In the early fifth century C.E., the bishop Augustine (354–430) responded to a letter that criticized his agnosticism with regard to the origin of the individual soul. The crucial question was this: were all souls generated from Adam, or did God make a new soul for each human? Augustine professed not to know. His correspondent had accused him of being as ignorant as a cow if he could not give an account of his own soul. Augustine responded that the relationship between body and soul was a mystery to all:

From what part of the body does that which they call the *hēgemonikon* [the governing part of the soul] rule over the rest? Is it from the heart or from the brain? Or is it divided, with movement ruled from the heart and perception from the brain? Or are perception and voluntary movement both from the brain, while the involuntary pulsation of the blood vessels is from the heart? And if these two faculties are governed from the brain, why does it perceive even unwillingly, but does not move the limbs unless it wills?

Given human uncertainty over how the heart and brain operate, Augustine reasoned, it was surely unsurprising that the soul itself was obscure.

As his questions slyly reveal, Augustine was not so ignorant. The organ of the governing part of the soul was a stock question in ancient philosophy and regularly appeared in theological texts. Theodoret of Cyrrhus (c. 393–457) mapped out an overview:

How far they have differed amongst themselves regarding the location of the *hēgemonikon* is simple to map out: Hippocrates, Democritus, and Plato have stated that it is seated within the brain, Strato in the space between the eyebrows,
Erasistratus the doctor in the region of the cerebral membrane, which he terms the *epikranis*, Herophilus in the brain’s ventricle, Parmenides and Epicurus in the torso as a whole; Empedocles, Aristotle, and the Stoics collectively allocate the heart to it. And among these, again, some place it in the ventricle of the heart, others in the blood, some in the pericardium, and others in the diaphragm.4

The Stoic concept of the *hēgemonikon* referred to one of eight parts of the soul, the others being the five senses, reproduction, and speech.5 The *hēgemonikon* was the center of consciousness, responsible for thought, sensation, and voluntary motion. Consisting of *pneuma* (refined air), it extended outward from the heart like an octopus or a spider, activating and governing the rest of the creature.6 By the second century, the term had become generalized and could be applied to the ideas of thinkers far beyond the chronological and intellectual reach of the Stoics.7 The Presocratic philosopher Heraclitus, for example, had certainly never heard of the *hēgemonikon*. Nor, in all likelihood, had Plato or Hippocrates. Nonetheless, “What is the organ of the *hēgemonikon*?” could be answered with reference to anyone with an opinion about the bodily processes responsible for mental activity.8

By late antiquity, the central sites of the *hēgemonikon* were all located in either the head or the torso.9 These two clusters are typically identified as “encephalocentrism” (the brain is the organ of the *hēgemonikon*) and “cardiocentrism” (the heart is the organ of the *hēgemonikon*).10 Plato and the medical writers (Hippocrates, Herophilus, Erasistratus) were among the foremost authorities cited in favor of encephalocentrism.11 Aristotle and the Stoics were most prominent in arguments for cardiocentrism.12 Most late antique theologians, including Theodoret, preferred the brain.13 In this, they followed Plato (explicitly) and the second-century physician Galen (implicitly).14 This was in spite of the lack of scriptural corroboration: Jesus was never recorded instructing his disciples to “Love the Lord your God with all your brain, with all your mind, and with all your strength”—nor did God “examine our brains” for signs of evil.15 Instead, scriptural authorities centered the heart.16 Augustine addresses this discrepancy in his treatise *On the Trinity*:

Some, therefore, have reckoned that [the mind] is blood, some the brain, and some the heart—not in the way that Scripture says, *I will confess to you, Lord, with all my heart* (Ps 9:2), and *You shall love the Lord your God with all your heart* (Dt 6:5), where the word is being applied catachrestically or metaphorically, from body to soul. Rather, they are thinking just about that part of the body we observe when viscera are torn apart.17
Augustine saw that parts of the body might represent aspects of the soul and psychic experience. He sought to separate this rhetorical technique from arguments about how the soul operated through the substances and organs of the body. To help his reader grasp theories about the soul/body relationship, he called to mind an everyday experience: observing “the viscera...torn apart,” in a marketplace, for example, or at war. He was pressing back against a rising tide: during late antiquity, medical understandings of the brain as organ of the hēgemonikon gained symbolic power in discussions of what it meant to be a human being—rational, but embodied; vulnerable, but capable of ruling over the earth. Among Augustine’s contemporaries, the brain was both medical concept and rhetorical tool.

I have begun with the question of the hēgemonikon in part because it was the most prominent debate about the brain in late antique society. Also, however, it draws attention to a key theme in this book as a whole: the concept of the brain as a governing organ. Hēgemonikon means “that which governs.” Within Stoic thought, it was the coordinator of the other parts. By late antiquity, and in part through the work of Galen, the hēgemonikon had become conflated with Plato’s logistikon (“that which reasons”). As organ of the hēgemonikon-logistikon, the brain became an increasingly human organ, responsible not only for self-governance but for governance over others also. The fusion of ideas about reason and governance in the brain within early Christian thought forms an unexplored but crucial stage in the history of the brain as the putative key to what it means to be human. How this process unfolded in the images and arguments of early Christian texts is the focus of this book. The goal is to better understand what lies beneath our own fascination with the brain as the center of our power, and how our concepts and imaginings of the brain have in consequence shaped what we imagine power to be, how we understand it to operate through our bodies, who gets to have it, and who does not.

**THE ROOTS OF BRAINHOOD**

We are living in the aftermath of the era of the brain. Across academic and lay scientific discourse, we learn that gender is constituted in the brain, that gut inflammation produces brain chemistry conducive to depression, and that functional magnetic resonance imaging technology, which records the magnetic properties of blood flow in the brain, can represent our thoughts and
actions, as well as where and why they take place. In accounts of trauma, therapeutic focus has come to focus on the brain and nervous system, a shift that Catherine Malabou has described as “cerebrality,” in opposition to the Freudian focus on sexuality and the genitals. The boom in psychopharmaceuticals has fostered the development of what Nikolas Rose calls “neurochemical selves.” In the words of neurobiologist Dick Swaab, we are our brains.

Philosophers and neuroscientists have argued that our assumption that the brain is identical with the human subject must be understood historically. Some claim that it is a holdover from Cartesian dualism, out of place in materialist neuroscience. Fernando Vidal has provided a more specific and compelling etiology, arguing that the identification of the human self with the brain arose within seventeenth-century Europe out of the convergence of philosophical materialism with psychological theories of personal identity and the reconceptualization of soul not as animating force but as intellect. He names the resultant phenomenon “cerebral subjectivity” (sometimes, more colloquially, “brainhood”). Crucially, Vidal understands cerebral subjectivity to be ideological, insofar as it is bound up in the classical liberal prioritization of an autonomous and rational human subject, a position that pretends to the absence of interdependency within human communities and that excludes from full citizenship and sometimes selfhood those who are dependent or whose cognitive capacities are perceived as nonnormative or impaired. Rather than understand cerebral subjectivity as the sticky residue of dualism within the otherwise materialist discipline of neuroscience, Vidal argues that cerebral subjectivity in fact generated the discipline of neuroscience—that is to say, the identification of the self with the brain produced the brain as an object of scientific investigation.

When it comes to the period prior to the seventeenth century, historians of the modern brain are typically rather vague. Skipping from Galen (second century) to Descartes (seventeenth century), Vidal argues that the anatomical brain had little relevance to the concept of the human person in the intervening period. The Galenic brain “functioned as a factory and storehouse of the animal spirits,” such that “animal spirits” and humors “determined a person’s character.” Fluids and gases, not anatomy, were the key. As such, the brain itself bore no relation to the self.

In this argument, Vidal represents a general consensus. We tend to think of the brain as modern. By this I mean secular and scientific: scientific, inso-
As we saw above, the brain played a central role in ancient and late antique discussions of what it meant to be a human being. A central goal of my analysis is to begin the work of connecting our (quite detailed) knowledge of ancient Greek medical ideas about the brain with our (extremely detailed) knowledge of early modern European medical ideas about the brain, focusing in particular on the critical moment when early Christian intellectuals established themselves as central social and political authorities within the Roman Empire. I will argue that the concept of the brain was a powerful tool in their explorations of what it meant to be human and to hold power over others. In so doing, I seek to dig down beneath Vidal’s seventeenth-century genealogy of the cerebral subject to expose the premodern and Christian root system beneath. Early Christianity, as I argue through the course of this book, shaped modern self-identification with the brain as agent and instrument of governance over self and others.

Early modern knowledge about Galenic theories of the brain was filtered through influential late antique preachers and theologians, each of whom had their own theologically inflected ideas about the role of the brain in human personhood. Like Galen, late antique Christian intellectuals considered the brain to be the organ of the rational soul. Unlike Galen, they willingly departed from the constraints of medical theory to examine the role of the brain in accounts of salvation, church-building, and ascetic practice. It is valuable, therefore, to contextualize modern and early modern notions of brainhood in
terms of their early Christian antecedents. The voices of late antique theologians—as loud as Galen’s in sixteenth- and seventeenth-century Europe—presented the medical concept of the brain as a tool for thinking about the human being and the soul, so laying the foundations for the identification of brain with human self that came to dominate Western science and philosophy. By examining how preachers and theologians made use of the brain, we can glimpse the early Christian interests and obsessions that haunt our conceptions of the brain as the organ of the self.

Late Antiquity and the History of Medicine

Late antiquity typically refers to the transitional period between ancient and medieval worlds. Within the history of the Mediterranean and its adjacent regions, it is fundamentally tied to the disintegration of the Roman Empire and the rise of Christianity and Islam as politically powerful, monotheistic religious systems. Often it is understood as a time of crisis and decline, although the work of cultural historians in recent decades has amply demonstrated the vibrancy and adaptability of late antique culture and society. The chronological boundaries of this period are debated, in particular because “late antiquity” elaborates a periodization rooted in Greco-Roman history and encompasses elements beyond the purely chronological: as Hervé Inglebert has argued, it tends to refer to a geographical region (the territory of the Roman Empire), specific themes (for example, religious transformation), and a negative value judgment (the “late” of late antiquity refers to the longstanding perception of the period as one of cultural decadence and political fragmentation).

Some follow Peter Brown’s The World of Late Antiquity in identifying the period as c. 150–750. Others focus more narrowly on c. 200–600 or some period within that frame, especially if working more closely on an aspect of the Roman empire. Still others recommend that we should instead pursue first millennium studies, which offers a more arbitrary window that is not centered around Greece and Rome. The scope of this book is, roughly speaking, c. 200–600, with the central focus falling on the fourth and fifth centuries, during which period Christianity transformed into the dominant religion of the imperial elite, in part through the investment of elite intellectuals who drew upon medical and scientific knowledge to formulate authoritative statements about what it meant to be a human and a Christian.
Introduction

Within a traditional, classicizing view of the ancient Mediterranean world, late antique culture has often been understood as inferior and imitative of what had come before, a belief that was expressed already in late antiquity itself. Until quite recently, the period was cast as the gateway to the so-called Dark Ages, and it was assumed that Christian preachers and intellectuals abandoned the coolly rational scientific investigations of classical Greece and Rome, insisting instead upon theological dogma. There was a widespread perception, slow to change, that medicine in particular stagnated after Galen (c. 130–215/16). Historians have pushed back on this view in recent decades, paying close attention to late antique medical culture on the one hand and to Christian intellectuals’ engagement with scientific and medical ideas on the other in order to establish richer intellectual and popular histories of medicine during this period of transformation. It has become clear that late antiquity was a period that valued the work of intensively studying, repackaging, and repurposing ancient (indeed, already “classical”) works across a wide range of intellectual disciplines. These acts of organization neither excluded existing scientific ideas nor functioned solely as vehicles that incorporated classical material whole and transmitted it in pristine form to the medieval world. Instead, the intensive engagement with the past that we see in late antique intellectual culture indicates ongoing negotiations between varied sources and authorities. These negotiations filtered and reshaped medical and scientific ideas about humans and their environments for late antique audiences and medieval readers.

At the root of the assumption that late antique Christian authors stood in the way of science is the presumed genealogical connection between ancient Greek “science” (that is, the study of the natural world) and modern science (that is, the set of disciplines and methods that emerged in seventeenth-century Europe). This connection, which is embedded in twin narratives of the “Greek miracle” (that is, the exceptionalism of ancient Greece as a site for the invention of, among other things, philosophy, science, and medicine) and European “inheritance” of Greek culture, has meant that ancient Greek (and only ancient Greek) science has traditionally been included in histories of the science, including histories of the brain, as though science were an invention of the Greeks that found its fulfillment in early modern Europe.

As historians have long pointed out, this narrative betrays its intellectual roots in European hegemony, insofar as it frames the activity of medieval Arab-Islamic thinkers as the vehicle in which Greek knowledge was ferried
into the European Renaissance. It also raises the question of what we mean when we use the word “science.” Does it refer to a culturally specific activity invented in early modern Europe? In this case, the ancients cannot have practiced science since it did not yet exist. Is it, rather, an umbrella term that is useful for describing various cross-cultural practices of seeking and making knowledge about the natural world? If so, then the whole opposition between (Greek) science and (Christian) religion collapses, since this kind of science can (indeed, often does) include theistic understandings of the natural world. The resilience of narratives of connection between ancient Greek and modern Western science is rooted in the projects of European colonialism and white supremacy, insofar as both have called on connections to the classical world for the legitimacy of cultural and political dominance. Closer attention to the wedge of Christianity that is lodged between ideas of ancient Greek and modern science as rational, secular projects reveals the lie in the conventional arc from Greek miracle through Christian decline into early modern European rebirth: by historicizing scientific objects, furthermore, we can begin to denaturalize them and so contribute to the work of building a pluralistic science studies that does not take a single epistemological frame or conceptual system as its center of gravity.

What, then, did “science” look like in late antiquity? The rise of Christianity as an imperial religion certainly shut down forms of religious and intellectual pluralism within its sphere of influence, but it did not bring about the “decline” of science so much as transform and adapt scientific projects and knowledge to new ends. By tapping into the transformations that late antique Christian authors wrought upon existing medical ideas about the brain, it is possible to interrupt the imagined evolutionary progression between ancient Greek and modern, Western science and also to grasp the theological pressures that shaped some key scientific objects as they were taken up by early modern European scientists.

This shift in narrative from decline to transformation is common within late antique studies. It is now generally understood that late antiquity was a moment of social, political, religious, and cultural transformation in the Mediterranean world. During this period, Christianity became first a legal and then a compulsory religion within the Roman Empire. Bishops, priests, and holy men became ambassadors between rulers and cities, rich and poor, human and divine. Theological debates burned like wildfires, resulting in depositions, excommunications, and exile. Fundamental to these controversies
was the contested status of the human body, which was rejected as a site of corruption and sin but also celebrated as the medium of both the incarnation and the resurrection, as well as of spiritual practices such as ascetic training.

Within this book, science refers to the cross-cultural and transhistorical project of examining and describing the world, with a focus on the “natural” world, that is, living bodies and their environments. While I do distinguish between medical, philosophical, scientific, and theological approaches in late antique culture, I follow Heidi Marx in the basic premise that late antique intellectuals worked across disciplines to study both natural and supernatural phenomena: in late antiquity, science did not exist as an intellectual discipline defined in opposition to theology; rather, the study of the natural world was integrated with theological investigation.

Like Galen, late antique Christian intellectuals considered the brain to be the organ of the rational and governing soul, the ἥγεμονικόν. They followed medical authorities in describing the brain as a soft and vulnerable organ that received sensory impressions, stored memories, and initiated voluntary motion. When a person displayed signs of madness, they held the brain responsible. They explained to their congregants that the brain was connected to all the other parts of the body through the nerves, which carried pneuma from the brain into each individual part, establishing a network that relied on the integrity of the brain to function. In the majority of their references to the brain, late antique Christian authors borrow from medical ideas, occasionally expanding or elaborating the figurative language associated with these ideas to support their own rhetorical agendas. This is significant because Christian pastoral texts, especially homilies and sermons, enjoyed a far wider circulation than medical treatises among late antique and medieval audiences. Late antique Christian writings were an important vehicle for transmitting medical ideas about the brain outside of expert medical communities.

Furthermore, unconstrained by the scope or genre expectations of medical authors, late antique Christian preachers and theologians were in a position to appropriate the brain as a flexible tool in their rhetorical arsenal. The brain governed the body just as humans governed the earth and God governed the cosmos. The brain was physically vulnerable compared to other parts of the body, in the same way that the human being was physically and psychically vulnerable in comparison to other animals (that is to say, vulnerable to attack and to temptation). Christian individuals needed to take care of their brains through appropriate behaviors (for example, moderate fasting) in order to
ensure that their rational souls could operate freely and effectively, so enabling
the kinds of self-control important to spiritual health. At the same time, the
brain was not in the same category as the soul: injury to the brain could not
actually compromise salvation since the brain was merely bodily matter. These
tensions shaped the concept of the brain as it was transmitted to medieval and
early modern audiences.

Early Christian reception is a key, albeit understudied, moment in the
history of the brain; in similar ways, the brain is a particularly crucial concept
to explore when considering early Christian engagement with medical exper-
tise and the body more generally. This is because the brain was typically
understood as the node that connected the material and mortal body to the
immortal, immaterial soul. It is also because, contrary to common assump-
tions about stagnation in late antique medicine, a new theory of brain function
was developed during this period. The earliest extant witnesses to the model
of brain function known as ventricular localization come from the late fourth
and early fifth centuries, chiefly from the works of theologians, although they
were almost certainly drawing from medical texts or acquaintances. Accord-
ing to ventricular localization, discrete faculties of the soul, such as memory,
operate through, or dwell within, ventricles (that is, “little stomachs”) within
the brain. Ventricular localization was to become one of the longest-enduring
models of brain function in human history, and it paved the way for subsequent
frameworks that highlighted localization, such as phrenology. Its dominance
was assured in part because of its centrality in influential Christian texts.

The brain is also an interesting object of examination within the study of early
Christianity because it became a figurative resource to aid in exploring key ques-
tions and debates, especially in relation to governance, reason, salvation, and their
relation to human vulnerability. As I will explore, early Christian authors devel-
oped imaginative strategies for incorporating the brain into accounts of what it
meant to be part of political and spiritual communities: the brain as a king, the
brain as Christ, the brain as a drunken man—these images developed out of early
Christian efforts to tap into and to control the potential of the brain. In the same
way that metaphors tend to reflect underlying conceptual structures and assump-
tions about how the world works, the elaboration and repetition of new metaphors
about the brain influenced perceptions of its shape and functions.

Finally, the philosophical questions of early Christian writers set the stage
for centuries to come: To what extent is the brain responsible for moral judg-
ment? Is a person who suffers from brain-based mental illness responsible for
their actions? Is the soul contained within the brain, or does it rather exist externally, playing the brain like some kind of flute or lyre? These questions were not new to Christian authors, but Christian theological debates made them newly pressing, and it was through sermons and homilies that they were to filter down to later audiences.\textsuperscript{46} In late medieval and early modern Europe, when the brain came to the center of attention with the translation into Latin of texts such as Nemesius of Emesa’s \textit{On the Nature of the Human Being} and Galen’s \textit{On the Usefulness of the Parts}, the context in which it invited investigation and fresh theorization was contoured around philosophical questions that had been motivated by early Christian concerns.

\textbf{Approaches to the Brain}

Previous studies of the brain in ancient Mediterranean thought have focused on medical and philosophical texts, almost exclusively with a view to the psychological functions of the brain.\textsuperscript{47} Theories of the brain’s role in cooling the body or absorbing excess fluids and descriptions of the brain’s texture and internal structures have rarely received attention, and often they have been dismissed as erroneous.\textsuperscript{48} The distinctive contribution of this book is to explore the brain as a cultural object that had a wide range of functions and that took shape across several hundred years and in a range of social and intellectual contexts. In this, I follow Roberto Lo Presti, who framed his study of the Hippocratic treatise \textit{On the Sacred Disease} as “a kind of archaeological operation” intended to contribute to the “epistemological history of the brain: the history of its constitution as an object of knowledge,” not by seeking out the exact forerunners to modern neuroscience in ancient medicine, but by sketching out “the epistemological presuppositions and discursive rules that rendered such [modern] theories and scientific investigations possible.”\textsuperscript{49} Whereas Lo Presti takes a single text as his lens, the scope of this book is a cultural moment: the emergence of Christianity as a legitimate and then dominant religion within the late Roman Empire and the upsurge in Christian leadership drawn from the educated elite, who brought with them both extensive knowledge of philosophical and medical theories of the body and an investment in the cultural capital of these theories as a kind of currency that circulated through rhetorical performances.

Early Christian preaching constituted a major passage-point in the transmission of medical ideas, including ideas about the brain, into the early
medieval world. Late antique texts that incorporated references to the brain did not function as refrigerators (to borrow from Nutton’s historiographical critique) but like microwaves, blenders, and paring knives that recycled, reshuffled, and reshaped existing medical knowledge for new rhetorical and pedagogical programs. Rather than focusing on the authors who knew most about the brain or who represent the closest possible access to cutting-edge medical ideas, this book works more in the mode of reception studies, exploring how ideas were ferried out of ancient medicine into other realms of thought. In this, I seek to open up the ancient concept of the brain for study as a cultural object that straddles expert and nonexpert discourse.

By taking early Christianity as my focus, I have sought to show how the work of hammering out ideas about power, salvation, and embodiment toward the legitimation of a newly powerful religion shaped the brain into the kind of conceptual object that could come to represent selfhood—in particular, the kind of selfhood that depends upon modes of control and reason for its existence and its value. I borrow the term “conceptual object” from Brooke Holmes’ study of the emergence of the “physical body” as separable from the human subject, “an object of and an impetus to thought and imagination.” Like Holmes, I seek to defamiliarize an object that “has remained largely external to our critical apparatus” to the extent that ancient accounts of the brain are typically assessed on their level of “accuracy” (that is, their degree of proximity to current ideas). In this, I also follow other historians of the body in borrowing tools and strategies from medical anthropology to decenter modern biomedicine as the exclusive or dominant framework of knowledge. This shift in perspective is a matter both of historical method (insofar as it attempts to examine ancient texts and ideas on their own terms) and of politics since it is part of a broader movement to challenge the imposition of imperialist scientific systems of managing and regulating bodies.

My approach to the history of the brain more particularly is grounded in critical neuroscience, a transdisciplinary field of research that analyzes how and why the brain has come to play a central role in scientific explanations of human behaviors. An explicitly political field, critical neuroscience seeks to expose the values, moral frameworks, and ideologies that underpin neuroscientific research and popular engagement with the brain, especially those that equate understanding the brain with understanding what it means to be human.

Core to this work is the argument that the centrality of neuroscience to current explanations of what humans are and how we operate is an artifact of
cultural, political, and economic practices rather than a reflection of the centrality of the brain itself to human subjective experience. This is not to deny the efficacy of neuroscience or the accuracy of the “brain facts” that it produces. Rather, it is to analyze “the ways in which, and conditions through which, behaviors and categories of people are naturalized” and, further, to examine “how these ‘brain facts’ are appropriated in various domains in society.”

Following this rubric, the present book analyzes how early Christian intellectuals appropriated “brain facts” that circulated within medical and philosophical literature in order to establish the natural status and moral value of specific behaviors (for example: moderate asceticism) and categories of people (for example: the spiritual athlete).

At the heart of critical neuroscience is the work of “reinscrib[ing] the objects and practices of neuroscientific knowledge back within the webs of social, cultural and historical context to which they are always inevitably subject.” This is explicitly not a social constructivist vision, but instead understands the brain and neuroscience itself to be entangled with one another and with other material stuff, discourses, practices, and problems. Similarly, my project in this book is not to assert the falsity of claims that the brain is crucial to cognition, moral judgement, and self-control. Rather, it is an attempt to make legible the historical moment at which the brain became a way of talking about the importance of vulnerability and control to what it meant to be human. This work is grounded in the premise that the brain could have been otherwise, that we certainly might have been otherwise, had it not been for the particular norms that Christianity established during the dawn of its imperial ascendancy. The alternative possibilities that I imagine for the brain are both conceptual and material: how we think about the brain changes the brain, as many others have pointed out, both because it affects how we treat the brain (for example, how we nourish it, how we exercise it, how we manipulate its activity) and because thinking itself is a fundamental process through which the brain transforms.

The body is a fundamental theme in the study of late antiquity. With their focus on asceticism, celibacy, demons, martyrdom, resurrection, and the relationship between flesh, spirit, and soul, late antique religious experts set the terms for theories and experiences of embodiment within medieval Europe, leaving a legacy that in many ways still remains. The focus on how these religious experts incorporated and elaborated upon medical knowledge is more recent, reflecting the rise of humanist approaches to the sciences in
recent decades. The study of medicine and religion in late antiquity has opened up new avenues of research, highlighting the interdisciplinarity of late antique intellectual activity and the depth of technical knowledge that lies behind apparently casual remarks and tropes that have to do with the body and its well-being.

A key question within this field is how to interpret medical metaphors in religious texts. This question is salient within critical neuroscience also. Metaphors of the brain often encode ideas about the relationship between the brain and the mind or self. When metaphors change or contradict one another, this may reflect the different aspects of the brain/self/mind relationship, theoretical pluralism, or the liminal quality of the brain’s role as mediator between different planes of being. As Jan Slaby and Suparna Choudhury write in their programmatic essay, it is necessary to ask how “certain metaphors begin to frame, and even shape, our understanding of the brain,” indeed, how they “become tenable in the first place.”

Given the figurative tendencies of early Christian texts, these questions might already be considered fundamental to the chapters that follow, regardless of the metaphors in question. Yet, within the study of medicine and religion, the interpretation of metaphors is especially crucial. The central structuring metaphor within early Christianity was that of healing as salvation. This image served as a lynchpin in a conceptual network that supported the elaboration of metaphorical and conceptual associations across various domains, most obviously the theological, but also the moral and the political. Preachers and theologians, borrowing from philosophers, identified themselves (and Christ) as physicians of the soul and their work as healing their audiences of sin. Any reference to medical knowledge, including the concept of the brain, in early Christian texts must be interpreted in light of these fundamental metaphors.

Christian references to medical concepts have often been dismissed as mere ornament or idiom. Yet, they are basic windows into and tools for shaping experiences of embodiment and relationality. Metaphors reveal what speakers expect their audience to already understand and have the capacity to imagine, “the horizon of possibilities for thinking and acting” within a cultural and intellectual context. Within this book, I follow other late antique historians in drawing on conceptual metaphor theory (CMT) as a useful framework for making legible the thought-worlds that metaphors imply. According to CMT, metaphorical expressions (metaphors that are encountered in
texts or speech, for example, “follow your path”) can be analyzed to reveal conceptual metaphors (underlying conceptual structures, for example, life is a journey). While the reductive tendencies of CMT invite debate, its central claim—metaphors reflect habits of thought—is widely accepted, and the theory has opened new avenues for research into late antique history by encouraging the reinterpretation of metaphors not as ornaments but as indicators of “an underlying way of thought” that is largely preconscious. This approach is reflected in a growing body of scholarship that investigates medical metaphors in late antiquity.

CMT has proved attractive to and useful for late antique historians not only because it enables the analysis of metaphors as evidence for the history of thought, but also because of the importance that it gives to the body. According to Lakoff and Johnson, the body is a fundamental source of metaphors: the conceptual metaphor good is up, for example, assumes the body as a point of departure. Embodied experience produces metaphors—both metaphorical expressions and their underlying (and typically implicit) metaphorical concepts. This resonates with the body metaphors (especially metaphors that connect body to society) that wend through late ancient discourse. When transferred from a linguistic to a historical approach, CMT, with its focus on embodiment, offers tools for analyzing not only how bodily experience directs metaphorical concepts, but also how metaphors structure and illuminate the experiences of ordinary embodiment. This takes us beyond the fundamental claims of CMT. As Kristi Upson-Saia writes, “Late ancient Christians’ medical metaphors [were] more than just a conceptual or linguistic frame to borrow. . . . Religious authors were borrowing medical ideas to think about early Christians’ material bodies (both their anatomy and physiology) so that they could describe what ailed their congregants and prescribe material, ritualized interventions that would restore them to full health.” Metaphors reveal habits of thought that are often unconscious, but they are also used to navigate and manipulate bodies. Greek philosophers had developed the popular metaphorical expression that philosophy is medicine for the soul. Late antique Christian theologians and preachers transformed this metaphor into an argument that Christianity is medicine for the soul and the body also.

When interpreting metaphors of the brain in late antique texts, it is important to consider the understanding of figurative language within ancient rhetorical theory and Christian exegesis also. In the arguments that I construct throughout this book, much turns upon the interpretation of complex
metaphor and, crucially, upon the question of whether an account of the brain is to be understood in literal or figurative terms, to the extent that such a binary can be applied. This raises the further question, however, of the extent to which late antique audiences would have thought about this distinction, and indeed of what frameworks they had in place to make sense of the medical metaphors that they encountered within sermons and other texts.

In his *Institutes of Oratory*, Quintilian introduced metaphor as follows: “Let us begin, then, with that which is both the most frequent and the most beautiful by far—that which I call *translatio*, but which is known in Greek as μεταφορά.” As Averil Cameron has argued, figurative language was especially important in early Christian rhetoric, not only as a “beautiful” artifact, but also as a tool for illuminating the mysterious and unknowable qualities of the divine, by “presenting the audience with a series of images through which it was thought possible to perceive an objective and higher truth.”

This use of metaphor to illuminate the unfamiliar through the familiar could be understood not only in terms of transformed perception or revelation, but also as the relocation of the observing subject. In his commentary on *Song of Songs*, Gregory the Great wrote that allegory (which ancient rhetoricians often defined as a kind of metaphor) “makes something like a machine [machinam]” by which the soul “might be lifted [leuetur] to God.” In other words, if metaphor is, etymologically, a “carrying across,” then, when integrated into allegorical interpretation, it functioned as a lever that lifted the soul out of the mortal, bodily realm and into the realm of the divine.

The fourth century was a period of contestation regarding the value and veracity of allegorical and literal interpretations of the Judeo-Christian scriptures. In the late twentieth century, scholars in late antique studies and Patristics began to challenge the conventional view that fourth-century exegetes were divided into the “Alexandrians,” who dealt in allegory, and the “Antiochenes,” who offered only literal interpretations. While there were exegetes who identified with each camp, the terms are perhaps better understood as “fighting words,” leveraged in order to “justify one’s own reading and denigrate that of the other.” The stakes in this exegetical battle were high, but the result was not that one mode of reading prevailed; rather, through polemical sermons and orations, pamphlets and tracts, late antique congregants were trained to distinguish layers of figurative and literal meaning within scriptural imagery. Exposure to a range of competing interpretations—all of which drew upon a range of reading strategies, and many of which deployed
both figurative and literal exegesis—schooled late antique audiences in the
discerning multiple meanings within a single image, even within a
single word. Late antique audiences and readers were expected to apply these
interpretative practices not only to images in the Judeo-Christian scriptures,
but also to those developed by contemporary Christian authors. Trained in
rhetoric and in exegesis, preachers wove literal and figurative threads into a
mode of speech that worked upon its audience through its connection between
multiple images and planes of meaning. When we encounter metaphors of
the brain in Christian texts, we should assume not only that these metaphors
can function as tracers for underlying conceptual structures but also that late
antique audiences engaged in sophisticated strategies of interpretation in order
to construct their own understanding of what it meant to have a brain and
what this then meant for the work of being human.

REASON, REGULATION, VULNERABILITY, AND THE BRAIN

“From what part of the body does that which they call the ἡγεμόνικον rule over
the rest? Is it from the heart or from the brain?” When Augustine raised these
questions in his letter to the layperson who had challenged him regarding his
ignorance about the origins of individual souls, he was drawing on commonplace
knowledge to dismiss his opponent. The brain entered late antique conscious-
ness as a probable, if problematic, answer to the question, What is the organ of
the governing part of the soul? A core argument of this book is that early Christian
authors built on the foundation of this question to present the brain as crucial
for governing both the self and others, a capacity that was tied to reason (as we
might expect) and vulnerability (which we might not). This triangle of govern-
ance, reason, and vulnerability shaped the brain into the kind of object that
could become a “cipher for the self” in early modern European science, and it
also naturalized certain norms and expectations related to human and especially
Christian identity. This is in part because, as I will argue, the brain became
identified with the human being, both in the metonymic sense (the individual
brain could stand in for the individual human) and in the sense that brains
themselves became humanized, representing the distinctive characteristics that
guaranteed the claim to a unique human capacity for rulership and salvation.

In a letter to his brother Peter, Gregory of Nyssa writes of humankind as
follows: “How, you might ask, has such a creature been allotted governance
over everything? . . . The apparent neediness of our nature is the occasion for
domination over all things that are under our control.” The brain echoed this paradox: it was soft, delicate, and in need of physical protection; yet it was also the governing organ within the microcosm of the animal body—and not merely in spite of, but also because of, its weakness. Softness was the foundation for sensitivity. Intelligence required vulnerability. This oxymoron—strength in weakness—served to explain the apparent disconnect between the Christian theory that God had designed human beings perfectly for their role as governors and stewards of the created world and the obvious weakness of human bodies in comparison to other animals. It also warned listeners of their limitations as mortal, embodied beings. The brain, as the instrument of the distinctively human capacity for reason, became a kind of model and metonym for the way in which physical vulnerability could simultaneously produce and constrain the intellectual qualities that enabled hierarchical power and control.

Early Christian authors used medical ideas about the brain not only as conceptual and figurative tools to explore what it means to be human, but also to instruct their congregants and readers in proper Christian behavior. Preachers bolstered their condemnation of drunkenness, for example, by hinting at the effects of alcohol on the brain. At the same time, excessive ascetic practices (for example, avoidance of sleep) were criticized on the grounds that they could damage the brain and so undermine the purpose of ascetic practice in the first place.

This emphasis on cerebral vulnerability motivated conformity to behavioral standards by representing the limits and the techniques of self-governance. The brain became a material signifier of human vulnerability and therefore of human dependence on God. It is no coincidence, then, that it is in the early Christian period that we see a sudden multiplication of anthropomorphizing metaphors of the brain: the brain as king, the brain as priest, the brain as a drowning man. These metaphors reflect the proximity between the brain and the human being in early Christianity—a proximity that was, I argue in this book, a precursor and foundation for subsequent identifications of the individual human self with their brain. The aspects of human identity associated with brainhood in early Christian thought were rationality, regulation (over self and others), vulnerability, and the capacity for spiritual sickness and healing.

CHAPTER SUMMARIES

Chapter 1 begins by examining the circulation of medical knowledge outside of expert contexts in late antiquity. This work is a necessary foundation to
grasp the significance and the limits of references to the brain in Christian literature. Through parallel analyses of Christian and non-Christian sources, I argue that medical knowledge about the human body carried cultural capital in late antiquity and was in the process of being transformed into more accessible and portable forms. References to the brain in early Christian texts reflect broader cultural frameworks and values.

Whereas the first chapter offers social and cultural context for the analyses that follow, chapter 2 provides historical context, surveying ideas about the brain that circulated prior to late antiquity. The purpose of this is threefold: first, to sketch out the range of intellectual resources that Christian authors may have accessed in their representations of the brain; second, to explore how psychological and nonpsychological models of the brain coexisted, sometimes even within the same account, in ancient medicine and philosophy; and third, to show, nevertheless, how the psychological model of brain function (the brain as the organ of the governing part of the soul) became dominant in the centuries leading up to late antiquity. This last point is important because it suggests why the brain was such a potent symbol for late antique Christian authors.

Chapter 3 continues the work of the second chapter in examining theorizations of brain structure and function, but it pays particular attention to late antiquity. My argument in this chapter shows how a close reexamination of the sources within their Christian context might transform our understanding of the history of medical concepts of the brain. As this chapter explores, the longest-enduring model of brain function emerged in the fourth century C.E. and was transmitted almost entirely through the writings of two late antique bishops. This model, which is called ventricular localization in the study of ancient medicine and cell theory in medieval or early modern studies, ascribed a discrete faculty of the soul to each “ventricle” or “cell” that earlier anatomists had identified within the brain. These faculties depended on the movement of pneumata through the ventricles of the brain and the associated nerves. Historians of the brain have long asserted that ventricular localization is not a true model of brain function, since the brain seems to operate merely as a container for the pneumata. I argue in this chapter that if we interpret ventricular localization in light of the late antique metaphor of the body and brain as instruments of the soul, then we can set aside the modern binary between brain substance and hollow ventricles and understand the ventricles, pneumata, and cerebral structure to be working in collaboration with one
another in the manner of a flute or a lyre. That is to say, by examining the early Christian sources for ventricular localization in closer detail, it becomes possible to see the limitations in the modern concept of the “brain” (qua solid body) as a tool for assessing late antique theories and to lay the foundations for more nuanced analysis.

Chapter 4 marks a turn from explicit theorization of how the brain works to interpretations of its figurative appearances in early Christian rhetoric. The focus of the chapter is the central metaphor of the brain as a governing agent within the human body. In late antique Christian writings, I argue, we see the emergence of varied and elaborate anthropomorphizing of the brain in different governing roles. These metaphors suggest a tightening association between the brain and the human being as bodies that govern self and (through self-governance) others. As I turn to in the following chapters, this capacity for governance was both enabled and constrained by vulnerability.

Chapters 5 and 6 examine the rhetoric of cerebral vulnerability in early Christian texts. By this, I mean the ways that Christian authors used medical and philosophical discussion of the brain’s physical delicacy as a tool for talking about the psychological vulnerabilities and mortality of human beings. Chapter 5 demonstrates that Christian preachers used the physical vulnerability of the brain to construct persuasive arguments for ascetic practices, especially fasting, avoidance of alcohol, and minimal use of perfumes. Chapter 6 argues, in turn, that preachers and theologians used the brain-based mental illness phrenitis to build arguments against reliance upon asceticism, especially excessive asceticism, as a tool for salvation. Through this two-pronged argument, I show how the vulnerability of the brain could stand in for the limits of human self-determination as embodied, rational beings.

What was the theological advantage to early Christian authors of emphasizing cerebral vulnerability? Chapter 7 turns from the pastoral mileage available in this rhetoric to its implications for Christian anthropology. Through an examination of the use of comparative anatomy in Christian discussions of the human being, I argue that the emphasis on cerebral vulnerability as a sign of human dependence on God was part of a broader appropriation of the brain as symbol of the human being in late antique Christian thought. This “humanization” of the brain served a theological and pastoral agenda and laid the foundations for the identification of the brain with the individual human subject in subsequent medical and philosophical thought.
Specifically, this conception of the human being was of a creature that governs and can be saved. The early Christian brain required a particular kind of care (moderate ascetic practices) in order to tend to its vulnerability in a way that would continue to allow for reason, salvation, and control over the self and the rest of the created world.