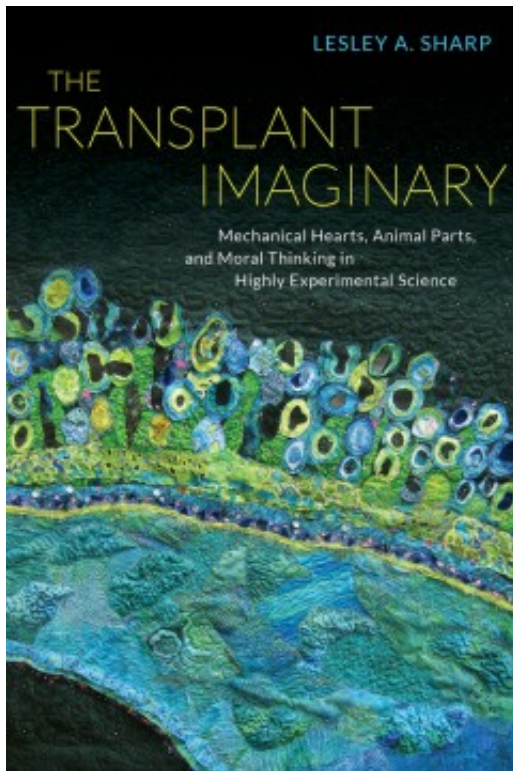


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Lesley Sharp's The Transplant Imaginary

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By Emily Avera



[The Transplant Imaginary: Mechanical Hearts, Animal Parts, and Moral Thinking in Highly Experimental Science](#)

by [Lesley A. Sharp](#)

University of California Press, 2014, paperback, 236 pages.

The Transplant Imaginary continues Lesley Sharp's project on the anthropology of organ transplantation, building from her two previous monographs [Strange Harvest](#) (2006) and [Bodies Commodities, and Biotechnologies](#) (2007). This latest work spans five Anglophone countries (U.S. Canada, New Zealand, U.K., and Australia) and relays her cumulative findings from years of field research. It highlights two major areas of transplant science: xenotransplantation (or xeno) and biomechanical engineering (or bioengineering). Xeno entails the transfer of cells/organs from one species to another with the future goal of making animal to human transfer possible, whereas bioengineering's primary goal

is fashioning artificial organs or devices that serve as substitutes for organ function. Sharp describes these arenas of transplant medicine as shot through with the “experimental ethos” (2014: 3). At the same time they are informed by “moral convictions” that come to the fore in the pursuit of scientific creativity and invention (2014: 4). In other words, they are rife with imagination and unpredictability, invested in future possibilities for technological innovations that may only be realized long after present scientists’ lifetimes. This interplay between feasibility and imagination is characteristic of highly experimental realms, not only in medicine. In this respect, the book functions in conversation with other works on laboratory settings.

Sharp’s approach is resonant with Karen Knorr-Cetina’s [Epistemic Cultures](#), a study of knowledge production in high energy physics and molecular biology labs, in its teasing out of epistemic particularities through comparison (1999). Likewise, Sharp juxtaposes two different domains of scientific experimentation (Xeno and bioengineering). She outlines how different trajectories of moral thinking develop. She also demonstrates how these two domains overlap in their shared concerns—namely in the hope to eliminate the problem of organ scarcity in transplant medicine. These experimental scientists believe their work represents a move toward bypassing the present shortage of human donors. From their position, this work avoids the problems associated with public reluctance to using cadaveric donors, including next-of-kin fears related to violating the dead or other ideological objections. They also see the possibility of breeding animals on a large scale for transplant purposes, or the easily personalized production of artificial devices as ways to the cut through health care access differentials that vex the current organ transplantation system. Such changes would lower prohibitive costs and rectify the inequalities particular to factors like age, race, and organ size. Drawing from these potentialities, xeno and bioengineering scientists often view the intended products of their work as “value free” and “morally superior”(14). In order to unpack this moral positioning, Sharp’s analysis remains squarely focused on the activities of scientists. The aim in doing so is to “encourage a fresh sensitivity to the significance of experimental work” (18). Yet the bigger question that she seeks to tackle is: “How might we shift the frame of reference such that discussions become less about *how* we must pursue these experimental forms of body repair and more about *why* we insist this must be so?” (18).

Through the introduction and Chapter 1, Sharp situates her analysis amidst four major strands of thought: (1) an examination of negotiations of knowledge-making and tinkering, a staple of science and technology studies (STS); (2) a growing interdisciplinary interest in multi-species studies and hybrid subjectivity; (3) medical anthropology’s engagements with the “biotechnical embrace” (DeVecchio-Good 2007) and (4) the

“ethical turn” in anthropology more broadly. Sharp deftly weaves these conceptual strands together, managing to convey the rich detail of the scientific work while retaining legibility for those less-versed in its technical language. Incorporating these four major areas of scholarship enables Sharp to contextualize the central issues that haunt moral thinking in these two foci of experimental transplant science. These include the distinction between (bio)ethics and morality, especially in relation to suffering (both human and animal) and the negotiation of bodily integrity. She also devotes considerable thought to how imagined futures and the temporal frame of the *longue durée* inform the moral thinking of xeno scientists and bioengineers who work in anticipatory science.

Chapter 2 traces the particularities of xenotransplantation. Sharp examines how scientists gauge proximity to the species they are using (e.g. how closely a pig’s organ approximates a human’s). This gauging affects the clinical applicability of using porcine parts for human patients, for instance. This chapter also shows the tension between two competing time frames: the slow methodical development of experimental science versus the quick turnaround that venture capitalist investors expect. In one notable example, Sharp recounts an incident in 1995 at XenoLife, an experimental lab based in the U.K. After showing signs of good results using primates as test recipients for xeno, there was an increase in financial pressure from investors to move to human trials. This eventually drove XenoLife scientists to run through the entire available supply of laboratory rhesus macaques in the U.K., and they proceeded to exhaust the European supply afterwards. Ultimately, this even led to company attempts at obtaining baboons from East Africa, locally viewed as disposable “pests.” These desperate measures taken to achieve profitable results at huge animal expense met with public backlash. The incident was a crucial factor that led to a shift in the parameters in which xeno scientists are able to do their work (2014: 76-77). As such, the current trend is to do xeno work at the molecular level rather than using scores of animal test subjects. Such moral valences about animals’ lives have also affected the ways that certain species become “naturalized.” Sharp builds on prior understandings of naturalization in terms of citizenship, looking at the ways that species have taken on different valences with respect to how other (mostly porcine and simian) species serve as suitable proxies for natural or natal organs. Via the lab, they are fashioned in such a way as to no longer be seen as foreign to the human body. As this chapter demonstrates, the determination of which species undergo naturalization processes directly relates to the particular goals of experimentation as well as the moral thinking that undergirds it.

Chapter 3 opens with a description of bioengineering’s own tendency to honor pioneering heroes in the field. Bioengineers often tell stories of their scientific forbearers and can trace their scientific genealogies. Paralleling

this biographic aesthetic, this chapter contains the richest ethnographic detail with respect to specific people who populate Sharp's multi-sited research. She lays out an illustrative slate of personal stories. It is also where she most attends to the generational, gendered, and ethnic differences of those in the bioengineering field (and science and engineering more generally). These differences inform the work that they do and grounds some of the principles that guide them. She also includes a discussion of how bioengineers have interspecies interactions that differ from xeno, notably in forging more sentimental attachments to the animals often giving playful names to their test subjects. Affectionate monikers like "Blimpy" or "The Champ" highlight another way in which bioengineering is inflected with elements of personalization. This makes it a particularly useful chapter for understanding how the circulation of biographies (as well as their elisions) affect the agendas of experimentation. Sharp also compellingly draws this in contrast to the ways that patient suffering and certain bodies, especially women's bodies (123-125), are often erased or absent from bioengineering (132).

Returning to a more theoretical focus, Chapter 4 deals with temporality. One of Sharp's crucial points is how scientists in both domains employ the strategy of bringing both human and animal bodies and/or suffering to the fore at some moments, while at others they completely fall out of the picture. In both domains, scientists have very little contact with patients. This limited interaction makes the consideration of suffering (or altered post-procedure subjectivity) all the more notable when it arises. The range of moral considerations are, as Sharp asserts throughout the book, informed by the "temporal gymnastics" they perform. Emphasis on the *longue durée* of experimentation and eventual alleviation of suffering (especially in eliminating organ scarcity) exemplify the sort of moral thinking that highly experimental transplant science exhibits. Bioethical standards set the boundaries of what should and should not be done in the lab. In contrast, moral thinking incites the imagination of what is possible, and it is this futuristic hope that drives ingenuity and invention. Sharp demonstrates the paradox that the scientists themselves shy away from explicit discussions of morality even though moral reasoning greatly informs their work. The harsh realities of biocapital and profit-making, public perceptions, and available resources also temper the kinds of moral thinking that shape the aspirations and desires of transplant scientists.

Sharp's insistence on ethnography as the best method for tracing the open-ended processes of moral thinking puts the spotlight on the importance of understanding the ways that morality unfolds in everyday practices. This allows for scientists to hold seemingly contradictory tenets. They deal with the present suffering of experimental human and animal subjects, and the failures of experimental procedures in relation to the hope in the potentially widespread alleviation of suffering that experimental

success may yield. In their day-to-day uses they cobble together these different temporal frames and incongruent moral values; a means for navigating moral confusion that arises in a multitude of imagined possibilities. This kind of disarray actually offers us the most fruitful instances of seeing moral thinking in process before it crystallizes.

The Transplant Imaginary is an important contribution for those who follow anthropological literature on transplantation from one of the most eminent scholars working on the topic. It also encourages an in-depth look at the processes of moral thinking, extending beyond staid conceptions of (bio)ethics that are tied to legal frameworks. The book serves as a powerful reminder of the value of describing and analyzing experimental scientific endeavors. The analysis opens up discussions about how morality develops and is creatively shaped. This work also shows how different parties clash and collaborate in experimental science — scientists, activists and venture capitalists, among other medical stakeholders — to profoundly influence research agendas and the lives of humans and other species.

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