepts in their organizers; students describe the strengths, weaknesses of, and what interests them about these concepts.

Included here are brief definitions of the concepts included in the organizer.

Identity theory: This theory suggests that mental events (thoughts) are the *same type* of events as physical events in the brain. (See SE p. 123.)

Qualia: The qualitative, hard to describe and largely private (inside) feeling of what it is like to have a sensation such as pain or joy. Words like *love* and *learning* actually refer to material, neuroscientific processes. (See SE p. 124.)

Eliminative materialism: Words like *love* and *learning* actually refer to material, neuroscientific processes. (See Paul and Patricia Churchland, SE p. 124.)

Substance: What everything is made of, whether material or spiritual, extensive or thoughtful. (See Spinoza and Descartes, SE p. 127; cf. SE p. 101.)

Anomalous monism: Mental events, such as thoughts or feelings, are identical to physical events, but these cannot be explained by (or reduced to) strict physical laws. We may know what parts of the brain are triggered by "music appreciation," but this does not explain what we mean by that concept or practice. (See Donald Davidson, SE p. 127.)

Subjective facts: Personal truths that can only be assessed from the inside, like knowing one is in love or that one's melancholy is caused by loneliness. (Subjective facts are opposite of objective facts, which are delivered, for example, by science or math. See Thomas Nagel, SE p. 130.)

New mysterianism: The human mind is incapable of knowing some things or solving certain problems because of limitations in its structure (e.g., 11-dimension universe proposed in cosmic string theory, SE p. 366). (See Colin McGinn, SE p. 130.)

3. The models of the mind from which students will select are: materialism (the Churchlands), monism (Spinoza), and dualism (Nagel, SE p. 127).
4. To make the comparison between the human brain and a computer is an enticing model, especially when we see Deep Blue beating Kasparov at chess or Watson

winning the *Jeopardy* contest. But neither computer has composed a symphony or written a novel that would be impressive by human standards. Look up the following video title on YouTube:

Deep Blue beat G. Kasparov in 1997

To side with Nagel on this question (SE p. 127), having enormous data storage and computational ability is not enough, it seems, to fulfill the requirements of our concept of consciousness. Self-awareness is very rare even in the animal world, and a remote but fascinating possibility for machines. The HAL 9000 computer in *2001: A Space Odyssey* is a fictional example of a dangerously self-aware computer. Look up the following video title on YouTube:

Hal 9000 VS Dave - Ontological scene in 2001: A Space Odyssey

5. Students will offer their understanding of the relationship between the mind and the brain (or mental states and brain states), using terminology and philosophers related to metaphysics. (See the list of information in the answer to Chapter Review question 2 for some of this content.)
6. Cognitive psychology and neuroscience will likely continue to progress, giving us more understanding of brain processes. See for instance the documentaries on music and studies of the brain in Unit 7: Aesthetics. Many philosophers would argue, however, that we risk mistakenly equating the brain with the mind. Wittgenstein suggested at the end of his *Philosophical Investigations* that the questions of psychology and of philosophy “pass each other by,” not really addressing the same things. The mistake is to think that the word *mind*—a holistic concept—refers to a singular thing, such as the brain or its physical workings. Gilbert Ryle explained this category mistake in his book *The Concept of Mind*: it is rather like someone walking onto campus and asking “Which of the buildings is the university?” or “Where on the pitch can you find the footballers’ team spirit?”

Look up *The Concept of Mind* at this link:

<http://www.scribd.com/doc/7003453/Gilbert-Ryle-The-Concept-of-Mind>

7. The cognitive sciences have given rise to philosophical views such as depth grammar (Chomsky and Fodor), in which we speak of language as being hard-wired into the human brain and that of our nearest primate cousins. The eliminative-materialist school could only have developed in response to advances in neuroscience.

The question “Can a machine think?” makes for a good essay topic, requiring research as suggested in part b) of this question. Examples students might use could include computers such as Deep Blue and Watson, and also examples of advances in robotics.

8. Drawing on TV shows, music and pop culture, students will develop a creative account (written or otherwise) of their own philosophical views on personal identity. A rich example to consider is the poet Fernando Pessoa. The following passage comes from Poetry International Web:

“It is sometimes said that the four greatest Portuguese poets of modern times are Fernando Pessoa. The statement is possible since Pessoa, whose name means ‘person’ in Portuguese, had three alter egos who wrote in styles completely different from his own. In fact Pessoa wrote under dozens of names, but Alberto Caeiro, Ricardo Reis and Álvaro de Campos were – their creator claimed – full-fledged individuals who wrote things that he himself would never or could never write. He dubbed them ‘heteronyms’ rather than pseudonyms, since they were not false names but ‘other names,’ belonging to distinct literary personalities. Not only were their styles

different; they thought differently, they had different religious and political views, different aesthetic sensibilities, different social temperaments. And each produced a large body of poetry. Álvaro de Campos and Ricardo Reis also signed dozens of pages of prose.”

You can read more about Pessoa by following this link:

http://www.poetryinternational.org/piw/cms/cms/cms_module/index.php?obj_id=7051

9. Do Zasetzky and Wearing have personal identities? That Zasetzky wrote a memoir suggests that he does have an identity, even if partial or not always accessible. Wearing is also a *self* in the moment, responding to his wife. However, since he lacks any temporal horizon, it is hard to say that he has what we would consider an identity. We are in some ways a collection of memories and anticipations, and Wearing has neither. This makes memory crucial to a person’s sense of self and personal identity.