

CHAPTER 1

INTRODUCTION

A little learning is a dang'rous Thing;
Drink deep, or taste not the Pierian Spring:
There shallow Draughts intoxicate the Brain,
And drinking largely sobers us again.

—Alexander Pope

Ever-expanding research in neuroscience now engages religious topics. As liberally as the popular press (Aaen-Stockdale, 2012; Hagerty, 2009), professional discussion links brain function to supposed experiences of God Almighty Himself—or Herself? Itself? Godself? The very uncertainty in even knowing how to accurately refer to God—and traditions that forbid naming G-d at all—should give one pause. Still, the complexity of the neurological findings and the subtlety of the philosophical issues open a space for the free run of popular religiosity, esoteric beliefs, impatient curiosity, creative imagination, and marketing opportunities and sales. Thus, whether well-conceived or not, talk of “the God gene” (Hamer, 2004), “The God Helmet” (Persinger, n.d.), the “God” part of the brain (Alper, 2001, 2006), the “God spot in the brain” (Crutcher, 2003), “neurotheology” (Ashbrook, 1984; Bekoff, 2002, p. xvii; d’Aquila & Newberg, 1999; Joseph, 2003), “entheogens” (Forte, 1997b; Richards, 2003, 2005), “theobiology” (Rayburn & Richard, 2002), “theistic psychology” (Helminiak, 2010, 2013a), and the like has become commonplace across academic disciplines. To bring some clarification to this discussion is my ambitious goal.

1.1. Mystical, Religious—or Transcendent—Experiences

The focus of this neuroscientific research is what is called mystical or religious experiences (Belzen & Geels, 2003; Carmody & Carmody, 1996). These terms refer to a range of personal occurrences of varying intensity. They include a pervasive sense of wonder and awe within everyday living; mysticism as a way of life (“enlightenment” in the East). And they refer to occasional moments of overwhelming intensity in which the epitome is the ineffable experience of the unity of all things and a loss of a sense of self: mysticism as an extraordinary experience. Fred Hanna (2000) provides an intimate account of such experiences, and, instructively, he does so apart from the more common context of religious belief and reference to God. To refer to such phenomena, I will speak of transcendent experience. I use *transcendent* as a loosely defined term to replace the also loosely defined terms *religious* and *mystical*. These latter terms, themselves often equated, can have importantly different meanings (e.g., Roy, 2003, pp. xix–xxi). Likewise, the term *transcendental* is also sometimes used to name meditative and psychedelic experiences (e.g., Aaen-Stockdale, 2012; Szalavitz, 2011) and carries similar ambiguities and vagueness, usually implying something other-worldly or, perhaps, mysterious. I would avoid prejudicing the discussion from the outset. Accordingly, with a neutral term, *transcendent*, and a lower-case *t*, I indicate a particular kind of experience without implying *a priori* any specific interpretation of it.

In the broadest sense, by *transcendent* I mean simply whatever is, or takes one, beyond one’s present state in a positive, non-self-destructive way (Helminiak, 1987b, pp. 23–24). Simply to pose a question, for example, opens one to a broader perspective. Or to realize a new fact expands or even reconfigures one’s way of thinking and acting. Or to love another person or to admire a thing of beauty or to marvel at the stars and the ocean moves one out of oneself and into a broader and shared universe. Any activity, even getting off to work in the morning, can be self-transcending—indeed, just waking up qualifies—insofar as it invites us to new experiences and the possibility for personal growth—that is, the expansion of our awareness, understandings, abilities, and commitments. Understood in this way, self-transcendence appears to be a built-in and defining facet of humanity; it is what contemporary movements of “personal growth” intend. In contrast, that this process entails, rather, a connection with some non-human entity, such as God or the “Sacred,” or the work of some supernatural force (e.g., Beauregard & O’Leary, 2007; Engels, 2001; Hill et al., 2000, p. 64; Larson, Swyers, and McCullough, 1998; Pargament, 1997, p. 31; Pargament & Maloney, 2002; Reber, 2002, 2006b, p. 199; Richards & Bergin, 2005,

pp. 101, 114; Richardson, 2006, p. 242, n. 12; Slife & Whoolery, 2006, pp. 225, 226)—this is a greater supposition than I am willing to make. It is the very supposition that is in question.

1.2. Consciousness of Consciousness, Not Experience of God

Of course, I do have my own interpretation and explanation of transcendent experience, as the previous paragraph betrays. I argue that we can account for transcendent experiences by appeal to a self-transcending dimension of the human mind—referred to variously as consciousness, Atman, Buddha Nature, nous, soul, higher self, and the like. In accord with long-standing aspects of the Western philosophical tradition, I prefer the term human *spirit* (Helminiak, 1996a, pp. 50–56; Lonergan, 1957/1992, pp. 372, 394, 538–543, 640–642, 670–671, 696–697, 711; 1968/2006, tracks 46, 48, 51; 1972, pp. 13, 210, 302, 352; Peters & Mace, 1967). I take all these terms to be roughly synonymous. This supposition is surely open to debate, but profitable debate would presume the very clarification toward which I aim. So I freely state my position at the outset, further suggesting, of course, that I believe I am on target: we can account for transcendent experiences through appeal to a self-transcending dimension of the human mind. If so, by application of Occam's razor or Morgan's canon, no added reference to God is needed, nor to the Hindu Brahman. These are experiences of the outward-oriented, open-ended, dynamic human spirit, namely, at its epitome, pure consciousness of consciousness. They pertain to human *spirituality*, not to some direct or immediate (i.e., non-mediated) divine encounter or uncovered divine identity. In my understanding, although the divine is spiritual, not everything spiritual is therefore divine. And although, by definition in standard Western theology, God is somehow involved whenever anything exists or happens, immediate and unnuanced appeal to God to explain these instances is theologically and scientifically naïve (cf. Helminiak, 2010, 2013a; Helminiak, Hoffman, & Dodson, 2012). In the first instance, transcendent experience is a possibility or occurrence that is fully human. It expresses a marvelous capacity due to one dimension of the human mind. Questions about God's role in such experience are, indeed, appropriate. However, the theological questions are secondary. They are further questions, not to be confounded with the primary question. They are but possible, subsequent considerations when scientific explanation—not yet theology or, above all, not devotional rhetoric or controlling religious lore—is the prime concern (Helminiak, 1987b).

Abraham Maslow (1954/1970) made something of the same point when describing his “self-actualizers,” those rare, highly developed specimens of humanity. With a blatant spiritual allusion, Maslow reports that these individuals view things “*sub specie aeternitatis* [in light of eternity]” (p. 160). Moreover, he says, they are particularly prone to mystical experience. But Maslow incisively adds, “It is quite important to dissociate this experience from any theological or supernatural reference, even though for thousands of years they have been linked. Because this experience is a natural experience, well within the jurisdiction of science, I call it the peak experience” (p. 164; see also Maslow, 1964/1970).

Similarly, Roberto Assagioli’s (1965/1976) rich treatment of spiritual growth, under the name of psychosynthesis, is a completely psychological proposition. Granted, Assagioli does obscurely relate the human “higher Self,” the focus of spiritual psychosynthesis, to the “Supreme Spirit” and the “universal Self” of Vedantic philosophy (the divine Brahman, which is supposedly identical to the human Atman: see 6.3.5, i.e., Chapter 6, section 3, subsection 5 of this book), but he has no real investment in this connection (pp. 20, 44–45, 194–195). He insists that psychosynthesis is a “scientific conception.” It “does not aim nor attempt to give a metaphysical nor a theological explanation of the great Mystery—it leads to the door, but stops there” (pp. 6–7; see Helminiak, 1987b, pp. 12–19).

To extricate God from the scientific explanation of transcendent experiences focuses the true, contemporary, scientific question: the so-called “mind–body problem” or the “mind/brain” problem (Searle, 1998; Shafer, 1967). This problem entails the challenge of accounting for the nature of the human spirit and its relationship to the human “brain” (i.e., the human organism). To be sure, then, my proposed explanation of transcendent experience will address this challenge head-on. Indeed, its treatment fills the long, central chapters in this book—Chapter 4, on the mind, and Chapter 5, on consciousness. In contrast, actually, the theological questions are comparatively simple. Long-standing theological discussion about the relationship of the Creator to creation provides readily available answers. The empirically constrained puzzle of the mind–body problem remains the pivotal challenge in this discussion and demands its own clarification. The lack of this clarification is today’s nemesis.

The supposed identification of the human spirit and Divinity is a pervasive bugaboo. By reverting to classical Greek usage, consonant with much Eastern philosophy (Helminiak, 2008a, pp. 167–168; Muesse, 2003), some theorists use the terms *God* or *divine* simply as alternative words for the spiritual dimension of the human mind. The unspoken assumption is that the human spirit and Divinity are somehow one and the same, as in

the Hindu formula “Atman is Brahman.” Thus, any extraordinary mental occurrences—except, inconsistently and tellingly, psychoses and temporal lobe epilepsy (Brown, 2002; Crutcher, 2002; Helminiak, 1984b; Persinger, 2001, 2002; but see 3.1.2)—might still be taken today to be encounters with God. This ambiguous usage might be unwitting, resulting from casual theological and philosophical thinking. Or it might be deliberate, expressing an attempt to reject distance between the human spirit and the divine. Albert Hofmann (2000), famous for the discovery of LSD, for example, uses the terms *spiritual* and *divine* seemingly interchangeably. He speaks of the need to transcend “the division between humankind and nature” or, phrased supposedly otherwise, to abolish “the separation of creator and creation” or “the duality of creator/creation” (p. 37). As is typical of this topic, it is difficult to know what such statements mean exactly, half technical in terminology and half popular. From a critical perspective, the problem of the meaning of *spiritual* and *divine* might be simple equivocation—different terms are applied to the same reality, or different realities are subsumed under the same term.

However, in the West there does exist a long-standing distinction between Creator and creature, the Uncreated and the created, necessary being and contingent being. In light of this distinction, whether one believes in God or not, the term *Creator-God* must be taken to denote a distinct reality or being that might actually exist (as some religions insist); and the Uncreated and the created must not be taken to be one and the same (as mere logic requires). Two different terms, *Uncreated* and *created* or *Creator* and *creature*, defined by a mutual negative relationship, imply that two different proposed entities are in question.

If so, to appeal to God to explain transcendent experiences would require an account of the nature of God in addition to the nature of the human mind (Delio, 2003). Under these conditions, God’s role in transcendent experiences can, indeed, be explained—or, more exactly, as in all science, a credible hypothesis can, indeed, be proposed. But such explanation is theology, not psychology; and, as such, it exceeds the content matter and the competence of neuroscience and psychology. Once again, not God’s role in human experience but rather the mind–body problem and the nature of consciousness emerge as the true psychological challenge: how does organic matter relate to mental and even spiritual—transcendent—experience?

1.3. An Interdisciplinary Study

I elaborate on my argument by treating, in turn, neuroscience, psychology, spiritualology, and theology. In passing, with gratitude to Philip McShane, I

propose a much-needed neologism: *spiritualogy*. I take *spirituality* to mean a person's lived commitment to enhancement of his or her spiritual sensitivities (Helminiak, 1996a, Chapter 2). Most people, at least in the West, associate this particular process of growth with religion or some notion of God and describe it in religious terms. Currently, however—in English translation from the French in the mid-20th century, replacing the Roman Catholic terms *ascetic* or *mystical theology* (Principe, 1983; e.g., Tanquerey, 1930)—the term *spirituality* also names the study of that lived commitment. So confusion often results. I offer the term *spiritualogy* to name the academic study or research discipline pertinent to the lived commitment (Helminiak, 1996a, pp. 31–39; 2009). Spiritualogy is the study of spirituality.

Now, in this book, chapter by chapter, I both differentiate and interrelate neuroscience, psychology, spiritualogy, and theology, and I specify their respective contributions to a comprehensive explanation of transcendent experiences. However, this central task requires a substantive prolegomenon to treat epistemology. Etymologically “the study of knowledge,” epistemology is an account of the human ability to know; it is an explanation of what knowing means and what validity human knowledge can enjoy. Epistemology is the controlling yet ignored specter that haunts the discussion of “God in the brain” and current consciousness studies overall. Without an understanding of knowledge adequate to non-palpable realities—such as emotions, thoughts, the mind, consciousness, and God, not to mention quarks, leptons, black holes, and dark matter—the topic of this book cannot be treated coherently. Thus my first chapter treats epistemology.

1.4. Reliance on a Coherent and Consistent Epistemology: Lonergan

Echoing Bernard J. F. Lonergan (1957/1992, 1972, 1980/1990), I maintain that human knowledge is a composite of experience, understanding, and judgment; so accurate explanation must be attentive, intelligent, and reasonable. I consider my summary and application of Lonergan's epistemology to be the major contribution of this book. Amidst the jungle of theological, philosophical, spiritual, religious, devotional, evaluative, cognitive, emotional, psychological, neuroanatomical, neurophysiological, and neurochemical considerations that impinge on our topic, I propose a framework in which these relevant matters can be ordered and given their due. My purpose, though quite bold, is rather restricted. On a philosophically cluttered playing field, others have taken on whole swaths of religiosity and speculated about

their relationships to brain function (e.g., Alper, 2001/2006; Beauregard & O’Leary, 2007; d’Aquili & Newberg, 1999; McNamara, 2009; Murphy, 2006). My humble yet daunting goal is merely to order the field.

My reliance on Bernard Lonergan offers a novel approach—novel in that Lonergan’s is just becoming a mainline philosophical position and novel, too, in that his position actually promises a coherent treatment of the difficult questions before us. Lonergan took up the traditional philosophical question, dating from the pre-Socratics, about the possibility, nature, and limits of accurate human knowing and presented a core understanding of knowledge that applies to all fields of intellectual endeavor. As such, his position qualifies as a kind of “foundationalism” (Braman, 2008, pp. 80–81, 86–91), that is, the proposal of a common basis, the discovery of an Archimedean point, from which one could supposedly deal coherently with all matters of knowing. Among philosophers today, foundationalism is mostly a shattered dream. However, Lonergan’s proposal appears unique. His foundation is the inherent and unavoidable processes of human consciousness itself. Overlooking insight and restricted merely to logic, most other foundationalist theories propose a set of basic beliefs, some suggested first principles, which via deduction and inference would ground all other beliefs (Poston, 2014)—an ultimately unworkable solution (4.16). Digging deeper, Lonergan claims to have elucidated the primordial engine that generates all beliefs, all knowledge. His analyses offer a strikingly new approach to foundationalism (2.7.1). Chapter 2 relates parts of that story of despair over ever explaining the essence of human knowing (2.2.6–7; see McCarthy, 1990). As Lawrence Cahoon (2010) reports, over the course of the 20th century, Western philosophy fragmented into basically three incompatible schools: continental phenomenology, Anglo-American linguistic analysis, and American pragmatism. These schools of philosophy

rarely spoke across party lines. Rather than opposing each other like three different baseball teams—as in much of the history of philosophy, schools of thought opposed each other—they became more like a baseball, football, and a soccer team, each playing its own game, addressing its philosophical questions in its own particular language, to which the other teams had nothing to say because they were playing a different game. (p. 47)

That breakdown of intellectual consensus, even as to what are the important questions, underlies the discombobulating pluralism that more and more characterizes the postmodern world gone global. My bet is that

Loneragan offers a solution to this human dilemma of our times. Staying with the traditional question, he has proposed a new answer. Its heart is the trenchant and consistently applied distinction between sensate- or perception-modeled theories (knowing is like taking a good look and seeing what is actually there) and an intelligence-based theory (knowing is the achievement of correct understanding). The one theory of knowing implicitly assumes that reality is palpable stuff lying out there about us or imaginable stuff hidden down inside us. The other theory holds that the real is what correct judgment affirms. In light of the intellectual chaos that reigns in academic circles today, in the very least this answer deserves a hearing. So in this book I summarize Lonergan's position, foundational though it be, and I apply it, in a telling and most challenging case, to the mind–body problem, the relationship of the “hard” and “soft” sciences (Percy, 1989/1990), the nature of consciousness, and the notion of “God in the brain.”

1.5. Broader Issues of Interdisciplinary Studies

My exemplification of Lonergan's thought in this book is sufficiently challenging in itself. Yet my effort is but a student's exposition of Lonergan's far-reaching theory, and I want to highlight this point, if only briefly. Pragmatically, I meet current thinkers somewhere close to where they already stand and nudge their thinking along as best I can, so in this book I list standard disciplines to be interrelated—neuroscience, psychology, and theology—and I could not avoid including yet another contrived discipline, spirituality. But, ultimately, this breakdown of disciplines is highly inadequate. It results from the rather haphazard emergence of ever-novel disciplines that fill out the list of arts, theology, law, and medicine in the medieval universities.

In fact, for example, neuroscience is the hottest thing going in psychology today. Are the two really distinct disciplines? What, then, of sociology, anthropology, criminology, history, economics, political science, philosophy, and literature? They all regard humanity and the human situation, and the overlap among them is extensive. My university recently divided the College of Arts and Sciences into the College of Arts and Humanities, the College of Social Sciences, and the College of Science and Mathematics. We colleagues within the Department of Psychology gave serious consideration to our future affiliation: does our humanistic and transpersonal orientation fit better with the lush human concerns of the humanities or with the mostly anemic statistics-controlled endeavors of the social sciences? We actually fit with neither alone, but practicality and politics have us now as a department

in the College of Social Sciences. Yet don't physics, chemistry, and biology also have major contributions to make toward understanding humanity? Additionally, our campus also comprises a College of Education, a College of Nursing, and a College of Business. Again, the duplication among all these supposedly diverse colleges, disciplines, and sciences is enormous. Clearly, the division of labor at our current universities is chaotic, ineffective, even irrational. The problem shows most obviously in any treatment of the human, for in its polymorphic constitution our species entails everything from subatomic particles through consciousness to belief in God. What kind of a discipline would adequately treat of humanity? (See Henriques, 2003, 2004, for related discussion and references.)

In *Method in Theology*, Lonergan (1972) proposed a novel answer to that question. The answer is the suggestion, not of yet another new discipline, but of a new way of doing human science. Note at the outset that, although the book has "theology" in the title, it actually proposes a method for all the humanities and human sciences. Let this observation make the point: if a method can actually sort through the jungle of religious beliefs and teachings, that method can surely order the current disarray among the social sciences.

The brilliance of the method is to divide scholarly activities, not according to myriad topics or congenial objects of study, but according to the kinds of intellectual activities each involves. These intellectual activities parallel the structure of the process of human knowing, "the native spontaneities and inevitabilities of our consciousness" (p. 18)—about which, much more in Chapter 2. For example, if knowing depends on appeal to relevant data, one specialized function of scholarship would be Research—that preliminary digging up and assembling of relevant facts and tidbits, that explorer's fascination, which absolutely delights some curious people but absolutely weighs down others who are preoccupied with the bigger questions. So let the researchers do what they do best, and let them pass their results along to others for further processing. For example, again, then, if knowing also depends on proposing viable explanations, understandings, or hypotheses, another specialized function for creative intellects would be Interpretation of the collected evidence. And so on. Functional specializations, not contrived objects of study, would organize, differentiate, and interrelate scientific endeavors.

Uniquely, Lonergan's method also includes elaborated functions for assessing conclusions for accuracy or error and for wholesomeness or dysfunction—epistemology and ethics—the nemesis of postmodernism: normativity. The social sciences completely lack a systemic way of determining normativity, yet without a measure of it social science could never become

prescriptive (cf. Helminiak, 2013a, p. 48; 2014, pp. 127–128), as is every full-fledged science. Namely, when science actually comes to understand how something works, it can prescribe what ought to be done if a project is to succeed. Medical science, for example, takes prescription for granted. Without apology physicians tell us how to live, what to eat, where to work, and so on, if we want to be healthy. Yet, confusing unbiased objectivity with value-neutrality, social science still often harbors the untenable notion of science as a “value-free” enterprise (e.g., Paloutzian & Park, 2005, p. 560). The rub, of course, is that matters of value are both unavoidable and highly contentious in human affairs, and, as noted at 1.4, the bottom has fallen out of philosophical consensus on such matters. As a result, unable to take a grounded stand on the quintessential human questions of epistemology and ethics, human science cannot become genuinely scientific. Lonergan offers a solution to this problem. The goal is that today’s mere “academic disciplines” become genuine “sciences” (Lonergan, 1972, p. 3), methodically “yielding cumulative and progressive results” (p. 4).

Organized in this new fashion, the collective enterprise of human knowing—human science—would function in institutionalized patterns that actually parallel the pattern of knowing built into the human mind. The university would operate as one collective knowing agent, a juggernaut of collaborative human minds—investigating, inquiring, theorizing, checking, integrating, assessing, and finally proposing and popularizing conclusions ever to be refined, corrected, and updated. In a cycling process this collective knowing agent would pursue the open-ended human quest for correct understanding.

This overall project is far too elaborate to explicate here. Indeed, we can only wait to see how it might unfold. Philip McShane (1985, 2013a, 2013b; see also www.philipmcschane.org) has mounted a heroic campaign of advancing a Lonerganian reorganization of the academy. In fact, that vision is so far-reaching that even most Lonerganians shy away from its demands (McShane, 2013a, pp. 53–56), and only half tongue-in-cheek, McShane muses that Lonergan’s system “will be as familiar as the periodic table in chemistry by 9011 A.D.” (p. 67). Lonergan (1985) himself showed similar perspicacity about the methodological revolution he has proposed:

Is my proposal utopian? It asks merely for creativity, for an interdisciplinary theory that at first will be denounced as absurd, then will be admitted to be true but obvious and insignificant, and perhaps, finally, be regarded as so important that its adversaries will claim that they themselves discovered it. (p. 108)

1.6. Attention to Major Thinkers in Neuroscience and Consciousness Studies

Throughout this work, in only today's slogging way, moving from neuroscience, to psychology, to spirituality, to theology, I clarify my argument by contrasting it with others. My references to other positions are selective because my goal is restricted. My intention is neither to summarize the field (see, e.g., Blackmore, 2012) nor, far less, to try and discern what the multitudinous confounded statements in this subtle discussion might actually mean in each case. Rather, my limited intention is to highlight and clarify the underlying theoretical issues, and they are pervasive, intricate, and recurrent. When I focus on individual positions, sometimes in considerable detail, my goal is not comprehensive exposition and criticism, but revealing exemplification. Mostly I want to illustrate how confusion in epistemology provokes many of the problems in these discussions and how the problems can be resolved if the epistemology is cleaned up.

This book is a bold, perhaps even a fatuous, attempt to address major methodological questions in relatively short compass. The presentation even presumes a way of thinking that is foreign to most people. Perhaps this application of Lonergan's thought even qualifies for what Patricia Churchland (1996) derisively called a "real humdinger of a solution" (p. 405) to the mind-body problem, "some fundamental new understanding," a "rethink of the nature of the universe" (Blackmore, 2012, pp. 29–30). Nonetheless, granted the novelty—I would call it a breakthrough—the relevant contributions of the various sciences and disciplines fall rather easily into place. Unfortunately, however, this place might not always be congenial. Given a coherent and consistent epistemology, the requirements of our own minds sometimes force us into positions we might prefer not to have to hold—especially when our topic has existential and even religious implications. But the chips must fall where they will. Despite the far-reaching implications of my position, I believe this book presents the necessary detail that, given careful reading, clinches my argument or, at least, credibly expounds it. The audacity of this presentation does have the advantage of offering a relatively brief overview of fundamental philosophical issues, which most people could not explore in tomes of hundreds of pages and on which there exists only an array of differing opinions; but, as far as I know after 35 years of comparison, no coherent position other than Lonergan's is available (cf. McCarthy, 1990, 1997; Webb, 1988; Willis, 2007, pp. 8–23). If I can convey only a main idea and open a potential new perspective, I will have achieved my purpose of pointing to a brighter horizon.

1.7. Attention to Intelligence, Not Merely to Logic

My argument is to be coherent and consistent from beginning to end. As a result, it cannot be grasped in part or by selective reading. It would, of course, be useful to read the Conclusion at the outset just to get some idea of where I am going, but one might read my Conclusion and state that Helminiak holds such and such and even affirm or dismiss a summary statement, all without understanding what I actually mean. In these matters the same terms mean different things to different people working within different philosophical perspectives, so, apart from their broad contexts, summary statements are easily misunderstood. The commonplace terms *mind*, *person*, *nature*, and *substance*, or in mathematics even the terms *point* and *line*, offer instructive examples because they mean different things to different people in different contexts. One needs to be sure one understands what an author means by this and that term before judging the statement.

Besides, in my case, the argument is not a matter of deductive logic, which produces a necessary conclusion on the basis of easily stated premises. Rather, as already intimated, the argument turns on explicit attention to intelligence, which demands prolonged effort to achieve understanding and to which we seldom attend explicitly. Not logic but understanding is at stake. The difference is that intelligence makes leaps, transcending or dismantling prior systems and setting up new ones in which, only then, logic again can make its demands (Lonergan, 1957/1992, pp. 301–302, 595–600).

Thus, the whole of my argument holds together only through a grasp of the parts, and the grasp of the parts depends on the meaning of the whole. Such is the case with any fully systematic statement such as a new mathematics or the equation that expresses a scientific breakthrough: the elements codefine one another; they lock one another together in a pattern of relationships that make one another be what they are. At stake is “implicit definition,” as mathematician David Hilbert (1902/1971) named the matter in absolute generality (4.6.5). A rather concrete example would be the relationship $d = rt$ (distance = rate of speed x time traveled). This relationship fixes the value of the terms so that, given any one of them, the other two are already colimited in what they could be; and given two of them, the third is absolutely limited to only one possible value.

My presentation aims at such refined scientific articulation, which expresses its meaning through the interrelationship of terms—such as experience, understanding, and judgment—whose mutually defined meanings are grounded in an insight into what is being affirmed. Intended meaning

depends on insight. The statements need to be understood, not merely noted, reported, and “parroted” back.

1.8. An Interrelated and Unfolding Presentation

Said otherwise, at stake is the proverbial hermeneutic circle—as when a sentence makes sense only given the meanings of the words, but the meanings of the words depend on the sense of the sentence. For example, consider the word *sense* in the previous sentence: the word does not regard sensations, vague impressions, a discerning awareness, or—if heard, not read—American coins of the smallest denomination. This situation does, indeed, constitute a vicious circle, but only logically. If logic were our only intellectual tool, we would be at an impasse. But we also have intelligence, and it breaks the vicious circle. Intelligence grapples back and forth with the meaning of the words and of the sentence and eventually transcends them both in a moment of insight, usually unnoticed (as in the simple case of *sense* just described), which provides an interpretation that determines the one, consistent, interlocking meaning of both the words and the sentence. Similarly, the parts of this book mutually clarify one another. For this reason, throughout the text I have included cross-references to chapter, section, and subsections within this book (e.g., 4.6.5 equals Chapter 4, section 6, subsection 5).

Moreover, as the book unfolds, I introduce only the epistemological ideas that seem necessary at each point along the way and later expand and clarify the exposition as further questions demand further elaboration. As we move from brain to mind to consciousness to God, the questions do become more subtle. Chapter 4, in particular, on the mind–body problem, offers telling examples of the difference between a sensate-modeled and an intellectual epistemology, important clarification about the notion of causality, specification of the unity of a “thing” in contrast to its constitutive “parts,” and an account of emergence within cosmic and evolutionary process. Chapter 5, on spirituality, requires a difficult elaboration about the nature of consciousness or human spirit, not only intentional (that is, directed toward some object), as is commonly held, but also conscious (that is, unmediatedly “self-present”). These two chapters—Chapters 4 and 5—address the most difficult questions in this discussion and present what I think is a coherent resolution of them. From this point of view, this book could well have been entitled *The Nature of Consciousness* or *The Mind-Body Problem* or something

similar. However, as the actual title of this book witnesses—for no good reason except the confusion in question over mind, consciousness, spirit, and Divinity—neuroscientists and psychologists have entangled God in this discussion. So, finally, Chapter 6, applying the same epistemology, presents an understanding of God—absolutely standard in the Western theological tradition—that far outstrips the pious notions controlling current discussion and that accounts for the role of God in human biological, mental, and conscious or spiritual functioning. So be forewarned: the argument is not complete until the book reaches its conclusion. Chapter 3, on neuroscience, turns out to be the least significant in this book—not because the topic is irrelevant to a comprehensive scientific account of the human, but because that field already enjoys a consensual methodology and elaborated technologies, and its current offerings, nonetheless, remain tentative, still highly speculative, and merely indicative of the robust understanding that will someday be achieved. Still, whatever the final understanding, the relationship between brain and mind can be clarified in principle.

Finally, the challenging subject matter of this book provides occasions to concretely apply and pointedly exemplify the breakthrough ideas summarized only generically in the critical chapter on epistemology—Chapter 2. To engage the multidimensionality of this book's subtle topic is to encounter a particularly fruitful opportunity. Can any epistemology deal consistently and coherently with that whole array of issues? I believe so, and I offer my exemplification. Then, my point here is, again, that the reader is unlikely to appreciate the argument without working through the unfolding topics along the way in order to understand both each different concrete issue in question and the one methodology guiding every resolution and projecting the coherence of them all.

1.9. The Centrality of Consciousness

Given that human consciousness or spirit is central to this discussion—for both its content and its method—the reflexivity I have been highlighting should not be unexpected (Helminiak, 1998, p. xii). After all, the essence of human consciousness is a peculiar self-consciousness, an unmediated self-presence, which is non-objectifying, which does not turn the subject into an object to her- or himself but is experienced as subjectivity *per se* (5.3.1). Because of self-consciousness, the very condition for the possibility of subsequent cognitive reflexivity, we have the ability to reflect back on ourselves and to turn even our insights into objects of awareness and thought. Thus,

an adequate understanding of consciousness entails also an understanding of human knowing. Moreover, at its core, my argument is that transcendent experience is such consciousness of consciousness—or “awareness of awareness” (Lonergan 1957/1992, p. 346), as many would alternatively say, making little distinction between the English terms *consciousness* and *awareness*. Following the very helpful suggestion of Louis Roy (2003, pp. 27, 29), as best I can, I reserve the term *aware* to refer to intentionality, that is, a subject’s relationship to some object; and I use the term *conscious* to refer to that uniquely human, non-objectified self-presence that constitutes subjectivity (5.1.2; 5.5.1). Yet even apart from these distinctions, consciousness and knowing easily appear as two academically distinguished sides of the same coin.

On many fronts, then, the subtle matter of consciousness is central to this study. I therefore beg the reader to bear these considerations in mind, to give this book a fair and repeated reading, and to reject its conclusions only if they prove incoherent on the basis of their own presuppositions. Chapter 2 begins this intellectual project by laying out these presuppositions.