

Book Review | *Resilient Cyborgs: Living and Dying with Pacemakers and Defibrillators*, by Nelly Oudshoorn (Palgrave Macmillan, 2020)

Anne Pollock

King's College London

anne.pollock@kcl.ac.uk

The cyborg is a foundational figuration for feminist technoscience scholarship, but is generally regarded from a conceptual perspective, often inspired by science fiction. How might feminist science and technology scholars productively engage cyborgs who are living among us today? This is among the vital questions explored by Nelly Oudshoorn in her fascinating book *Resilient Cyborgs: Living and Dying with Pacemakers and Defibrillators*. The book makes a compelling case for rematerializing the cyborg, by turning to the lived experiences of people who have powerful life-transforming machines implanted into their bodies.

Resilient Cyborgs is about what it is like to live and die with implanted electronic devices that intervene on the rhythm of the heart. Oudshoorn invents the evocative term “wired heart cyborgs” as an umbrella term to describe people with two kinds of implanted devices: pacemakers and defibrillators. Pacemakers, which send small electrical impulses to the heart to keep it beating regularly and not too slowly, are probably familiar to most readers. Despite being quite widespread, defibrillators are likely less familiar. Internal defibrillators also work by sending electrical impulses to the heart, but they are much more powerful impulses, to shock the heart to reset it out of a dangerous rhythm. Internal defibrillators work in the same way as defibrillator paddles that are so iconic of

Pollock, Anne. 2021. Review of *Resilient Cyborgs: Living and Dying with Pacemakers and Defibrillators*, by Nelly Oudshoorn (Palgrave Macmillan, 2020). *Catalyst: Feminism, Theory, Technoscience* 7 (1): 1–3.

<http://www.catalystjournal.org> | ISSN: 2380-3312

© Anne Pollock, 2021 | Licensed to the Catalyst Project under a Creative Commons Attribution Non-Commercial No Derivatives license

medical emergencies both real and dramatized, but the devices work automatically and internally—a potentially life-saving but often traumatic experience. As Oudshoorn points out, these electro-cardiological implants are now a routine part of “ordinary medicine” in rich countries. *Resilient Cyborgs* is far and away the most comprehensive account of pacemakers and internal defibrillators to date, and because these technologies are strikingly understudied, the book will likely remain definitive for years to come.

The book is grounded in careful qualitative social science research in the Netherlands, while also analyzing the global contexts in which these devices travel. For example, in addition to providing a rich account of the experiences of particular Dutch patients and clinics that she has interviewed and observed, Oudshoorn also brings in the voices of wired heart cyborgs from beyond the Netherlands by drawing on comments from web forums that connect interlocutors from varying locales. More surprisingly, she also recounts the post-mortem refurbishment for reuse in low- and middle-income countries. Indeed, a distinctive element of the book is that it attends to the entire lifecycle of the technology.

Oudshoorn is a skilled ethnographer, and she attends to interview data and observations of clinical practice in a particularly nuanced way, reflecting expertise, empathy, and insight. In exemplary STS style, Oudshoorn also attends very insightfully to the material configuration of the devices in a geography of patients’ bodies, technicians’ offices, and electronically infused worlds. Oudshoorn illuminates the ways in which wired heart cyborgs navigate complicated “technogeographies” as they endeavor to communicate and manage their experiences and needs to their clinicians and others in their social and material worlds. Oudshoorn emphasizes that these cyborgs are not passive, but practice “techniques of resilience” (43). They engage in active listening, learning to hear low-battery beeps, for example, and work to achieve some measure of control over the clinical encounters and their lives beyond.

As cyborgs, wired heart cyborgs have hybrid bodies that are notably susceptible to intertwinement with the electrical world beyond their skin. Oudshoorn’s title and her optimistic outlook foregrounds *resilience*, and yet the book also illuminates a great deal about the flip side: *vulnerability*. Sometimes the particular risks that wired heart cyborgs face must be managed in public settings, as patients plead for consideration from airport personnel, since most screening devices pose risks of dangerous interference with pacemakers and defibrillators.

Risk must also be managed in private settings, for example with sexual partners, as patients navigate body image concerns as well as an intimate choreography constrained by the risks of elevated heart rate leading to painful shocks that can sometimes even be felt by the partner. Wired heart cyborgs are simultaneously isolated and intertwined, with devices that protect and extend their lives while also rendering them distinctly exposed.

Even as the book is a compelling whole, it can also be appreciated in parts, in a way that is notably useful for the classroom. For example, scholars and teachers of medical sociology and related fields might be particularly interested in Part II, “Technogeographies of Resilience,” and within that especially the clear-eyed, non-mystifying attention to the device and the clinic in Chapter 3, “Creating Material Resilient Cyborgs: Sensing and Tuning Agencies of Pacemakers and Defibrillators.” This is where we read about the “end of life” referring to the end of battery life (69) and how people learn to listen to the device’s signals and sounds (72). Those in gender studies and related fields might be particularly interested in Part I, especially Chapter 1, “Rematerializing the Cyborg: Understanding the Agency of People Living with Technologies Inside Their Bodies,” and in Part III, “Resilience and Difference,” especially Chapter 6: “How Did You Get That Scar?: Gender and the Appropriation of Visibly Marked Bodies.” Scholars and teachers in bioethics might turn directly to Part IV, “How Hybrid Bodies Fall Apart,” especially “Should We Turn Off the Pacemaker?: Trajectories of Dying and Geographies of Rights and Responsibilities,” which combines analysis of various countries’ consensus statements on these devices and some very human stories of end of life.

Resilient Cyborgs is an exquisitely observed account of an important topic, and deserves a wide readership. In feminist science and technology studies and related fields, we have much to learn from the wired heart cyborgs living among us.

Author Bio

Anne Pollock is a professor of Global Health and Social Medicine at King’s College London and serves as a member of the Lead Editorial Team of *Catalyst: Feminism, Theory, Technoscience*.