Unintended Consequences: Organ Transplantation, Organ Trafficking, and the Globalized Ethics of Biomedicine

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Introduction

The ability to remove a part of the body of one person, living or dead, and place it into the body of an ill person to make them well is one of the most dramatic symbols of the power of Western biomedicine. Organ transplantation is hailed as a modern scientific miracle that saves lives but also exposes a dense complex of personal, social, and cultural phenomenon that belie simplistic notions of health and illness, the healing act, altruism, death, bioethics, political economy, personal agency, cultural relativism, human rights, the social-cultural role of biomedicine, and even the course of globalization. Moreover, organ transplantation is unique in the way that it juxtaposes a personal – even intimate – act against a manifestly social transaction that is not just played out between donor and recipient but upon a worldwide stage as well. The forces behind this propagation of effect are many, not the least of which is the fundamental economic principle of supply and demand. Inevitably, continuous increases in the worldwide demand for organs coupled with the desperation of both organ transplant candidates, especially those with financial means, and the poorest poor has created fertile ground for an international market in organs that taints the simple justification that transplants save lives.

Recent Trends in Organ Transplantation

As of November 17, 2006, there 94,104 patients awaiting transplants in the U.S. (UNOS, 2006c) with 19,719 transplant surgeries performed between January and August of 2006 (OPTN/SRTR, 2004). Between 1994 and 2003, the number of patients awaiting kidney transplants increased approximately 220%, from around 25,000 to 55,000, while the number of transplant surgeries performed increased
from about 11,000 to 14,000 in the same period. The number of patients waiting for liver transplants increased by 375% to approximately 15,000 while patients waiting for lungs increased by 231% to 3,600. The number of donors, living or deceased, for all organs grew from 8,100 in 1994 to 13,000 in 2003, driven mainly by a 120% increase in living donors.

The World Health Organization (WHO, 2004b) reported that, “There are no reliable data on organ trafficking — or indeed transplantation activity in general”, a surprising statement given the importance of these issues. The same news release quoted a European Parliamentary Assembly report in 2003 which stated that 120,000 patients were on dialysis treatment and about 40,000 patients on waiting lists for kidneys and estimated that, by 2010, the average wait for an organ will increase from three to ten years (WHO, 2004b). A WHO conference report (WHO Madrid, 2004a:6) estimated 27 kidney transplants per million population (PMP) in Europe and 3 PMP in Asia compared to 52 PMP in the U.S. Erin and Harris (2003) stated that an estimated 700,000 people worldwide were on dialysis while in India alone 100,000 patients present with kidney failure each year.

In Europe, as in the U.S., the number of living donors overtook deceased donors in 2001 (WHO Madrid, 2004a: 6; OPTN/SRTR, 2004) within the context of a largely uncompensated, volunteer system. Unlike the U.S. and Europe, the trend in Asia has been a preference for living donor organs. India and Japan rely almost exclusively on living donors for kidneys and livers (WHO Madrid, 2004a:6). Schepers-Hughes (2004) reported that China is obtaining large numbers of organs from executed prisoners. Iran, the only country with a regulated market for organs,
employs “social workers” to recruit donors from unemployment offices, jails, and low SES neighborhoods for $1000 per kidney (Schep-Hughes, 2004).

What is clear from these facts is that global demand for transplant organs is greater than the supply, and the gap between supply and demand is growing. And yet, despite shortfalls in organ supply, some biomedical organizations want to expand the current criteria for who may receive organ transplants. For example, Eurotransplant, in their annual meeting in 2000, reviewed experimental programs that would add patients over 70 years old, patients with hepatitis C and HIV, and patients prone to organ rejection to organ waiting lists, apparently without consideration of the effect such increases in demand would create (Schep-Hughes, 2001:4). Interestingly, Matas (2004) asserts that in the U.S., “if all potential kidney donors become actual donors, the current demand would double.” It would seem that the global appetite for organs is insatiable.

The Foundations of Organ Trafficking

Organ transplantation as a relatively routine treatment of organ failure is an invention of Western biomedicine which began in earnest 1954 with the first successful kidney transplant between twins (UNOSa, 2006; Murry, 2004:73). However, it was not until 1979 that researchers were able to largely overcome allograft rejection using a combination therapy of cyclosporine and steroids, most typically prednisone (Borel, 2002:436). With the advent of cyclosporine therapy, organ transplantation between unrelated persons became practicable and the business of organ trafficking became possible (Cohen, 2001:11).
Before cyclosporine, the only organ transplantations with the potential for long-term success were those between genetic relatives and then only those relatives who were most genetically similar to the patient. Organ transplantation was a treatment of last resort aimed at improving short-term quality-of-life because, even when an organ could be obtained from a relative, few patients survived beyond one year (Matas, 2004). In this era, donor and recipient knew each other; altruism was the dominant value, and the exchange of an organ was an intimate yet social ritual of revitalization and hope. Interminable organ waiting lists did not exist as a dominant dynamic. The question of “supply” was answered rapidly with a histocompatibility assessment of the inner social circle, and hope was bounded by the reality that failure or only short-term benefit was more likely than long-term success. Even so, approximately 10,000 kidney transplants were performed between 1954 and 1974 (PBS, n.d.).

Cyclosporine changed everything. While genetic relatives are still the preferred source of organs because of reduced complications and the potential to perform the transplant operation quickly, cyclosporine shifted the social paradigm from related to anonymous donor. Organs and the altruistic impulse became detached, generalized by the donor as a contribution to a greater social good and by the patient as the gift of a faceless benefactor. Organs became spare parts, commodities to be traded via networks of biomedical bureaucracy. Cyclosporine changed hope from a bounded object of known proportions to an open-ended war between optimism and pessimism marked by the knowledge that intermediate, life-sustaining treatments might fail before an organ is obtained (Mayo Clinic, 2005).
Doctors, armed with the knowledge that organ failure did not have to be the end for their patients, began prescribing organ replacement in greater numbers and for less-than-terminal conditions. About 9,000 kidney transplants were performed in 1986 alone (PBS, n.d.). Cyclosporine created a true market for organs and, by accelerating demand, created supply problems in this new organ marketplace.

Before going further, we must examine the notion of organs as commodities. The Encarta Dictionary (2006) defines commodity as “an item that is bought and sold, especially an unprocessed material.” In Merriam-Webster Online (2006), commodity is, “an economic good; a product of agriculture or mining; an article of commerce especially when delivered for shipment; a mass-produced unspecialized product; one that is subject to ready exchange or exploitation within a market.” Given these two definitions, can human organs be classified as commodities?

In mainstream biomedicine, donors are not compensated but a transaction of sorts does take place based upon a sense of contributing to the “social good”. However, every other person in the supply chain is compensated, including the patient vis a vis the material benefit of the new organ (Erin & Harris, 2003). In the illegal organ network, “organ vendors” are directly compensated, sometimes for as little as $1000 (WHO, 2004) An organ is an “unprocessed material” in that, aside from removal, testing, shipping, and installation (deeply technological processes in and of themselves that required key innovations to make organ transplantation successful), there are no “value-adding” processes performed upon the organ per se (Hogle, 1996). While potentially offensive to some, organs must also be seen as similar in important ways to the “agricultural” bodily products of animals we
consume, wear, and otherwise use as raw materials. Organs are relatively unspecialized except in their kind (kidney, heart, liver, etc.) and their biological/immunological characteristics, and are mass-produced in the sense that all humans have the organs in question. And finally, organs, or rather their owners, are subject to “ready exchange and exploitation” by means of immunosuppressant drugs facilitating the use of organs from a greater range of unrelated donors (Cohen, 2001:12) and by the normative social dynamic of the anonymous donor; parts are parts. However, ethnic “preferences” are expressed in the extreme variability in organ prices. For example, a Brazilian kidney vendor might receive $2000 while an Israeli vendor might receive $20,000 (Lawless, 2004).

While some would argue otherwise (e.g. Matas, 2004:2011; Seale, Cavers, & Dixon-Woods, 2006), organs clearly meet the definitional conditions above but also exist within the category by virtue of the zeitgeist of present debate within biomedicine and the bioethics community (e.g. Erin & Harris, 2003; Matas, 2004; Savulescu, 2003; Richards, 2003; Marshall & Koenig, 2004). The debate over organ sales arose with the first shortages and is reflected in the condemnation of the practice by the World Medical Association in 1987 (Matas, 2004) and in articles in the mainstream press (e.g. Bailey, 1990). But Matas (2004) also notes that one-time blanket condemnation coupled with quiet consideration of the idea has now shifted to a vocal and public debate about how biomedicine and government should create a market for organ sales. This ethical sea change has been facilitated by an a priori morality best conveyed by a quote from Erin & Harris (2003): “While people’s lives continue to be put at risk by the dearth of organs available for transplantation, we
must give urgent consideration to any option that may make up the shortfall.” This call to consider “any option” is further justified by the current logic of ethics rooted in free markets, rational choice, and personal agency (Schepers-Hughes, 2001; Marshall & Koenig, 2004) in which organ sellers are presumed to be empowered by having the right to sell parts of their bodies in a regulated market. Or in the words of Savulescu (2003), “If we should be allowed to sell our labour [sic], why not sell the means to that labour?” The logic of this statement is simple and compelling, almost beyond rational argument. But it is a logic premised on Western culture values and philosophies in the deepest way, and therefore object of study for medical anthropology.

It is hard to avoid drawing certain conclusions at this point. Namely, there is a paradigmatic wholeness to the premises and logic of organ transplantation which lead us, with an almost overwhelming sense of inevitability, to the necessity of healing tens of thousands of people with replacement parts, and of doing all that we can (within “ethical” limits) to expand the supply of organs. This paradigmatic wholeness and inevitability extends as well to the commodification of the body as the conceptual child of biomedicine’s reductionist view of the body and Western culture’s elevation of individuality and choice within free market systems to that of a moral philosophy. And it is equally inevitable that supply and demand, desperation, free market morality, commodification of the body, and technology would intersect to produce a global gray and black market for transplant organs.

Swept in to the corner of current debate within biomedicine is one remaining element: the health of live organ donors. Koenig (2003:26) stated, “Bioethics has
failed to question the social harms of removing organs from one category of patient to benefit another.” This position is justified by claims in most of the biomedical literature that we reviewed of a 20% risk of temporary morbidity and a 0.03% risk of mortality for donors (e.g. Matas, 2004:2012; Erin & Harris, 2003), an acceptable risk against the benefits to organ recipients. There is, however, another smaller body of research which suggests that the effects of organ donation are much more severe and complex than a narrow assessment of morbidity and mortality might suggest. For example, a study conducted by Goyal et al. (2002) (and published in the Journal of the American Medical Association) to assess the effects of paid kidney donation in India, states:

“Ninety-six percent of participants sold their kidneys to pay off debts. The average amount received was $1070. Most of the money received was spent on debts, food, and clothing. Average family income declined by one third after nephrectomy (P<.001), and the number of participants living below the poverty line increased. Three fourths [sic] of participants were still in debt at the time of the survey. About 86% of participants reported a deterioration in their health status after nephrectomy. Seventy-nine percent would not recommend that others sell a kidney.”

Kahn and Delmonico (2004:179) cite additional research supporting Goyal et al.

If biomedicine has not abandoned its creed of “first, do no harm”, then need for further cross-cultural research is clear for two reasons. First, much of the data upon which the mainstream morbidity and mortality assessments are based come from the post-industrial nations; the larger context of poverty in less-developed
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counties may lead to much higher donor morbidity and mortality rates than is currently understood (Scheper-Hughes, 2000:192). Second, the vast majority of organ sales occurs in black markets and is therefore beyond the reach of mainstream biomedical research (Scheper-Hughes, 2001b). Given the global nature of current organ trafficking (e.g. Sheper-Hughs, 2003), the anticipated global nature of regulated organ markets (e.g. Matas, 2004), and the probability that the poor will continue to be the major source of organs for sale (e.g. Sheper-Hughs, 2003:1645; Caplan, 2004:1933), there can be no substantive ethical debate about organ sales until the effects of live organ donation are truly understood.

Organs for Sale: New or Used

While there is little reliable data on organ trafficking, WHO publicly acknowledged organ trafficking as a growing phenomenon (WHO, 2004b) and a serious international problem. The most readily available information about the global trade in organs comes from Nancy Scheper-Hughes and her associates at Organ Watch, a non-governmental organization based at the University of California Berkley. What Scheper-Hughes and others have documented is an extremely lucrative (see Figure 1 in the Appendix for the current cost of legal organ transplants in the U.S.) and “bizarre kula ring” of affluent patients and “organs (encased in their human packages)” brought together by corrupt bureaucracies, mercenary doctors, and organized crime (Scheper-Hughes, 2003; Lawless, 2004). While much of this trade network is based in the developing countries such as India, Brazil, Peru, and the Philippines (Scheper-Hughes, 2003), evidence of illicit and marginally legal organ trafficking is also found inside the U.S. and in Western Europe (Oversight US
cite; Lawless, 2004; Organ Watch, n.d.(a)). For example, Scheper-Hughes stated that New York transplant surgeons have used organs purchased from executed Chinese prisoners (Lawless, 2004).

More than the worldwide movement of organs themselves, “transplant tourism” – the practice of wealth patients traveling to “organ trafficking hotspots” for transplant surgery – best exemplifies the force of globalization in organ trafficking. One example is the City Park Hospital in Johannesburg, South Africa which provides luxury hotel amenities for cash-basis organ transplant patients from Western Europe and the U.S. (Organ Watch, n.d.(b)). Cohen (2001:16) discussed the “five-star” Indraprastha Apollo hospital in Delhi, India, one location of a private franchise growing throughout India and into the Middle East. During the 1990s in Israel, a transplant industry emerged in which Palestinian donors were paid for organs for Israeli patients. An Israeli government investigation caused the relocation and transformation of this network into a transplant tourism network based in Turkey, Eastern Europe, and the U.S. which continued to serve mainly Israeli patients (Campion-Vincent & Scheper-Hughes, 2001:557). The existence of such networks speaks both to a sophisticated underground utilizing the technologies and methods of mainstream business, and equally sophisticated efforts to “mainstream” organ trafficking as in the ventures by the Apollo group.

Perhaps the most disputed, and frightening, dimension of organ trafficking is the widespread allegations of organ theft in both the media and modern folklore. Some, including Scheper-Hughes, have broadly characterized stories of organ theft as a social “language of distress”; suffering from poverty, structural violence and
discrimination, social injustice, and helplessness redirected into metaphors of insecurity about the sanctity and ownership of one’s body (e.g. Green, 1998; Scheper-Hughes & Lock, 1986). Others (e.g. Seale, Cavers, & Dixon-Woods, 2006) assert that the media has played a significant role in creating, magnifying, and/or sensationalizing what may be a rather small problem. However, thefts or “misappropriations” of the organs have been documented, more frequently with the dead (e.g. Organ Watch, n.d.(b); Scheper-Hughes, 2000; Scheper-Hughes, 2003) than the living (e.g. Campion-Vincent & Scheper-Hughes, 2001:556; Scheper-Hughes, 2000; Scheper-Hughes, 2003).

We err on the side of caution in choosing not to present more, and more graphic, detail about organ trafficking. While we do not dismiss the quality of the fieldwork conducted by Scheper-Hughes, Cohen, and others within Organ Watch, the importance, and inflammatory nature, of organ trafficking and organ theft demands additional research by other parties, especially major, international organizations such as WHO. That said, what arises out of the existing data is a clear pattern: it is the rich who buy organs and the poorest of the poor who sell organs. This alone should be a cautionary signal to governments and biomedical organizations, and a sign that the potential, if not the actuality, of the most vampiric kind of exploitation exists.

Conclusion
There is an irony hidden in this essay that we have saved for last. While the developing world struggles for access to the most rudimentary forms of biomedical healthcare and suffers from starvation and infectious diseases, the biomedical institutions of the post-industrial world ask that we find a way to heroically “cure”, with a greater supply of organs, patients whose bodies have failed, in most cases despite access to advanced biomedicine, good diets, and greatly diminished exposure to infectious diseases. The irony, however, does not arise from this dichotomy but by the way in which it exposes questions about the relative value of human life. If “‘lifeboat ethics,’ a situation ‘in which scarcity requires that some must die so that others live’” (Scheper-Hughes, 2003a) is the ethical paradigm of our time then how might the cost of curing organ failure be judged against the cost of live donation, or the value of applying $210,000 (the estimated cost of a kidney transplant from Figure 1) to the basic needs of people in the developing world? Could it be that we do not, in fact, have an organ supply problem but an organ demand problem (Koenig, 2003)? Medical anthropology has role, if not a moral obligation, to confront organ transplantation and the problem of organ trafficking in order to guide the subculture of biomedicine to a reflexive understanding of itself and an ethics informed by anthropology’s understanding of the connectedness of culture, for no other discipline has documented the unintended consequences of human social and technological evolution as well as anthropology.
## Appendix

### Estimated U.S. Average Billed Charges Per Transplant as of July 1, 2005

#### First Year Following Transplant

<table>
<thead>
<tr>
<th>Transplant</th>
<th>Procurement</th>
<th>Hospital</th>
<th>Physician</th>
<th>Evaluation</th>
<th>Follow-up</th>
<th>Immunosuppressants</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Only</td>
<td>$74,400</td>
<td>$240,500</td>
<td>$34,900</td>
<td>$20,100</td>
<td>$81,600</td>
<td>$27,400</td>
<td>$478,900</td>
</tr>
<tr>
<td>Single Lung Only</td>
<td>$41,700</td>
<td>$128,600</td>
<td>$28,200</td>
<td>$17,200</td>
<td>$56,500</td>
<td>$27,700</td>
<td>$299,900</td>
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<tr>
<td>Double Lung Only</td>
<td>$83,400</td>
<td>$236,700</td>
<td>$44,700</td>
<td>$27,300</td>
<td>$89,700</td>
<td>$26,400</td>
<td>$508,200</td>
</tr>
<tr>
<td>Liver Only</td>
<td>$57,400</td>
<td>$155,600</td>
<td>$55,800</td>
<td>$21,900</td>
<td>$74,800</td>
<td>$27,300</td>
<td>$392,800</td>
</tr>
<tr>
<td>Kidney Only Pancreas Only</td>
<td>$50,800</td>
<td>$62,900</td>
<td>$17,700</td>
<td>$12,300</td>
<td>$40,200</td>
<td>$26,100</td>
<td>$210,000</td>
</tr>
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<td>Intestine Only</td>
<td>$67,200</td>
<td>$98,800</td>
<td>$20,500</td>
<td>$12,400</td>
<td>$40,800</td>
<td>$31,100</td>
<td>$270,800</td>
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<tr>
<td>Heart-Lung</td>
<td>$134,400</td>
<td>$323,000</td>
<td>$46,500</td>
<td>$21,900</td>
<td>$87,200</td>
<td>$27,800</td>
<td>$640,800</td>
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<tr>
<td>Kidney-Heart</td>
<td>$125,200</td>
<td>$296,200</td>
<td>$34,900</td>
<td>$20,100</td>
<td>$81,600</td>
<td>$30,400</td>
<td>$588,400</td>
</tr>
<tr>
<td>Kidney-Pancreas Liver Intestine</td>
<td>$118,000</td>
<td>$70,400</td>
<td>$20,500</td>
<td>$12,400</td>
<td>$40,800</td>
<td>$31,000</td>
<td>$293,100</td>
</tr>
<tr>
<td>Liver-Intestine</td>
<td>$132,000</td>
<td>$492,000</td>
<td>$70,700</td>
<td>$34,300</td>
<td>$74,800</td>
<td>$26,400</td>
<td>$830,200</td>
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<tr>
<td>Liver-Kidney Liver-Pancreas Intestine</td>
<td>$108,200</td>
<td>$221,900</td>
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<td>$21,900</td>
<td>$74,800</td>
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<td>Pancreas-Intestine</td>
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<td>Pancreas-Intestine</td>
<td>$141,800</td>
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<td>$70,700</td>
<td>$34,300</td>
<td>$64,600</td>
<td>$31,100</td>
<td>$832,100</td>
</tr>
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</table>

1 Milliman USA, 2005. Some services may comprise a negotiated case rate.

Figure 1: Cost Estimates for Common Organ Transplantations (UNOS, 2006a).
Bibliography

Bailey, R.

Borel, J. F.

Campion-Vincent, V. and Scheper-Hughes, N.

Cohen, L.

Caplan, A. L.

Encarta Dictionary
Erin, C. A. & Harris, J.


Green, L.


Goyal, M. et al.


Hogle, L. F.


Kahn, J. P. and Delmonico, F. L.


Koenig, B. A.


Lawless, A.

October 14, 2006, from

Marshall, P. and Koenig, B. A.

Matas, A. J.

Merriam-Webster Online Dictionary
2006 "Commodity", retrieved November 2, 2006, from

Mayo Clinic

Murry, J. E.

OPTN/SRTR
Organ Watch


PBS (Public Broadcasting Service)


Richards, R. J.

2003 Commentary: An Ethical Market in Human Organs. J. Med. Ethics, 29;139-140.

Schepers-Hughes, N.


Scheper-Hughes, N. and Lock, M. M.

Speaking "Truth" to Illness: Metaphors, Reification, and a Pedagogy for Patients. Medical Anthropology Quarterly, 17(5):137-140.

Seale, C., Cavers, D. and Dixon-Woods, M.


UNOS (United Network for Organ Sharing)


WHO (World Health Organization)


2004b Organ Trafficking and Transplantation Pose New Challenges. Bulletin