AMERICAN BLOOD BANKS: NAVIGATING GIFT AND COMMODITY EXCHANGE

By

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ABSTRACT OF THE THESIS

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The U.S. blood supply system, which underpins much of modern healthcare, daily engages in both market and gift exchange. Voluntary blood donation in the midst of a profit-oriented healthcare system is usually taken for granted and rarely discussed in the national debate over commodification of medicine. This thesis investigates how non-profit blood banks balance the demands of all the markets that they participate in, while supplying a substance that is provided as a gift by donors. The research questions are: What are the historical roots of the American blood supply system, or how was the current mix of commodity and gift exchange established? What kind of calculation, competition, and price setting do blood banks engage in? What kind of gift exchange do blood banks engage in? How is blood both a commodity and a gift, and what does this mean for blood banks? Using an analytical framework based on Michel Callon's theory of market formation, the thesis investigates U.S. Senate archives from the 1960s and interviews with current blood bank staff in New Jersey to describe the historical and contemporary practices that allow blood banks to manage their participation in multiple economies. This research confirms the idea that blood can be considered both a gift and a commodity, while demonstrating how people in a variety of organizational roles theorize this situation.

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Introduction

Blood bank staff working at campus blood drives at my university inspired me to probe the complex economic and social arrangements that constitute the U.S. blood supply system. I approached these staff as an actual or potential donor while making appointments to donate blood or chatting in the waiting area before being cleared to leave after donating. Their frank discussions about competition, cooperation, and inter-regional transactions surprised me. As a donor, I was used to thinking about blood as a gift, and of blood banks as non-profits that simply enable the transfer of blood between donors and patients. It didn't occur to me that blood banks must navigate market conditions as well as manage relationships with donors.

I realized that in the context of the highly politicized, fractious healthcare debate in the United States, failing to consider the experience of blood banks is an unfortunate omission. As debates rage over the proper place of commodification in medicine, an important sector underpinning much of modern healthcare daily engages in both market and gift exchange. No one seems to suggest that they are radical, idealistic, or cynical, as they quietly dispense millions of pints of blood a year. Voluntary blood donation in the midst of a profit-oriented healthcare system is simply taken for granted.

I wanted to know how non-profit blood banks balance the demands of all the markets that they participate in, while supplying a substance that is provided as a gift by donors. This thesis approaches this broad topic through four questions: 1) What are the historical roots of the American blood supply system, or how was the current mix of commodity and gift exchange established? 2) What kind of calculation, competition, and price setting do blood banks engage in? 3) What kind of gift exchange do blood banks

engage in? 4) How is blood both a commodity and a gift, and what does this mean for blood banks?

After reviewing literature on markets, gift exchange, and human bodily commodification, I settled on an analytical framework that could accommodate both market and gift exchange within a single organization. The empirical work was then divided into two parts – archival analysis and interviews. Archives of senate hearings on blood bank regulation in the 1960s provided a context for today's blood supply system. Interviews with blood bank staff in New Jersey illuminated multiple forms of exchange and the priorities and concerns of the staff engaging in them. This research confirms the idea that blood can be considered both a gift and a commodity, while demonstrating how people in a variety of organizational roles theorize this situation.

Chapter 1

Literature review

Dispensing with binaries, examining bio-commerce: topical literature

This research is situated in the movement in the social sciences, starting in the 1980s, to blur the distinction between gift and commodity exchange and between monetized and non-monetized societies. These categories were still relevant as ideal types, but strict binaries dissolved on inspections. Nor were types of exchange mutually exclusive within a given society or relative to the same object. Appadurai (1986) introduces the idea of commodity as a state of objects at a given time, a transitory experience rather than an intrinsic property of things embedded in their production or original purpose. This doesn't negate the importance of capitalist modes of production in creating commodities – rather it suggests that items created to be commodities need not continue circulating as such, and items that started outside of commodity production might enter commodity exchange. Kopytoff (1986) expands upon this by describing processes of singularization and commensurability that allow objects to move back and forth between commodity and non-commodity status. Others dispute the universal agency of money and its function in a gift/commodity dichotomy, suggesting that this varies across societies (Parry and Bloch 1989).

The anthropologists above were mostly concerned with locating calculative behaviors in traditional societies, but at the same time, scholars like Zelizer were locating decommodification and gift exchange in highly monetized societies (1998). Zelizer describes earmarking of money to make it non-commensurable and de-commodified (1998). Challenging the commodity status of money inspired studies that took seriously

its "expressive role" in exchange, not just as a singularizing accounting tool (Healy 2006, 36). From these scholars, I take my basic definition of commodity – an object that acquires value through exchange and becomes commensurable rather than singular and inalienable, though I will modify this definition further when I consider what it means for commodities to enter a market. I also take their suggestion to look for the intermixing of both gift and commodity exchange in societies and institutions, and I accept their skepticism towards a direct causal narrative of money and commodification. The presence of money doesn't automatically signal commodity exchange, nor is its absence evidence of gift exchange.

Drawing on scholars like Zelizer and Appadurai, social scientists examined gifts and commodities related to bodies, bodily substances, and bodily attributes. Some of these studies addressed blood donation, but they include a wide variety of objects – stem cells (Waldby and Mitchell 2006), genes and genetic information (Andrews and Nelkin 2001), athleticism (Wacquant 2002), kidneys (Scheper-Hughes 2002), and breast milk (Boyer 2010). A common theme is the circulation of these items as part of capitalist accumulation, whether originally taken from their owners as voluntary donations or sold outright. Andrews and Nelkin (2001) chart the rise of biotechnology firms, genetic patenting, and increased collection and commodification of genetic information and body substances. They consider the transformation of common property as well as items that legally haven't been subject to property status, such as one's own body, into private property traded on markets.

The bulk of Scheper-Hughes' and Wacquant's edited collection also examines how bodies acquire exchange value and enter markets (2002). They cover a broader

sample of both legal and illegal transactions and reconsider such longstanding practices as prostitution as well as new ones like DNA testing. A particularly useful study in this volume examines the donation of semen, which, like blood, is a regenerative substance taken from living donors (Tober 2002). Unlike most American blood donors, however, sperm donors are frequently paid in cash. Tober considers how sperm banks commodify altruism itself, de-emphasizing payment by encouraging even paid donors to create a narrative of altruism through written statements for recipients describing their motives to donate. Recipients favor altruistic donors, creating a market for demonstrations of altruism either through favorable written statements or through unpaid donations, which garner a higher price from recipients. The concept of transacting in altruism alongside bodily substances is one I consider when analyzing blood donation systems.

A study by Boyer (2010) examines the donation of breast milk by women who have extra, to be used by those who have AIDS. Boyer's main interest is in the geography of caring for distant strangers, a point relevant to the geographies of altruism implicit in blood banks' rhetoric over the decades. However, she also addresses commodification in this particular example through the participation of a for-profit company that sells part of the donated milk to finance the non-profit project that donates the remainder. Scholars have paid close attention to the institutional arrangements that channel bodily substances between public and private, for-profit and non-profit entities. Waldby and Mitchell (2006) consider how a British public stem cell bank allows donated embryos to be used by both public and private interests by putting limits on complete privatization of resulting scientific gains and on certain types of uses, making this circulation more acceptable to the donors for whom the embryos have great personal

importance. In another example, Waldby and Mitchell show how labeling bodily substances as waste allows them to be transferred from non-ownership to the private property of physician-researchers. These studies encouraged me to probe the ways in which non-profit blood banks dispose of waste and surplus and how they interact with for-profit organizations. Waldby and Mitchell's examples of reconciling multiple narratives and meanings of bodily substances tuned me to the multiple ontologies at play in the 1960s debates about the role and meaning of blood.

Scholars like Waldby, Mitchel, Andrews, Nelkin, and Scheper-Hughes adopt a fairly cynical view of gift exchange in bodily substances. Gifting is a way to generate profits from freely given objects without compensating donors. It is an exploitative process that uses the language of gifts to mask less-than-voluntary exchange under uneven power relationships, such as occurs in cases of organ donation, both legal and illegal (Scheper-Hughes 2002). Less-than-voluntary exchange and exploitation are also examined by legal scholars with an interest in law and economics, who have considered the legal underpinning of both gift and commodity exchange, with special consideration of commodification of bodies (Radin and Sunder 2005). They explore whether commodification can ever be empowering and what legal structures promote either exploitation or autonomy and control (Williams and Zelizer 2005). Like the sociologists and anthropologists studying commodification, the legal scholars have investigated the hybridity of gift and market exchange, attempting to break the normative and practical binaries of the two (Rose 1992, Fellows 1992, Frank 1992). While I don't review the entire body of law that governs the blood supply system, I consider some key laws on voluntary donation and the status of blood as a service. Taking a cue from legal scholars,

I investigate how these laws define gifts and commodities, and whether these are consistent with blood bank professionals' beliefs about what constitutes a donation or a sale.

Some scholars do examine the internal logic of gift exchange, treating it as more than a façade for or a foil to capitalist accumulation. Fox and Swazey, with a science and technology studies background, started studying organ donation before the more recent commodification scholarship of Scheper-Hughes and Waldby (1992). While not skirting questions of commodification, especially regarding access to transplantation, they consider the full implication of organs as gifts. Gifting of organs creates its own forms of obligations and relationships not always considered by organ transplant proponents. Fox and Swazey describe the gradual de-emphasis of the ethical dilemmas of this form of exchange as transplantation became a standard medical procedure and demand for organs increased. While blood donation is very different from organ donation in the demands placed on donors, Fox and Swazey's analysis of obligations incurred is a useful example to follow. The regulation, rhetoric, and value judgments about familial and societal obligations implicit in voluntary blood donation have changed through the decades (Waldby and Mitchell 2006). Blood bank staff of the 1960s and today have much to say about the relational consequences of different forms of gift-giving beyond a simple comparison with market exchange.

The most famous analysis of *blood* as a gift exchange is Richard Titmuss' 1971 classic, *The gift relationship: From human blood to social policy*. He compares the hybrid 1960s US system of paid and unpaid donations to the UK's all-volunteer system, finding that commercial exchange of blood exploits the disadvantaged, endangers health,

creates waste, and perpetuates shortages. His work was highly influential in formulating U.S. policy on blood in the seventies and on organs in the eighties (Starr 1998). It has also been crudely interpreted as advocating for the straightforward superiority of gift rather than market exchange (Healy 2006, 113). It is true that he adheres to a gift/commodity binary to a greater extent than later scholars; however, he also provides a nuanced analysis of the interplay between institutions, forms of exchange, subjectivities, and health and equity outcomes. He also provides examples where non-payment for blood still amounts to commercial and social pressure to donate, a situation of great concern for today's blood banks.

Healy (2006) builds on this work by considering how institutions construct altruism in blood and organ donation. Like Titmuss, he's interested in institutional structures that mediate exchange. He describes the ways tissue-collecting organizations construct cultural narratives of donations, routinize altruistic acts, and grapple with conflicting incentive structures facing them, their donors, and their recipients. Like later scholars, he considers how institutions become involved in both gift-giving and commercial activities, to question whether the cultural narrative of tissue donation as an act of gift-giving can survive these institutions' industrialization and participation in secondary markets. He believes this depends a lot on "whether—and to what degree—the staff of procurement organizations really subscribe to it," noting that this is still "an open empirical question" (Healy 2006, 118). This is precisely the question I investigate through interviews with blood bank staff. I also take up Healy's broader inquiry into the subjection of tissue banks to competing norms of gift and market exchange.

Michel Callon's analytical framework

I created many of my interview questions and archival analysis codes with the insight from the bodily commodification literature referenced above, within the tradition of loosening gift and commodity dichotomies established by Appadurai, Kopytoff, and Zelizer. For an analytical framework across the whole project, I decided to use Michel Callon's work on market formation. Callon provides a simple definition of a market – an organization where calculative agents with opposing interests compete to non-violently determine a price of exchange, arriving and leaving as strangers (1998a). This allows me to discuss how blood banks acquire calculative agency, engage in price-setting activity, and compete. When I ask how blood is treated as a commodity, I'm interested in the ways that it is subject to market exchanges as defined in this framework.

Callon's understanding of markets as a certain kind of network also allows me to take non-market behavior of blood banks seriously. He employs actor-network theory to argue that rather than independently existing with predetermined preferences, market actors are shaped by their involvement in a network that draws them into a dominant form of calculation (1998a). Calculative agency, or the ability to make formally rational economic choices, is not something that individuals possess – it is formed and wielded through the relationships between the actors within a network (1998a). Blood banks and their staff need not be thought of as born *homo economici*, inherently calculative beings, to explore how they are drawn into competition and calculation. Callon also takes seriously the role of non-human, technical actors in forming market networks, and for today's high-tech blood banks, technology, regulations, and the changing properties of blood itself, combine to allow and limit certain kinds of calculation.

Finally, for Callon, full commodification and full calculability are never possible – there are always countervailing processes. He describes commodification as disentanglement and framing – or the removal of objects from their previous social relationships in order to enumerate a limited set of properties over which people can calculate within a market (1998a, 1998b). Market framing generates the most controversy in situations of great uncertainty, technological change, and scientific disputes (1998b). Simultaneously with framing, entanglement and overflowing occur – new social relationships often must be formed to create market networks, while the independent properties of all objects and actors create phenomena that escape framing. Overflowing generates unanticipated or unaccounted-for phenomena, which are therefore not amenable to calculative rationality (1998a, 1998b).

Callon directly incorporates theories of gift giving into market exchange, describing gifts as unframed exchanges (1998a). That is, gifts aren't separable from attributes of the giver, so they're completely entangled. Also, in the perfect gift exchange, no calculation is occurring. By insisting on incomplete framing in all exchanges, he avoids creating another strict gift/commodity binary, so all exchanges have gift and commodity properties. Callon's analysis is highly suited to blood, its donation, and its exchange, because transfused blood calls for a theory that accommodates its simultaneous status as a gift embroiled in social relationships and a commodity that circulates in a competitive, highly framed market. Callon himself used organ donation as an example of simultaneous framing and overflowing, considering how institutions disentangle organs and "reconcile circulation and entanglement" (Callon 1998a, 36).

Though Callon's work is not often used in studies of bodily commodification and gift-giving, it has been thus employed in at least one study. Waldby and Mitchell (2006) used Callon's concept of disentanglement to describe the function of public embryonic-stem-cell banks. I used his full description of market formation to create primary analytical categories throughout the project – interview instruments and text codes were designed to consider how blood banks now and historically have approached commodification and gift giving. Thus, I am adapting Callon's analysis to consider blood donation. His framework organizes my empirical work to investigate institutional norms and staff beliefs in the context of blood donation. I apply Callon to investigate Healy's question about the balance of gift and market exchanges in today's tissue banking institutions (Healy 2006).

Data and methodology

Archival research

To understand the historical roots of today's blood supply system, I analyzed two government documents from 1964 and 1967 that included witness testimony from blood bank professionals, medical organizations, and lawmakers. These are publicly available senate hearing transcripts from the Senate Committee on the Judiciary, the results of an attempt to stop the Federal Trade Commission from regulating non-profit community blood banks as commercial enterprises. I will explain why I chose this time period and these documents in the second chapter.

To synthesize what these transcripts revealed about the emergence of today's blood system, I coded them using categories borrowed and then modified from those used

in grounded theory analysis (Titscher et al. 2000). I did not employ an actual grounded theory analysis because I already had Callon's theoretical perspectives in mind, and I wasn't looking to generate theory entirely from the perspectives of the hearing participants. I chose these categories because they were useful for organizing text by elements of discourse and then combining with thematic and abstract elements. Initial categories included questions, explicit and implicit definitions, typologies, statements of causation and consequence, direct disagreements, and geographical as well as metaphoric boundaries. Most coded text also belonged to topical categories such as blood banks, donors, safety, or regulation. I did not transfer my pen-and-paper annotation into electronic form, but the coding process helped to identify recurring themes, rhetorical devices, explicit and implicit contradictions, and differences between stated values and descriptions of practices.

The initial coding contextualized my use of broader analytical categories adapted from Callon. The major categories were entanglement/disentanglement, framing/overflowing, calculative agency and price-setting, and competition/cooperation. Some text was directly coded with these, but most of this analysis proceeds from initial topical coding. Some categories, like competition, are explicitly discussed by participants. Others, like framing, were much more inferential – I am redescribing portions of the hearings in those terms. For example, when senators suggest that the community blood bankers should consider better safety regulation instead of antitrust exemption, I code this exchange as an attempt at framing. Tabular evidence presented by witnesses is a display of calculative agency. When witnesses describe relationships between donors and patients, I code this as entanglement.

I am not making a claim that the hearings are manifestations of definitely-existing categories such as framing, entanglement, or calculation. Rather, I am wondering whether applying these metaphorical redescriptions to the hearings aids in narrating the history of commodifying and decommodifying human blood (Allen 2003). It is my task in the second chapter of this thesis to explain why the hearings can be viewed as a conflict between framing a market and refusing to partake in market calculative agency.

The hearings illustrate the ideological inconsistencies, safety problems, and organizational chaos that motivated policy changes to bring about today's blood supply system. My next step was to describe these changes by briefly reviewing the regulatory developments relevant to blood banks with the aid of government documents and secondary sources. I use them to contextualize my interviews with current blood bank professionals, which I conducted to consider how today's blood banks reconcile commodification and gift-giving. The hearings show that blood banks of the 1960s failed to do so, and I wanted to know whether that has changed in light of all the developments in regulation, practice, and attitudes.

Interviews

I interviewed ten staff members at a number[1] of New Jersey community blood banks. All blood banks were independent (non-Red Cross), non-profit organizations, similar to the independent blood banks of the 1960s. I chose administrative staff who had some discretion in institutional decision making rather than those who performed routine technical tasks such as phlebotomy, delivery driving, or accounting. Some roles corresponded to those covered by the hearings – I interviewed the directors of each blood

[1] IRB protocol prevents me from revealing the exact number of organizations I worked with.

bank. Others included heads of donor recruitment, laboratory directors, and financial officers. I created three sets of questions, tailored to different types of staff.[2] I often had to select from across these sets because many roles didn't fit into the original distinctions. Because I chose a semi-structured interview format, I could do this provided no new topics or question types were introduced.

My questions were based on Callon's analytical categories such as competition, price-setting, entanglement, gift-giving, and calculative agency. I did not directly ask about the abstract categories such as entanglement, but I probed behaviors that I hypothesized would be most closely related to each category, such as donor recruitment and entanglement. It is difficult to study behavior through interviews rather than through ethnography or participant observation – there may be differences between what people say they do and what they actually do on a daily basis, because routine behavior may be hard to summarize accurately. It was beyond the scope of this project to observe staff at work, though the organizations generously took me on tours of their blood processing laboratories. While most of my questions asked about behaviors, I was most interested in how staff descriptions and opinions about those behaviors reflected on their perceptions of commodification and gift-giving, rather than in how accurate and generalizable those descriptions are.

All but one interview were recorded and fully transcribed.[3] I coded interviews using subtopics related to the conceptual categories, picking topics that were most commonly addressed by all staff. Because I generated questions that I hoped would pertain to pre-existing categories, a lot more analysis preceded the coding of the

[2] Please see appendix for annotated interview instruments.
[3] One interviewee requested that I not record our conversation. Instead, I took detailed notes and reconstructed most of the conversation into a transcript-like document.

interviews than was the case for the hearings. I already had some narratives in mind, and I used the coding to check my line of reasoning against all relevant quotes and to organize material for writing rather than to generate entirely new ideas, though this sometimes happened. As in the hearings analysis, I wanted to identify contradictions, whether identified by the interviewees or by me after the fact, and ways that staff thought about them and through them.

With two sets of transcripts addressing distinct periods of U.S. blood banking history, this work is partially comparative. As I re-read my interviews, I often considered staff attitudes relative to those expressed in the hearings; however, there are limits to comparison beyond the obvious fact that one of the sets is archival and the other was co-created by my interview subjects and me. The hearings provide a national perspective from heads of many organizations, while I talked to many types of staff in just a few organizations in one region. The hearings were a public event, whereas I offered confidentiality. I specifically wanted to inquire beyond the gift narratives created for public consumption on websites and other promotional material. In a secure interview setting, I think I was able to do so.

On the other hand, the Senate committee counsel could pierce through any public relations façade with very assertive, sometimes confrontational questioning techniques – they were cross-examining witnesses, not interviewing volunteers for graduate research. I chose an "empathetic" interview style to set staff members and their organizations at ease (Fontana and Frey 2007, 116-118). Especially since some organizations had refused to work with me, I wanted to make sure those who agreed felt safe. I proactively informed them of my theoretical positions and even personal experience with blood

donation to make my intentions and good will clear. Thus, the two sets of transcripts significantly differ in context, content, and tone, limiting comparisons and conclusions to cases of near unanimity of opinion across transcript sets, where continuities and contrasts were especially obvious. Fortunately, several such contrasts exist, and I note them throughout my analysis in the third chapter.

Chapter 2

Context: The FTC and the U.S. Senate take on the post-war blood supply

To understand the circumstances out of which today's non-profit blood supply system has been created, I start by examining attitudes towards blood provision in the 1960s. This was a turbulent period between the all-volunteer effort that had supplied battle troops throughout World War II and the system in place today (Starr 1998). With rising post-war demand, it had developed into a nearly unregulated hodge-podge of Red Cross, private non-profit, and commercial blood banks (Starr 1998). Transfusion-related hepatitis was prevalent in the entire supply (U.S. Senate 1964). The Red Cross and the American Association of Blood Banks were publicly and acrimoniously debating how best to organize an all-volunteer system – along a centralized national Red Cross model or along a community blood bank model (Starr 1998, U.S. Senate 1967). They both sought to counter the commercial blood banks that were purchasing blood from known alcoholics and drug addicts (Starr 1998, U.S. Senate 1964). Before a national blood policy was developed in 1973, these conflicts were aired in all three branches of the U.S. government.

In 1962, Midwest Blood and Plasma Center, a commercial blood bank in Kansas City, Missouri, complained to the Federal Trade Commission that they were the subject of an illegal boycott (Starr 1998). They claimed their blood products were being turned away at local hospitals, which had formed a community blood bank to drive them out of business. In fact, the Community Blood Bank of Kansas City had opened its doors precisely for the purpose of eliminating commercial suppliers, which hospital pathologists had found to be unhygienic and unreliable (Starr 1998). After two years of

hearings, the FTC announced an initial ruling which found the community blood bank, the local medical association, and several pathologists guilty of restraint of trade (FTC 1970). Calling blood "an article of commerce,"[4] the FTC hearing examiner ruled that for-profit blood banks had the same rights to a fair trading environment as any other business (FTC 1970). Hospitals were forbidden from rejecting blood delivered by the commercial blood bank. Community blood banks and the medical organizations appealed the ruling, and after seven years of litigation, a federal appeals court struck it down. By 1969, community blood banks were no longer under the jurisdiction of the FTC (FTC 1970).

In the intervening years, several U.S. Senators attempted to support the community blood banks in their fight against FTC regulations. They proposed to bypass the FTC and the judicial process entirely through an antitrust exemption for all non-profit human tissue banks. In 1964, and again in 1967, they sponsored bills granting such an exemption, conducting their own hearings though the Committee on the Judiciary's Subcommittee on Antitrust and Monopoly. S. 2560 would permit blood banks to singly or jointly refuse to accept blood from any other blood bank without being charged with "restraint of trade" (U.S. Senate 1964, 5). S. 1945 advocated for the same measure but also added that shipment of tissue across state lines would not constitute "commerce in commodities" (U.S. Senate 1967, 5). Neither bill made it out of the subcommittee and onto the floor for a Senate vote.

[4] To be precise, the initial hearing examiner, Walter. K. Bennet, did not so much define blood as an article of commerce as declare that "respondents' contention that human whole blood is not an article of commerce must be rejected," citing federal regulations that governed sales in whole blood (FTC 1970, 869).

The voluminous hearings documents from the FTC and the Senate hearings have been effectively summarized by Douglas Starr in his history of blood banking around the world (1998). He described the very different world views and definitions of boycotts that led the FTC to rule against the doctors in the first place, as well as the highly contradictory testimonies given by witnesses for the Senate. The two Senate hearings are the focus of my analysis. Their transcripts not only detail the daily operations of all types of blood banks, they also capture the purported values and aspirations of the country's blood bankers, medical establishment, and lawmakers. Over twenty witnesses for and against the bill gave prepared statements and answered questions from sponsors of the bill and from skeptical committee counsel members. The result is a record of the nation's preeminent blood banking professionals debating the meaning, desirability, and necessity of commodifying blood. The counsel and bill sponsors lost no opportunity to question discrepancies and inconsistencies of witness testimony. They drew witnesses into ethical debates and sometimes led them through long, technical clarifications of blood bank operations and medical opinions.

"Is human blood properly an item of commerce to be peddled like maple syrup? Do our antitrust laws properly apply to the distribution of living human tissue?" asked Senator Edward Long, co-sponsor of S. 2560. (U.S. Senate 1964, 4). Witnesses in support of the bill sought to make Senator Long's question the central one in the hearings. The FTC's entrance into blood banking implied that commerce in blood was a legitimate economic pursuit, the same as any business; it was the non-profit, cooperative provision of blood by community organizations that had to be brought into compliance with the FTC's mandates. Pro-bill witnesses repeatedly reminded the committee that blood was a

living tissue and often compared transfusions to transplantation of hearts or eyes. Commodification of all human tissues, and implicitly of human life, was at stake.

Pro-bill witnesses expressed moral outrage and disgust at the prospect of bodily substances being treated like commodities – subject to competitive procurement and sale for profit. Yet even as they gave impassioned statements against commodification, they also offered many other medical, legal, economic, and moral arguments. My analysis suggests that the subcommittee counsel often seized on these additional considerations and diverted the debate on the commodification of blood into a market-framing exercise. I will explain how this occurred with respect to legal definitions of commodities, delineations of medical judgment, clarification of the FTC ruling, and proposals for safety regulations.

These invitations to frame markets were met with ambivalence. I will explain why community blood banks insisted on the merits of non-market blood provision and the benefits of entanglement, considering whether these rejections amounted to a refusal to calculate. At the same time, the hearings revealed community blood bank practices that were deeply contradictory with their claims of being non-market actors. Summarizing these practices, I will consider to what extent community blood banks were exercising calculative agency, competing, and putting a price on blood. While these practices might explain pro-bill witnesses' mixed reactions to market-framing suggestions, they could also be seen as a transitional stage for relatively young organizations struggling to re-organize the U.S. blood supply along all-volunteer, non-market-oriented lines. I will conclude the chapter by summarizing the subsequent developments in the blood supply

system, before skipping to the present in the next chapter to consider whether community blood banks have succeeded in decommodifying blood.

For the rest of this chapter, "witnesses" will refer mainly to pro-bill testimony. They include community blood bank representatives, such as the heads of the Association of American Blood Banks (AABB), and the general medical establishment, such as members of the American Medical Association or the College of American Pathologists. Witnesses who were indifferent to or critical of the bills, especially the Red Cross and private commercial blood bankers, will be explicitly identified. "Counsel" refers to the staff attorneys whose role was to cross-examine the witnesses to provide greater clarity for the Senate subcommittee.

Invitations to frame

A superficial, legalistic definition of market products coexisted uneasily with the morally loaded discourse on commodification. Many witnesses, including anti-bill commercial blood bankers, supported any legal language that would make it clear that blood was a service and not a commodity sold as a product. Legal liability is different for a transaction defined as a service rather than a product (Westfall 1986). Calling blood an article of commerce would subject blood banks to strict product liability laws, making hospitals and physicians liable for transmission of blood-borne disease. Since no tests existed for hepatitis, subjecting blood to strict warranty would burden transfusion medicine with even more lawsuits than they were already facing. Citing case law from around the country as well as state statutes that held blood to be part of a transfusion service and not a sale, these witnesses hoped the bill would make it clear that blood, as a

service, was subject to gross negligence suits only. They embraced anti-commodification language as a legal device without objecting to commodification itself.

The desire to officially label blood as a service and not a sale could be considered a market-framing activity, because framing is a strategy to cope with and minimize uncertainty in order to allow calculation and transaction (Callon 1998a). Passing a national law to resolve the uncertainty around liability laws would allow blood to circulate as a commodity, free of legal requirements that could not be met by the present state of medical testing technology. Counsel encouraged this line of reasoning when questioning the witnesses. In exchange for freedom from costly lawsuits, witnesses would also have to concede that transacting in a service was an act of trade and thus still subject to antitrust laws.

Another source of uncertainty, particularly for the community blood banks, was the FTC ruling itself. At the time of the 1964 hearings, the FTC's local hearing examiner's initial decision was under review by the FTC commissioners, and everyone was waiting for a final ruling. The counsel conceded that certain interpretations of the FTC ruling were not sensible – surely the federal agency didn't expect doctors to suspend their medical judgment, transfuse clotted blood, or stop talking to each other in hospital corridors. At the same time, counsel demonstrated that many witnesses had a very weak grasp of antitrust law, suggesting that their worst fears were unfounded and could be alleviated by clarification and reassurance by the FTC. Here, counsel member S. Jerry Cohen asks why Bernice Hemphill, a director of a respected San Francisco blood bank, seeks antitrust protection:

> Mr. Cohen: …Is it your feeling that community blood banks cannot grow unless the law allows them to band together and boycott other blood banks?

> Mrs. Hemphill: I feel unless the law does pass that there is a marked impediment on the basis of not being able to freely join together…
> Mr. Cohen: Of course, the law as it is now has nothing to do with forming the blood banks…
> Mrs. Hemphill: Yes. I understand that, but on the other hand, how much does it take to be a boycott. ..[Gives examples of situations that might or might not constitute a boycott]
> Mr. Cohen: So what bothers you really is not the law so much as the *uncertainty of the law at the present time.*
> Mrs. Hemphill: *I guess that's right.* (U.S. Senate 1964, 45-46, emphasis mine)

Again the witnesses were invited to continue framing the market for blood. In creating a more predictable legal environment, the status quo would continue and both commercial and non-profit blood banks could operate with less uncertainty. Most witnesses in 1964 agreed that legal clarification would be helpful, though by the 1967 hearings, it was clear that the FTC really did intend to regulate community blood banks in ways that witnesses feared would impede their basic functions (U.S. Senate 1967).

In addition to protecting transfusion medicine from paralyzing lawsuits and regulatory ambiguity, witnesses also wanted to protect medical judgment from interference by non-professionals. Physician witnesses expressed a fear that the FTC ruling forced them to accept commercially sourced blood on the same footing as voluntarily donated blood, against their medical judgment about the superiority of one over the other. Physicians insisted that since doctors and hospitals bore responsibility for patient safety, they maintained the right to closely inspect and approve their sources of blood. The opposition to FTC regulation was a defense of physicians' medical autonomy, the right to make life and death decisions without interference from commercial regulation. This changed the commodification debate to a conflict over regulatory jurisdiction and professional territory. In these arguments, commodification was a problem only in as much as it stripped doctors of their professional autonomy.

Protecting professional boundaries from non-professional activities can be a form of market-framing. Callon suggests that competition is never perfect, and only occurs *after* market actors have been delimited (1998a, 1998b). Especially when technologies and scientific knowledge relevant to a market are new and uncertain, the set of properties and actors are up for negotiation during the framing process (Callon 1998b). Some of the older hematologists suggested this was the case in the 1960s. When Senator Long asked a director of a commercial blood bank whether a former guitar teacher was qualified to run a blood bank, the director replied, "If we go back far enough, none of us knew much, including me" (U.S. Senate 1967, 55). On the one hand, patients and lawmakers regarded professionalization in American medicine with suspicion, as anti-competitive and a form of trust-building since at least the first world war (Tomer 2003). Counsel even reminded witnesses from the American College of Pathologists that they had other antitrust complaints pending (U.S. Senate 1967, 72). However, at a time when non-profit hospitals still accounted for the dominant part of U.S. healthcare, witnesses and sponsoring senators could still suggest that medicine was not a form of ordinary commerce without appearing cynical. Senator Long implicitly made the argument that medicine was not commerce at all: "… an agency whose job is the regulation of *economic activity* has expanded its realm into the field of *medicine*" (U.S. Senate 1964, 4, emphasis mine).

Physician witnesses did not usually take up Senator Long's suggestion that their work was entirely outside of commerce. They defended their professional boundaries mainly on the grounds of safety, elaborating on the technical complexities of modern transfusion medicine. Counsel encouraged witnesses to consider safety as a technical,

regulatory problem, presenting an opportunity to again divert the discussion into market framing. Counsel repeatedly invited witnesses to accept stricter regulation of all blood banks as an alternative to antitrust exemption. Under this solution, commerce in blood would continue as before, but unprofessional, unsavory operators of both commercial and non-profit blood banks would be shut down. All witnesses welcomed more regulatory oversight, agreeing that it was currently inadequate. Some came close to accepting it as the solution to current safety problems.

Ambivalence: Collective Action and Refusal to Calculate

Decommodification of blood was one of several, sometimes incompatible, priorities facing community blood banks. Witnesses wanted a favorable legal environment for their activities and better safety regulations to protect all transfusion patients. They were sometimes tempted by the invitation to frame away uncertainties, creating a well-run commodity market. Some came close to accepting the counsel's regulatory solutions in lieu of antitrust exemptions, especially when they were ambivalent about the nature of the problems facing community blood banks to begin with. Dr. Howell of the American Hospital Association espoused a commitment to non-profit blood supplies, yet had the following to say about his priorities:

> I should like to point out that the statement does not condemn commercial blood banks. The issue is not commercialism but quality, first, then cost. We favor the nonprofit institution as being more likely to provide the highest quality service at the lowest possible cost. […] We do not encourage profitmaking on human blood or other human tissue. (U.S. Senate 1964, 51)

The counsel treated this as a request for better regulation and consumer protection:

> Mr. Cohen: I am particularly impressed with your statement where you say, "The issue is not commercialism but quality, first, then cost." I think this gets us down to the very heart of the problem. We are not talking about morality. We are not talking

> about whether living tissue should be considered a product or not a product. We are discussing the basic issues of quality and cost. (U.S. Senate 1964, 55)

Most witnesses did not agree with this narrow interpretation of their concerns. They hesitated to embrace the coexistence of commercial and non-profit blood provision, critiquing the market-framing suggestions of the counsel for ignoring safety hazards and organizational incompatibilities inherent in commercial organization of the blood supply.

Witnesses resisted treating the safety of the blood supply as a technical problem temporarily caused by the absence of a hepatitis test. When counsel asked witnesses to imagine a state where safety was guaranteed by technical advances, they presented other arguments for taking blood out of commerce. They argued that the blood supply was a societal concern best addressed through cooperative action and decommodification. Witnesses predicated a safer blood supply on volunteer donors, non-profit blood banks, and personal connections between donors, patients, doctors, and blood banks. Remaining entangled in dense institutional and social relationships made for safer blood, while the FTC's desire to impose antitrust regulations ignored the need for entanglement and the perils of commercially sourced blood.

Witnesses described serious safety breaches at commercial blood banks, attributing them to the use of paid donors and the presence of the profit motive. Most community blood bank witnesses, Red Cross representatives, and physicians believed that cash payments to donors led to tainted supplies because donors had an incentive to lie about their medical history. They associated blood selling with drug addicts and alcoholics – more likely to be ill, desperate for money, and thus more likely to agree to sell their blood and to lie in order to do so. Without tests for hepatitis, honesty about medical history was crucial to reduce transmission. Paid donors of commercial blood

banks often gave false names and addresses, which witnesses demonstrated by referencing specific outbreaks that couldn't be traced by public health officials because of the false identification provided by paid donors. In contrast, the voluntary donors sought out by community blood banks had no cash incentive to conceal their medical history. They gave blood presumably out of altruism and wouldn't knowingly endanger friends, family, or community members.

The case against paid donors and for friends and family was actually not unanimous at the hearings. Some witnesses presented epidemiological studies that didn't show a clear link between paid donation and hepatitis. A director of a non-profit blood bank who paid some of his donors but not others presented evidence that with careful screening, paid donors were less likely to transmit hepatitis than volunteers. This was due to the regularity of paid donation, where paid donors were tested by time while volunteers, who were usually one-time donors, presented a new, unknown risk when they came to donate. Some witnesses in favor of an all-volunteer system questioned the superiority of family and friend donors. Without advocating for paid donation, they were still attentive to the coercive dynamics of certain forms of gift exchange. A non-profit blood bank operator who accepted both volunteer and purchased blood suggested that the very disentanglement of the paid donor from a gift-giving relationship made it easier to reject unsuitable donors. He described the situation to the counsel:

> There is one thing you must concede about paid donors. You can turn them down very easily, very readily. This is sometimes more difficult to do with an individual who is rendering a public service to his neighbors. (U.S. Senate 1964, 76)

Of course, most witnesses argued that offering payment made it harder to identify unsuitable donors in the first place.

There was far less ambiguity about the deleterious effects of the profit motive on blood banking. Commercial blood banks had monetary incentives to collect and sell as much blood as possible. They were accused of knowingly collecting from drug addicts and ill individuals. Their screening procedures were thought to be inadequate, reflected by their failure to verify the most basic information about their donors, such as name and address. Witnesses brought newspaper clippings of lurid stories on unsanitary and corrupt practices in commercial blood banks, adding to the large appendices of evidence and correspondence that accompany each hearing transcript. Many of these witnesses also opposed competition in blood provision on both ethical and public health grounds. Competition engendered massive waste amidst severe shortfalls, unscrupulous and unsafe collection practices, demoralization and decline of voluntary donors, and an expensive and unreliable blood supply.

To solve these problems, community organizations had to coordinate, cooperate, and even consolidate. They sought relief from antitrust laws to protect their right to form community-wide organizations, believing that the FTC interpreted most of their collective actions as boycotts and conspiracies. Firstly, the witnesses worried that simply meeting to form new community blood banks would be deemed a conspiracy, since it usually involved coordinated action to replace commercial blood supplies. Secondly, they feared that doctors would be penalized for warning each other about unsafe blood sources, even if individual doctors' rights of refusal were clearly upheld by the FTC. Thirdly, they insisted that preference for non-profit over commercially-sourced blood was a medical judgment and shouldn't be viewed as a boycott, even if some commercial blood banks would go out of business as a result of this preference.

Witnesses admitted that National Institute of Health licenses were not a signal of a safe facility – only the voluntary AABB inspection system for community blood banks provided strong oversight. Because licensed facilities were rarely monitored, and many more were completely unregulated, hospitals and blood banks transacting with other facilities maintained safety through entanglement. They made acquaintance with blood bank staff, personally evaluating their medical expertise, before accepting their blood. Information on hazardous or unsavory sources was routinely disseminated at meetings of local medical societies and public health bodies. This was not a boycott, the witnesses argued, but the exercise of professional judgment in the interest of public health. Of course, this situation led the counsel to suggest better safety regulation instead of antitrust exemption. However, this proposed solution didn't address threats to collective action.

The counsel reassured that anyone at any time could refuse blood from any source if a valid safety reason existed for doing so. Under an antitrust exemption, however, doctors could refuse to deal with particular blood banks for any reason, even a spurious one designed to impede competitors. Charged with upholding antitrust law, the counsel was suspicious of any measure that would leave room for boycotts and restraint of trade. Charged with protecting public health and acquiring sufficient safe blood, the medical witnesses were baffled by the suggestion that they would ever maliciously turn down a safe pint of blood to pursue market dominance. The following is an exchange between counselor S. Jerry Cohen and the AABB president, Dr. Rosser Mainwaring:

> Mr. Cohen: Now, you have this blood bank in Detroit. Suppose a group of hospitals in Detroit were to get together and decide to boycott your blood. […]Do you think they ought to have a legal right to do that?
> Dr. Mainwaring: I think if they have good and sufficient reason they ought to have the right to do it.

> Mr. Cohen: Do you think they should be allowed to do it if they don't have good and sufficient reason?
> Dr. Mainwaring: I don't see why they would do it if they didn't have good and sufficient reason. (U.S. Senate 1964, 16)

This exchange continued without either party changing their view – the doctor was confident that there was no need to question hospitals' choice of blood, and the lawyer repeatedly asked why transactions in blood should be treated differently from any other exchange. Starr documented far longer and more heated exchanges of this kind in the original FTC hearings (1998). In both cases, the counsel and the witnesses found it difficult to formulate and answer questions based on each other's calculative logics, since their models of expected behavior differed so much. The counsel assumed commercial regulations could sensibly be applied to blood banks without affecting their basic operations because the counsel assumed they were inherently competitive agents. The medical witnesses feared that antitrust regulations would undermine the core public health mission of community blood banks because these functions depended on cooperative, not competitive, organizational structures.

Instead of agreeing to frame a better-functioning market for their activities, witnesses for community blood banks often refused to deploy a market-oriented calculative logic. They preferred entanglement and cooperation for a variety of reasons: organizational efficiency, blood supply safety and reliability, and popular moral sentiment that human blood and profit-seeking behavior were incompatible. Pro-bill witnesses insisted on the right to refuse calculation and market participation.

Contradiction: Commodification, competition and bought blood

Refusal to calculate is not sufficient to distinguish market competitors from non-market cooperators. Moreover, counsel challenged witnesses to demonstrate that non-

profit community blood banks did not engage in commerce, while holding them to the same standards of calculative ability expected of other businesses. Drawn into a calculative discourse, witnesses provided testimony that challenged community blood banks' self-image as non-market actors. In particular, counsel accused community blood banks of disregarding their potential to unfairly compete with other non-profits and of practicing hypocrisy in their use of paid donors.

The committee refused to consider exemptions to antitrust law without examining the potential effects on consumer prices, drawing witnesses into cost-accounting exercises on the stand. They asked witnesses to compare price differences between community and commercial sources of blood for hospitals and patients. Community blood banks were put in the awkward position of proving that their supply was cheaper and justifying cases when their blood products were more expensive. They argued that blood banks employing qualified medical personnel were bound to pay higher salaries than shady operations employing people with little medical training.

They listed the technical, research, and charitable services their organizations provided that commercial banks did not. They presented detailed breakdowns of the costs of each step of collecting, testing, typing, storing, and delivering blood to show that they did not ever charge for the blood itself, much less sell it at a profit.

Unfortunately, participating in the calculative strategies of cost accounting not only showed them to be very capable calculative agents, but also underscored practices that could amount to commodification of blood. These included insurance coverage offered to individuals and groups of blood donors and blood replacement fees charged to patients by some hospital blood banks. The counsel did not explicitly condemn these

practices as commodification, but these institutional structures were preconditions for the more controversial paid donations at community blood banks and are thus worth examining.

Both community blood banks and commercial enterprises frequently offered insurance schemes to individuals, families, or social groups like workplaces or clubs. Subscribers could purchase coverage for future blood transfusions either with a monetary fee, or, more commonly, by donating a pint of blood. As Titmuss noted in his survey of blood collection schemes, insurance schemes often cultivated a responsible, male middle-class subject who invested in his family's well-being rather than encouraging altruistic, community-oriented donation (1971, 82-84). Insurance schemes run by medically competent but entrepreneurially inept non-profits also opened the door to criticism by commercial blood providers, who accused them of running badly managed insurance companies under the guise of community organizations.

Many hospital blood banks charged patients very high replacement fees for units used in treatment. The witnesses asked that these charges not be conflated with prices, because the fees were set high to encourage patients to replace the units through family and friends' donations. This would either cancel or greatly reduce the charges. They vowed that they preferred blood donation to fee collection, but this practice clearly deviated from cost-based pricing. For the patient, it was like putting a price on blood itself, inviting him to treat the received blood as a cash commodity. Witnesses from commercial banks even insisted on patients' rights to do so, citing wealthy patients who preferred to pay rather than ask family members to bleed or to deplete a work or fraternal club account. When patients paid with cash rather than blood, the supply had to be

replaced somehow. Often, the replacement fees were used to purchase blood from paid donors.

As witnesses testified, most community blood banks, not just hospital ones, purchased blood from donors and even from commercial organizations in times of shortage. This practice troubled the counsel much more than any other, because all witnesses in support of the bill insisted that community blood banks were distinguished by their commitment to voluntary donation, in contrast to exploitative commercial organizations that bought blood with cash. It is hard to overstate the tight discursive link between community blood banks and unpaid donation, with one explicitly and implicitly defining the other throughout both hearings. In admitting to widespread, routine purchases from paid donors, the witnesses imperiled their very identities. The paid donor was a challenge to the high-road moral arguments in favor of non-profit blood banks. Witnesses recognized and agonized about this. Below is a continuation of the conversation between Dr. Mainwaring and Jerry S. Cohen. In addition to his work with the AABB and a hospital blood bank, Dr. Mainwaring oversaw a non-profit blood bank that purchased all of its blood from paid donors:

> Mr. Cohen: […]Would you be in the business of buying and selling blood if you thought it was immoral?
> Dr. Mainwaring: I think it is immoral. I also think it is immoral to allow patients to die if they don't have blood.
> Mr. Cohen: In balancing the two immoralities, you think the lesser immorality is selling the blood, is that right?
> Dr. Mainwaring: That is exactly right. […] I would close up Detroit Blood Service tomorrow if voluntary donations could supply our blood needs.
> Mr. Cohen: And inasmuch as they can't, the commercial blood banks perform a useful service […]?
> Dr. Mainwaring: I don't consider myself a commercial blood bank.
> Mr. Cohen: Would you say that blood banks that sell blood are performing a service to the country?

> Dr. Mainwaring: Oh, yes; they are definitely performing a service, no question about it. (U.S. Senate 1964, 17)

In this exchange, even the counsel is assuming an implicit equivalence between paid donation and commercial organizations.

Given the grave dangers attributed to paid donation, counsel questioned whether paid donors at non-profit blood banks were equally hazardous. Community blood bank operators admitted this was a suboptimal practice but insisted that they were far more cautious in recruiting and screening those donors. They turned away the unhealthy and the addicted, and their highly qualified medical staff were better judges of donor health than the untrained businessmen operating commercial blood banks. The community blood banks expected the committee to trust their medical and ethical judgment in the face of the paid donor dilemma because they were not driven by a profit motive. They purchased blood only as a last resort, not as a matter of operating principle. Unlike commercial operators, they did not exploit the poor, passing most of the fees collected from hospitals to the donors. Most emphatically, they weren't profiteering in blood by buying low and selling high. Linking safety to the absence of a profit motive, community blood banks asserted their worthiness of antitrust exemptions despite their use of paid donors. Their purchases were undesirable, perhaps even immoral, but not commercial or profit-driven.

Unfortunately for the community blood banks, the counsel did not take their non-profit status at face value. "Non-profit" was a legal, managerial designation, not a statement of good character, they maintained. In the counsel's eye, it did not preclude community blood banks from conspiring to compete unfairly. As Callon points out, entanglement and refusal to use the calculative tools of one's opponent can also become

competitive strategies (1998a, 43). Coming from a commercial law background, the counsel tended to be suspicious of competition masquerading as cooperation. To determine whether this was the case, they questioned community blood bank and other witnesses about their competitive impulses.

The Red Cross witnesses presented an opportunity to accuse community blood banks of competition against a highly respected non-profit organization. At the second hearing especially, Red Cross witnesses were questioned on their relationship with community blood banks and the AABB. These were sometimes tumultuous, as evidenced by some bitter exchanges between members of the organizations in trade journal articles submitted as evidence for the hearings (U.S. Senate 1967, 100-114). The Red Cross witnesses denied that community blood banks tried to prevent their entry into new cities, but the counsel repeatedly brought up localized conflicts over organization of the blood supply. While the Red Cross never directly accused community blood banks of seeking the antitrust exemptions to target the Red Cross, the counsel insinuated that this was a distinct possibility. Some committee members protested at the slanderous accusations, especially when counsel started questioning pathologists about their financial interests in preferring community blood banks to Red Cross supplies. In light of detailed testimony that explained how pathologists were actually paid for their work, these really were spurious accusations.

It was hard for the counsel to prove that community blood banks wished to compete with the Red Cross; however, their line of questions highlighted Red Cross indifference and opposition to the bill. In the first hearings, the Red Cross went on the record as indifferent. They did not feel the need to be protected against antitrust law

because they claimed to operate so thoroughly outside commercial structures that they were not even concerned about falling under FTC jurisdiction. Their blood assurance schemes bore much less resemblance to insurance coverage than did the community blood banks' programs. They entered communities only on invitation and were not in the position of rejecting commercial blood or competing with commercial providers. Most importantly, they never, ever bought blood – not a single pint. Their indifference was damaging, especially since they also favored the decommodification of blood in principle. In the second hearing, they went on the record as opposed – they denied that hostility between them and the community blood banks was imminent, but expressed a concern about the possibility of unfair competition in the future. Without appearing unduly accusatory, Red Cross testimony still served to highlight the contradictory behavior of community blood banks.

The community blood banks and hospitals were operating in a challenging environment. Faced directly with increased demand for blood, they couldn't easily take the Red Cross' high road and refuse to buy blood entirely. The counsel did not reflect long on the testimony that showed community blood banks to be in the unenviable position of making up for shortfalls in Red Cross provision. Instead, community blood banks were implicitly questioned on their commitment to decommodification. Notably, they requested the antitrust exemption in order to effect a gradual decommodification of blood through unimpeded expansion of community blood banks and voluntary donation. Neither the proposed bills nor any of the witnesses were asking for an immediate ban on blood selling. In the meanwhile, they had to procure blood where and how they could.

The contradictory reliance on purchased blood was reflected in the geographic imagination of the witnesses. Volunteer donors were described as "local citizens," permanent and respectable members of their community (U.S. Senate 1964, 74). Paid donors were "transient," living on skid row (U.S. Senate 1967, 85). Yet commercial enterprises recruiting paid donors were "in *some* communities…absolutely essential" (U.S. Senate 1964, 3).[5] The community blood banks were located discursively and often physically in respectable, middle-class spaces, but they relied on additional blood from peripheral, marginalized neighborhoods. Indeed, Titmuss' survey of commercial blood banks revealed that they drew heavily on unemployed black men in inner cities (1971, 90-119). Simultaneously decrying commerce in blood and acknowledging its "useful service" failed to convince the committee to support a bill that would "in essence create first and second class blood banks" (U.S. Senate 1964,17,72).

Seizing on this ambiguous relationship to commercial sources, both the counsel and witnesses from commercial blood banks called out the hypocrisy of pro-bill witnesses. Dr. M. David Orrahood, a pathologist and director of a for-profit blood bank and insurance program testifying under a subpoena, accused bill supporters of conflating poor donors with drug addicts:

> We have never accepted skid row donors, although we live in an area of poverty in Kentucky, and indeed many of our people in Kentucky[…]would take great umbrage at the implication that the poor people were bad donors. […]the skid row donor is a semantic term that carries a great deal of heat and weight. (U.S. Senate 1964, 123)

Even some staff at non-profit blood banks suggested that the presence of for-profit blood provision was an indication of resource inequality, not a reflection on the morality of the proprietors. "I am rather of the opinion that many blood banks are proprietary

[5] Emphasis mine.

institutions simply because donated charitable funds were not available at the time a service need appeared in the area," suggested W. Quinn Jordan, a director of a large non-profit blood bank and insurance scheme (U.S. Senate 1964, 72).

Operating in a chaotic market, community blood banks were faced with multiple uncertainties over the service/sale distinction, interpretation of FTC rulings, and inadequate safety regulations. All of these were opportunities to frame the market, and counsel continually invited witnesses to do so. Unable to show an unambiguous commitment to decommodification, dependent on the commercial sector, and shown up by the far more consistent Red Cross witnesses, community blood bank supporters were often distracted by framing exercises. This resulted in testimony that even the most sympathetic audience would describe as contradictory.

Transitions away from contradictions?

Starr, who personally interviewed committee members, suggested that the bills would have been rejected regardless of the testimony provided. "Hell, we were the *anti*-trust committee, there was no way in the world this exemption would get past us," explained S. Jerry Cohen, the staff attorney doing most of the questioning in the first hearing (Starr 1998, 202).[6] I do not suggest a causal relationship between the hearings and subsequent changes to the blood supply system. Instead, they are a record of contradictions to be resolved. I will now briefly summarize thirty years of major developments in blood supply regulation, a legacy of the move towards a national blood

[6] Bill sponsors did not approach the hearings in this spirit. The counsel's tactics were completely unexpected (Starr 1998). Senator Long even publicly rebuked the counsel in 1967, exclaiming that he had never before encountered such a concerted effort to discredit witnesses at a Senate hearing (U.S. Senate 1967).

policy in the 1970s and the AIDS crisis in the 1980s. This will provide the context for my interviews with current blood bank staff.

Table 1: Regulatory Development of the U.S. Blood Supply

Year	Regulatory or Medical Development
1969	A federal appeals court rules that the Federal Trade Commission has no jurisdiction over non-profit blood banks.[a]
1971	Richard Titmuss publishes *The Gift Relationship*, highly critical of the disorganized, commercialized blood supply system of the U.S. It is widely read by American lawmakers, including Elliot Richardson, the head of the U.S. Department of Health, Education and Welfare.[b]
1972	Elliot Richardson transfers oversight of all blood banks from the HEW's Division of Biologics Standards to the Food and Drug Administration.[b]
1973	The FDA passes its first binding regulations of blood banks, which include FDA inspections of all facilities at least once every two years.[c]
1974	HEW develops a national blood policy, which calls for promotion of an all-volunteer donor system, standardization in labeling and tracking all blood products, and regional cooperation. FDA proposes its first set of common manufacturing practices, which include donor suitability criteria and standardized labels.[d]
1980	The FDA proposes expansion of the 1974 manufacturing regulations; mandatory labeling of sources as "volunteer" or "paid donor" is first proposed.[d]
1982	Dr. Bruce Evatt of the Center for Disease Control first suggests that a new viral disease is spreading through blood products; AIDS is named and described by the CDC. Three years of conflict ensue over how to prevent its spread through transfusion in the absence of a blood test; twenty thousand Americans contract AIDS through blood products.[b]
1985	The ELISA test for presence of AIDS antibodies is approved for use, rapidly adopted by all blood handling facilities.[b]
1985	Source labeling requirements become mandatory. "The appropriate donor classification, i.e. 'paid donor' or 'volunteer donor'" is to be placed on each bag of blood "*in no less prominence than the proper name of the product*." This is still the language of current FDA regulations.[c],[e] .
1994	FDA outlines the most current process to systematically report and track all adverse reactions, including transmission of disease, resulting from blood products.[c]
2012	As of 2012, the following tests must be performed on all units of blood products: syphilis, ABO typing, Rh typing, HIV 1 and 2, Hepatitis B and C, and Human T-Lymphotropic Virus 1 and 2.[c]

[a]US FTC 1970 [b]Starr 1998 [c]US NARA 2012 [d]US NARA 1980 [e]US NARA 1985

Today, paid donation of blood for transfusion has been eliminated, commercial blood banks have been closed, and the U.S. blood supply is vigorously regulated and monitored for safety.[7] Did the vision of the most committed community blood bank proponents come to pass, with a cooperative network of organizations providing non-commodified blood to the nation? Or did the increased regulation succeed in framing a market, albeit one dominated by non-profits? By talking to today's blood bank staff, I consider whether they have overcome the contradictions revealed in the Senate hearings, and whether the simultaneous gift and commodity status of blood has generated new contradictions.

[7] I am going on the word of my interviewees that payment of blood has been eliminated and commercial blood banks have closed; there are actually no laws against either, just regulations that make commercial and paid blood collection conspicuous, onerous, and undesirable.

Chapter 3

Interviews with blood bank staff suggest that blood banks are operating in a variety of markets. Regulation of the blood supply did serve to frame a market, and I will explain why eliminating cash payments for blood did not decisively decommodify it. Nevertheless, non-profit blood banks are able to reconcile their mode of blood collection with their non-profit status much more easily now that they are no longer purchasing blood. Ongoing changes in healthcare provision are further enrolling blood banks in calculative market networks of all sorts. From new forms of hospital management to evidence-based medicine, new forms of calculation and industrialization alter relationships between donors, blood banks, and hospitals. The fierce competition that results from these changes generates a similar sense of ambivalence and contradiction as blood payments did in the past. However, as Callon reminds us, all actors in a market networks have "irreducible autonomy" that is a source of overflowing and re-entanglement (1998a, 38). Blood bank staff continually negotiate the meaning of all transactions, resisting commodification in unexpected ways. The overflowing of commodity into gift exchange occurs in the most paradoxical places, most notably donor incentive programs.

For the rest of this chapter, I will rely on staff interviews to justify my claims above. Unless explicitly stated otherwise, all descriptions of practices are derived from these interviews – they are not generalizable to all community blood banks, nor are they all verified by direct observations of day-to-day activities or secondary sources. I was interested in how staff perceive their simultaneous involvement in both voluntary donation and market exchange. Thus, I am confident that the interviews are adequate

reflections of their opinions, regardless of the precision with which actual activities are described.

Transacting in altruism: Non-payment, non-profit, non-commodification?

> If you go to a hospital blood bank, and you take a blood bag, it will say on it in red letters, "Volunteer." Right. And so, if you pay the donor, you can't put that on your bag. And if you don't have that on your bag, the hospitals won't buy the blood.
> *Director*

The regulated production of the voluntary donation transforms individual acts of kindness into standardized, exchangeable units of blood. If commodification is a process of making the something incommensurable into something exchangeable, then the stringent FDA regulations on the proper recruitment and compensation of the unpaid volunteer allow commodification to take place (Kopytoff 1986). Only by following these mandates can blood banks label their blood as "volunteer," an official label that allows transactions in blood to take place. Most staff are keenly aware of the importance of these rules for blood safety and for the ability to transact with hospitals, though they vary in their familiarity with the basic details of the rules.

The FDA regulates voluntary donation because it is concerned with a widely-accepted link between cash incentives, dishonesty, and hazard in blood donation. All staff I interview consider honesty to be vital to blood safety. As the more technically-oriented staff explained, there are serious blood-borne illnesses that cannot be tested for, notably malaria and the CJD virus, which causes mad cow disease. The only mechanism to reduce contamination risk is a deferral for travelers to exposed areas, which is enforced entirely through self-reporting on screening questionnaires. Even for viruses that are routinely tested for, such as HIV, steering at-risk donors away from donating is seen as an important precaution. Screening questions also ask about medication use and health

history, protecting donors from unsafe donation and patients from transfer of pharmaceuticals from the donor's blood.

Despite extensive testing of each donated unit, these technical constraints on detecting some blood-borne illnesses foster a reliance on thorough, honest donor disclosure of a variety of personal information, from the mundane to the deeply private. Thus, staff are focused on avoiding any incentives to lie or conceal information. Any situation that creates an incentive for donor dishonesty is seen as a serious safety hazard. Altruistic, anonymous donation is presumed to promote the honest answers needed to screen out donors with potentially contaminated blood. Thus, as much as they are supplying blood, blood banks are also transacting in altruism and trust.

My interviewees were unanimous that payment for blood blatantly compromises both altruism and trust in donor honesty. It is simply not feasible, imaginable, or desirable to purchase blood outright. Everyone who was asked agreed that no blood center in the country engages in this practice, except maybe one or two new ones that have not fared well. While all ten suggested a relationship between money and dishonesty, they described different mechanisms for this effect. About a third of interviewees agreed that the offering of money attracts undesirable, high-risk donors such as drug addicts. This was the refrain at the Senate hearings, connecting social groups, drug use, illness, money, and dishonesty. However, more staff made a sweeping link between money and dishonesty in general. In this argument, cash is a corrupting influence, tempting any potential donor to conceal anything from illegal drug use to ordinary trips abroad. By this logic, cash acquires immense power to influence behaviors:

> Katya: There was a time, before the community blood centers really got big, when commercial blood transactions…
> Collections coordinator (interrupting): Which is very bad, because that would *force* people to lie. Mm-hmm. […] If you're paying for blood, like I said, it's going to *force* someone who knows that they shouldn't donate to not tell you why, because they want to get paid. (Emphasis mine)

The staff are also more attuned to the non-voluntary and coercive nature of certain forms of gift exchange than their counterparts of the 1960s, when friends and family were praised as ideal, purely altruistic donors precisely because of their personal links to the patients (U.S. Senate 1964). Over half of the interviewees spontaneously mentioned practices that create incentives or pressure to be dishonest. The most common was directed donation, where individuals are asked to donate specifically for a friend or relative. Faced with an urgent, personal appeal, donors might find it hard to be honest about disqualifying conditions. There is pressure to fulfill an obligation or to conceal sensitive life histories from family and friends. This makes it neither voluntary nor entirely altruistic in the eyes of some staff:

> Some people, as we know, are pressured into donating, "You got to donate for grandma!" Should I tell dad about those IV drugs I used in college? No, I'm going to donate for grandma. […] A directed donor is not coming in to just help out the community. They're forced to come donate for grandma. *Hospital Liaison*

Blood banks make great efforts to protect the privacy of directed donors, never revealing the reason for deferrals or, when possible, the identity of any deferred donor. However, some staff members still feel that directed blood is a "horrible product,"[8] and several would flatly refuse a directed donation, preferring blood from the general, anonymous pool. Blood drives hosted by organizations, where people donate as a group, were also identified by one staff member as a site of pressure. Another staff member

[8] Hospital Liaison

even saw potential for dishonesty in autologous donation,[9] since the donor may be very eager to have their own blood and is less concerned with infecting anyone else. However, this is not a commonly held view of autologous donation. Titmuss was prescient in his precise distinctions between five kinds of unpaid donors, most of them coming under some kind of pressure to donate (1971, 75-89). The staff were quick to make similar distinctions as well.

I was struck by the immediate link between honesty, voluntary donation, and safety, followed by the relative absence of other motivations to maintain an all-volunteer system. It was difficult to gauge consensus on this issue because phrasing of the question changed considerably over time, as I struggled to articulate it. Thus, not everyone was asked in the same way whether there are any reasons other than safety to collect blood from volunteers. Two stated outright that they could not think of any other reasons, while two noted that it would be more costly to test blood coming from a potentially unsafe source—the paid donor—and then to discard tainted units. A few noted a personal preference for donation without offering any reasons. Only two people explicitly considered the possibility that paying for blood may change the relationships between blood banks, donors, and blood, altering the quality of the transaction:

> Some people come in every two weeks like clockwork [to donate plasma]. Would they do it [if they were paid]? It dips into the psychology of it. *Donor Relations*
> If, [you] just say, "Hey, look, we'll just pay you there to have blood," […] they see a monetary value. […] Am I volunteering to give my blood? Well, no, not really. You're paying me. You want to pay for my blood? OK, *I'll charge you*. *Finance Officer* (emphasis mine)

[9] Autologous donation refers to drawing blood for one's own use. For example, someone scheduled for surgery may elect to store their own blood ahead of time in case a transfusion is required during the operation. Staff explained that many of the general rules for selecting blood donors do not apply to autologous donors, and therefore autologous donations are never distributed for use by other people, even if they are not used by the original donor.

The ad-hoc nature of my inquiry into the pre-eminence of safety prevents me from generalizing. However, the more rigorously-posed question about plasma collections corroborates the dominance of a safety narrative. I asked many staff why plasma was often purchased from donors by pharmaceutical companies. Most staff either described commercially sourced plasma as non-therapeutic and non-injectable, or they explained how the pharmaceutical processing of plasma kills viruses. Some also considered the role of a large demand and the for-profit nature of pharmaceuticals. Still, the most common rationale for allowing payments was that honesty is not essential to guarantee safety of commercially-processed plasma products. Deception was made irrelevant through a sterilization process, but it was still linked conceptually with cash payments. Staff reasoning implied that in cases where technological protection is not available, cash payment for blood must be avoided for safety.

The relative absence of other reasons to avoid payments contrasts with responses from the Senate hearings, when blood bank staff offered a variety of narratives on the merits of voluntary donations: equity and justice, emergency preparedness, lower costs, reliability, and moral arguments about the status of bodily substances (U.S. Senate 1964, U.S. Senate 1967). I propose several reasons why these were not central arguments for the staff I interviewed, even if they might believe at least some of them. Most staff have spent their professional lives in an all-volunteer system, so payment for blood is not something they have needed to formulate a response to. In the wake of the AIDS crisis, blood bank staff understandably have safety as their primary concern. Several staff claimed that the decline of payment for blood was due to the AIDS crisis. In fact, some linked paid donations to transfusion-related AIDS transmission, and no one correctly

identified unpaid volunteers as the main source of the contamination (Starr 1998). It is not surprising then, that safety dominates the discourse on the merits of volunteer donation.

A common national standard for what constitutes a voluntary donation attempts to make a standardized package of blood components, donor characteristics, and blood bank relationships with donors. As I will make clear when describing market pressures, this standardization matters for allowing calculation and competition. Commodification of both blood and altruism is an ironic byproduct of this preference of donation over payment, and this is why I argued earlier that blood banks transact in altruism and trustworthiness. However, blood bank personnel do not support this form of regulated voluntary donation because of a conscious, never mind cynical, desire to commofidy blood. On the contrary, most are deeply aware that voluntary donation, no matter for what reason, places certain limits and norms on the pursuits of blood banks.

Most staff emphatically assert that they do not sell the blood they collect. "We don't talk about selling blood. We talk about getting reimbursed for the expenses associated with what we do," a director told me. "[Hospitals are] not really paying for the free gift, which is the blood, but there's the processing and the testing," explained a quality control staff member. Some staff wonder whether this is an artificial distinction:

> We don't sell the blood. […] It's semantics. […] There's no fee for the actual blood. That's free. What I'm charging you for is the processing. The phlebotomist who collected it, the cost of the bag, the cost of the testing, the cost to deliver it, the cost of the driver. That's where the fee comes in, so it's a distribution fee. Again, semantics. I'm selling the product. But…[stops talking] *Hospital Liaison*

From the conversation itself it was unclear whether this staff member thought "selling" was an inaccurate name for charging fees, or that charging fees was an inaccurate name

for selling. The absence of profit distinguishes this kind of selling from other business activity – the goal is to recover the very high costs associated with processing and distributing blood. The hospital liaison's quote describes only a small portion of the steps and expenses involved in getting one pint of blood from donor to patient. Sometimes this requires charging a margin slightly above the cost of the individual unit – everyone could name a piece of equipment they wanted to update or other improvements they wanted to make, which would require a surplus. However, this surplus is not profit in the sense that a commercial organization's profit can be used to enrich private owners.

Staff suggested that actually profiting off of blood fees, rather than using any extra money to improve equipment and training, would be inconsistent with collecting blood from voluntary donors. They often made the implicit connection between non-profit status and voluntary donation, much as the community blood banks tried to do in the senate hearings. However, they are more successful in making this case today because they do not buy blood from donors at all. A finance officer summarizes his organization's work:

> Our mission, as a non-profit organization [is] that we rely on donors to supply us with what we need, to distribute to our hospitals. […] Our mission is not to make money. *Our mission is to maintain ourselves*. (Emphasis mine)

Maintaining themselves has become increasingly difficult for small community blood banks. Few are making any surpluses; many rely on imports of blood from other states. Echoing the predicament of community blood banks in the senate hearings, a donor relations staff remarked, "The challenge is that you're expected to run as a business but you can't – you don't have the resources." The pressure for non-profit blood

banks to operate on business principles has been increasing, changing relationships with clients and donors.

From everyday calculation…

Technological change, financial pressure on healthcare, and the emergence of a national blood market have created new mechanisms to enroll community blood banks in networks of calculative agency. Salient medical developments include new blood supply management techniques and blood conservation through evidence-based medicine. Financial pressures have changed the relationships between blood banks and local hospitals towards financial managerialism. At the same time, national blood safety regulations now allow blood to be traded across the country. After summarizing the sophisticated calculative strategies that community blood banks have already been routinely using, I'll address each of these sources of change. These trends increase competitive pressures and propel community blood banks towards market exchange. At the same time the intrinsic properties of blood and the personality and ingenuity of staff generate new entanglements and non-market rationales in the face of these changes.

Both the senate hearings and interviews with longtime blood bank professionals confirm that community blood banks have always been technologically savvy (U.S. Senate 1964, U.S.Senate 1967). Besides continually improving safety protocols, they direct sophisticated accounting methods and technology to coordinate blood supplies with hospital demand and manage complex inventories of blood components.[10] This

[10] To appreciate the calculation required to manage the blood supply for a given area, it's important to remember that blood is separated into an increasing array of components (red cells, plasma, platelets, etc.) that are used to treat very different conditions (trauma, cancer, sickle cell). They are further divided into eight common and hundreds of uncommon blood types, some associated with specific ethnic groups. Accidents or natural disasters can instantly skew supply and demand. Staff described how shortages of one component or blood type can occur simultaneously with surplus of other blood products.

calculative agency need not be used to compete in a market, but the skills and technology developed by blood banks are being translated into an increasingly market-oriented working environment. The blood banks I interviewed make complex contractual agreements with hospitals and other blood banks, develop strategies to cope with shortages and surpluses by seeking new partnerships, and recruit donors with marketing strategies in mind. Many staff feel that the blood banking field is changing rapidly; these changes are calling on blood banks to exercise their calculative strategies in a market context.

Donor recruitment is a delicate task – blood banks appeal to donor altruism in soliciting a gift, but at the same time they have to collect from a range of blood groups, defer those deemed risky, and counsel those who are deferred. A quality control staff member who doesn't spend much time with donors still acutely feels the challenge:

> Donation is a privilege, it's not a right. [But] I cannot communicate it like that to a donor. … I run the risk that the donor feels more rejection than acceptance. …For the patient, I have to ensure that […] we're just taking the very best. But then for the donor, I have to say, "You're welcome. This is a good thing, you should do it, it's rewarding. But there's a potential at the end that you will be deferred."

After the effort to recruit and successfully screen a donor, blood banks want to collect the optimal blood product from each donor – plasma from AB+ males, double red cells from people endowed with high iron, whole blood from the highly-sought-after O- universal donor. Already the ability to extract specific blood components at mobile drives is allowing blood banks to optimize donations; a staff member explained that there is now technology to test blood type on the spot, so that even new donors can be encouraged to donate the optimal blood component.

Donor optimization is a calculative strategy that combines medical and economic considerations in a way that makes it hard to distinguish where market rationality ends and medical preferences start. It is driven by concern for donor safety,[11] patient needs, cost savings, market demands, and even appeals to altruism, and I found it hard to evaluate any one of these priorities separately from the others. This is how a collections coordinator described the benefits of donating plasma through apheresis:[12]

> Collections coordinator: For us, what gets us more money is our platelets. So as long as we can collect a lot of platelets and sell these platelets, we are definitely better off.
> K: And then on the donor end, [it's] convincing people to donate the platelets as well…
> Collections coordinator: …Platelets, you're not losing your red cells, ok. You can donate more often. […] Your body is always in a constant fluid balance, […] so it probably would be better off for [the donor]. […] Showing them why a platelet donation for the patient is better.[13] So a lot of times we sell it on need to the patient.

All of these reasons are in and of themselves compelling, and the unique properties of platelets, disease transmission, and human bodies undergoing apheresis overflow simple market calculations that make platelet collection the best choice for everyone.

It is more difficult for staff to synthesize the multiple rationales behind the rise of blood conservation techniques. Concerned with preventing unnecessary transfusions, these techniques arose as part of a focus on evidence-based medicine and cost-accounting. They rely on extensive data analysis of treatment outcomes rather than on the subjective judgment of an attending physician. Staff members agreed that it is a positive development, but their descriptions were somewhat ambivalent:

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[11] For example, donors with modest iron counts or a slight build would never be asked to donate double red cells.

[12] Apheresis is a mechanized process to isolate specific blood components while returning all other blood components to the donor through; this takes longer than regular blood donation and involves being connected to a self-contained set of tubes running through centrifuge.

[13] Platelets from a single donor present a smaller disease transmission risk than platelets extracted from multiple whole-blood donations, this staff member explained.

> OK, it's also driven by financial concerns, but it has a medical platform to it, too…Don't transfuse if you don't have to. Just because a patient has a hemoglobin of ten, doesn't mean that he's in bad shape. It does affect us, the blood centers, because they don't request as many units, but, looking at the transfusion medicine overall, it's good education. Because…the key is not to harm the patient. *Quality control staff*

> A lot of hospitals are looking, well, anywhere, how to cut costs…A lot of hospitals are now into conservation of blood…They're educating doctors that you don't need this unnecessary blood. …With a hemoglobin of ten, they transfused. Now it's down to seven, which is really frightening, but not really…It's doing more good to the patient to replenish his own cells in a natural way. *Technical director*

Both blood conservation and donor optimization are becoming more relevant to blood banks and their hospital clients as financial pressures mount in the healthcare sector. Staff sympathized with the financial distress of local hospitals, which leads to closures of smaller institutions and consolidation into large hospital systems. Larger and fewer hospitals reduce the number of discrete customers available to blood banks and require suppliers to provide very large quantities of blood to multiple hospitals within one hospital system. Hospitals also deploy new management strategies to cut costs. I have already discussed blood conservation. Another strategy is a shift of decision-making power away from medical professionals and towards financial managers:

> Ten years ago, the decision as to which blood center you were going to work With […] was made by the laboratory, which is where the blood bank is in the Hospital system. … So you had to deal with the pathologist, you had to deal with the lab administrator. You had to deal with the blood bank supervisor, and they made the decisions. Today the decision is being made by purchasing managers. And in many cases, these people are very well trained in negotiations. They understand financial statements. Their task is to reduce their cost. *Director*

Whereas a long-term commitment to one local blood bank was once assumed, now hospitals use open bids to source their blood. They purchase different quantities and types of blood products from multiple suppliers. This introduces new forms of calculation into the original relationship of blood banks to local hospitals, "[Hospitals] get things

from other people, you know, *they have their strategies, too*. But our challenge is to make sure we are the number one,"[14] explains a quality control staff member.

Strict national safety regulations allow hospitals to choose suppliers from around the nation, supporting the argument that regulation serves not only to make blood safer but to frame a market where transactions with distant others are possible. A director echoed this argument:

> [Blood centers] were protected by the fact that a lot of [them] were created to ensure the safety of the blood supplied to the community. So there was loyalty, because what was the most important fact was the *safety* of blood. The cost was irrelevant. And with years of regulation and FDA review and the emergence of industry standards and accreditation, well, the quality is now assumed. (emphasis mine)

The financial distress and consolidation of hospital clients, the introduction of financial managerial techniques, the presence of a national blood supply, and calculative innovation embedded in medical techniques all combine to place competitive pressure on blood banks. The number of hospital clients has decreased through mergers and closures. Overall blood use has declined, in part due to blood conservation techniques, yet the size of the orders per client has increased. At the same time, access to distant sources of blood has proliferated. Staff who arrange for exports and imports of blood across state lines confirm that there is a relatively open national market, in which supply and demand determine prices. There exists both an ad-hoc market for excess blood managed by organizations like Blood Centers of America or the National Blood Exchange, as well as advance contractual arrangements. In this sense, blood is not fully decommodified – it is subjected to competitive price setting by calculative agents, who are enrolled into a market structure.

[14] Emphasis mine

…to contradictory competition

If markets are formed by the calculative agencies that actors deploy in competitive price setting, then blood banks are very much involved in a competitive market. Every staff member I interviewed had something to say about finding themselves embroiled in intense competition with other blood banks. Though it is one of the main questions in my interview protocol, most staff mentioned competition even before I asked about it. It is a constant presence, but at the same time, some staff sense an incongruity between provision of donated blood and competition:

> You know, this is a competitive environment, which is silent because nobody really wants that to hit the front page of the newspaper, right? Because then it's like, "You're fighting over my blood?!" But at the same time […] you cannot dissociate the blood business from the economic realities of the world. *Director*

Blood banks face "economic realities" that enroll them in calculative networks of competition. They compete with each other, with new commercial brokers[15], and with large organizations like the Red Cross and the New York Blood Center, both for donors and for hospital clients. Most staff agreed that New Jersey is probably uniquely competitive because it has an unusually high number of small, independent community blood banks for such a small area. Under the pressures described above, most staff felt that they could not remain confined to their original area, original clients, and original donors. Simply maintaining themselves required growth. Competition simultaneously caused the need to grow and also was a means for growth.

In a competitive environment, it is much harder for blood banks to refuse to calculate, or refuse to use calculation in service of commodification, than for the blood

[15] For example, the for-profit broker, General Blood, based in Minnesota, seeks to eliminate the remaining inefficiencies in blood markets by purchasing in low-cost areas and selling to hospitals in high-cost areas. Their website does not mention that all of this blood is freely given by volunteers who donated it to non-profits (General Blood 2013).

banks of the 1960s, both practically and discursively. They cannot easily extricate themselves from the market's calculative network and remain solvent. Discursively, they cannot claim to be above commodification if they are not above competition. Their misgivings about public perception of competition are akin to misgivings of earlier blood banks about their purchases of blood. Like purchased blood, competition is viewed as necessary but possibly contradictory. However, unlike purchases of blood, which were almost universally reviled by community blood banks of the 1960s, competition is viewed with ambivalence by staff members.

Several staff members felt that competition improves quality of service. According to many staff, smaller blood banks compete more effectively on service than on price, and local blood banks remain very alert to the quality of the donor experience and to hospital needs. At the same time, some staff could formulate quality-based arguments *against* competition. A technical specialist suggested that competition accounts for the persistence of outdated medical practices in New Jersey. Cheaper but less desirable products like non-leukocyte reduced blood[16] or popular but medically less sound practices like directed donations are always available from competitors. This means blood banks that want to improve and innovate cannot unilaterally adopt these practices without losing customers who would switch to competitors. The fact that larger, non-competing Midwestern blood banks have long ago stopped directed donations and collections of non-leukocyte-reduced blood convinced this staff member that competition could easily be an obstacle to quality improvement.

[16] Leukocyte reduction refers to filtering white blood cells out of the whole blood, often at the time of donation through a filter placed directly in the blood bag. This is believed to reduce the risk of transmission of a broad array of diseases. In fact, all blood banks I interviewed do this, but some reported losing customers when making the switch to this procedure.

Ambivalence about the proper place of competition is a source of overflow in the blood banks' competitive network, because ambivalence and antipathy towards competition in blood provision is not a phenomenon that is readily calculable. It does not produce predictable results. Staff who make full use of all calculative tools available to be competitive actors can still propose widely divergent paths to reconcile competition with their organizational missions. Two directors, both concerned with growth, provide the most striking example of this.

> Katya: What would you say your priorities are for the next few years…?
> Director: [Lists several technical goals first]. Growing the base business, bringing on more hospital clients. And competing with my friends at the other blood centers in the state, and putting them out of business if I can. Gotta grow. If you're not growing, you know, you're just not going to have a place in this world. So, New Jersey doesn't need eight blood centers. …I don't mean to sound mercenary, but one of my jobs is really, I'd like to put some of the other blood centers out of business.

I asked all staff members this question. Another director provided the following answer:

> Katya: So, what would you most like to see happen at this blood center? What would be your goal?
> Director: Well, we're looking at forming partnerships basically. We have to sort of identify our core competencies, build on them, how do we make ourselves more competitive? What's our niche? How can we be different than the other blood centers down the street?...And then, how do you make yourself bigger, when a bigger boat has a bigger chance of surviving a storm…Where can we align and do we have partners? So of course, the natural partners would be the other independent blood centers in New Jersey.

As the second director points out, cooperation is open to blood banks facing competitive pressure. If market pressures force smaller blood banks to compete, they can combine in friendly mergers or form alliances as an alternative to closures or competitive takeovers. This has already happened in many parts of the country.[17] At the same time, cooperation can be an instrument of competition, and some staff described partnerships

[17] Some staff gave the example of One Blood, formed from three community blood banks in Florida. One Blood's website calls it a "merger of equals," describing a lengthy consultation period on the best way to build on the strengths of all three organizations (One Blood 2013).

between local blood banks and organizations outside the region, to the detriment of local competitors. Moreover, the degree of cooperation desired by some could be viewed as precisely the type of monopolistic behavior the antitrust committee of the 1960s was concerned with. Forming alliances would stabilize blood prices, which I would argue is a reasonable desire for non-profits who are facing rising costs and operating losses, but is a concern in the context of high healthcare costs.

Staff do not want competition to ever be a barrier to provision of blood for all who are in need. New Jersey's blood banks already cooperate during catastrophic events, when even direct competitors will arrange to ship blood to each other. Non-calculative cooperation extends critical services like bone marrow registries to more patients in the state. However, staff were somewhat skeptical that competitive pressures will be resolved through cooperation. Many expressed this hope, but it is by no means a given outcome when competition has become entrenched even in the geographic imaginary of the staff.

Many staff spontaneously suggested that the northeast of the country is more competitive and less altruistic as a region than is the mid-west. I did not include a question about regional differences in my interview because I did not know that this would be such a frequent refrain. However, there is a combination of common practices and cultural images that reinforce this idea. New Jersey blood banks do import significant quantities of blood from Midwestern blood banks, where donation rates are higher, blood processing costs are far lower, and a surplus of blood is available for use outside the region. Today's situation is the reverse of the community blood banks' testifying at the senate hearings – New Jersey's competitive blood banks rely on

cooperation and altruism at the literal and metaphorical Midwestern periphery, just as the cooperative blood banks of the 1960s relied on a literal and metaphorical periphery of shady commercial operators.

Many staff resent this situation of dependence, even though they appreciate their Midwestern partners. A common explanation for this situation is competition from large organizations like the Red Cross and the New York Blood Center; there is a widespread belief that they collect blood in New Jersey and then send it out of state. However, official blood-use statistics show that at least as of 2011, the large centers dispensed more blood in New Jersey than they took out of the state, so this perception is not borne out in practice (State of NJ 2012). This belief reflects the frustrations of competition rather than actual blood-use patterns. It is part of a feeling among some staff that they live in a less generous and more competitive environment than they would want, and that elsewhere the situation is better.

> In the Midwest [it is a] different story. …Like a lot of their drivers are volunteers. Cause they're, you know, [retired] farmers; they've got nothing to do. Things are much different there. …And a lot of it is the economy. People [here] work like two or three jobs. They don't have the time to volunteer.…[In the Midwest,] it's a much slower pace of life.. We're very frenzied here. We're stressed. You know, you can just tell by the people driving… *Hospital Liaison*

Staff cite regional economic structure, cultural differences, and a donation environment affected by competition when explaining why donation rates are lower than average in New Jersey. Staff are particularly worried about cultivating a calculative relationship with their donors as a result of blood bank competition for a limited number of volunteers.

Incentives, payments, gifts – overflowing into gratitude

Blood centers vying for donors in a relatively small area make use of incentive programs to attract new donors or retain current ones. Staff offer a variety of explanations for the origin, function, and meaning of incentives. These rewards likely started out as simple tokens of appreciation. Yet the term "incentive" already implies something other than a thank-you gift. Staff agree that the current purpose of incentives is "to bring them in the door,"[18] to increase blood supplies during periods of shortage, or to solicit for specific blood components. In New Jersey specifically, the incentive system is also described in terms of a bidding war.

Almost half of the staff believe that competition between blood banks shapes the structure of the incentive system and the types of donor rewards offered. The onset of competition between blood banks changed the types of incentive offered, from teddy bears to gas cards, and turned tokens of appreciation into objects of calculation. The FDA also shapes incentive systems by a regulatory distinction between acceptable incentives and unacceptable payments, demanding non-transferability into cash (U.S. NARA 2012). The FDA creates a *de facto* price ceiling by linking a pint of blood to a tangible reward, even though its ostensible goal is to eliminate sales of blood.[19] Competition then compels blood banks to increase the value and attraction of incentives up to their regulatory limits. Staff report that once one blood bank offers a gift card of a certain value, another blood bank will raise the value of its gift cards, forcing others to do the same.

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[18] Collections coordinator

[19] The FDA does not actually specify a limit to the monetary value that an incentive can take – they just forbid cash and allow non-cash benefits (U.S. NARA 2012); however, staff report that offering incentives above $20-$25 in value would raise the suspicions of FDA inspectors, so blood banks operate as if the FDA has set a price ceiling.

This kind of competition provides donors with the material conditions necessary to engage in calculative behavior, maximizing the return on their donations through choosing a specific blood bank based on incentives offered. Blood banks and their donors become part of a network where a certain kind of calculative agency, in this instance, the ability to compare the value of incentives on offer, constitutes utility-maximizing actors. Of course, donors bring personal and social motivations to help their communities every time they choose to give blood, but their choice of blood bank, and sometimes the timing and type of donation,[20] are taken in the context of competing incentive programs. As in Callon and Holm's description of actors in market networks, there is no separation between actor and network, between donors' altruistic motives and the invitations to calculate that they encounter when blood banks offer dollar-denominated gasoline cards in exchange for blood (Callon 1998a, Holm 2007).

Though they do not speak the actor-network language of Callon, staff recognize the role that blood banks play in appealing to donors' rationality in a competitive context. They do not describe donors as intrinsically calculative, with the blood banks simply taking advantage of this quality. Likewise, blood bank staff themselves are enrolled in this calculative network as they go about selecting the right incentive structures.[21] Yet, as all actors in such networks, staff bring their own motivations and purposes that constitute overflow into something other than market exchange. As Healy suggests in his discussion on payments for organs, rewards intermingled with gift exchange are not mere "window dressing" that could be dispensed with if only we acknowledge that

[20] Blood banks sometimes offer higher-value incentives for donating during expected shortages, such as weekends or holidays, or for donating platelets and plasma, which generally takes a longer time.
[21] Some blood banks have incentives that work on a point system, an actual "donor reward card," while others offer periodic gifts. Blood banks are continually experimenting with their incentive structures.

incentives are really market mechanisms (2006, 39). I argue that incentives are simultaneously supply management tools, quasi-payments, and counter-gifts, and I want to understand how staff balance these multiple meanings.

At first glance, even staff members have difficulty distinguishing incentives from highly regulated payment structures:

> Katya: What's the thinking behind how [incentives are] different…from paying? Collections coordinator: (sighs) Well, how? (pause) I guess that could probably be an argument […] where is that difference?

The absence of cash was the most frequent immediate answer about the difference between incentives and payment, linked to the belief that cash has a particular power to affect people's behavior. Often the answers related to the regulatory stipulations, such as non-transferability.

A completely different narrative was offered to me by the same interviewees in the context of conversations on unrelated topics. As much as donors "want *things*"[22] as tokens of appreciation, staff spontaneously expressed a wish to give something to their donors. Even staff who rarely interact with donors voiced this need:

> Especially with donors that come in a lot of times, you need to start giving them *something*. Any donor will be happy, even just for a pen, or jelly beans, or [laughs] candies, chocolates. You know, that [we're] thankful for their donation. *Technical administrator* (emphasis in the original)

The same staff member who candidly discussed incentives as a supply-management strategy would launch into the language of gifts at some other point in the conversation. "One year, we had nothing to give donors for Christmas," a donor recruiter complained. And all of them, even as they discussed the need for incentivizing people, reiterated how altruistic their donors were. Giving donors some kind of token of appreciation was

[22] Donor Recruiter

deemed appropriate even by staff who were ambivalent about the current incentive structure:

> A donation is a donation. And if you say, "Oh, before you leave, don't forget to take one of those gas cards,…or, you know, make sure you take one of your shirts." OK. *That's a given*. That's after the fact. But for some reason here, in this area, they just are compelled, they want something. Not that they want a lot, but they want something. *Finance Officer* (emphasis mine)

The finance officer quoted above reflects an anxiety on the part of some staff that the incentives *are* viewed as payments by donors. Staff worry about creating "an entitlement"[23] rather than a relationship of reciprocity and gratitude. Staff do not worry that twenty-dollar gas cards are creating incentives to lie in the way that cash payments might. Nor are they worried about breaking regulations – these are unambiguous and straightforward to follow. Their ambivalence about incentive systems stems from a threat to a gift-exchange relationship with donors. This relationship simultaneously compels them to offer these incentives/gifts in the first place. An administrative staff member whose career spanned several kinds of for-profit and non-profit work describes the relationship at stake:

> [In a business context where I would be working a similar position]…it would be a buyer-seller relationship. In this, it's kind of a taker relationship, because we're taking things from them and they're not getting anything for it, except this great sense of well-being and the fact that they're saving people's lives. …You can't put a price on either of those things, right? So it's a different kind of a relationship that you establish with people in this line of work versus in any previous line of work that I was involved with. *Donor Recruiter*

From the point of view of blood bank staff, the gift status of blood is signaled by the desire to give a counter-gift that is clearly distinguishable from a payment or incentive. The difficulty in making this distinction is perhaps parallel to the difficulty in separating the gift and commodity properties of blood itself under the current market

[23] Donor Recruiter

network of blood banks. Blood banks participate in market networks and calculative strategies, but the staff themselves are a source of re-interpretation and non-calculative possibilities. Healy asks whether modern tissue banks' staff still subscribe to the gift-exchange model of tissue procurement (2006). Regarding these blood banks, I can answer "yes" without any hesitation, even as I have described the high degree to which commodification through competition and calculation are part of the everyday work of these organizations. In the limited context of my interviews, I have demonstrated that blood is treated as both a gift and a commodity.

Conclusion

Reconsidering my original foray into the world of blood banking, I must acknowledge that my positionality as a donor influenced my main question – how blood banks manage both commodity and gift exchange. As a donor, I envisioned this combination as something that must be actively managed, and possibly even contradictory or incompatible. While my interviewees generally agreed that the broad question is worth asking, it was not a question they could intuitively or directly answer. After an initial moment of anxiety that I posed an irrelevant question, I realized that lack of direct engagement with this question by the staff is actually a demonstration of a shift in attitudes between the time of the senate hearings and the present. Community blood bank witnesses directly engaged this question because they were agonizing about the difficulty of treating blood as either a gift or a commodity. They preferred an entirely gift-oriented approach but could not deliver on it. Today's blood banks are comfortable with the dual status of blood, so it is no longer a burning issue.

The accepted coexistence of commodification and gift exchange should not be taken as a sign of market development or increase in commodification. Non-profit blood banks of the 1960s engaged in a lot of activities that contradicted their ideals. For them, purchasing blood from donors represented the biggest challenge to their desire not to commodify blood. Today's blood banks are struggling with competition in a similar fashion. The extent to which gift and commodity exchange will continue to coexist is subject to a number of developments: movements to compete or to cooperate in the face of market pressure, entrance of commercial actors such as brokers, and continual

technological change. These are ongoing developments that make future forms of exchange an open question for further investigation.

Commodity and gift exchange in the blood supply system also pose a question to the broader medical establishment. Why does an entire medical sector accept that pure commodity exchange is dangerous to health and safety, and then actually takes this idea as an operating principle? At the same time, this argument is posed by critics of the U.S. healthcare system as a whole, but it is not operationalized in any other branch of healthcare to such a degree. Why is blood provision unique? Or is it not so unique, and commodity exchange always overflows into something else, as Callon would suggest? If human blood is both gift and commodity, and blood banks see value in treating it as such, what are the possibilities for the rest of our healthcare system?

Appendix – Annotated Interview Instrument

Interview Protocol - Blood Banks: Navigating the Gift and Market Economy

Please note that questions categories, bolded in front of every question group, are annotations. My interview subjects did not see these categories, only the questions that follow. Further customization of each question set was done before each interview, re-combining existing questions to fit particular staff roles.

Blood Bank Managers/Executives

1) **General Information** Please describe what you and your blood bank do. Whom do you supply with what types of blood products?
2) **General Information** What are your greatest challenges right now? How are you addressing them? What would help you address them more easily?
3) **Market Behavior: Price Setting** How do you recover the costs of operating this blood bank? Where do you get funding? Have you ever used the AABB guide to blood pricing? Has it been helpful? Do you have suggestions for pricing blood products? Do the hospitals charge for the blood? Do you think hospitals make a profit on it?
4) **Market Behavior: Price Setting; Gift Status of Blood: Perceptions** Do you ever use paid donors? If yes, for what blood products (plasma, whole blood, other)? Under what circumstances? How do you pay them? How would blood banking be affected if all donors were paid for blood? What do you think would happen to the supply of blood if all blood donors were paid? Why do you think plasma is often banked commercially? Why do you think whole blood is not generally banked commercially?
5) **Market Behavior: Rationing, Purchasing** How do you cope with shortages of blood products? What do you do with surpluses of blood? Do you ever use the National Blood Exchange? If yes, is it helpful? Why or why not?

6) **Market Behavior: Competition** Does your blood bank face competition from other blood banks? If yes, what kind (for donors, for hospitals/facilities that use the blood products, for other resources)? How do you address it? Do any of the hospitals or facilities that you supply routinely use blood from any other blood banks?
7) **General Information** What is your biggest priority for the blood bank right now? What would you most like to see happen in the field blood-banking?
8) **General Information** Finally, do you think blood banks can offer lessons to other sectors of U.S. healthcare?

Donor Relations/Donor Recruitment Staff

1) **General Information** Please briefly describe what this blood bank does and what you do at the blood bank.
2) **General Information** What are your greatest challenges right now? How are you addressing them? What would help you address them more easily?
3) **Gift Status of Blood: Entanglement, Disentaglement; Market Behavior: Calculative Activity** How do you recruit the donors? Whom do you target in your recruitment efforts? Who are your typical donors? How do you deal with people who want to donate but must be deferred?
4) **Gift Status of Blood/ Market Behavior: Calculative Activity** Do you have a donor reward or incentive program?

   4a) (For blood banks that have incentive programs) How does your incentive program work? Why did the blood bank decide to have an incentive program? How did the blood bank choose this type of program? Do you think it is successful? What do you like about it? Is there anything you'd change about it?

4b) (For blood banks that don't have incentive programs)Would you like an incentive program at your blood bank? If yes, how would you like it to work? If no, why not? Have you heard about the rewards programs of other blood banks? [If they've not heard of it, I will give the following example: "New York Blood Center, for example, awards points for each donation. The number of points awarded depends on the blood component donated and the time or frequency of donation. The donor can accumulate these points and redeem them for a variety of gifts online. Gifts include things like chocoloates, clothing, electronic equipment, and toys." This description was created from publicly available information on the New York Blood Center's website.] What do you think about this type of program?

5) **Market Behavior: Price Setting; Gift Status of Blood: Perceptions** Do you ever use paid donors? If yes, for what blood products (plasma, whole blood, other)? In what circumstances? How would blood banking be affected if all donors were paid for blood? What do you think would happen to the supply of blood if all blood donors were paid? Why do you think plasma is often banked commercially? Why do you think whole blood is not generally banked commercially? Do you think it should be legal for adults to sell their own whole blood? Why or why not? If yes, under what circumstances?
6) **Market Behavior: Competition** Does your blood bank face competition for donors from other blood banks?
7) **Gift Status of Blood: Perceptions** How do you educate your donors on what happens to their blood after it's donated? What is most important for them to know? What is least important for them to know? Do donors ever express their expectations for what happens to their blood? What do they tend to care about? Are there common misperceptions about blood banks that you've come across?
8) **General Information** What is your biggest priority for the blood bank right now? What would you most like to see happen in the field of blood-banking?

9) **General Information** Finally, do you think blood banks can offer lessons to other sectors of U.S. healthcare?

Mangers/Administrative Staff dealing with supply management and/or billing

1) **General Information** Please briefly describe what this blood bank does and what you do at the blood bank.
2) **General Information** What are you greatest challenges right now? How are you addressing them? What would help you addres them more easily?
3) **Market Behavior: Socio-technical basis** What kind of technology (software programs, machines, etc.) do you regularly use on your job? Are they designed for blood banks specifically or are they often used by other types of organizations? How are these tools helpful or not?
4) **Gift Status of Blood: Perceptions; Market Behavior: Socio-technical basis** (For administrative staff that does generic business work like accounts payable, where equivalent positions exist outside of blood banks) Would your job change if you were working in the same position as you are now, but not in a blood bank? Is there anything about doing this job at a blood bank that makes it different from doing it elsewhere?
5) **Market Behavior: Price Setting** How does the blood bank recover costs? Where do you get funding? Have you ever used the AABB guide to blood pricing? Has it been helpful? Do you have suggestions for pricing blood products? Do the hospitals charge for the blood? Do you think hospitals make a profit on it?
6) **Market Behavior: Rationing, Purchasing** How do you cope with shortages of blood products? What do you do with surpluses of blood? Do you ever use the National Blood Exchange? If yes, is it helpful? Why or why not?
7) **Market Behavior: Competition** Does your blood bank face competition from other blood banks? If yes, what kind (for donors, for hospitals/facilities that use the blood products, for

other resources)? How do you address it? Do any of the hospitals or facilities that you supply routinely use blood from any other blood banks?

8) **General Information** What is your biggest priority right now, and what would you most like to see happen in blood-banking?
9) **General Information** Finally, do you think blood banks can offer lessons to other sectors of U.S. healthcare?

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