



Selling under stigma: The relational gender dynamics of becoming biolaborers in China

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ABSTRACT

Existing studies have examined how economic and cultural factors affect individuals selling organs and human tissues. But how social interactions and community relationships shape individuals' decisions and experiences has received much less attention. This research focuses on the intersection between economic disparities and gendered lineage structures to explain why and how people engage in bodily commodification. Drawing on oral history interviews with 32 former plasma sellers in central rural China, I find that villagers entered collection stations in two ways: 1) individual recruitment through which migrant men and married women on the margin of local lineage hierarchies in richer villages sold plasma as individuals and 2) familial recruitment through which multiple men of dominant lineage groups in poorer villages sold plasma in groups. While individual sellers struggled with self-blame and shame, familial sellers were shielded from gendered stigma as their communities adapted lineage rules to align plasma sale with masculinity. The results highlight the utility of a relational framework of gender in highlighting commodification as a dynamic social process shaped by participants' power locations in relation to not only each other but also the local patriarchal order.

Credit author statement

Yan Long is responsible for all the aspects of this paper.

1. Introduction

The rapid development of the global biomedical market relies on the flow, exchange, and circulation of organs, tissues, and body parts. The often-dangerous processes of turning blood, plasma, cells, genes, and other tissues into biomedical products entail the transformation of raw life into biolabor, the extraction of surplus value for biocapitalist production (Cooper, 2008). I define biolabor as the use and management of human biological fragments and faculties that results in goods or services. By invoking this concept, scholars can recognize and examine the blurred boundaries between choice and coercion, production and reproduction, and ultimately, work and life. Biolabor has exchange value because it is sold for money on the market where it is not the amount of time a laborer spends but the material and immaterial forms of subjectivity and life itself that is put to work (Morini and Fumagalli, 2010). Such transactions, however, violate many societies' cultural and moral conceptions of the self and human body (Pande, 2014; Schweda and Schicktan, 2009). So how do people become biolaborers in the face

of health risks and local cultural barriers?

Much research treats selling organ/tissue as a livelihood strategy in dire straits which results in physical suffering and emotional distress (Moniruzzaman, 2019; Scheper-Hughes, 2000; Sharp, 2000). It highlights how the exploitation of already-disadvantaged populations feeds global biomedical industry profits (Hamdy, 2008; Harrison, 2019). Scholars hence focus on how coercive and/or deceitful procurement processes propel sellers to ignore health risks (Daniels and Heidt-Forsythe, 2012).

More recently scholars argue exploitation alone cannot capture the heterogeneous ways sellers navigate the complexities of their biolabor (Cooper and Waldby, 2014). They rather examine biolaborers' financial considerations entangle with local meanings and values (Lock and Nguyen, 2018; Miner, 2021). The pathways people follow to enter bioeconomy are social processes imbued with distinctive cultural understandings of bodily integrity, selfhood, and human beings' social worth (Healy, 2006; Scheper-Hughes, 2011). As kidney selling became routine in Brazil, India, and the Philippines, for instance, it was "in some cases a meritorious act of self-sacrifice, in others a bodily inscription for the young; a kidney scar, a rite of passage, signifying courage and family loyalty, or, in other cases, acts of violence perpetrated on street children, the homeless and prisoners" (Kieran, 2011: 1472).

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This paper joins this burgeoning discussion on socioeconomic processes through which people turn into biolaborers in market exchanges by focusing on gender. Gender norms and discourses shape organ and tissue selling (Almeling, 2011; Hovav, 2019; Newman and Nahman, 2020). Individuals draw on locally valued forms of femininities and masculinities to handle moral conflicts around bodily commodification. For instance, British sperm donors emphasize altruism and view compensation as a threat to their manhood (Gilman, 2018). But donors in Denmark take pride in earning money for high semen quality and sperm count (Mohr, 2018). Meanwhile, hegemonic gender expectations inform the construction of health risks and safety in bodily transactions. Many women cannot sell plasma in the UK because regulators see maternal bodies as vulnerable (Kent and Farrell, 2015). Meanwhile, male kidney sellers in the Philippines think the danger of organ removal complements their heroic masculinity (Yea, 2015).

While yielding important insights, the existing literature stops short of analyzing how group relationships—families and communities—shape sellers' approaches to and experiences with bodily exchanges. Some exceptional studies note that selling organs and tissues is not an individual decision and that familial interactions and community characteristics affect the gendered terms in which biolabor occurs. Pande (2020) suggests that middle-class women in South Africa sell their eggs overseas to pursue a cosmopolitan lifestyle and escape conservative gender control in their rural families. Ziff (2019) finds the military culture influenced how American military wives navigated the work of surrogacy while military institutions blocked their employment opportunities. But these studies do not explicitly address group dynamics.

This article extends a relational framework of gender (Messerschmidt et al., 2018) to demonstrate the risky decisions of becoming biolabor are enacted in people's day-to-day gendered interactions with others in their communities. These interactions shape the divergent intertwining of gender dynamics with commodification and economic marginalization at the community level. Individuals derive their femininity/masculinity practices not from fixed gender categories, but from differential opportunities and constraints arising within everyday interactions and social relationships. Indeed, neither masculinities nor femininities entail static traits; they are constantly (re)produced in relation to not only each other but also dominant institutions and power structures (Ridgeway and Correll, 2004; Sweet, 2020). Patriarchy designates hierarchical relations between and within men/women categories (Schippers, 2007). Hence, this study advances bodily commodification studies through highlighting the construction of masculinities and femininities together as relational processes.

Specifically, I argue that kinship networks—the extended family structures with greater weight in the Global South than the nuclear-family-based contemporary Western model—play a critical role in mediating the multifaceted links between gender values and biomedical production. In India, extended families select either men or women to sell organs based on financial arrangements and divisions of labor (Cohen, 2005). Crowley-Matoka and Hamdy (2016) study of voluntary organ transplantation in Egypt and Mexico reveals that the valuation of women's lives depends on household structures, including intergenerational family conflicts. My research expands this small body of scholarship by underscoring community-level lineage structures and dynamics. Community relations, like family, are woven through and constitutive of gender practices which render certain bodies especially vulnerable to biolabor extraction.

Based on oral history interviews with 32 former commercial plasma sellers in rural central China, I find poverty alone does not determine the decision to sell plasma. Rather, the configuration of local kinship hierarchy structures the interplay between economic stratification and gender order. My respondents entered plasma collection in two ways: *individual recruitment* and *familial recruitment*. The former persuaded married women and immigrant men with lower status in richer villages to sell plasma as individuals. The latter induced men of dominant lineage groups in poorer village to sell plasma in groups. Each pathway

generated distinct conceptions of risk, money, and bodies in relations to womanhood/manhood among sellers.

2. Background

Many Asian countries have joined the global competition to harvest raw materials for producing plasma-derived commodities “to restore national identity and political ambition” through a “science-driven economy” (Ong, 2010: 3). Fractionating techniques that break whole blood into various components ready to be manufactured into blood and plasma products quickly became common.

In the mid-1980s, the idea of large-scale commercial plasma collection took hold in China. To stop the “invasion” of HIV as a foreign virus, the Ministry of Health banned almost all foreign blood products (General Customs Administration, 1986). Zeng Yi, Vice President of the Chinese Academy of Preventive Medical Sciences, asserted that China had no domestic AIDS “source” and the HIV virus could enter China only through foreign blood products or sex with foreigners (Xinhua News Agency, 1988a, 1988b). Building China's own plasma industry was also promoted to wean the country of its dependence on Western products. Other socialist countries such as the German Democratic Republic adopted similar approaches.

Collection stations became a lucrative business for local hospitals in inland provinces including Henan where the current research took place. This industry concentrated on recruiting sellers in rural areas because farmers' blood was considered cleaner, less susceptible to foreign contagion, than that of urban Chinese due to their distance from “the dangers of seaports, airports, and exit and entry stations along borders” (Xinhua News Agency, 1988a, 1988b).

Collection stations pooled sellers' blood by types, separated plasma from whole blood, and then injected remaining red cells back into sellers. Some sellers were tested for other blood-borne viruses, but no HIV screening occurred. Like people subjected to other tissue extractions (Pfeffer, 2011), rural plasma sellers in China did not know of the risks. HIV, and hepatitis pandemics erupted. Henan alone had at least 370,000 HIV cases by 1996 (Erwin, 2006). The plasmapheresis fever ended in 1996 when the central government limited its geographic locations. This extreme case provides a fertile ground to explore bodily commodification in emerging economies to which scholars, with a few exceptions (Mastro and Yip, 2006; Shao, 2006), have paid scant attention.

3. Methods and data

I undertook oral history interviews with 32 former commercial plasma sellers in 2012, 2014, and 2017 in Henan. They are part of a broader study tracing the lived experiences and survival strategies of people living with HIV/AIDS in China. Three national AIDS advocacy networks helped me to use purposive and snowball sampling to recruit participants infected with HIV via selling plasma in 1990–1995; but I was unable to recruit HIV-negative former plasma sellers.

Table 1 presents an overview of the 32 participants. I use pseudonyms and omit information to protect confidentiality. Participants were aged 41–63; 19 men and 13 women; and 66% had not attended secondary school. Sixteen participants sold plasma for 0–1 year, seven for 1–2 years, and nine for 2–3 years.

I chose oral history because official Chinese epidemiological history only mentions plasma trading in passing. To record the forgotten histories of silenced sellers motivated this research (Crane, 1997). Interviews were open-ended and unstructured, framed by key historical events in the villages over participants' life courses (Thompson and Bornat, 2017). I traveled to participants' villages, observing their homes, communities, and public spaces discussed in their narratives. Discussing and sharing sensitive memories of highly stigmatized bodily commodification was challenging. As a researcher from an urban area, I had to learn local language and build relationships with participants beyond one-off encounters and thus I interviewed each participant 2–3

Table 1
Interviewee characteristics.

	Gender	Age at the time of initial selling	Marital status at the time of initial selling	Belong to dominant lineage groups in the village	Years of plasma-selling
Yanzi	F	30–34	Y	N	<1
Yangyang	F	20–24	Y	N	<1
Yingchun	F	30–34	Y	N	<1
Lingling	F	25–29	Y	N	<1
Xiaozheng	F	25–29	Y	N	<1
Guanglu	F	25–29	Y	N	<1
Qiyue	F	30–34	Y	N	1–2
Taohao	F	35–39	Y	N	<1
Juncheng	F	25–29	Y	N	<1
Zihui	F	30–34	Y	N	1–2
Tongjie	M	30–34	Y	N	>2
Huleng	M	45–50	Y	N	>2
Xiaoxi	M	40–44	Y	N	1–2
Songyong	M	35–39	Y	N	1–2
Zidan	M	30–34	Y	N	>2
Cheng	M	25–29	Y	Y	1–2
Bingding	M	40–44	Y	Y	>2
Leng	M	20–24	Y	Y	1–2
Sanching	M	20–24	N	Y	<1
Sanmin	M	20–24	N	Y	<1
Yingying	M	35–39	Y	Y	1–2
Rongxuan	M	35–39	Y	Y	>2
Haozong	M	35–30	Y	Y	>2
Yanli	M	25–20	Y	Y	<1
Qile	M	35–39	Y	Y	<1
Jiahan	M	40–44	Y	Y	>2
Yongxue	M	30–34	Y	Y	>2
Teng	M	25–29	Y	N	<1
Zhuang	M	30–34	Y	N	1–2
Chengkai	F	20–24	N	N	<1
Yuxuan	F	35–39	Y	N	<1
Zhenyuan	F	40–44	Y	Y	<1

times. Interviews ranged from 1.5 to 4.5 h, averaging 2.5 h.

The research design adopted concurrent data collection and initial coding inspired by grounded theory (Glaser and Strauss, 1967) since little has been written about biolabor in the Global South. The data from earlier interviews were coded before follow-up interviews and the process of analysis repeated. This inductive and iterative data generation and analysis procedure led to “unforeseen areas” (Charmaz, 2006: 187). During the initial coding I read all the interview transcripts closely and performed manual line-by-line open coding to label assumptions, actions, and incidents around plasma-selling. Comparing codes across participants revealed that participants attributed different meanings to the money they received for their plasma, raising the question of what noneconomic factors shaped sellers’ choices. Male migrant participants responded to questions about plasma-selling in initial interviews with silence, deflection, or short, perfunctory answers. Knowing I should treat silence and hesitation as research findings instead of problems (Sheftel and Zembrzycki, 2013), I decided to explore gender in the follow-up interviews through questions concerning sellers’ lives growing up in their communities, important relationships, normative gendered expectations, and navigation of social interactions when selling plasma.

After data collection concluded, I used a refined list of *in vivo* codes to trace all the steps in participant’s personal pathways to selling on a spreadsheet. My coding focused on describing each participant’s movements along the pathway since early childhood, especially when, where, and how points of change took place that led to selling, and what actors were involved at those points. I constantly compared codes and themes across interview transcripts, finding that daily situations and interactions affected plasma-selling. At this stage I brought in the existing literature on bodily commodification to help construct focused analytic codes to analyze people’s beliefs about and experiences with the plasma industry in relation to gendered lineage rules and structures. This

process identified individual and familial recruitment. Results were then analyzed again for sub-themes—such as work, couple relationships, parent-child relations, and extended families—within these two categories. Relational production of biolaborers emerged as the central theoretical concept.

I coupled interview data with an analysis of official discourses around China’s plasma industry drawn from news coverage and official documents. I conducted a full search of China Core Newspaper Databases and the Xinhua News Agency Multimedia Database—China’s official state press agency in both Chinese and English—to compile all the news reports of infectious diseases and plasma production. I also collected all the governmental regulations and policies related to blood and plasma since the current regime was founded in 1949.

4. Findings

4.1. Recruiting biolabor against cultural taboo

Before health departments introduced plasmapheresis into rural Henan in the late 1980s, blood sellers were largely limited to the urban poor. Blood tissue dealings concentrated around large city hospitals which maintained small groups of individual suppliers who regularly sold their blood tissues on call. When the Henan provincial health department launched a plasma-trading system, collection stations sprang up in their small counties and towns. Local governments invested in plasmapheresis which required little industrial infrastructure. In some cases, doctors and nurses even pooled their own money to start blood banks when local health bureaus lacked funds. According to my interviewees, they earned 45–50 yuan per extraction, which they could officially do ever twenty days. This was sizable given that the per capita annual net income for rural households was 533.2–798.8 yuan.

However, farmers’ decisions to sell their plasma did not solely derive from poverty. Twenty-two participants (69%) emphasized the financial hardship facing their households. Another eight (25%) considered their household income as “decent” (*haikeyi*) by local standards at the time, and two (6%) considered their household income as “good” or far above the average (*haibucuo*). More to the point, many fellow villagers with similar economic situations stayed away from plasma-selling.

Like people in much of the Global South, Chinese consider selling human tissues a violation of nature and morality (Vlasenko, 2021). Unlike contemporary European biomedical ideas of blood as a discrete liquid moving in vessels, traditional Chinese medicine sees blood as a vital fluid connecting the limbs, the head, and an ensemble of emotional systems. The “body” (*shenti*) includes not just the concrete physical being separate from the mind but the entire individual personality and identity, with blood at its core (Furth, 1999). Given blood’s significance to both physical and moral presences, selling blood is denounced as producing profound disorder.

Further, farmers in Henan perceive selling blood despicable, equating it—especially for men—with laziness and incompetence. A man selling his blood would bring disgrace upon his whole family. As one interviewee stated, “Being a man is being an able-bodied person (*laodongli*). Walking into a collection station means he is a loser with no work ethic (*buai laodong*). Everybody would belittle him.” Productive work is essential to masculine power and identity. Getting HIV through selling plasma produced even more self-blame and grief, even despair. All but three participants described the first three years after receiving the diagnosis as isolation. Among 15 participants (46%) who had suicidal thoughts, 11 were men.

4.2. Two pathways to commodification

Both men and women facing social exclusion from dominant lineage groups in their villages entered plasma trading through individual recruitment. This group were the only persons in their extended households to participate, which brought extreme shame and agony. In

contrast, familial recruitment mobilized family ties to mostly persuade men members of dominant lineages to participate. Familial sellers participated as a group, which buffered them from emotional distress.

4.2.1. Individual recruitment

Individual recruitment mainly enlisted women who married into less respected families from outside the village or first-generation migrant men without long-held family roots in the area. Both groups were outsiders, at the bottom of kinship hierarchies in their villages, socially and economically. They had turned to plasma-selling to cope with the gendered expectations about womanhood and manhood. Economic imperatives did inform individual sellers' decisions. However, such imperatives were only part of contextual fabrics of village life constituting those sellers' vulnerability to biolabor extraction.

The social institutions of lineage were a pronounced feature of gender order and Chinese inland rural life in the 1990s. Each village had a few dominant lineage groups, each of which had a single surname. Blood ties were finely graded in terms of closeness or kinship distance. Agnatic kinship ties provided individuals a framework for interacting with other villagers. Corporate holdings and genealogical solidarity differentiated the statuses of various lineages, based on the relationship between their descent lines and the founding ancestor and the succession of eldest sons following him. Dominant lineage groups conferred moral standing and social obligations on villagers through the men of each household. Members of low-status lineage groups had much less access to village collective resources and social privileges.

Ironically, the marginal role of women in lineage systems based on the distribution of power among men made it feasible for them to engage in stigmatized plasma-selling. Yanzi, now in her 50s, explained to me that her husband did not sell plasma because "Selling blood is a disgrace. If a male laborer in the countryside sells his blood, people think he is not a hard-working man. Everybody in the village would spit on him." She said it was OK for her because, "I am a woman."

Other women individual sellers agreed that they were the biolaborers of choice for their households to protect their families' honor which was tied to their husbands' masculine identity. Like Yanzi, once married, women would join the family of their husbands, while married men usually continue to live in the same household headed by their fathers. Dependent on their husbands' status to participate in the public sphere, married women felt obliged to shield them from the stigma of plasma-selling. Yangyang (40s)'s husband offered to sell his plasma because of her poor health, but she refused: "How could he? It would bring shame to our entire family. What would my in-laws say? What would people say about us, about our kids? People wouldn't take it seriously [if I sold plasma]."

Blood symbolized men's physical strength, courage, and uprightness in local beliefs. Men were breadwinners, and women protected them as the nurturers. Since women's bodies were not deemed as important as men to lineages, selling blood did not violate femininity rules or damage family pride as strongly when locals see losing blood in menstruation as part of regular womanhood. Thus, communal solidarity and familial duty, not individualist rationality, informed their decisions.

My interviewees rejected a linear connection between gender beliefs and the decision to become biolaborers. Rather, strong kinship networks allowed gender hierarchies to exert their power through community and family interactions in their everyday lives which in turn led them to collection stations. Much research has recognized how discourses centering on hegemonic femininities premised on women's altruism, selflessness, and love for others dominates biolabor exchange (Almeling, 2011; Oksala, 2019). Gender rules are not simply abstract beliefs and principles at the macro level (Connell, 1987); they play out in various social relational contexts which directly and indirectly affect women's propensity to trade their bodies.

Consider Yingchun who married into a marginal lineage group and had no son. Members of dominant lineage groups and her extended family teased and bullied her:

No son, no status ... My husband's brothers were poor. But at least they had sons. We didn't. Our relatives were contemptuous of us. My father-in-law didn't count my daughters as people. He didn't even let us build a better house [because] "Your family will die out anyway and leave no descendants."

Yingchun stopped working and finally had a son, which reduced the family to penury. She had to sell her plasma, and both of her teenage daughters left school to work and support the family. Yingchun later started a successful logging business after her son went to daycare. Like her, many married women who could make ends meet on their own were pulled into plasma selling because of major life events involving their expectations of qualified mothers. Yingchun thought she "had no choice" since having no brother would negatively affect her daughters' chances of marrying into higher-status households. Producing sons was central to the definition of motherhood which also expected married women to combine long hours at agricultural work with childcare duties. Emotional expressions of love and sacrifice dominated the feminine notions of self among interviewees, which obligated them to make risky choices during family crises.

Households already marginalized in the village were prone to crises. In such times, family conflicts made fulfilling women's motherhood especially challenging, and they turned to plasma an option to gain autonomy and independence from familial control. For example, Lingling did not get along with her husband's family because she often disobeyed the male lineage heads. When her three-month-old baby got sick, nobody would help:

We didn't have money to see a doctor. My baby cried for a whole night. The next morning, I asked my husband again if he could borrow some [money]. He said nobody would help, not even rich ones in the lineage. We had no choice but to turn to his parents. My mother-in-law went back to her room, came out with 10 yuan [1 USD], and slammed it down angrily. All the bills fell on the floor. When my husband got down to pick them up, I could only imagine what went through his mind.

The feeling of degradation from that morning was devastating. Fearing exposing her husband to humiliation again, when the baby got sick again a year later, Lingling went immediately to a collection station without asking anyone for help.

Lending money within kinship groups was a strategy for collective survival in crises. But its application rested on social statuses, which hurt marginalized women. Like Lingling, Xiaozheng (50s) married into the lowest echelon of the village, a household belonging to a junior subdivision whose branch was not descended from the founding ancestors of the village. No man in their kin groups had obtained an official salaried position. Her husband and his brothers cannot find someone to marry until their early thirties when most villagers would marry before the age of 24. Xiaozheng's husband then went to jail for fighting, isolating her further. When her baby got acute hepatitis, she paid for treatment using 240 yuan (29 USD) she made selling plasma: "I was tired of borrowing money from my husband's relatives. They made me beg ... I wanted to save my face. I can't beg anymore." The arduous experience of being rejected by family members rather than money shortage itself was prominent as interviewees sold bodies to realize motherhood responsibilities.

Given the stigma, the women did not take comfort in the fact that they had made the sacrifice for their children and husbands. Yingchun told me, "Only those helpless losers, stupid or ignorant, would choose to sell plasma. They were the weaker villagers." She did not hesitate to include herself among the incompetent losers. Indeed, all the women called plasma-selling a shameful act.

Exclusion from the dominant lineage was also drove migrant men into collection stations. They had moved into the current villages because changing administrative divisions dismantled their original villages and merged them into nearby ones. Without lineage connections

accessing social benefits and economic resources, most could not find stable work. Many of them emphasized that “men are the pillar of the home,” referencing the breadwinner rules. As Connell states, the “cultural function of masculine identity is to motivate men to work” (1995: 33). An inability to do so diminished my interviewees’ authority and power. Tongjie (60s) was struggling with family conflict for years:

My wife and mother fought over everything ... Both of my brothers have mental problems; my wife had to take care of them. All of us lived in a cramped tiny place. Not enough money to go around. [My wife] told our neighbors she regretted marrying into our family ... I needed to build for our family a real house, you know, like everybody else did.

Tongjie’ conception of masculine responsibilities represents that of all participants in my research that are rooted in extended instead of nuclear family. As the eldest son, he had to care for his parents and younger brothers financially and his wife had to care for their bodily needs. Tongjie thus embarked upon plasma provision:

I went to many collection stations. There was one month when I sold my plasma twelve times. I passed out once during an extraction. The nurse pulled out the needle; no blood was coming out. I was too drained ... But then we built our house.

To make more money, Tongjie often bicycled 2 h to collection stations.

Although migrant men sold plasma to fulfill the breadwinning expectation, they were subjected to stigmatization in the village. They tried to hide personal plasma-trading records and visited more remote stations to avoid acquaintances. They all lied to family members about their income sources. One even burned the documents connecting him to collection stations. “It was humiliating. You lost your dignity,” said Huleng. Now in his 50s, he still spoke with intense emotion, reliving the immense shame:

The first time I did it, I came home and wept all night. What are human bodies? Bones, muscles, and blood. With your blood drained, how can you be a human with bones and skin? I felt mentally weighed down with a huge load.... Too scared and frustrated.

A friend of Huleng found out he was selling plasma, “My friend let out a long sigh and looked so disappointed in me. Later he asked, ‘Why didn’t you ask me if you need money? Why did you do such a horrible thing?’” The violation of masculinity amplified male individual sellers’ sorrow, grief, and pain in ways female sellers did not describe.

Such acute shame made it difficult for migrant men to narrate the details of their selling experience. All of them at first said they could not remember. Songyong (50s) was visibly upset about my questions, “There was nothing to tell. I was useless. So I did it. The end.” All the migrant men said their stories were unworthy of being recorded. Multiple indirect questions helped them to open up, but they never stopped condemning themselves for failing their families.

4.2.2. Familial recruitment

Familial recruitment did not enlist just individuals but households through local lineage structures as collection stations entered poorer villages. While individual sellers tried to hide their practices from others, familial sellers—mostly men—visited collection stations with family members and relatives. This pathway highlights these sellers’ affiliation with, rather than exclusion from, dominant lineage groups.

Whilst individual recruitment mostly occurred in richer villages, familial recruitment took place in poorer ones. Macro-level political and economic factors rendered certain villages vulnerable targets of plasma-trading. Interviewees’ stories reveal collective challenges facing their villages, including land scarcity, natural disasters, and constrained employment opportunities. Cheng (40s) and Bingding (60s) live in the same village. Cheng taught me a local song to explain the dire conditions of their communities: “Drought visits us in nine years out of ten, and in

the other comes floods. Lush grass turns brown. Season after season we are hungry. Sweet potatoes are all we have.” He and his wife were trying to survive by farming 0.22 acres of land. Although two rivers cross their county from the northwest to the southeast, the area counted on rain in summer months for irrigation. Bingding despaired how the dry and impoverished soil often failed to produce enough wheat:

Urban people don’t get it. What do they normally have for dinner? Two or three dishes plus soup, etc. They can have chicken, duck, fish, or meat. What were we peasants eating? A bowl of rice congee, a little vegetable and two steamed buns. Maybe noodles sometimes.

He had sought work at urban construction sites. But restrictions on rural-to-urban migration blocked him from long-term jobs. The registration system (*hukou*) divides Chinese citizens into rural versus urban households, which dictates people’s residential locations. This policy was relaxed in the 1980s as the government allowed farmers to work in nearby small towns, but workers like Bingding were denied equal access to welfare benefits and public services. Two third of familial sellers found the payment for plasma attractive in relative terms given their extreme financial hardship.

However, poverty alone did not send these men to collection stations: Familial recruitment also rested on community-level lineage dynamics that not only normalized the risk of plasma-selling but also legitimized it as a valid “manly” way to provide for households. While individual sellers had to negotiate gender rules on their own, familial recruitment adapted the dominant ideas of masculinities to accommodate biolabor presence, which gave men rationales and justifications to engage in plasma-trading.

Collection centers actively tapped local lineage systems for procurement. When government units ventured into the plasma industry, many raced to build smaller collection stations in poorer villages, competing for raw materials. Initially limited to enrolling and screening potential sellers, these stations quickly began to conduct plasma extraction. “It was convenient,” said Yongxue. “Our town had four stations. [Selling plasma] didn’t interrupt farm work. Without traveling far, you could harvest vegetable and then go to the station.” When county-level collection centers branched out to the village level, they reached out to the male heads of influential lineages first, to rally support by renting their houses to set up collection stations and hiring their kin members to run the facilities. Plasma-selling was presented first as a resource limited to dominant lineages. As participation grew, members of primary lineages received certain “privileges,” such as priority in the waiting line or exemption from blood screening.

The kinship networks served as a source of information and emotional support that challenged the cultural idioms denouncing the detriments of blood extraction. My interviewees heard about plasma-selling from their family members and relatives, which justified such high-risk behaviors within networks. The trust among lineage members even facilitated the enrollment of younger males. Leng (40s) stated:

I was young in 1993. One day I was working with my brother in the field. My cousins were passing by. They were going to a collection station to earn some quick and easy money. It sounded like a good idea. I didn’t have a second thought. So, the four of us went there together.

The station managers and staff members themselves sold plasma, and they also encouraged their family members to do so. As Cheng said:

Two of my relatives worked [at the collection station]. I didn’t quite understand plasmapheresis. But they said that getting blood back was good for our bodies. I thought that must be true since they did it themselves.

Statements such as those Cheng heard were made honestly. Even health professionals running plasmapheresis were unaware of its potential danger in the 1990s since HIV/AIDS was considered a foreign problem.

Exposure to family members engaging in plasma-trading reduced anxiety levels and posited a neutral frame for the act. Collection stations had become a routine part of economic life in certain villages. Villagers who might have seen it as immoral or selling blood as a signal of desperation saw it as a regular industry. This was particularly persuasive in motivating young adults without strong financial incentives to become biolaborers. Sanching, the son of an influential family, was serving in the military at the time. One year he came home for vacation during Chinese New Year:

Many people in our lineage were selling plasma. I didn't know much about it. But it seemed harmless. One day I was hanging out with my pals. There wasn't much going on that day, and we were bored. Someone suggested going to the collection station. I was curious anyway. So we did.

The experience of Sanching's cousin, Sanmin, further illustrates the importance of strong ties in normalizing plasma-selling:

Several of my friends egged me on, so we went to a collection station. I still had doubts. One of my paternal aunts worked there as a nurse. She said that it was a good thing. I had no reason not to believe my own aunt, right? I felt dizzy after they drew one bag of blood. I became afraid. But I couldn't be a wimp in front of my friends.... My aunt didn't charge me the testing fee, so I got something like 55 yuan [5.5 USD]. My friends and I went to a restaurant. The money wasn't enough to cover the meal, so I ended up spending another 10 yuan [2 USD].

These two examples demonstrate the social situational dimension of familial sellers' decisions and their bodily experiences, which were drastically different compared to individual sellers.

While collection stations attempted to frame plasma trading as physically safe and morally sound, group interactions helped lineage members to incorporate those frames into their masculine practices in two ways. First, familial sellers shared the idea that plasma-extraction was aligned with traditional notions of masculinity, such as physical and emotional toughness. Contrary to migrant sellers, male familial sellers were comfortable narrating details without feeling similar shame. Many told me that they thought plasma-selling was just like women's menstruation. "[Women] lose blood every month anyway, right? People said if women can do it, men can do it," recalled Yingying. He (50s) told me that he went to the collection station with his father and brother:

Not going to lie. I was very scared. But others had done it and nothing bad happened. Seeing the needle made me nervous. I really didn't want to do it anymore. But I couldn't leave. My younger brother just did in front of me. I told myself to hold out a little longer and I did.

Most male familial sellers emphasized to me how men were more suitable for it because the plasmapheresis was a physically intensive procedure. Leng commented, "Women shouldn't do it. We all knew it. They weren't as strong [as men]. I didn't want [my wife] to get hurt ... Me? I was so strong. I didn't care." While female individual sellers attempted to protect their husbands' reputations, male familial sellers saw themselves as protecting their wives' bodies. The narratives of becoming biolaborers were both rooted in "protecting" one's spouse but framed in opposite directions. This difference illustrates how people draw on community-level rules to understand the health consequences of risk behaviors through their relationships with others.

Yingying and Saming were the only male familial sellers who reported that discomfort with the procedure unsettled them. Some were even led to believe that routine blood draws would promote metabolism and lower heart attack and stroke risk among men. Such false ideas originated from collection centers circulating misleading information. They became believable and trustworthy when they were spread through strong kinship ties and community connections.

The second way group interactions helped lineage members to accommodate plasma-selling in their masculine practices was that they

were able to frame it as a short-term job to simultaneously fulfil their families' needs and patriotic norms aligned with manhood. Many emphasized to me the money was not a payment for their bodies—which would have violated the work ethic as the core part of local masculine rules. They highlighted that these payments were supplementary only, making it clear that their labor paid for household necessities. Many research participants mentioned a slogan spread by collection stations in Henan: "One man's blood donation is a political credit to his whole family" (*yiren xianxue, quanjia guangrong*). Yingying explained this:

Supposedly the state was having a plasma shortage. People were telling me that the government was calling on us men to act. If I sold my plasma at the time, my whole family wouldn't need to wait in line when we need plasma in the future.

Familial sellers hence perceived the same acts individual sellers saw as disgraceful as honorable.

Three familial sellers (18%) were women. As a single woman in her early 20s, Chengkai sold plasma once "out of curiosity." Yuxuan and Zhengyuan sold plasma because their husbands had health problems at the time. Both were already the main income contributors to their household incomes. As Yuxuan described: "My husband had less physical strength [than me]. We were already paying for hospital bills for him." Apparently the (re)construction of masculinities and femininities through the division of labor was fluid, which led to different family choices of selling biolabor.

5. Discussion

My findings enrich prior research on how poverty put people at risk of biolabor exploitation. The Chinese government was in charge of, for example, uneven industrial development and population migration policies that put many villagers in central China in an economically vulnerable position in the first place. Local governmental agencies then intentionally targeted populous and less developed rural villages to scale up plasma procurement such that forms of capitalist accumulation alienated bodily materials from humans and converted them into biolaborers for state-owned biomedical enterprises. My analysis points unequivocally to the important role of economic inequality in subordinating not only individuals but also communities to biomedical capitalism (Sunder Rajan, 2006). Furthermore, I join a few scholars such as Cohen (2011) in addressing the state as a critical market player in commodifying the body's living labor, which pushes beyond the prevalent focus on the private sector while treating governments as neutral policy regulators and law makers.

Recognizing the impact of economic factors, however, does not mean that money works alone as an "undue inducement," "a potential threat to the principles of autonomy, justice and consent" (Waldby et al., 2013: 35). While some Chinese plasma sellers were in dire straits, some had access to other financial means. A small portion of commercial sellers were even living a decent life by local standards. Even among those motivated by financial incentives, the payments for their plasma were not the same instrument with fixed meaning for all sellers. Fraser (2014) correctly points out: "Markets depend for their very existence on non-marketized social relations which supply their background conditions" (59). Human tissue transactions are heterogeneous exchanges involving diverse relational dynamics.

My findings show that different sellers followed distinctive pathways depending on their links to community gender power structures, which modified their particular experiences of monetary exchanges for plasma. On the women's side, the marginal positions of women marrying into low-lineage-status households in richer villages gave them the freedom to engage in plasma-selling without violating gender rules. Blood tissues are often gendered. In Pakistan, women are excluded from blood procurement because menstrual blood is considered impure and the masculinity of men who receive women's blood would be contaminated (Mumtaz et al., 2012). In central China, however, women's plasma

selling was much less stigmatized exactly because menstrual bleeding is a normal part of women's bodily inferiorities, while men were supposed to reserve all their blood to maintain masculine completeness.

On the men's side, only migrant men in richer villages suffered psychological trauma which male members of the dominant lineage groups in richer villages were buffered from. This contrast highlights that maintaining the masculinity of tissue sellers is a complex and sometimes contradictory process. The specific social locations of men in local patriarchal structures may lead to opposite experiences. Confirming previous research (Moniruzzaman, 2019), migrant men endured mental anguish evidenced as self-blame, shame, and humiliation for their involvement in highly stigmatized conduct as well as physical impacts. By contrast, male familial sellers were not condemned as violators of community-level masculinity rules because the plasma industry had transformed those rules. Their strong networks validated discourses and information fabricated by collection centers and neutralized the physical and moral danger of plasma-selling.

The Chinese case I document here diverges from the mainstream literature as most plasma sellers chose to participate in bodily transactions as a family strategy. Although a few scholars acknowledge family support to commercial tissue donors (Berend, 2016; Jacobson, 2016), the existing literature persistently emphasizes individual decisions. However, people often participate in bodily market exchanges as family units (Watkins, 1990). Kin serves as a mediator between individuals and emerging industries in modern history when "the family as an active agent ... planned, initiated, or resisted change" in responses to external opportunities and constraints (Hareven, 2000: 18). Families act strategically to realize collective goals, which subjects different members to health risks.

These analyses have several limitations. First, I study rural communities with homogeneous populations and strong ties in central China. Future research should consider how the impact of social relationships vary based on divergent structural forms, contents, and structural compositions of local networks at different locations around the globe. Second, the application of the oral history approach confines my findings to the early 1990s when biomedical markets were still in the process of formation in Asia. I posit that, as the configurations of these markets evolve, the ways in which economic marginalization, gender rules, and bodily commodification interact with each other may change. The question of how the plasma market changes within specific circumstances at particular times warrants further examination. Thirdly, my participants' memories and narratives might be affected by their current health conditions. Their experiences may differ from plasma sellers whose did not get infected with HIV.

6. Conclusion

While the existing literature has identified a range of structural conditions (e.g. global capital and labor flows, legal and regulatory environments) and personal conditions (e.g. income, race, education) under which individuals are willing to participate in selling human tissue and organs, we know little about how group relationships and dynamics affect the operations of those conditions. This paper addresses this gap by examining how the structure and content of social ties and interactions shape the interplay between political and economic structures and individual actions in everyday practices. I have analyzed people's decisions to become biolaborers, finding they were relational, interactional, processual, and ultimately, social. Bodily commodification may take on divergent forms depending on the intersection between economic disparities and local community hierarchies.

In particular, this paper highlights that social ties and interactions are gendered mechanisms mediating between macrolevel structural forces driving the formation of biomedical markets and microlevel individual actions of selling human tissues. By complicating the question of health agency and autonomy, it contributes to an expanding body of research on market exchanges of human bodies that pushes beyond the

false dichotomies of control/choice, and exploitation/agency (Hovav, 2019; Pande, 2020; Yea, 2015). By showcasing gender as a central non-marketized mechanism in bodily transactions, the findings extend a relational framework (Connell and Pearse, 2014) to disrupt the typical stories portraying the global subordination of women to men. As Almeling (2020) criticizes, existing scholarship often sees gender as an entrenched identity or role from which individuals derive values, beliefs, and meanings and actions accordingly. Scholars hence mainly study women or men exclusively as one category. By contrast, this research conceptualizes bodily commodification as a dynamic social process through which masculinity and femininity are constructed in relation to not only each other but also the local patriarchal order.

To understand the (re)production of biolabor, researchers must recognize that gender prescribes a set of relationships that establish a hierarchical social space in which women and men are both subjected to patriarchy domination. Such space may prompt some people to sell their tissues or body parts and others not to. This study hence rejects the linear connection between gender ideologies and individual action by illuminating various situations or life events that propel men and women to engage in biomedical trading. It agrees, rather, with economic sociology that indicates intimate relationships are not separate from but integral to market exchanges (Chan, 2012; Zelizer, 2007). Unsurprisingly, people were under pressure to uphold gender normative behaviors as fathers and mothers (Jacobson, 2016). Less expectedly, however, this paper reveals how people's gendered subjectivities as plasma sellers were forged in emotionally charged family negotiations, conflicts, and compromises in everyday settings. This finding underscores the need for more attention to concrete social interactions as the "fine texture of life" (Das et al., 2000: 284) that alters health risk calculations.

In addition, the biomedical industry may redefine masculinities and femininities in order to enroll individual bodies into the market (Namberger, 2019). This paper adds to this line of inquiry by showing that such redefinition does not necessarily hinge on direct interactions between the market and individuals and calling for attention on mediating actors at the community level such as kinship groups.

This study also elucidates the paradoxical effects of social networks. On the one hand, the lack of strong community ties may make certain people's bodies vulnerable to biolabor exploitation. It may also intensify the psychological impairment of extraction processes. On the other hand, strong community ties with protective effects on sellers against psychological stress can also recruit people into highly dangerous bodily commodification. My discussion strengthens a growing body of scholarship on the dark side of social networks on health outcomes (Rodgers et al., 2019; Song et al., 2021) by showing how social relationships may normalize fabricated information and high-risk practices. People's risk perceptions and choices are mediated through kinship-based community memberships which produce biomedical industry profits at the expense of biolaborers' health.

Declaration of competing interest

None.

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References

- Almeling, R., 2011. *Sex Cells: the Medical Market for Eggs and Sperm*. University of California Press.
- Almeling, R., 2020. *GYNecology: the Missing Science of Men's Reproductive Health*. University of California Press.

- Berend, Z., 2016. *The Online World of Surrogacy*. Berghahn Books.
- Chan, C., 2012. *Marketing Death: Culture and the Making of a Life Insurance Market in China*. Oxford University Press.
- Charmaz, K., 2006. *Constructing Grounded Theory*. SAGE.
- Cohen, L., 2005. Operability, bioavailability, and exception. In: Ong, A., Collier, S. (Eds.), *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*. Blackwell, Oxford, pp. 79–90.
- Cohen, L., 2011. Migrant supplementarity: remaking biological relatedness in Chinese military and Indian five-star hospitals. *Body Soc.* 17 (2–3), 531–541.
- Connell, R., 1987. *Gender and Power: Society, the Person and Sexual Politics*. Stanford University Press.
- Connell, R., 1995. *Masculinities*. University of California Press.
- Connell, R., Pearce, R., 2014. *Gender: in World Perspective (Polity)*.
- Cooper, M., 2008. *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era*. University of Washington Press.
- Cooper, M., Waldby, C., 2014. *Clinical Labor: Tissue Donors and Research Subjects in the Global Bioeconomy*. Duke University Press.
- Crane, S., Writing the individual back into collective memory. *Am. Hist. Rev.* 102, 5, 1372–1385.
- Crowley-Matoka, M., Hamdy, S., 2016. Gendering the gift of life: family politics and kidney donation in Egypt and Mexico. *Med. Anthropol.* 22.
- Daniels, C., Heidt-Forsythe, E., 2012. Gendered eugenics and the problematic of free market reproductive technologies: sperm and egg donation in the United States. *Signs. J. Women Cult. Soc.* 37 (3), 719–747.
- Das, V., Kleinman, A., Reynolds, P., Ramphel, M., 2000. *Violence and Subjectivity*. University of California Press.
- Erwin, K., 2006. The circulatory system: blood procurement, AIDS, and the social body in China. *MAQ (Med. Anthropol. Q.)* 20 (2), 139–159.
- Fraser, N., 2014. Behind Marx's hidden abode for an expanded conception of capitalism. *N. Left Rev.* 86, 55–72.
- Furth, C., 1999. *A Flourishing Yin: Gender in China's Medical History, 960–1665*. University of California Press.
- General Customs Administration, 1986. Announcement regarding prohibiting the importation of factor VIII preparations and some other blood products. January 29.
- Gilman, L., 2018. Toxic money or paid altruism: the meaning of payments for identity-release gamete donors. *Soc. Health Illness* 40 (4), 702–717.
- Glaser, B.G., Strauss, A.L., 1967. *The Discovery of Grounded Theory*. Aldine.
- Hamdy, S., 2008. When the state and your kidneys fail: political etiologies in an Egyptian dialysis ward. *Am. Ethnol.* 35 (4), 553–569.
- Hareven, T., 2000. *Families, History and Social Change: Life Course and Cross-Cultural Perspectives*. Westview Press, Boulder.
- Harrison, L., 2019. Milk money: race, gender, and breast milk “donation”. *Signs. J. Women Cult. Soc.* 44 (2), 281–306.
- Healy, K., 2006. *Last Best Gifts: Altruism and the Market for Human Blood and Organs*. University of Chicago Press.
- Hovav, A., 2019. Producing moral palatability in the Mexican surrogacy market. *Gen. Soc.* 33 (2), 273–295.
- Jacobson, H., 2016. *Labor of Love: Gestational Surrogacy and the Work of Making Babies*. Rutgers University Press.
- Kent, J., Farrell, A.M., 2015. Risky bodies in the plasma bioeconomy: a feminist analysis. *Body Soc.* 21 (1), 29–57.
- Kierans, C., 2011. Anthropology, organ transplantation and the immune system: resituating commodity and gift exchange. *Soc. Sci. Med.* 73 (10), 1469–1476.
- Lock, M., Nguyen, V., 2018. *An Anthropology of Biomedicine*. Wiley Blackwell.
- Mastro, T.D., Yip, R., 2006. The legacy of unhygienic plasma collection in China. *AIDS* 20 (10), 1451–1452.
- Messerschmidt, J., Connell, R., Messner, M., Martin, P., 2018. *Gender Reckonings: New Social Theory and Research*. NYU Press.
- Miner, S., 2021. I would want to pay her”: challenging altruistic egg exchanges in Canada through moral patchworks. *Soc. Sci. Med.* 272, 113733.
- Mohr, S., 2018. *Being a Sperm Donor: Masculinity, Sexuality and Biosociality in Denmark*. Berghahn Books.
- Moniruzzaman, M., 2019. The heavier selves”: embodied and subjective suffering of organ sellers in Bangladesh. *ETHOS* 47 (2), 233–253.
- Morini, C., Fumagalli, A., 2010. Life put to work: towards a life theory of value. *Ephemera* 10 (3/4), 234–252.
- Mumtaz, Z., Bowen, S., Mumtaz, R., 2012. Meanings of blood, bleeding and blood donations in Pakistan: implications for national vs global safe blood supply policies. *Health Pol. Plann.* 27 (2), 147–155.
- Namberger, V., 2019. *The Reproductive Body at Work: the South African Bioeconomy of Egg Donation*. Routledge.
- Newman, S., Nahman, M., 2020. Nurture commodified? An investigation into commercial human milk supply chains. *Rev. Int. Polit. Econ.* 10, 016224392199646.
- Oksala, J., 2019. Feminism against biocapitalism: gestational surrogacy and the limits of the labor paradigm. *Signs* 44 (4), 883–904.
- Ong, A., 2010. An analytics of biotechnology and ethics at multiple scales. In: Ong, A., Chen, N. (Eds.), *Asian Biotech: Ethics and Communities of Fate*. Duke University Press, Durham and London, pp. 1–54.
- Pande, A., 2014. *Wombs in Labor: Transnational Commercial Surrogacy in India*. Columbia University Press.
- Pande, A., 2020. Visa Stamps for Injections Traveling Biolabor and South African Egg Provision. *Gender and Society*, pp. 1–24.
- Pfeffer, N., 2011. Eggsploiting women: a critical feminist analysis of the different principles in transplant and fertility tourism. *Reprod. Biomed. Online* 23 (5), 634–641.
- Ridgeway, C.L., Correll, S.J., 2004. Unpacking the gender system: a theoretical perspective on gender beliefs and social relations. *Gen. Soc.* 18 (4), 510–531.
- Rodgers, J., Valuev, A., Hswen, Y., Subramanian, S. **Social capital and physical health: an updated review of the literature for 2007–2018.** *Soc. Sci. Med.* 236, 112360.
- Scheper-Hughes, N., 2000. The global traffic in organs. *Curr. Anthropol.* 41 (2), 191–224.
- Scheper-Hughes, N., 2011. Mr Tati's holiday and joao's safari: seeing the world through transplant tourism. *Body Soc.* 17 (2–3), 55–92.
- Schippers, M., 2007. Recovering the feminine other: femininity, masculinity, and gender hegemony. *Theor. Soc.* 36 (1), 85–102.
- Schweda, M., Schickanz, S., 2009. Public ideas and values concerning the commercialization of organ donation in four European countries. *Soc. Sci. Med.* 68, 1129–1136.
- Shao, J., 2006. Fluid labor and blood money: the economy of HIV/AIDS in rural central China. *Cult. Anthropol.* 21 (4), 535–569.
- Sharp, L., 2000. The commodification of the body and its parts. *Annu. Rev. Anthropol.* 29, 287–328.
- Sheftel, A., Zembrzycki, S., 2013. *Oral History off the Record*. Palgrave.
- Song, L., Pettis, P., Chen, Y., Goodson-Miller, M., 2021. Social cost and health: the downside of social relationships and social networks. *J. Health Soc. Behav.* 62 (3), 371–387.
- Sunder Rajan, K., 2006. *Biocapital: the Constitution of Postgenomic Life*. Duke University Press.
- Sweet, P., 2020. Who knows? Reflexivity in feminist standpoint theory and Bourdieu. *Gen. Soc.* 34 (6), 922–950.
- Thompson, P., Bornat, J., 2017. *The Voice of the Past, Oral History*. Oxford University Press.
- Vlasenko, P., 2021. *Global Circuits of Fertility: the Political Economy of the Ukrainian Ova Market*. Dissertation. Indiana University.
- Waldby, C., Kerridge, I., Boulos, M., Carroll, K., 2013. From altruism to monetisation: Australian women's ideas about money, ethics and research eggs. *Soc. Sci. Med.* 94, 34–42.
- Watkins, S., 1990. From local to national communities: the transformation of demographic regimes in Western Europe, 1870–1960. *Popul. Dev. Rev.* 16 (2), 241–272.
- Xinhua News Agency, 1988a. Prevention of AIDS is important because of open policy. January 14.
- Xinhua News Agency, 1988b. Scientists says China has No AIDS sources. January 22.
- Yea, S., 2015. Masculinity under the knife: Filipino men, trafficking and the black organ market in Manila, the Philippines. *Gen. Place Cult.* 22 (1), 123–142.
- Zelizer, V., 2007. *The Purchase of Intimacy*. Princeton University Press.
- Ziff, E., 2019. *The All-American Surrogate: Military Wives and Surrogacy in the United States*. Dissertation. The New School for Social Research.