are grounded, not in the Leibnizian notion of possible worlds, but in the Aristotelian theory of act and potency. Whereas the rationalist tends to collapse all possibility into what the Scholastic calls logical or objective potency … for the Scholastic, what is possible for a thing is a function of its real or subjective potencies, which are grounded in the various ways in which it is in act or actual" (141). Such contrasts show how Thomism can speak to the contemporary world by putting the anti-metaphysician on the spot, even while pointing out some similarities. A certain charity inheres in this kind of critique, as it seeks not to destroy other schools of thought but, whenever possible, to help them flourish and even achieve their fullest potential. Consequently, the tone of *Scholastic Metaphysics* is restrained and respectful, never hostile.

In other words, Feser's Thomism can take on scientism. When examining the claim that Newton's principle of motion refutes Aristotle's, he notes that they "are *not* talking about the same thing, or at least not exactly the same thing. Newton's principle is concerned solely with *local* motion, change with respect to place or location. When Scholastic philosophers speak of 'motion,' they mean change of *any* kind" (119). Throughout the book, Feser stresses that when Scholasticism and science appear to conflict with each other, the two approachs are, in fact, talking about different things, or the same thing from very different angles. Instead of offering competing claims, they are often complementary and certainly do not refute each other.

Much of *Scholastic Metaphysics* is contrastive and builds the case for Thomistic metaphysics by comparing the failures of other systems to its successes. Feser aims to dispel the notions that, on the one hand, becoming is constant and there is no being or potency and, on the other, that to safeguard the reality of being, change is only an illusion. Aristotelian philosophy, above all Thomism, offers a rebuff to both viewpoints by placing act and potency at the heart of the argument, thus allowing for both being and change. Feser unearths many undeclared assumptions of modern philosophy that either unwittingly rest on the foundations of unworkable metaphysics or spill over into philosophy.

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Being Mortal: Medicine and What Matters in the End

by Atul Gawande

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Has medical technology rendered discussions of the *ars moriendi* obsolete*?* Is it still possible, in an era marked by ever-lengthening life spans and institutionalized caretaking, to persevere through the wintry season of senescence with some small measure of autonomy and intact dignity?

In this informative, accessible, and deftly written book, surgeon and best-selling author Atul Gawande surveys the shifting landscape of end-of-life care in the United States and is troubled by what he sees. "For more than half a century now, we have treated the trials of sickness, aging, and mortality as medical concerns. It's been an experiment in social engineering, putting our fates in the hands of people valued more for their technical prowess than for their understanding of human needs. That experiment has failed" (128). The casualties of this recurring failure include those who endure unnecessarily protracted deaths as well as those whose cherished

memories of a loved one are forever cast in the pall of a painful and undignified end.

Framing his work as an exploration of "the modern experience of mortality," Gawande begins with a sketch of the historical shift in trajectories of dying (9). Whereas previous centuries witnessed precipitous and discretely demarcated deaths, mortality is now more likely to be experienced as a lengthy, fluctuating process with an indiscernible beginning and an indeterminate end. Gawande's description of physical disintegration conjures images of a wind-up toy ingloriously completing its performance with a series of sputters, stumbles, and the spasmodically grinding and wheezing of ossified internal mechanisms before mercifully falling silent. His clinically precise, if rather discomfiting, summary of age-related biological dissolution sets the stage for the primary focus of the book's first half: the perils and possibilities of long-term care.

Over several chapters, Gawande assumes the role of Virgil in a Dantean journey through long-term care facilities. The pilgrimage begins with the ghastliness of a cacophonous, stench-filled New Delhi home for the indigent aged and then proceeds to the *purgatorio* of contemporary American nursing homes, where confinement in structurally enervating environments renders residents psychologically moribund.

Along the way, Gawande challenges certain fundamental assumptions about the status quo of institutional long-term care. Most notably, he questions the judgment that resident safety is an unassailable, paramount value. Does physical fragility and the sensible need for a structured environment inevitably necessitate a life stripped of even the thinnest veneer of liberty? Gawande believes the obsession with risk aversion can degenerate into an institutional neurosis that traps both residents and staff in sclerotic, life-eroding routines. He worries that safety, along with its satellite priorities of compliance, efficiency, and routine, too often supersedes residents' needs for autonomy, meaning, and relationships.

Turning his attention to direct patient care, the author frankly acknowledges the dismissive attitude with which many in his profession treat elderly patients who suffer from intractable problems. Efficacious, life-enhancing geriatric care necessitates interventions tailored to each patient's particular competencies, symptoms, and daily goals. This requires a blend of medical and interpersonal expertise that is a rare commodity in a profession increasingly smitten by sophisticated, technology-driven solutions. Gawande confronts readers with the reality that the need for competent elderly care will probably continue to increase unmet.

Gawande finally glimpses *paradiso* when he visits a Green House home. These small, communal residences maintain regulatory compliance yet have the look, feel, and privacy of private homes. Caregivers devote their time to individual residents, not particular tasks, and give priority to helping residents manage daily activities that imbue their lives with meaning and purpose. Gawande's fears of aging evaporate at this vision of geriatric repose.

The second half of the book focuses on the complexities of palliative care and end-of-life decision making, which Gawande approaches both as a physician and as a son bearing witness to his father's lengthy and courageous battle with terminal cancer. He recounts a revelatory moment in which he and his physician parents found themselves uncharacteristically bewildered by the dizzying array of pharmaceutical and technological options offered, with unsparing comprehensiveness, by a ruthlessly efficient oncologist. It was an epiphany for Gawande to discover that the information-saturated, technology-focused approach that he had often used with patients was patently unhelpful and ineffective when experienced from the other side of the consulting room.

As his father's condition worsened, Gawande developed an appreciation for hospice as a life-enhancing initiative that forestalls the relentless momentum of increasingly unrealistic, burdensome, and invasive medical treatments. Far from being a gesture of unconditional surrender, hospice is a life-affirming, pragmatic approach to

managing symptoms that ensures the highest possible level of daily functioning within the constraints of a person's illness. A fair portion of hospice's palliative effect stems from social connections with caring practitioners who help patients and their families with the immediate physical and psychological challenges of living in the shadow of death.

Through his encounters with hospice, Gawande developed an appreciation for the wisdom of taking a more collaborative approach with his patients, one that facilitates their self-understanding and helps frame their illnesses within the context of life goals. He admits to being a neophyte in this approach and at times evinces a persistent, data-driven tendency to seek *la technique exacte* in the form of conversational algorithms—ask question, listen, ask question—not altogether different from those employed by therapeutic chatbots.

For Gawande, the goal is not a "good death but a good life to the very end," which he characterizes as one in which a patient possesses some level of meaningful control over the trajectory of medical care as well as the narrative of his last chapter (245). "Choice," "control," and "autonomy" seem to be Gawande's operative terms. Midway through the book, he includes a brief discussion of Josiah Royce's assertion that loyalties to something greater than ourselves imbue life with significance and meaning and counterbalance a completely self-focused existence. However, that part of his argument seems relatively vaporous compared to his determined emphasis on the primacy of autonomy.

His perspective is manifest from the book's first chapter, which recounts the inspirational story of his grandfather's century-long life lived within a multigenerational, familial context. Despite the obvious pride and esteem with which he relates the details of his grandfather's story, Gawande harbors no rueful sense of nostalgia for this bygone era, believing instead that such traditional familial and cultural patterns stifle the autonomy of younger generations. He notes with approval modernity's demotion of family primacy, which allows for more complete expressions of liberty among individual family members.

Therefore, it is perhaps not altogether surprising that in the last full chapter of the book Gawande expresses ambivalent support for the legalization of physician-assisted suicide. However, his argument elides distinctions between *killing and letting die* and *ordinary and extraordinary care*. He also expresses unbridled confidence in the ability of regulatory agencies to forestall the abuse of lethal medications. Given that much of his book focuses on the callous indifference and reckless invasiveness with which technocratic medicine treats vulnerable patients, this seems a rather curious, and wholly unconvincing, position for him to hold.

Gawande's work is reminiscent of physician and palliative care specialist Ira Byock's highly regarded book, *Dying Well: Peace and Possibilities at the End of Life*. Both authors frame their work around their own fathers' deaths, decry increasing technological invasiveness during end-of-life care, advocate for hospice, and urge health care practitioners to develop more egalitarian relationships with their patients.

Nevertheless, the texts contain notable differences. Byock's case studies richly depict the interpersonal affective virtues, such as compassion, empathy, and love, which are integral to effective end-of-life care. While never losing sight of the importance of autonomy, he explores the merits of interdependency and the graces that can flow from being a recipient of care. Finally, he devotes significant attention to the neurodegenerative disorders that are the scourge and most profound existential fear of contemporary old age, insisting that even these horrific ravages do not taint a patient's intrinsic dignity. In contrast, Gawande's reticence to broach these issues limits his book's potency.

Despite its shortcomings, *Being Mortal* is highly recommended, deserving wide readership and discussion. It would make an ideal choice for an undergraduate or graduate seminar on gerontology or death and dying. Readers may well discover that Gawande's diagnosis is more convincing than his prescription and more certain than his prognosis. But for the debilitating spiritual malady

that ails our society, just as it did Tolstoy's character who was "impatient with illness, suffering, and death which interfered with her happiness," an accurate diagnosis can be the first step in the healing process.[1]

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1. Leo Tolstoy, *The Death of Ivan Illyich*, trans. Lynn Solotaroff (New York: Bantam Dell, 1981), 95.

The End of Sex and the Future of Human Reproduction
by Henry T. Greely

Harvard University Press, 2016, hardcover, $33
400 pages, index, ISBN 978-0-67-472896-7

Sex is an ambiguous word. As such, when Henry Greely talks about the end of sex, he does not mean the disappearance of the physical attributes of men and women, nor is he suggesting that people will no longer have sexual intercourse. Rather, he portends that sometime in the next twenty to forty years, the majority of healthy human beings will not engage in sexual intercourse for the purpose of reproduction, and prospective parents will have the opportunity to conceive their own babies through widely accessible artificial methods of reproduction. Simply put, this book is about the future of human reproduction engendered by revolutionary biological technologies (chapters 1–6), the social acceptance of the envisioned assisted reproduction techniques (chapters 7–12), and the implications and challenges these techniques will pose to everyone (chapters 13–18).

As a professor of genetics and law, Greely's overarching aim is not only to draw our attention to the potential effect of genetics and stem cell research, but to provide everyone with information that will help them make their own decisions about this developing field. As such, the author is far less concerned with the morality of specific assisted reproductive technologies than with the reader's ability to use them.

Greely envisages a future where the process of child bearing will not begin in bed but in vitro, where children will be selected by their parents from several possible embryos on the basis of desired traits and genetic variations. This process, which he calls Easy PGD, will be superior to current forms of preimplantation genetic diagnosis and, if coupled with advancements in related fields, could eventually eliminate the need for IVF, which is very expensive, uncomfortable, somewhat inefficient, and risky, especially for the woman providing the eggs. In 2016, a basic IVF cycle cost $20,000 in the United States, and most of the time, one cycle does not result in pregnancy. Moreover, egg retrieval alone accounts for at least 80 percent of the cost of IVF, almost all the discomfort, and all the health risks, which include ovarian hyperstimulation syndrome, infection, ectopic pregnancy and, in severe cases, death. Unlike current methods of PGD, easy PGD will be cheap, effective, and painless.

The first six chapters focus on the science and technology involved in Easy PGD, including molecular biology, human reproduction, infertility and its treatments, genetics and genetic testing, and stem cell research. Greely maintains that Easy PGD is not fiction, but a scientific plausibility that can become a clinical reality through advances in two areas, namely, genetic testing and stem cells research.

The author highlights five methods of genetic testing: karyotyping, fluorescence in situ hybridization, array comparative genomic hybridization, single nucleotide polymorphism chips or genotyping, and DNA sequencing. Easy PGD requires DNA sequencing, which can provide information