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An Anthropological Perspective

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Le « tournant ontologique » dans l’anthropologie russe

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Résumé de l'article

Cet article offre une perspective anthropologique sur la transplantation d’organes en Russie. L’auteur emploie les approches et les principes de l’anthropologie médicale et du tournant ontologique en anthropologie, et tente de présenter une histoire inédite de la transplantation d’organes entre l’homme et l’objet. Cette recherche se concentre principalement sur les collectifs humains, tels que les communautés médicales et le reste de la société, mais aussi sur certains objets, notamment les donneurs d’organes et l’infrastructure créée par la technologie. L’article aborde les questions suivantes : Comment la technologie de transplantation transforme-t-elle la communauté médicale ? Comment s’intègre-t-elle dans le contexte social et culturel ? Comment est-elle perçue par le reste de la société ? Comment certains médecins tentent-ils d’adapter cette technologie aux valeurs traditionnelles de la société russe ? Cette recherche a été menée dans deux grands centres russes de transplantation d’organes. Les documents analysés comprennent des publications anthropologiques et médicales, ainsi que des sources médiatiques.

Organ Transplantation in Russia

An Anthropological Perspective

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Abstract: This article offers an anthropological perspective on organ transplantation in Russia. The author employs approaches and principles of medical anthropology and ontological turn in anthropology and attempts to present a novel human-object history of organ transplantation. This research focuses primarily on human collectives, such as medical communities and the rest of society, but also on certain objects, including donor organs and the infrastructure created by the technology. The article discusses the following questions: How does transplantation technology transform the medical community? How is it built into the social and cultural context? How is it perceived by the rest of society? How do some doctors try to adapt this technology to the traditional values of Russian society? This research was conducted at two large Russian organ transplantation centers. The analyzed materials include anthropological and medical publications, and mass media sources.

Keywords: anthropology; new medical technologies; transplantation; Russia; medical communities; donor organs; extracorporeal perfusion.

Résumé: Cet article offre une perspective anthropologique sur la transplantation d'organes en Russie. L'auteur emploie les approches et les principes de l'anthropologie médicale et du tournant ontologique en anthropologie, et tente de présenter une histoire inédite de la transplantation d'organes entre l'homme et l'objet. Cette recherche se concentre principalement sur les collectifs humains, tels que les communautés médicales et le reste de la société, mais aussi sur certains objets, notamment les donneurs d'organes et l'infrastructure créée par la technologie. L'article aborde les questions suivantes : Comment la technologie de transplantation transforme-t-elle la communauté médicale ? Comment s'intègre-t-elle dans le contexte social et culturel ? Comment est-elle perçue par le reste de la société ? Comment certains médecins tentent-ils d'adapter cette technologie aux valeurs traditionnelles de la société russe ? Cette recherche a été menée dans deux grands centres

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Mots-clés : anthropologie ; Nouvelles technologies médicales ; transplantation ; Russie ; communautés médicales ; don d'organes ; perfusion extra-corporelle

Introduction

This article is an attempt to offer an anthropological perspective on organ transplantation in Russia.[1] I am planning to apply several well-known anthropological approaches to create an original overview of organ transplantation as it pertains to Russia. I am also planning to explain why the process of development and increased use of this medical technology is fraught with difficulties and why not all patients who need a donor organ have the opportunity to receive one. I will be addressing several questions in the article. First, how does the technology of organ transplantation transform the medical community? Second, how does it get embedded in the social and cultural context and how is it perceived by the rest of the society? Third, which modes of cultural adaptation of the technology are most compatible with the traditional values of Russian society?

Methodological Framework and Field

In my research, I employ the approaches and principles of medical anthropology (Crowley-Matoka 2016; Hamdy 2012; Hogle 1999; Lock 2002; Sanal 2011; Sharp 1995), as well as of the ontological turn in anthropology, even though none of the established leaders of this turn has discussed the question of organ transplantation (Descola 2005; Latour 1988; Mol 2002). My intention to offer an anthropological perspective on the process of organ transplantation in Russia means, first of all, that I avoid discussing transplantation exclusively in the context of medical histories, where it is seen only as a medical technology, that is, a combination of methods and practices related to instruments, equipment, bodies, organs, medications, infections, immunity, etcetera. However, I do not plan to approach transplantation exclusively as a social technology that is located in the space of words and imagination and affects social institutions, society, and individuals. I wanted to locate organ transplantation within a larger methodological framework that would make it possible to maintain connections between words and things, artificial and natural, human and material. In short,

I wanted to preserve my right to interpret transplantation as a technology that affects both the natural and the cultural, as well as bodies and meanings. From this perspective, when planning my research, I tried to consider the whole interactive field of organ transplantation, including people, buildings, words, gestures, texts, images, etcetera.

I conducted my research (between 2017 and 2019) at two large Russian organ transplantation centres. One of them is a flagship of Russian transplantation medicine, the former Institute of Transplantology and Artificial Organs of the USSR Academy of Medical Sciences, now called the Valerii Shumakov National Medical Research Centre, located in Moscow. The second centre is the I. I. Dzhanelidze Research Institute of Emergency Medicine in St. Petersburg. I also monitored a number of other Moscow organ transplantation centres as they are important to our understanding of this field. It was important for me to have an opportunity to attend several conferences on the development of organ donation and transplantation in Russia, and also to communicate in person with several organ transplant specialists and observe their work.

As a part of this research, I analyzed various texts related to this topic, including publications by medical professionals, philosophers, historians, and other scholars who addressed organ transplantation, as well as a corpus of legal documents relevant to this question. Needless to say, particularly useful for the understanding of my materials were the journals published over the past twenty years by two major professional organizations, the Russian Transplantology Association and the Russian Association of Transplant Surgeons, including the *Vestnik transplantologii i iskustvennyh organov* [*Journal of Transplantology and Artificial Organs*] and *Transplantologiia* [*Transplantology*], but also other related publications that have an even longer history. Some of the official documents on the establishment of specialized medical centres, which I came across when doing this research, will soon probably become archival rarities. I often had to read and then reread a lot of texts, asking myself not so much about *what* was written there, but *why* it was written.

An important primary source was also documentaries, movies, and television shows produced by Russian television channels, which directly or indirectly addressed organ donation and transplantation. Most of them offered a relatively critical approach to the issue of organ transplantation. At least twenty Russian movies produced after 1992 linked the practice of organ donation and transplantation with issues of corruption, criminal activity and other abuses in the area of distribution of a scarce supply of donor organs. The Russian

Internet has also been a source of relevant information. Most of it was very emotionally charged. On one hand, there is a network of websites that provides scandalous and incriminating materials on organ transplantation. On the other hand, there are websites supported by organ transplant patients that promote the importance of transplantation. There are multiple other resources that are located somewhere between these two extremes, including comments people write on various communication platforms available in the Internet. Some of these people have had a firsthand experience with organ transplantation, while others did not have any experience with it, but were willing to participate in various discussions related to this practice.

Much of what I could observe during my research had to be interpreted using existing interpretational frameworks that have been offered by other anthropologists. None of these texts had previously been applied to the Russian context of organ transplantation. However, each of them proved to be very useful, not only for a better understanding of various aspects of the materials I studied, but also for formulating research questions. I will try to show in the article how these anthropological interpretations are appropriate in my case. Each of the questions I formulate in this article will be analyzed, while the analysis itself will be illustrated with examples.

The research project that I conducted was part of a large multi-disciplinary research project focusing on the study of social and cultural aspects of organ donation, which lasted for three years and was supported by the Russian Science Foundation. This was the first example of such a research project conducted in Russia, and two groups of specialists participated, including both medical doctors and scholars in the humanities and social sciences. Both groups had their own responsibilities within the collective research work. My task was to apply an anthropological perspective to the understanding of organ donation and transplantation in Russia. Even though I already had experience in conducting research in medical anthropology, my work in this field left me with a persistent feeling of its immensity and fluidity. My impressions still need time to settle; as of now, they keep on intertwining into an amazing interactive network. I must admit that this network does not only include the people whom I met and I talked to, but also conference rooms, brightly lit operating rooms, miserable hospital hallways, hospital rooms, mortuaries, and courtyards, their sounds and smells, and even their silence, which was sometimes more eloquent than any words. This network would not be complete without the blaring of sirens of special vehicles used by teams of doctors from the centre of organ

procurement, and telephone calls, connecting various spaces and different people's fates. It also includes Internet discussion boards that respond to human suffering and, finally, donor organs, transported in special cooler bags from one place to another.

Transplantation and Medical Communities

At the first stage of my research, I focused on how the technology of organ transplantation changed the medical community; in other words, how it transformed the disciplinary and political organization of medicine in Russia. I took as a premise that the medical landscape in Russia was different before this technology appeared and developed; there was no *space* for organ transplantation, there was no *practice* of organ transplantation, and there was no *community* of medical doctors who practiced it. I suggested that organ transplantation is a particular kind of skill or art which allows the movement of organs from one body to another with therapeutic goals. But what is in the basis of this skill? I had to assume that some kind of special *knowledge* unites medical doctors who practice organ transplantation.

From the very beginning, I decided to interpret these doctors not like a specific medical community, but as a nation with its leaders and history, one that is able to form alliances with other nations and enlarge the sphere of their influence. This need to interpret medicine as a space populated by various nations seemed natural to me. The main point is that medicine is not just one discipline. There are a lot of closely related disciplines, including internal medicine, surgery, intensive care medicine, and, finally, transplantation medicine. Medicine has a complicated organization structure, not only disciplinary, but also political. This obvious truth has been recently explained by Annemarie Mol (2002).

When I became more familiar with the life of this community, I realized that the title they use to describe themselves does not fully reflect what they do. The Russian word *transplantologist* (transplant physician or surgeon) means those who transplant organs (organ transplanters), but it reflects only a part of what they normally do. I think it would also be correct to call them organ hunters. In their conversations with each other, with potential organ recipients, and also when they address society at large, they always speak about an organ shortage, and how they could help a greater number of patients if they had more donor organs. Similar to the Nuer people of Eastern Africa, described by Edward Evans-Pritchard, whose whole lives were related to cows, the nation of transplant specialists has devoted their lives to tending to donor organs. However,

these organs are almost never in their hands. They are to be tracked down and watched for like some wild animals. In this sense, these doctors have always been hunters as well. Something similar to the mysterious head-hunters or microbe hunters, described by Paul de Kruif (1954).

I started my research with the question of what kind of knowledge this community possesses. What is that transplantology of which transplant doctors speak, if we were to discuss it not in the language of their nation, but as if it still remained something absolutely secret? When I approached the question from this angle, I came to the conclusion that transplantation medicine is not just the knowledge of *how* to transplant organs (this has been known since the beginning of the twentieth century, when a special technique for sewing blood vessels was invented) or of how to achieve organ transplant tolerance (this was achieved through tissue typing in the mid-twentieth century and later through immunosuppressant drugs). Transplantation medicine is built on the belief that it is *possible* to use organs as a remedy: to take organs from one human body and transplant them to another to treat a patient. This is suggested by one transplant medicine textbook written almost 20 years ago: "[The m]odern state of transplant medicine allows us to discuss organ transplantation as a treatment, which is the only available option in terminal stages of chronic diseases" (Musatov and Kozlov 2000). This is now normal practice, but in the beginning, it must have been perceived as bizarre. If we took organs from living donors, we would harm them. If we took organs from a deceased donor, there was a high risk that organs would be damaged, suffer from warm ischemia. Moreover, nobody had historically taken organs from the deceased, because it had never been done before. However, transplant surgeons persuaded everyone else that it was possible, because they had the necessary knowledge.

They opened a door to the world of these incredible opportunities, letting everyone know that organs could be used as a medicine. In this way, they were similar to the aforementioned microbe hunters. Thinking about this similarity, I turned to Bruno Latour and the ideas he presented in his work on the pasteurization of France. Latour showed how Pasteur and a small number of his colleagues positioned themselves in French society as owners of the knowledge that connected them to the invisible world of microbes. They became mediators between microbes and the human world. Pasteur and his colleagues showed that they could tame microbes and make them safe (pasteurization) and even useful (vaccination) for people. Society in the second half of the nineteenth century was obsessed with hygiene and criticized the meaningless losses of soldiers who died not from wounds, but from infections. Knowledge made known

by Pasteur was promptly acknowledged in society (Latour 1988). In brief, the terms pasteurization and vaccination for Pasteur and his followers were what the terms properly matched organ and organ implantation have become for transplant physicians. By persuading others that it was possible to safely move organs from one human body to another to improve the recipient's physical health, transplant doctors slowly turned an ambitious idea into a complex medical technology, thus making it possible to save terminally ill patients.

I started with the question of knowledge, and then continued to observe the community of organ transplant surgeons. I was interested to know how this professional group was formed in Russia. What is the genealogy of this medical nation, who were their *ancestors*? Transplant surgeons say that the contemporary practice of organ transplantation goes back to the realm of experimental surgery, which started developing in the USSR in the 1930s. Soviet experimental surgery is seen as continuing the age-old traditions of Russian medical science, which can be traced back to charismatic individuals such as Nikolai Pirogov and Nikolai Sklifosofsky. In contemplating the aspect of nationhood, these famous experimental surgeons are considered by Russian transplant surgeons as the first among their most respected ancestors. As their immediate predecessors, they usually name Iury Voronoy, who experimented with kidney transplants from deceased donors (1931) and Vladimir Demikhov, who performed heart and lung transplants on dogs (1947). There are three doctors who are usually considered as the founding fathers of transplantation medicine. They are Boris Petrovsky from the Research Institute for Clinical and Experimental Surgery (Moscow), Alexander Vishnevsky from the Military Medical Academy (Leningrad), and Valery Shumakov, who was a student of Petrovsky's. Petrovsky performed the first successful kidney transplant in the USSR in 1965. After Christiaan Barnard, who referred to himself as Demikhov's student, performed the world's first successful heart transplant, doctors in the USSR decided to repeat his experiment. Similar surgery performed by Vishnevsky was not successful (1968). To regain their leading position in transplantation medicine, Soviet leadership and healthcare authorities established the Institute of Transplantology and Artificial Organs at the USSR Academy of Medical Sciences in 1969; the idea behind its organization came from Boris Petrovsky. Five years later, Valery Shumakov became its director, and in 1987, he performed the first successful heart transplant in the USSR.

My observations of *why* transplant surgeons tell the stories about the origins of their discipline led me to the simple conclusion that all these stories are ritual in nature. They can be found in the introductory chapters of medical books and

dissertations on various aspects of organ transplantation. These two examples serve as proof that they belong not only to the elite of the medical community, but also to the nation of transplant surgeons itself. These stories, or their most important chapters, are also often told at conferences, which regularly gather together all representatives of the nation. In this case, they are told by their leaders, who feel the need to reconfirm their leadership and remind everyone of what *people* they belong to. Leaders see these events as politically significant, as it is very important for them to have their achievements and merits recognized by their People. Previously, there were only a few leaders, equal to the number of organ transplantation centers. Now, their number has increased to sixty, on the basis of the Shumakov Centre, the Petrovsky Centre, and the Sklifosofsky Institute of Emergency Medicine (Gautier and Khomyakov 2019, 9). An example of one such ritual performance conducted with the objective of pursuing internal political goals is a presentation by Mogeli Khubutiia, the then director of the Sklifosofsky Institute of Emergency Medicine, and his deputy, Svetlana Kabanova, given in 2011 at the third conference of the "Association of Transplant Surgeons" organized by the Interregional Public Organization (Khubutiya and Kabanova 2011).

Transplant surgeons regularly point out that organ transplantation would not be possible if they did not cooperate with doctors representing other medical specialties, such as immunology, pharmacology, etcetera. "Organ transplantation as a treatment option became available as a result of broad multi-disciplinary cooperation" (Musatov and Kozlov 2000). This comes as no surprise, because the technology of organ transplantation is too complicated to be developed by one specialist or even a group of specialists belonging to the same medical nation. They need to cooperate with other medical communities here.

To gain a better understanding of the political meaning of this statement, I found the ideas formulated by medical anthropologist Lesley Sharp to be quite useful. She was studying the US case of organ transplantation, and she came to the conclusion that a specific *transplant community* can emerge around the technology of the organ transplant. According to Sharp, this community includes not only transplant specialists, but also other doctors with whom they cooperate, as well as patients, living donors, and their families (Sharp 1995, 366). What Sharp calls a transplant community is, in my understanding, a national confederation, the territory of which spans far beyond the medical centre where the organ transplantation takes place. Sharp also writes that all members of this community share a specific transplant ideology, according to which all patients need to be saved, even those who are most ill, and in this case donor organs

are the most effective treatment. In my understanding, transplant ideology is first and foremost the language that allows transplant surgeons to speak to other groups. Moreover, this is a way to earn trust of other doctors and the rest of society.

A study of medical texts on the development of organ transplantation in Russia showed that transplant surgeons had long experienced difficulties in finding a common language with the group of critical care physicians who thought that transplant surgeons were hindering their work, which was to save their patients. When a patient in an intensive care unit died, they would rarely inform the transplant surgeons who, consequently, would have insufficient time to procure organs for transplantation. In the early 2000s, transplant surgeons constantly criticized critical care physicians for this attitude. Sergei Gautier, who is currently the Director of the Shumakov National Medical Centre, said in one of his interviews: "When US critical care physicians get their licenses, they have to know how to prepare organs for transplantation. This is a part of their job. They consider it unethical if organs are wasted and human lives are not saved. For our critical care physicians, preparing an organ transplant is an extra problem, and they often do not even have normal technical conditions" (Kukulevich 2001, 10).

In 2006, transplant specialists and critical care physicians managed to find a common ground and formed an alliance between their nations. Professor Oleg Reznik from the Dzhanelidze Institute of Emergency Medicine in St. Petersburg kindly shared a story about an international conference, "The Role of the Intensive Care Unit Specialist in Organ Donation." Dr. Reznik was the conference organizer. He said, "critical care physicians and transplant surgeons were for the first time sitting in the same room, and they heard each other for the first time" (interview with Oleg Reznik in 2017). The conference received a lot of coverage, and one of its outcomes was a decision to establish the Association for Transplantation Coordinators, of which Dr. Reznik became president. A year after the conference, major hospitals in St. Petersburg hired teams of organ transplant coordinators, and hospitals started to pay ICU physicians to prepare their deceased patients for organ donation (Reznik, Bagnenko, Loginov and colleagues 2006).

It is reasonable to suggest that the cooperation between critical care physicians and transplant surgeons, which started in St. Petersburg, became possible after the former got over their mistrust of the latter. As for the situation in St. Petersburg, whose approach to the organization of organ transplantation process was later adopted by other cities in Russia, ICU physicians there started cooperating after transplant surgeons clearly articulated the need to save

everyone. According to Professor Reznik, transplant surgeons in St. Petersburg not only appealed to their former competitors by offering them material benefits, they also publicly insisted that every ICU had to be equipped with a mechanical ventilator (interview with Oleg Reznik in 2018). I think that this might serve as a good example to Sharp's thesis that transplant ideology is capable of uniting representatives of various medical communities under a national confederation.

The Rest of Society

In the next stage of my research, I focused on how the technology of organ transplantation became embedded into the social and cultural context and how it is perceived by the rest of society, which is comprised of people who do not have the knowledge of transplant specialists and who are not members of the aforementioned confederation of medical nations. Are they able to understand the language used by transplant specialists to address all other communities, and do they trust their knowledge?

First, my initial hypothesis was that there are very few people who know nothing about the existence of organ transplant technology, since it has been routinely used in Russia for over two decades. If a technology exists and has been in use for such a long time, there are always people who have come across it in one way or another, have their own opinion about its purpose, and have also formed a certain attitude towards it. In fact, this hypothesis was easy to prove.

When you first enter the Shumakov Centre, you can see that many people there are on the same page as the specialists who work in the Centre. These people are patients of the Shumakov Centre. A lot of them need surgeries that are not related to organ transplantation. There are others who will probably become organ recipients. There are recipients who have their first consultation scheduled, accompanied by their family members. These are all the people who will benefit from an organ transplantation, and for them this technology is a good thing. If I were to define their political relations with transplant surgeons, I would call them allies of necessity. These people were drawn to the Centre by their needs, and it is clearly visible in their faces, their postures and gestures, in their quiet voices, and in the content of their conversations.

There is also another category of people, whom we'll call sincere allies. There are very few of them, and I did not have a chance to meet any of them at a transplantation center. I am referring to people who have undergone organ transplants and are now active members of patient organizations. Their names

are usually well known to other organ donor recipients. Some of these people are no longer very active due to health issues. As I discovered, there were three patient organizations that focused on developing a positive relationship between organ transplant specialists and the rest of society. These organizations were the All-Russia Non-Profit Organization of Nephrology and Organ Transplant Patients Right for Life, the Interregional Non-Profit Organization of Nephrology Patients Nefro-Liga, and the Foundation for Support of Organ Donation and Transplantation Gifting a Part of Yourself. They were all established in 2008 when Sergei Gotie became the new director of the Shumakov Centre. They all cooperated closely with the Shumakov Centre, and with other organ transplant centers in various cities in Russia. Today, only the Nefro-Liga continues its operations, trying to assist people who have undergone organ transplant surgeries. They also actively participate in various events to support the concept of organ donation and transplantation; in other words, they promote transplant ideology. One of the problems that the organization Right for Life was trying to solve, and which has now been taken up by Nefro-Liga, is that hospitals give patients needing immunosuppressants cheap but ineffective generic medications. They have been petitioning the Ministry of Health to resolve this issue. I was not able to find out why Right for Life stopped their activity at the end of 2018, or why Gifting Part of Yourself was dissolved even earlier. However, the fact that Nefro-Liga, led by Liudmila Kondrashova and Galina Koretskaia, continues to actively pursue its goals, demonstrates that Russian transplant surgeons have active allies in Russian society.

Finally, I wish to focus on another category of people, those who are neither allies by necessity nor sincere allies to transplant surgeons. They form the largest portion of Russian society, all those people whose voices are not usually heard, the silent majority. Their voices are usually heard only when the organ transplantation situation suddenly becomes a matter of public debate that erupts around alleged criminal cases and corruption in transplantation.

My conversations with transplant surgeons and analyses of relevant publications led me to conclude that all scandalous incidents in this sphere were resulted from discrepancies between the development of the technology and the current legislation. Until 1987, the only organ that surgeons in the USSR could transplant was kidneys; nobody had experience with heart transplants. The existing legislation did not interfere with the development of the technology. In early 1987, it became clear that Valery Shumakov and his team were both technically and institutionally ready to start heart transplantations. In February,

the Ministry of Health of the USSR passed a bill and a special directive on establishing the diagnosis of brain death. In March, the first successful heart transplant was performed in the USSR. In the mass media, this event was presented as a bold experiment, but for the rest of society it was nothing more than a medical curiosity.

In the early 1990s, transplant surgeons working in major medical centers in the country were accumulating experience in treating donors diagnosed with *brain death*. About the same time, the country was stricken by a socio-economic crisis, and the healthcare system quickly went downhill. Heart transplants stopped, and even kidney transplants were rarely performed. This is when the first law regulating organ donation was approved in now post-Soviet Russia (1992). Soon after, healthcare legislation was passed (1993). Article 47 of this law significantly limited surgeons in their procurement of donor organs. They were prohibited from harvesting organs from underage live donors and from the deceased if they had not consented to be donors. However, most of society did not pay much attention to these legislative acts, as the practice of organ transplantation was almost nonexistent at the time.

In the early 2000s, the socio-economic situation in Russia was improving, and it became clear that the existing legislation did not work. In 2001, the Russian Ministry of Justice commented on a contradiction between the organ transplantation law and the burial law, which was passed in 1996. The burial law prohibited doctors from harvesting organs from deceased donors without official consent from their relatives. The same year, the Ministry of Justice repealed several by-laws that previously allowed doctors to procure organs from deceased donors. Transplant surgeons were disappointed by this legal development. Mikhail Kaabak, then head of the kidney transplant unit at the Petrovsky Centre, said, "Our department could perform no less than 40 organ transplants a year if this problem were solved. What prevents us from doing it? We have a very weak legal basis. We are still working by the instructions approved in 1977" (Kukulevich 2001, 3). Responding to the decision of the Ministry of Justice, the Ministry of Health issued a new administrative order, which included a detailed instruction on how to diagnose brain death.

In 2001, Valery Shumakov complained that there were three things hindering the development of organ transplantation. First, he named poor facilities and a lack of resources; second, a lack of support by ICU physicians; and third, a complete lack of promotion of the new technology among the rest of the society. "We need good popularizers, or we will never move things forward, and people who could otherwise live and work will keep dying" (Kukulevich 2001, 11).

In April 2003, the case of Anatoly Orekhov received a lot of publicity. This patient was rushed to Moscow City Hospital No. 20 with a deadly brain injury. Critical care physicians connected him to life-support and called transplant surgeons from the Moscow Centre for Organ Donation Coordination to make a decision regarding organ procurement. Orekhov was diagnosed with brain death, and transplant surgeons were preparing to harvest organs for transplantation. At this moment, a group of police officers entered the hospital and arrested the surgeons. They were accused of attempting to harvest organs from a patient who was still alive, since Orekhov's heart was still beating. The statement issued by the Moscow Prosecutor's office read: "ICU physicians of the hospital of the Main Internal Affairs Directorate of Moscow, who arrived with police officers, discovered Orekhov outside of the ICU unit, being prepared for kidney procurement, while he still demonstrated signs of being alive – arterial blood pressure and a heartbeat" (The Case of Organ Transplantation in Moscow City Hospital No. 20 2004).

After the Anatoly Orekhov incident, Russian mass media published several incriminating articles about "killer doctors." One of the main television channels aired a documentary called *Transplantology*, which criticized the sphere of organ donation and transplantation. The newspaper *Komsomol'skaia Pravda* published an article with the headline "The Case of Disemboweling Doctors." It claimed that organ transplantation surgeries in Russia were often performed for money, and there were both official and unofficial price lists for donor organs. Soon, this information was also published by the website Kompromat.ru, which specialized in discrediting information (Gerasimenko 2004). The newspaper *Sovershenno sekretno*, which also specializes in scandals, published an article called "People for Parts." It was based on the Moscow police photos and records of telephone conversations between doctors (Kislinskaya 2004). These publications caused a big commotion on Internet discussion boards. Medical professionals whose jobs were even remotely related to the procurement of donor organs were accused of criminal activity. Public opinion was formed that the sphere of organ transplantation was corrupt and criminalized.

My observations show that the situation improved somewhat, but not until 2008, when Sergei Gotie became the Director of the main organ transplantation centre in Russia. He replaced Valery Shumakov, who had died earlier that year. Dr. Gotie was able to change public opinion about organ transplantation, as he argued in his numerous interviews that organ transplantation had nothing to do with criminal activity and corruption.

In 2013, the sociologist Olga Karaeva from the Levada-Centre, a sociological research organization, published results of her research on attitudes towards organ donation and transplantation in Russian society. She found out that Russians had a mainly positive attitude towards the technology of organ transplantation, even though they had not formed a clear understanding of it. A significant part of her respondents said that they were not ready to donate their organs to strangers after they died. The majority of her respondents were ready to become living donors for their children, but not for other family members. Karaeva concluded that any further development of organ transplantation in Russia was hindered by several social issues. The main issue was that most people in Russia did not trust medical professionals, and there was a lack of solidarity among Russian citizens themselves (Karaeva 2013).

It has been several years since Karaeva conducted her research, and I feel that her conclusions are no longer valid, although a formal disproval of this thesis has to wait before more sociological research of a similar scale is conducted to address this issue. I suggest that Karaeva was not able to capture the main sentiment, which defined the attitude of the rest of society to organ transplantation. She called it mistrust. I think that instead, we need to talk about fear.

Here is my argument. In January 2014, another scandal related to organ transplantation received a lot of publicity. Alina Sablina, a young woman, died in hospital after a car accident. Transplant surgeons harvested her organs for transplantation. Her mother, Elena Sablina, later accused doctors of doing this without her permission and sued them. However, courts at all levels, including lower, municipal, and supreme courts, confirmed that the hospital and doctors acted according to the existing legislation, which allowed them to obtain organs from deceased donors on the grounds of presumed consent. Then, Elena Sablina's lawyers filed a complaint with the European Court of Human Rights, demanding the admission that organ transplantation legislation contradicted the Constitution and the law itself was inhumane. They also demanded the family receive compensation from the Moscow medical institution; and Elena Sablina herself wrote a letter to Kirill, the Patriarch of the Russian Orthodox Church, asking him for protection against the violation of Christian Orthodox traditions by medical professionals (Lepina 2015).

I argue that the story of Alina Sablina and other similar stories that followed demonstrate the actual reason for public outrage. Everyone who complained about being abused by the organ transplantation system was speaking about the cruelty and inhumanity of transplant surgeons. Most of these complains

were caused by the fact that the transplant surgeons did not ask the deceased young woman's parents for permission to procure organs. What would happen if they asked, even when the law does not require them to? One of the transplant surgeons whom I asked about this situation said, "I think that asking for permission is actually cruel. People are grieving, and here we are wanting to harvest their daughter's or son's organs." Then he added, "If we ask everyone for permission, a lot of people will say no. It means that the patients who are waiting for organ transplants will die" (interview with a medical doctor from Moscow, 2017).

I was analyzing this situation from various angles, and decided to take another look at what causes anger among people who feel victimized by transplant surgeons. It was clear that it was not criminal activity or corruption, it was an unwillingness to communicate. Surgeons avoid communicating with relatives of people who are about to become donors in this most traumatic moment of their lives, and, according to my informant, they do not communicate because they want to be compassionate. As a result, we observe here a clash of two different understandings of compassion, two different ethical positions, and in the end, it is the one shared by medical professionals that wins. Doctors have more authority and power than donors' relatives. This power does not only come from the Russian legislation, but also from their profession itself. This situation inevitably raises fear. I call this fear *a mortal fear*.

To elaborate on this thought, I want to address the ideas of Philippe Descola regarding animist collectives and liminal beings. He writes that, in an animist society, members of each nation-species share a similar physical appearance, housing, exercise similar food and reproductive behaviour, and are endogamous. Sometimes, some members of a nation-species might have some kind of additional connections to another nation-species. For example, they might be shamans who become mediators between human collectives and animals (Descola 2005, 428). I suggest that a mediation between various nation-species is not only important for shamans of Amazonia, but also for surgeons and physicians who participate in the process of organ donation and transplantation. Unlike shamans, rather than mediating between humans and animals, who live in the same universe, they connect the living and the dead, or, more specifically, they connect living humans and deceased donors. What does it mean for our conversation about the development of organ transplantation in Russia, which is not normally perceived in terms of animist collective? I think it might help us explain the underlying reasons for the fear that people feel

in regard to transplant surgeons. Contemporary Russian society continues to perceive them as liminal beings who have knowledge of world of the dead.

Technology Domestication?

One of the questions that I was interested in throughout my research was whether it is possible to adapt the technology of organ transplantation to the Russian context to guarantee optimum support from the population. In asking this question, I was inspired by the research on organ transplantation conducted by anthropologists in other communities. First, I was interested in the research of Linda Hogle, who studied organ transplantation in Germany. She shows how German society strongly rejects a model of organ transplantation that is based on the procurement of organs from living donors. According to Hogle, this cultural resistance is related to the current generation of Germans reacting to the country's Nazi past and everything related to it, including torture that took place in concentration camps. This is why Germans think it is morally unacceptable to violate the bodies of living people, and only allow for procurement of organs from deceased donors (Hogle 1999). I was also interested in the ideas of Megan Crowley-Matoka, Sherine Hamdy, and Aslihan Sanal, who studied organ transplantation in Mexico, Egypt, and Turkey, respectively. Unlike Germans, most of the inhabitants of these countries allow organ transplants from living donors only. These authors suggest that this attitude can be explained by cultural traditions of these countries and by the concept of maternal sacrifice, which is strong in families (Crowley-Matoka 2016; Hamdy 2012; Sanal 2011).

Studying the Russian case of organ transplantation, I noticed from the very beginning that deceased organ donation did not receive the same social support in Russia as it did in Germany. Russian medical statistics indicate a constant increase in donation, especially–like Europe and North America–an increase in deceased donation: thus, by the end of 2018, doctors could attract 364 living donors and 639 deceased donors (Gautier and Khomyakov 2019, 13). However, the value of living organ donation is recognized by a lot of Russians, similar to the situation in Mexico, Egypt, Turkey, and other developing countries. The idea of parents gifting organs to their children is particularly appreciated (as was also shown in research by Olga Karaeva). At the same time, I think that Russian transplant surgeons, like their colleagues in developed countries, are unable to abandon the idea of deceased organ donation under any circumstances. This made me even more interested in finding out if the Russian nation of organ hunters can find another approach that best corresponds to traditional values of Russian society.

It is a matter of luck that made it possible for me to find an answer to this question, one that was probably related to the fact that the location of my research was in St. Petersburg. I had met a group of transplant surgeons who at that time were actively seeking a new organizational model for organ donation. This group of surgeons was employed at the Dzhanelidze Institute for Emergency Medicine led by Dr. Reznik. It is not an exaggeration to say that Oleg Reznik is a very charismatic person, and he approaches this problem in a more creative manner than most of his colleagues. In 2000, he became the head of the St. Petersburg Organ Procurement Organization, and he concluded that the system was ineffective. He pushed for the establishment of a center for organ transplantation coordination, and just a year later this center helped to increase the number of donor organs available for transplants. He was the first to analyze the reasons behind the donor organ shortage in Russia, and his graduate student, Igor Loginov, studied this problem in his dissertation (Loginov 2011).

My interviews with Professor Reznik and my analysis of his publications show that as early as 2007 he suggested that the number of donors diagnosed with brain death would gradually decrease. One of the reasons he named was the improved qualification of neurosurgeons who had become better at saving patients with brain injuries. It was hard to counter this argument, as a similar tendency was also noticed by his colleagues in Europe (Kompanje, de Groot and Bakker 2011). This situation forced Dr. Reznik and his team to contemplate the need to find new organ donor resources, and how to organize their work in view of the fact that organ donation cannot be considered the post-mortem responsibility of citizens.

Reznik is one of those doctors who admit that the diagnosis of brain death, which is officially used in Russian medical care, is unconvincing for the relatives of the deceased patient, especially if they observe the patient while they are still connected to a breathing machine. The assessment he made of the Russian situation was, of course, typical not only of Russia, but also of Japan, China, and other countries (Ikels 2018; Lock 2002). When he was responsible for the regional transplantation coordination in St. Petersburg, he was involved in multiple negotiations with the relatives of deceased patients over the matter of organ retrieval permission. Let us recall here that Russian legislation does not oblige doctors to initiate such negotiations. I concluded that it was not the letter of law, but rather a moral feeling that drove him in such cases. According to Reznik, relatives agree on organ retrieval in 50 percent of cases. While

I have thus far been unable to personally observe these negotiations, I was well immersed in the context of such situations.

In recent years, Dr. Reznik and his St. Petersburg colleagues have tried to use donor organs procured from patients who died as a result of cardiac arrest. These donors are called asystolic donors, or donors after cardiac death. They are the people in whose cases a biological death was officially registered. In 2010, Dr. Reznik and his team were the first in Russia to develop a technical protocol on how to work with these donors, and this protocol was approved by the ethics committee of the Dzhanelidze Institute. A necessary step in this protocol is the use of a portable perfusion device, which is connected to the body of the deceased and restarts local blood flow. The specific characteristic of this approach is that organ procurement only starts after other medical specialists have confirmed the biological death of the donor. It usually takes two or more hours. This gives enough time to inform the family of the patient's cardiac arrest and to discuss organ donation. The portable perfusion device provides extracorporeal membrane oxygenation, which preserves the deceased donor's organs and solves the problem of warm ischemia.

From a medical point of view, Dr. Reznik's team reached interesting results. Between 2010 and 2017, these St. Petersburg surgeons could procure 56 kidneys from donors who died outside of hospital. All these organs were successfully transplanted in various hospitals in St. Petersburg. The main problem they faced was that the equipment they used in the process was very advanced. In the beginning, only one specialist, Dr. Andrei Skvortsov, could get the equipment work properly and reach perfusion. Dr. Reznik regularly presented the results of his team's work at medical conferences (Reznik, Skvortsov, Reznik A. et al. 2013). In September 2017, Dr. Reznik's team developed a new technical protocol of working with non-heart-beating donors and used a new type of devices for extracorporeal perfusion. After one year of working on the new protocol, they managed to receive not only a fully functional kidney, but also a liver (Skvortsov, Bagnenko, Komedev et al. 2019). By the beginning of 2019, St. Petersburg transplant surgeons had performed twelve more organ transplants.

When talking to Dr. Reznik, I noticed that he was always concerned about the ethical aspects of his work. Being the leader of a large team comprised of various specialists, he made sure to divide their work in stages. There are three stages in total. The first stage is when emergency physicians are fighting for the patient's life. The second stage starts when the patient experiences cardiac arrests and dies a biological death. The third stage is when extracorporeal perfusion starts, and organ procurement takes place. The consent of the patient's

family is always obtained between the second and the third stages. This approach allows all groups of medical specialists who are part of this large team not only to efficiently communicate, but also to follow clear ethical principles. Everyone is able to see where life ends, and death starts. In discussing the values of this approach, Dr. Reznik summed up his ethical principle: "A resuscitation of organs starts only after the resuscitation of the patient stops."

As I was observing the work of Dr. Reznik and his team, I thought that their approach of working with asystolic donors and their use of perfusion devices will, probably, be successful in Russia. As Dr. Reznik told me, "organ transplantation is in its infancy now, but there will be a revolution soon. When every emergency medicine physician has a portable perfusion device, transplant surgeons will finally have time to do their work. If this device can be turned on as easily as a USB device, we can have great results. We can save so many dying patients. Those who cannot be saved will become donors. Their organs will save other people" (interview with Oleg Reznik 2019). However, I cannot be entirely sure that this approach to the domestication of the technology in Russia will be recognized by all Russian transplant surgeons. As of today, Russian transplantation medicine is developing extensively: new transplantation centres are opening where most transplant surgeons are still focused on finding more organ donors diagnosed with brain death.

However, I keep on returning to my interactions with Dr. Reznik and his team of transplant surgeons in St. Petersburg, and I ask myself: will this "domesticated" approach to organ donation as discussed above receive support in Russian society? I remember Alina Sablina's mother and other people who did not have a chance to make decisions regarding the removal of organs from the bodies of their family members. I hope that this new approach, developed in St. Petersburg, will eliminate the lack of communication between doctors and family members of potential organ donors. This hope is further encouraged by Professor Reznik's words: "We can and have to talk to people. We will still have two hours to harvest healthy organs after that. We can do ECMO [extracorporeal membrane oxygenation]. This will allow us to do everything without rushing, in a civilized way" (interview with Oleg Reznik, 2018).

Conclusion

Transplantation technology appeared in Russia more than half a century ago, but its widespread dissemination was slowed down until the early 2000s by the socio-economic crisis. Currently, its spread is still continuing, affecting all aspects of Russian reality. At the same time, the speed of the resultant changes

varies, which means that the process of forming the national system of organ donation and transplantation is still not over. The fastest is the change in material reality. Institutions where transplantation is performed today are not only in Moscow and St. Petersburg, but throughout most of Russia. The infrastructure that allows organs to move from one body to another has become more complex. Closely related to this changing material reality is the social reality, on which I primarily focused in my research. Thus, within the larger Russian medical community, a special medical nation of transplant doctors has appeared. It boasts not only special knowledge, but also the professional language, genealogy, leaders and even policies that are needed to establish alliances with other medical nations. The nation must build relationships with the rest of society, but this is not always easy. This was reflected in several recent incidents in which the media accused Russian transplant doctors of corruption and crime. The reasons for such public reaction to the progress of transplantation were related primarily to the practice of deceased donation. Even today, the regulation of deceased donation is carried out in accordance with the laws of the early 1990s, and there were obvious contradictions in this area between various legal norms in the early 2000s. The process of harmonizing legislation could not fully weaken the public's rejection of the existing methods of harvesting organs. Therefore, I was forced to explain this situation in another way. Cases such as that of Alina Sablina, where organs were removed from a deceased donor in full accordance with the law, but without parental consent, showed that Russian society retains a mystical perception of transplant doctors. It is very likely that many people perceive them as liminal beings with power over the world of the dead. Since the negative attitude of a significant part of Russian society towards the practice of deceased donation is not exclusively a Russian prerogative, but is characteristic of other societies as well, I wanted to find out if there is a certain Russian way of domesticating technology. My observations of the work experiences of a small medical team at the Dzhanelidze Institute in St. Petersburg, who recently started working with asystolic donors and using extracorporeal perfusion, led me to the conclusion that this area of work could be very promising for Russia. A consensus can be found here between ultramodern technology and traditional values.

The presented picture of transplantation in Russia is still incomplete, since it ignores several other aspects of the impact of technology on Russian society, particularly, the question of how transplantation changes the patient experience. I shall discuss this issue elsewhere.

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