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BOOK REVIEW

Replaceable You

Mary Roach, *Replaceable You: Adventures in Human Anatomy*. W.W. Norton, 2025.

ISBN: 978-1-3240-5062-9, 304 pages, Paperback, \$18.99.

By Joy D. Riley, MD, MA | Advisory Board Member

Reading best-selling author Mary Roach is an adventure in itself. Several years ago, I read her book *Stiff: The Curious Lives of Human Cadavers* (W.W. Norton, 2021) and realized that options as a donated cadaver held no real attraction for me. With that humbling recollection, I approached her *Replaceable You: Adventures in Human Anatomy* with some trepidation. What would I learn, and how would I be impacted by that knowledge through this, her latest opus?

In this newest work, Mary Roach pulls back the curtain on attempts to replace absent, diseased, malformed, removed, or unwanted human body parts. Each of her 17 chapters deals with a separate organ or system. The author delves into the historical, current, and cutting-edge approaches to replacement of human hair, noses, and limbs, and many of the parts between these physical landmarks. How successful are these attempts? This book functions as a red

“you are here” button on our collective map of human progress.

The author’s wit is on display from the book’s beginning. She leaps into a discussion of false teeth, quoting from the late author, John Woodforde. His book was entitled *The Strange Story of False Teeth*, which Roach characterized as “a book I chewed through to here expectorate a few morsels” (p. 1). By page 186, she compares Wikipedia to a rec-tum and finds the former wanting.

Roach is a reporter—not a physician or scientist—as she points out several times. That said, she does an admirable job of translating science into understandable language and concepts. She does it with her own distinctive style and provocation, including crudity. Consider a few of the chapter titles: “Giving the Finger,” “Intubation for Dummies,” “Shaft,” and “The Ass Men.” Proceeding from one chapter to the next in this diverse array could cause mental whiplash, but the author is too astute for that. The

segues are interesting, subtle, and well written.

Her journalistic name as well as her personality open doors that would be closed to many. The book is a first-person account of meeting scientists, physicians, nurses, technologists, business executives, and others in her quest for knowledge. But Roach is more than a peripatetic interviewer: Her notes are replete with articles and books that range from obscurity to current day. She sifts data like a goldrush miner pans for gold. The difference is not only that she shares the nuggets. She also appreciates and shares other, often tangentially related things she sees or thinks along the way.

To research cataract surgery, she accompanies American and Mongolian ophthalmologists working with Orbis International, an eye health nonprofit. Chapter 11 opens with a description of the Mongolian countryside, owned by the government. One could say it “has few roads” or is “one big road,” because you can go wherever it is possible to aim and drive your car (p. 155). Such seemingly even-handed evaluation is attractive in a

book about science, but it is not a feature of this book on science.

Rather, *Replaceable You* is filled with accessible prose that clearly communicates complex ideas and procedures. The differences between burn degrees are explained as “like Richter earthquake numbers—one step up doesn’t sound like much, but in terms of the damage wrought, it’s substantial” (p. 28).

The chapter on limb amputation—“The Cutoff Point”—includes a description of a surgical attempt to “prevent phantom limb pain”:

I watched a lower leg amputation in which the surgeon would take the end of any major severed nerve and embed it in some muscle, to “give it a task.” So that it’s not, to use another surgeon’s metaphor, a loose power line sparking in the roadway. The technical term for what I observed is “regenerative peripheral nerve interface” (p. 99).

In Chapter 13, “Out of Ink,” Roach describes the problems encountered in 3D printing:

Organs are malleable—flimsy, even. An extrusion 3D printer builds what it’s building from the bottom up, the first layers serving as the base for the layers to come. To facilitate this, plastic inks are made to solidify within seconds. I own a 3D printed facsimile of a human rectum, made of hard plastic. You could not print an actual rectum this way, any more than you could build a cathedral out of tofu. The farther up you build, the floppier the structure becomes (p. 191).

Colorful descriptions abound, and there is more. Scattered throughout the book are little-known facts that do not necessarily hit the radar of the media or the general public but are useful and important to know. For instance, people are familiar with the usually extensive testing of potential new drugs required by the US Food and Drug Administration (FDA). Medical devices are a bit different: For these, the safety and efficacy trials require fewer subjects and shorter time frames than with drug trials. Moreover, once a device is approved, any other “substantially equivalent” device invented in that category “need not conduct trials at all” (p. 185). Stem cell treatments are in still a different category. Roach labels

stem cell treatments as “a cellular wild west, and it’s big money.” If one is “simply taking someone’s own cells out and putting them back somewhere else, FDA approval isn’t required” (p. 225).

Her investigation of human tissue donation takes her to an organ procurement organization (OPO). She visits CORE, the Center for Organ Recovery & Education, in Pittsburgh. CORE is a Tier 1 OPO, whereas “almost half” of OPOs are rated Tier 3, the lowest ranking. (p. 243). Roach reports:

Digital donor tracker boards are mounted on the wall at intervals, like airport arrival and departure boards. These display the names of people who’ve recently died, or are expected to soon, in area hospitals—people under consideration as organ and tissue donors. . . . Once a hospital notifies CORE of a patient’s death, the team has twenty-four hours to secure the medical examiner’s release, have the risk-assessment conversation, get consent from the family, and begin the tissue recovery. (p. 245).

The author’s philosophy, “I support everyone’s right to do to their body whatever makes them feel good about themselves” (p. 237), could underscore the wide range of possibilities for replacing various human body parts presented in *Replaceable You*, but she occasionally injects moments of realism. In considering 3D printing, she opines that “everything is more complicated than you think it’s going to be” (p. 194). Indeed, Roach makes this point repeatedly throughout the book. She also, and somewhat paradoxically, exhibits realism in her treatment of plastic surgery’s search for the golden ratio ideal in breast aesthetics. In one study of 37 subjects, plastic surgeons gave the “highest aesthetic ranking” not to a human, but to “a ‘virtual subject’—a computer-generated torso.” Roach opines that “plastic surgeons and their patients are chasing an ideal that rarely exists in undoctored human anatomy” (p. 232)—a statement that stands in contrast to her espoused philosophy.

In other arenas, Roach exhibits little if any evaluative prowess. She would like to “marvel at the strangeness of a few strands of long, flowing head hair growing on, say, my leg.” Plastic surgeon Richard Chafsoo “agrees to do it, if only because it’s easier to move a

follicle than to argue with a nitwit” (p. 207). In this recounting, there is no sense of an understanding that the *telos* of medicine might include something besides the fulfillment of one’s desires.

Medicine in the service of desire fulfillment—even if it is not described by the author as such—is the subject of Chapter 5, “The Vagina Dialogue.” This chapter details a dinner the author had with a urologist in a two-person banquet of an Italian restaurant in Los Angeles. There, while the waiter attended and served them, they discussed a surgical procedure that uses ascending colon to fashion a neovagina in a male desiring to be a woman. They talked about the advantages of using that particular section of bowel and how the bowel needed to be oriented in the body for the new function. It was noted that surgical procedures do not have FDA or other federal regulatory oversight. No institutional review board (IRB) oversight is needed either, if the procedure is a modification of an existing one. Therefore, the urologist and a colorectal surgeon had “consulted with the patient, explained the possible complications and side effects, and obtained consent.” (p. 71). No comment from the author about this.

There is more to digest. The urologist, Dr. Garcia, “holds a patent on a dilator designed specifically for women who have undergone intestinal vaginoplasty” (p. 74). The word “women” is not defined here, but seems to be restricted to men, who, through surgery and other therapies, are attempting to live as women. This patient population provides a new market for innovation not only in surgery but also in devices. Dr. Garcia “owns a medical device company” (p. 74). Again, no comment regarding any possible conflict of interest, ethics, etc.

To be fair, Mary Roach is a popular science writer; she does not pretend to be otherwise. She is very well skilled at translating complex ideas into accessible language. Her tenacity in conducting research is remarkable and wide-ranging. The notes she provides her readers are replete with details as well as digressions. She writes in a conversational tone and is witty, engaging, and self-effacing. Her humor often involves sexual content or innuendo, and, perhaps mirroring medical humor, can be rather macabre at times.

Replaceable You is chock-full of information

about attempts at replacing various human body parts, through the ages, currently, and even what is on the horizon. It is wonderfully collected in one place: no small feat. Information is important and very helpful as we contemplate various technologies, especially those that interface with our human

bodies. Beyond information, though, wisdom is required. We need to know who and what we are, what technology is, and how we are to navigate new technologies. Understanding the difference between *can* and *should* requires moral knowledge—something mere information cannot yield.



In April 2026, we launched a series of online book discussions that span a full calendar year. The aim of these discussions is to reflect deeply on current and emerging medical and bioethics trends that are currently relevant to daily life or likely to become more relevant within a generation. Participants are encouraged to engage in online written discussions and teleconferences to consider what is going on, why (or whether) it should be going on, and how Christians should live in light of these developments.

The four books we will read and discuss together are:

- David VanDrunen, *Bioethics and the Christian Life: A Guide to Making Difficult Decisions*
- Ewan Goligher, *How Should We Then Die? A Christian Response to Physician-Assisted Death*
- Paul Ramsey, *Fabricated Man: The Ethics of Genetic Control*
- TBA

Join us for the discussion! More details coming soon. Join the CBHD email list to be the first to know: <https://bit.ly/cbhd-email>