

## **Tissue Economies: Blood, Organs, and Cell Lines in Late Capitalism**

By Catherine Waldby and Robert Mitchell  
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The September 11th attacks brought unimaginable devastation and heartbreak to the city of New York that reverberated throughout the United States. The loss of life from an attack on U.S. soil was unprecedented, and in many respects the hours, days, and weeks to follow were some of America's darkest. Yet, the American people uniformly responded with an unparalleled desire to help in whatever way they could. With the media's continuous coverage of this disaster, many became aware of the concerns and questions by health authorities regarding the availability of blood for transfusions. For many Americans, the help they would give would come in the form of a blood donation. People in New York City and around the country waited in lines for hours and even through the night. The blood donations far exceeded what could properly be collected, tested, and used, and as a result much of what was collected had to be discarded. While this outpouring of generosity is unquestionably moving, it also provides the starting point of the discussion in *Tissue Economies: Blood, Organs, and Cell Lines in Late Capitalism*.

The authors of *Tissue Economies* trace the origins of the gift system of tissue donation while contrasting it with the commodity system. They focus on the new and ever-changing biotechnologies and how these biotechnologies have altered the way human tissues are regarded in law, politics, economics, and society. Waldby and Mitchell's respective backgrounds in medical sociology and English backgrounds resonate in their comprehensive and unique analysis

of the evolving position that human tissues occupy in both America and the United Kingdom. The authors illuminate the problems that have arisen due to emerging biotechnologies such as stem cell research, and how the traditional distinction between gift and commodity may not supply an adequate category for the new uses of human tissue. The authors do not criticize particular systems of treating and classifying human tissues. Rather, they offer a comprehensive understanding of how the systems came to be, and what models may be better in light of ever-changing biotechnology.

Waldby and Mitchell initiate the reader to their analysis by providing a broad introduction for the gift vs. commodity debate through an explanation of Richard Titmuss's well-known study, *The Gift Relationship: From Human Blood to Social Policy*.<sup>1</sup> Titmuss's study, published in 1970, contrasted the gift system of blood donation employed by the United Kingdom following World War II, with the gift-commodity system utilized by the United States. Titmuss believed that the gift system was superior in facilitating optimal blood supply because it connected the donor and donee to each other and thus, to the society in which they lived. Conversely, Titmuss believed that the commodity-gift system utilized in the United States produced a social fragmentation due the partial regulation of blood by market forces. The discussion of Titmuss's study provides the reader with a broad understanding of the traditional gift-commodity debate, and the authors refer back to Titmuss's study continuously as a reference point in their analysis.

In Part I of *Tissue Economies*, the authors explain how blood donation to blood banks has experienced a shift over the past two decades which reflects individuals' perception of the risks associated with blood transfusions from a blood bank supply. The authors argue that the rise in

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<sup>1</sup> RICHARD M. TITMUSS, *THE GIFT RELATIONSHIP: FROM HUMAN BLOOD TO SOCIAL POLICY* (Ann Oakley & John Ashton eds., 1997) (1970).

autologous donation (donation of one's own blood to a blood bank for potential later use) is a reaction to the difficulties the blood banks have encountered in efforts to reconcile competing ideas of how blood donation systems should operate. Specifically, the authors trace the rise of HIV/AIDS and the refusal by the United Kingdom, the U.S. and France to implement screening methods to protect the blood supply. In doing so, the countries were choosing to protect the donor and civil generosity over the public health in general. In this way, the authors point out the limits of the gift system of blood donation. Accordingly, as the blood supply became increasingly contaminated, the public's perception of the risks associated with blood bank transfusions reacted. Thus, the authors demonstrate a convincing connection between the public's perception of the risks of blood bank transfusions with the rise of autologous donations.

In one of the book's most engaging and philosophical arguments, the authors discuss the U.K. Stem Cell Bank and how it operates as a way to at least *manage* the current unrest surrounding the stem cell debate. Specifically, the authors note the argument that human organs are "entangled" because they cannot be stored outside the body for any substantial length of time.<sup>2</sup> Accordingly, Waldby and Mitchell posit that embryos differ from solid organs and can be "disentangled" by being banked, copied, circulated, and representing intellectual property.

Perhaps the most compelling aspect of the book is the author's argument that informed consent procedures act as a mechanism which serves to formalize and regulate the transfer of tissues (stem cells) from the donor to the donee. Thus, any property rights that the donor may have had in her tissues are eliminated through the informed consent procedure, and accordingly, the recipient (usually a hospital or researchers) is the new owner of the tissue *as property* through this contractual relationship. The stem cells are now no longer a product of particular familial relations. Thus, the authors convincingly argue that this "disentanglement" of the stem

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<sup>2</sup> MICHEL CALLON, THE LAWS OF THE MARKETS (Blackwell Publ'g Ltd. 1998).

cells through the informed consent procedure facilitates the tissue's new categorization as a technical entity which can be utilized by laboratory researchers as property. The stem cells are thus further disentangled by processes which turn them into a patented cell line. The intellectual property rights in a cell line are necessary to attract the venture capital needed by researchers. The authors assert that these intellectual property rights bestowed upon researchers and accentuated through the market act as a way to further "disentangle" or separate the cell line from the embryonic material itself.

The authors take care to intertwine the disentanglement analysis to their argument that the U.K. Stem Cell Bank operates as a way to manage the current unrest surrounding the stem cell debate. Specifically, Waldby and Mitchell persuasively describe the U.K. Stem Cell Bank as an entity which both further "disentangles" but also "reentangles" the stem cells. It "disentangles" further because it has become a central institution in the distribution of stem cells worldwide for research purposes, although it reaps no intellectual property rewards in its position. Yet, the authors posit that the U.K. Stem Cell Bank also serves to "reentangle" the stem cells by "tying them to imagined communities" and social obligation through its stem cell solicitation efforts for the purposes of promoting the public health. In this way, the authors succeed in their argument that the U.K. Stem Cell Bank is managing some of the issues concerning the stem cell debate because it acts as a public institution that provides a stable site for dispersion of the cells and acts to promote public research on stem cells in an effort to promote the public good.

In Part II, Waldby and Mitchell tackle the issue of waste within tissue economies. They first explain the differing arguments and viewpoints behind the well-known decision in *Moore v.*

*Regents of the University of California.*<sup>3</sup> The authors offer an insightful discussion of the decision, and argue that the case provides a great deal of information on the theories driving the political economy of waste tissues in commerce. The authors illuminate the connection between the *Moore* case and its focus on waste, to the emerging technologies dealing with umbilical cord blood. Umbilical cord blood, once seen as waste, has become a newfound source of life due to its ability to cure debilitating diseases through transplant. It is no longer considered waste, presumed to be abandoned; rather, donation to public banks must occur through an informed consent procedure completed by the new parents. As with autologous blood banking, the authors explain the rise of private cord-blood banking for possible future use.

With this background, the authors put forward a most innovative and relevant thesis as to the rise of private cord-blood banking; they argue that private cord-blood banking creates a new form of biological property which does not fit neatly into the gift or commodity categories. The authors posit that private cord-blood is a type of future-orientated property akin to the idea of insurance. For example, the authors make clear through statistics that the chances of a child ever needing to utilize her privately banked cord-blood are miniscule, the numbers of those opting for private cord-blood banking are on the rise. In this way, the authors make a convincing argument that individuals who privately bank their cord-blood are investing in future biotechnologies for themselves, despite widespread disapproval by medical professionals and bioethical bodies.

In Part III the authors utilize the previous discussion to explain how new biotechnologies have effectuated a “turn” to markets and capital as a way of obtaining the tissues traditionally assured under the gift-donation system. Waldby and Mitchell’s use of two case studies is an effective illustration of their argument, which at times can be conceptually difficult for the reader to follow. Yet, the authors’ basic distinction between those who support a global information

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<sup>3</sup> *Moore v. Regents of the University of California*, 793 P.2d 479 (Cal. 1990).

commons as the foundation for further research and health-related commodities, and those who believe that the commodity itself (the patent) is the foundation of research and further therapies is evident.

Finally, the authors turn back to whole human organs with a somewhat familiar discussion of the black markets in human organs that have developed under the current organ donation systems. The authors discuss legislation and the argument that it is a lack of information which is hindering the potential of the gift system. They contrast this argument with the growing assertion that a market for organs is needed and will alleviate the current disparity between demand and supply. While the authors do posit that the possibility of regenerative medicines and an unlimited demand for organs creates an increased pressure on organ transplantation technologies, this portion of their analysis lacks the definitive and novel theses present in the previous sections of the book.

Waldby and Mitchell provide a comprehensive and unique analysis to the economic, social, political, and legal principles underlying the current systems of tissue economies. They take an objective stance and focus on the principles themselves, rather than the political motivation behind them. While the conceptual aspect of the book connecting its philosophical and social aspects to its legal and scientific can at times be difficult for an inexperienced reader to follow, the end result of Waldby and Mitchell's efforts force the reader to question the fragile state of the current systems underlying biotechnology law.