Strange Blood: The Rise and Fall of Lamb Blood Transfusion in 19th Century Medicine and Beyond

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Surrounded by anxious and curious families of patients in a sickroom, the local physician installs an unusual contraption between two bodies; one being the weak patient lying in bed, and the other, a lively six-month-old lamb fastened to a board. Driven by the lamb's heartbeat, its blood flows into the patient's body. The room falls silent as everyone awaits the outcome of this strange transfusion process. This scene sets the stage for Boel Berner's *Strange Blood: The Rise and Fall of Lamb Blood Transfusion in 19th Century Medicine and Beyond*. Berner, an Emeritus Professor of Sociology and History at Linköping University in Sweden, has extensively researched the nexus of social development, technology, and power and presents her latest findings in this book based on her project that explores the politics of blood during the interwar periods.

Strange Blood delves into the use of lamb blood transfusion to treat patients with life-threatening diseases, as part of a Western medical surge that appeared and disappeared suddenly in late-nineteenth-century Europe. Why was lamb blood used, and why this specific kind of animal's blood over others? These questions piqued my interest before embarking on this journey with Berner. Fortunately, the author clarifies my confusion. Berner reveals that lamb blood was never the exclusive option for transfusion, and a variety of other animals' blood, including humans, dogs, calves, cows, and oxen, were all experimented with. The preference for using lamb blood for transfusion arose from negotiations between various conditions and concepts. For instance, it was believed that lamb blood had smaller blood cells, making it more capable of travelling through blood vessels. Some individuals chose lamb blood for practical reasons, simply because it was more financially viable. Interestingly, Berner does not provide a simple and straightforward conclusion to these reasons, as some readers may expect. Instead, she interweaves these explanations throughout the book, articulating them with intricate analyses of various historical actors' backgrounds, motivations, and methodologies. This writing style may seem unclear to some readers, but it effectively conveys the historical complexity the book aims to impart.

In general, *Strange Blood* poses questions such as "Why was there a sudden fervour for transfusing strange blood? How was it carried out, by whom, and how did the patients react? And, most importantly: did it work?" (p. 11). By examining these issues in nineteenth-century Germany, Britain, Sweden, Italy, Russia, and the USA, this book employs a range of

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primary historical materials to demonstrate how "lamb blood transfusion was, in many ways, a transgression" (p. 12). The transgression-lens that Berner uses aligns this book with other works in medical humanities (e.g., Lederer 2008) that reject the neutral, autonomous, and linear conceptualisation of medical science and focus on the complex political and cultural meanings, rather than merely medical and surgical importance. In Berner's words,

> the experiment with lamb blood transfusion was a political phenomenon. It upset medical hierarchies and truths. It challenged medical knowledge, ethics and expertise, gave rise to controversy and debate. It had ramifications also outside the medical world. (p. 12)

Berner's approach to her ambitious inquiry is Foucauldian, in my opinion. Like Foucault, who demonstrates how "sex is 'put into discourse'" from eighteenth-century Europe to "the contemporary West" (Foucault 1980, 11), Berner also investigates the contested relationship between power and knowledge production by revealing how specific knowledge of blood transfusion was socially and culturally celebrated or stigmatized, supported or oppressed, and constructed or destroyed. This book participates in the ongoing conversation in science and technology studies that seeks to deconstruct and reconstruct the boundaries of so-called scientific knowledge.

In addition to an engaging prologue and a clear introduction, the book is divided into four sections. The first section provides a historical overview of blood transfusion, primarily in the European context. Readers are then introduced to three marginal physicians, Oscar Hasse, Franz Gesellius, and Joseph-Antoine Roussel, who were nevertheless influential in promoting lamb blood transfusion in the 1870s. The second section shifts the narrative to the development of lamb blood transfusion practices in various contexts. Readers embark on thrilling journeys from battlefields to laboratories across the European continent, from sick rooms in the German countryside to Italian asylums, and from Swedish spas to Russian transfusion competitions. Along the way, readers encounter a diverse cast of characters, including local physicians, medical equipment entrepreneurs, military surgeons, hospital doctors, and physiologists. Their interventions in promoting or suppressing lamb blood transfusion practices were driven by personal ambitions intertwined with professional, cultural, and political compromises, rather than purely scientific agendas. Moreover, Berner devotes ample space to documenting the voices of patients who received lamb blood, providing a more comprehensive depiction of traditionally marginalized stakeholders in this process.

In my opinion, the third section is the heart of this book. After two lengthy but necessary sections that provide readers with essential information about lamb blood transfusion, this section meticulously analyses the controversy surrounding it, making it a contested knowledge. Berner successfully demonstrates that the conflicting voices for and against this particular medical treatment:

> signal a genuine uncertainty, not only about the effects of this particular intervention but, more generally, about how different kinds of medical evidence should be assessed and compared. Hospital and bedside based doctors tended to favour clinical experience and distrust animal experiments; physiologists thought quite the opposite. Still, the evidence was far from clear-cut; there were doubts on both sides as to the relevance of their respective arguments. (p. 117)

Overall, reading *Strange Blood* was a pleasurable experience for me. Although medical jargon occasionally appears in the book, the language is generally accessible and easy to understand. Additionally, the extensive use of multilingual (e.g., German, French, Italian, Swedish) primary historical materials by Berner is undoubtedly one of the book's most valuable assets. These materials include news, journal pieces, personal accounts of doctors and patients, academic exchange, clinical records, and hospital archives. Berner skilfully employs these materials to create vivid settings of nineteenth-century Europe and North America that are rich in micro-level details and comprehensive general illustrations. In *Strange Blood*, Berner expertly demonstrates her ability to collect, interpret, analyse, and articulate primary historical materials, seamlessly integrating them into her narrative. Reading the book feels like embarking on a wonderful journey that involves conversing with various historical characters. Thanks to Berner's excellent work in interpreting and organising the raw historical materials, the conversation always feels swift and direct. The addition of over thirty images undoubtedly brings readers closer to the characters and settings in late nineteenth-century Western contexts.

However, Berner's inquiry into transgressing not only scientific and medical boundaries but also cultural, social, and human/non-human boundaries, using the cases of lamb blood transfusion, is not entirely successful. To a large extent, Berner's overemphasis on presenting historical details diverts her attention from conducting in-depth analysis. While blood transfusion and transgression in human societies are not new topics and have been investigated by many scholars from various fields (e.g., Singelenberg 1990; Drawmer 2006), Berner rarely engages with the ongoing conversation in the broader scholarship (except for a few scholars, such as Anita Guerrini). This is a missed opportunity, given the wealth of historical materials that Berner has deliberately included in the book. *Strange Blood* could have contributed more significantly to academia than merely providing empirical materials for the theory-building work of STS if Berner had incorporated more social and cultural reflections into the book.

Another minor weakness of *Strange Blood* that I would like to address may seem irrelevant or harsh to some Western readers. However, as someone from Asia who is engaged in decolonising knowledge production, I find the book to be Eurocentric to some extent. For instance, in a book written in English, other European languages like French, German, Italian and Swedish are employed without proper translation. Furthermore, while Berner claims that lamb blood transfusion in the nineteenth century is part of a broader international story, the internationality in the book is limited to trajectories of people, ideas, and objects within the West. The book lacks a broader comparative perspective with countries outside Europe or North America, and it does not investigate how the notion of transgression in medical development is perceived, spread, and negotiated in wider non-Western societies. While I acknowledge that every scholar is positioned and brings an inevitable partial view on the subject-matter, in this case the author's indifference to justifying the choice of the field of investigation and the possible limits of that choice may suggest a Eurocentric perspective on the concept of internationality. This makes the book somewhat methodologically and theoretically outdated in an era when many scholars in the history of medicine (e.g., Kim 2014; Lin 2022) are exploring alternative and comparative methods of writing transcultural world histories. In reviewing this book, I hope to encourage the development of a more decolonised and transcultural framework that facilitates the exploration of plural, shifting, locally informed global trajectories of science and technology.

Overall, *Strange Blood* is a well-written and easy-to-read book. Its readability does not detract from its credibility as a serious academic work full of carefully examined and well-articulated historical analysis. I recommend it to anyone interested in problematising and reconstructing the established boundaries of scientific knowledge and any discipline in culture and humanity. I also recommend reading it alongside other relevant works cited in this review.

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