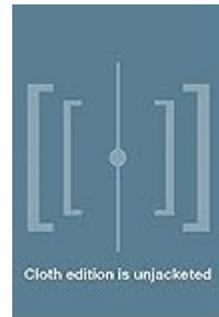




Katherine Ott, David Serlin, Stephen Mihm, eds. *Artificial Parts, Practical Lives: Modern Histories of Prosthetics*. New York and London: New York University Press, 2002. vi + 359 pp. \$22.00 (paper), ISBN 978-0-8147-6198-4; \$65.00 (cloth), ISBN 978-0-8147-6197-7.



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Real People, Artificial Parts

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Richard Christiansen, former theater critic for the *Chicago Tribune*, once summed up a musical play by suggesting that what the production attempted was worth seeing, but that what it achieved was something less. *Artificial Parts, Practical Lives* reminds me of this commentary. What the book attempts is worth reading about, but what it achieves is something less. The book consists of twelve essays by different authors on various aspects of the replacement of body parts, artificial restorations, and augmentation of human function. The many essays all have points of interest although they are highly divergent in topic and tone, which makes it almost impossible to write a short, coherent review of the book as a whole. In addition, there is a long introduction by Katherine Ott, who is one of the book's editors and an essay author. She suggests that "the anthology is intended to stimulate research and critical inquiry" (p. 7).

A charming photograph on the cover of the paperback edition shows two young fellows shaking artificial hands. This photo alone makes one want to open the

book immediately to find out more about these fellows and their fascinating mechanical limbs. Unfortunately, the book appears to contain nothing about the artificial parts shown on the cover or about the practical lives of the young men whose images capture our imaginations so vividly. Like the cover picture, several of the book's photos also stimulate our interest in the prostheses shown, while the text does not reveal much detail about the function of the mechanisms or how they are integrated with the people who use them.

Katherine Ott's introduction, "The Sum of Its Parts," introduces the essays but strays into commentary that seems weighty with cultural, social, political, and gender overlays that may be difficult for the general reader to comprehend. Her introduction and the first essay by David Serlin may throw knowledgeable readers off stride because of a number of inaccuracies and misinterpretations that appear in the opening pages. While the errors and misinterpretations are not crucial to the content of the book, they tend to erode a reader's confidence in all of the collected material and raise questions about the edit-

ing. For example, in discussing myoelectric controlled hand prostheses, Ott says, "Myoelectric limbs have yet to reach an engineering level that makes them commercially viable on a large scale" (p. 20). This conclusion is based on a 1969 report, but what may have been true in 1969 is not so in 2003. Ott's statement that the word "torque" was first used by electrical engineers (p. 20) seems to come out of the blue and must be a misunderstanding since torque was a concept used long before the advent of electrical engineering. Serlin's opening essay also contains notable mistakes. For example, Harold Russell did not have paraplegia as described (pp. 49, 59) and his hands were lost below the elbow, not above the elbow. Similarly, Jimmy Wilson, who had all four limbs amputated (pp. 49-51), would be considered to have quadruple limb loss, not quadriplegia. It should also be noted that the National Academy of Sciences and the National Research Council are not federal agencies and did not fund prosthetics research (p. 54).

David Serlin, author of the first essay and one of the book's editors, writes about "Engineering Masculinity" in prosthetics. Although evaluation of Serlin's essay is difficult, much of it rings true because loss of a limb takes a huge psychological toll and the engineering of a prosthesis to replace the void and assist with work, recreation, and other activities is inextricably linked with a male's feelings about masculinity. To illustrate the masculinity issue, Serlin uses a photograph of a man who has used his prosthesis to light a cigarette. Unfortunately, Serlin does not present technical details about the extraordinary prosthesis shown. This arm demonstrates the cineplasty alluded to in the introduction (p. 20) and illustrates the biceps tunnel cineplasty originated by Dr. F. Sauerbruch, a celebrated German surgeon who is briefly mentioned in the second essay (p. 90). An opportunity to build bridges between essays was missed, suggesting that strong communication links did not exist between the essayists during preparation of the text and that there was little, if any, editing of the text by technical or medical consultants.

Ott, a curator in the Science, Medicine, and Society Division of the National Museum of American History, shows her better side in her detailed and interesting article on the history of the development of artificial eyes. In fact, it is a little hard to believe that the introduction and her essay were written by the same person. Her inspiring last paragraph in the essay could easily be applied

to artificial replacements in general, not just to the eye. It is a powerful and positive statement that encapsulates many issues of prosthetics research and development.

Only three of the essays seem to deal closely with modern histories of prosthetics as alluded to in the book's title. They are Kirsten Gardner's worthwhile essay on breast prostheses before 1950, Ott's well-prepared article on the eye, and Alex Faulkner's exceptional essay on endoprostheses for human joint replacement.

Half of the essays seem to use prosthetics more or less as a point of departure from which to write about some related topic. Almost anything goes. The most evident essay of this kind is the "Long Arm of Benjamin Franklin" by David Waldstreicher, which deals in some depth with Franklin's life but hardly at all with a "reacher" mechanism Franklin invented to pick books from high shelves. The "long arm" is more an aid for activities of daily living than it is a prosthesis. The essay "Confederate Veterans and Artificial Limbs in Virginia" by Jennifer Davis McDaid follows the plight of Virginia veterans following the Civil War. "Development of Cosmetic Prostheses" by Elizabeth Haiken examines developments in plastic and esthetic surgery and the desires some people have for such services. "Communication and Alignment in Contemporary Prosthetics" by Steven Kurzman discusses the language artificial foot wearers use to describe the way alignment of their foot feels, as compared with the language their prosthetics clinicians use to describe the same event. Elspeth Brown examines the work of some of the pioneers of the ergonomics field in "Prosthetics of Management," which contains early notions of "Universal Design" in work environments. "Prosthetics Technologies in the Nineteenth Century" by Stephen Mihm (also an editor) has to do with people's appearance and their social strata, and how these influenced prosthesis design. Raman Srinivasan's article on "The Jaipur Foot Prosthesis" deals largely with the artisan and physician behind the foot's development and with the Indian culture out of which it grew.

Heather Perry's essay on prosthetics in Germany after World War I is to be applauded for the originality of the scholarship, whether or not one agrees with all of her ideas and conclusions. Prostheses around the world have been greatly influenced by German practitioners and the field can still learn much from studies of German archives.

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