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Culture, Technology and the New Death: Deadly Disputes in Japan and North America

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Article abstract

"Brain death" was institutionalized 25 years ago primarily to make organs "harvested" from brain dead bodies on an artificial ventilator available for transplant. Doubts exist as to whether the donors used in the first heart transplants conducted in South Africa in 1967, and in Japan in 1968, were dead. Reaction to these two experiments was remarkably different. In Japan the surgeon was arrested for murder, a national debate about brain death continues today, and transplants from brain dead bodies have only been made permissible since June 1997. This debate contrasts with that in North America, where transplant technology is routinized and an organ "shortage" is recognized. In Japan the argument is politicized, focuses on death, and draws on cultural knowledge about Self and Other; Japan and the West; harmony and individualism; tradition and modernity / postmodernity. North American discussion focuses on saving lives; making death meaningful; remaking death yet again; and assumes technology to be culturally and politically autonomous. These respective debates are discussed using textual analysis and the results of interviews with philosophers, physicians, and nurses in both cultural settings. An effort is made to suggest why the Japanese debate is central in constituting contemporary cultural identity, whereas the North American debate is of little public interest. The significance for anthropology of the hybrid status of brain dead bodies and organ recipients together with the national and global circulation and commodification of bodies and body parts associated with this technology is considered.

Culture, Technology and the New Death: Deadly Disputes in Japan and North America

Margaret Lock *

The conflict between practical activity and constraints of the mind inserts itself in an original, founding contradiction, between the poles of which anthropological theory has oscillated since the nineteenth century like a prisoner pacing between the farthest walls of his cell.

Marshall Sahlins, 1976:55

Il y a 25 ans, on institutionnalisait la « mort cérébrale », avant tout pour « prélever » dans les corps en coma dépassé et branchés à un ventilateur des organes qu'on utiliserait pour des greffes. Aujourd'hui, on se demande encore si les donateurs utilisés pour effectuer les premières greffes de cœur en Afrique du Sud en 1967 et au Japon en 1968 étaient bien morts. Les réactions qu'ont provoqué ces expériences ont été complètement différentes. Au Japon, le chirurgien fut arrêté pour meurtre. Le débat national sur la mort cérébrale est toujours d'actualité et il est interdit d'effectuer des greffes d'organes en les prélevant sur les corps dans un coma dépassé. Ce débat sera mis en contraste avec celui qui se poursuit en Amérique du Nord où les techniques de greffe sont routine et où on reconnaît qu'il existe une « pénurie » d'organes. Au Japon, la discussion s'est politisée ; elle porte sur la mort et fait appel aux connaissances sur le Soi et l'Autre ; le Japon et l'Occident, l'harmonie et l'individualisme, la tradition et la modernité/post-modernité. En Amérique du Nord, la discussion porte essentiellement sur la vie et sur la manière de sauver des vies, de rendre à la mort tout son sens et de la refaire pourtant encore ; elle assume que la technologie est culturellement et politiquement autonome. Ces débats respectifs seront abordés à l'aide de l'analyse textuelle et des résultats d'entretiens effectués avec des philosophes, des médecins et des infirmiers/ières dans les deux contextes culturels. L'exposé tentera de suggérer les raisons pour lesquelles le débat japonais est au centre de la constitution de l'identité culturelle contemporaine tandis que le débat nord-américain suscite peu d'intérêt auprès du public. Il abordera l'importance sur le plan anthropologique du statut hybride des corps dans un état de coma dépassé et de celui des receveurs d'organes ainsi que la circulation et la commercialisation, à l'échelle nationale et mondiale, des corps et des parties corporelles liées à cette technologie.

"Brain death" was institutionalized 25 years ago primarily to make organs "harvested" from brain dead bodies on an artificial ventilator available for transplant. Doubts exist as to whether the donors used in the first heart transplants conducted in South Africa in 1967, and in Japan in 1968, were dead. Reaction to these two experiments was remarkably different. In Japan the surgeon was arrested for murder, a national debate about brain death continues today, and transplants from brain dead bodies have only been made permissible since June 1997. This debate contrasts with that in North America, where transplant technology is routinized and an organ "shortage" is recognized. In Japan the argument is politicized, focuses on death, and draws on cultural knowledge about Self and Other; Japan and the West; harmony and individualism; tradition and modernity/postmodernity. North American discussion focuses on saving lives; making death meaningful; remaking death yet again; and assumes technology to be culturally and politically autonomous. These respective debates are discussed using textual analysis and the results of interviews with philosophers, physicians, and nurses in both cultural settings. An effort is made to suggest why the Japanese debate is central in constituting contemporary cultural identity, whereas the North American debate is of little public interest. The significance for anthropology of the hybrid status of brain dead bodies and organ recipients together with the national and global circulation and commodification of bodies and body parts associated with this technology is considered.

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A perusal of *Culture and Practical Reason*, a book that became one of Marshall Sahlins's major contributions to theory in anthropology, makes the argument that culture is fundamentally autonomous "by its own properties as a symbolic system." Sahlins, in part working to clothe Marx in an anthropological coat, insists that no cultural form can ever be read from a set of "material forces," and that our task as anthropologists is to reveal the way in which cultural order is constituted through meaning. For Sahlins necessity is not, after all, the mother of invention, rather, human technologies are material manifestations of specific histories and cultural forces. In seeking to counter the empirico-materialist wing of mid 20th century anthropology, Sahlins situated himself firmly on the culture-as-driving-force end of the nature/culture spectrum, and in so doing can be cited usefully to counter writers such as Ellul who warned that technology had become autonomous and was, in effect, out of control (1964). For Sahlins, neither human needs nor the technologies devised to meet those needs, should be conceptualized as autonomous and thus situated independently of culture and history. The question Sahlins might pose in connection with technology, therefore, could be: why in Euro/America has it been meaningful to constitute technology as though it were autonomous?

At the end of the century we have moved to different ground (I will not say moved "on") and are no longer preoccupied in a straightforward way with materialist/meaning dichotomies. In the mood of self-reflexivity, induced in part by criticism of anthropology from those who were made into the objects of its analysis, we seek to obliterate dichotomies. Nature/culture, mind/body, individual/society, self/other, are now perceived to be products of a 19th century colonial mentality characteristic of the "West." Dualities are out, and in their place is the fluidity and pastiche associated with the "late modern," or the "postmodern," depending upon one's leaning. This fluidity raises major difficulties for comparative analysis, for boundaries can no longer be drawn to readily differentiate self from other; the task of "other-knowing," as Geertz recently put it (1995) is a delicate business. Nevertheless, I believe such difficulties must be met head on; to white-out or black-box difference is as equally divisive as is the demarcation of hard boundaries around human communities. Sahlins may still have a thing or two to teach us along these lines, for we must include technologies, no matter how sophisticated and how deeply embedded in multinational markets, in our cultural analyses. But then, what exactly constitutes a cultural analysis these days?

A frequently voiced concern among many anthropologists today is that culture is a "totalizing" concept, one which is particularly amenable to appropriation by those with nationalistic interests. Dominquez, for example, argues that one should think of culture as something invoked, not as something which "is" (1992: 23). In keeping with this sentiment it is often noted that the culture concept is self-consciously put to work by human communities to give authority to an inherited tradition; this reinvented history is usually imagined as one uncorrupted by either colonial forces or modern influences. Thus, mytho-history is invoked to create an idealized past out of which culture can be turned into an "exclusionary teleology" (Daniel, 1991: 8) in which the pivotal question becomes, who is a "true" Sri Lankan, a "true" Québécois, a "true" Japanese? Culture put to work in the service of nationalisms cannot therefore be understood without reference to relationships of power and exclusion.

However, culture is not only exclusionary with respect to marking out difference among peoples; it is also exclusionary in its opposition to nature, where nature is understood as another given, the "natural" order — that which is not created by human endeavor, but by a higher power or, alternatively, through the forces of evolution. Bruno Latour has discussed the way in which we "moderns" have fragmented our world so that we understand nature as being "out there" — uncontroversial, scientifically analysable, and in a domain distinct from that of society and social relations, both of which are in turn different from subjective experience, and also from the discourse which we create to comment on our world (1993). In theory, therefore, nature is conceptualized as a domain entirely independent of the moral order associated with culture. In practice, however, "nature" continues to serve, as it did prior to the Enlightenment, as a moral touchstone, the effects of which are especially evident when we grapple with assigning the status of life or death to various entities. Strathern has pointed out the ambiguity present in anthropology when trying to situating individuals in the nature/culture dichotomy, for as humans we are all inevitably hybrids, and thus straddle both domains (1992: 48). It is at this margin, where culture is perceived to encroach on the natural world, that a rupture occurs and becomes a site for disputative moralizing discourses.

There is, of course, yet another concern about culture, namely that because the world is in a continual state of flux and transition, borders and boundaries can no longer be easily demarcated (Appadurai, 1990:

5). Along these lines, Appadurai encourages us to think ethnoscapas — to conceptualize deterritorialization, and the circulation of people, ideas, knowledge and practices around the globe. Ethnography becomes for Appadurai the challenge of portraying local, lived experience in a globalized world which makes it *appear* as though everything is possible, although he is quick to point out that he is not suggesting that all stable relationships and continuity are things of the past. Part of this task is to describe how things are “imagined” by those individuals under scrutiny and not simply to focus on actual practices.

Culture is more problematic than ever before in its checkered history, nevertheless the way in which meaning is mobilized and legitimized around this concept gives it significance, firstly as a complex tool for use in anthropological analyses, and secondly as one of several organizing principles made use of by the majority of communities, the application of which in specific geographical contexts is grist for the mill of comparative research.

THE NEW DEATH AND THE CULTURE OF TECHNOLOGY

In taking up the challenge posed by Rabinow to create a genealogy of the present (1993); to research people who are actively involved in making the future (Falk Moore, 1993: 8), thus situating the world of technoscience within the domain of anthropology, I have chosen to make death, that is, the “new” death created through technological intervention, my object of analysis. It would appear at first glance that there is little room for “culture” to intervene in the measurement of death in the intensive care units of tertiary care hospitals in supposedly secular societies. This is not the case, however, and in setting up my argument it is apparent that it is not only culture and nature which are unstable domains, but that technology is an equally tenuous category.

Death has become increasingly visible in recent years as a subject for public attention, whether it be a discussion about the moral status of euthanasia, or a lament at the increasing number of violent deaths we read about each day in the media. Whatever form death takes, it conjures up that margin between culture and nature that we apparently most fear — the space where mortality must be confronted. Where technology is made use of not only to intervene in but to “expedite” the “natural” process of death, one might expect a public outcry. Although this has been the case with what is termed “physician assisted suicide,” in which a

doctor administers medication to hasten the death of suffering individuals who want their lives ended, “brain death” has not created a similar concern. This is in spite of the fact that a diagnosis of brain death is taken in North America and most of Europe to signal the end of all *meaningful* life, and the physician in charge of the case, after collegial consultation, removes the artificial ventilator on which the patient’s continued breathing is fully dependent. The criteria set out for establishing brain death involve a series of measurements which indicate “irreversible” brain damage, and on this basis the end of meaningful life is established.

After the first artificial respirators (ventilators) were developed in the late 1950s, making it possible to sustain brain-dead but otherwise alive human bodies for anything from a number of hours to, occasionally, several weeks (and recently for much longer periods of time), it became an urgent priority to clarify the concept of death in “technologically-advanced” nations. This situation was exacerbated by the simultaneous development of solid organ transplantation technology, in which hearts, livers, lungs, and kidneys could be “harvested” from the brain dead for use in other patients. However, this process of redefining death was not carried out as part of an international endeavor, although at first it was thought this would be the case, but took place gradually on an *ad hoc* basis in one country after another. In Japan the debate has never been satisfactorily resolved, and brain death has only very recently been recognized in that country as the end of human life, and then only under certain circumstances. There has been, therefore, no simple distribution and institutionalization of these technologies for determining death and carrying out solid organ transplants at various sites around the globe.

A postmodern analysis of a brain dead person/cadaver places emphasis on the hybrid status of such an entity. In Haraway’s idiom a cyborg is “a condensed image of both imagination and reality, a coupling between organism and machine, each conceived of as coded devices.” The boundary transgressions exhibited by cyborgs present “dangerous possibilities” Haraway suggests, because their development is related to an authoritarian need for control and for universal domination. On the other hand, cyborgs also offer the possibility of criticizing and reconstructing that which is assumed to be natural and inevitable — the established order of things. Cyborgs permit us to conceptualize and live new social relations, and to reconsider our relationship with the worlds of the natural and the mechanical (Haraway, 1990:196).

I want to suggest that as anthropologists we should pay attention not only to those hybrids which catch media attention, but perhaps more importantly for the anthropological endeavor, to the pockets of silence, to the resistances, and to the possibilities that never materialize. A comparative ethnography of technoscience (and I increasingly think comparison is a fruitful way to take on this daunting subject despite the difficulty of demarcating boundaries) must immediately confront the question of why in certain locales some hybrids/cyborgs raise little concern, while in others they create havoc. In North America we have been forced to engage with what it is about the fetus and the embryo that triggers violence and fury. By contrast, in many other settings, these particular hybrids remain dormant and safely obscure, while in yet other situations, although recognized as entities, they cause little debate. Similarly, a brain dead individual clearly lurks on the margins of life and death, culture and nature, and machine and person. Nevertheless in North America we remain virtually silent about this particular product of technology. In contrast, turmoil has erupted in Japan over the past 25 years around this domain of technoscience.

So here we are, back in anthropology's favorite stamping ground of difference, seeking to understand why the compliant Japanese — as our stereotype has it — technologically sophisticated as they are, find themselves unable to recognize brain death as the end of life; why brain death and that other technology inextricably tied up with it, organ transplants, signals danger in Japan, loud and clear. This potential danger is perceived to be so destructive that the result has been an exhaustive public self-reflection in which discussion of the relationship of Japan to the West, tradition to modernity, and culture to technology — in particular the ambivalence many Japanese have in connection with technologies which radically intrude into what is taken as the "natural order" — loom large. Furthermore, disputes about self and other, a reaffirmation of the equality of all citizens, attitudes toward the medical profession, and toward the body and its position in society, all radiate out from the centrifugal trigger of the brain dead body.

Of even more interest, I think, is to ask why we in North America apparently sense no danger in connection with this deathly cyborg. On the contrary, why have we focused almost exclusively on the heroics and so-called altruism associated with organ transplants and the "gift of life," while apparently deleting virtually all anxiety from our minds about the source of those organs? We have selectively lighted on the sec-

ond part of the equation only, that other more pleasing, self/non-self hybrid, for here, perhaps, we believe we can "transcend" nature, whereas the plight of the brain dead fills us with other kinds of sentiments: horror, fear and despair.

Strathern has argued that we anthropologists should ask how "objects construct society" rather than posing the more usual constructivist question of how objects are constructed by society (1992). My position is that we must engage with both approaches at once. Thus, with the making of the new death, it is vital to come to terms with the way in which this knowledge was constructed and legitimated in Euro-America. The new death has been "naturalized" (purified in Latour's idiom) so that, with the exception of certain interested professionals (see below), it is not disputed. In the case of Japan, an anthropologist's attention is immediately drawn to the showy public disputes in connection with definitions of death. Brain death is as yet far from being naturalized in that setting, even though there are those who have worked hard for this to be the case.

At the same time it is important to ask what changes the recognition of technological death has brought to society, for while in Euro-America it has fitted remarkably easily into a utilitarian vision of the unfolding of technoscience, in Japan brain death has caused the most profound nation-wide self-reflection about technoscience that has taken place this century. In this paper I will focus less on the construction of brain death as a concept, and more on the consequences of its emergence as an object for societies, in particular, those of Japan and North America.

DEATH IN TECHNOLOGICAL TIME

Without the machine — the artificial ventilator — the condition of brain death would never have been marked except, on occasion, as a brief period of time prior to cardio-pulmonary arrest leading to the condition that we all intuitively understand as the end of life (even though most of us today have never witnessed such a death at first hand). "Brain death" could not have been made into a diagnostic category, nor into an object for social analysis, therefore, without the insertion of a machine into the process of dying. The immediate precursor of the ventilator was the iron lung, invented in Denmark in the 1940s to assist breathing for polio patients whose lungs had collapsed. The artificial ventilator, with its delivery of oxygen under pressure, was a great improvement on the iron lung, but polio was by the 1960s, in effect, "conquered." One must meander through a veritable Latourian network

(1987) to tell the story of the ventilator and of the patients hooked up to it, a network too complex to do more than hint at in this paper. This particular network includes the emergence of the car as the prime mode of transport, and of fast roads, together with an accelerating number of automobile accidents, coupled, particularly in America, with numerous incidents involving gunshot wounds, leading to rapidly increasing numbers of traumatic injuries and deaths. These changes stimulated in turn the development of emergency medicine as a specialty, and also the institutionalization of intensive care units with specialized staff who work under pressure to get patients out of such units as speedily as possible, alive or dead. This is just one part of the ventilator "network," however. One must enter another domain entirely to understand the full significance of the ventilator, and chart the emergence of an increasingly sophisticated immunology throughout the 1950s, permitting kidney transplants from both live donors and cadavers, and then follow the grandiose fancies of certain surgeons as they experimented on animals with liver and heart transplants. This technology took the world by storm, as most of us recall, when the flamboyant South African surgeon Christiaan Barnard carried out what was announced in 1967 as the world's first heart transplant (an inaccurate claim, since there had been one earlier effort in Mississippi, a miserable failure, in which the donor was a chimpanzee).

In an illuminating article entitled "*Back from the Grave*," Martin Pernick has shown that concern about defining death is not new but, on the contrary, represents the latest emergence of an issue which has been revived repeatedly throughout medical history, very often in the wake of "new medical discoveries, especially in such areas as experimental physiology, resuscitation, and suspended animation" (1988: 17). Pernick cites a 1940 article in *Scientific American* as a relatively recent example, in which it is stated that "frequent" errors in diagnosing death remain the cause of cases of premature burial (Newman, 1940). Pernick's article goes on to show that it is not simply responses to specific medical discoveries which have shaped the content of debates about death, but that professional interests and cultural values are inevitably implicated. The complex and often conflicting character of these interests and values precludes, he suggests, the possibility for arriving at a rational, universally acceptable definition of death.

In America the first major step in the most recent remaking of death was taken by an Ad Hoc Committee of the Harvard Medical School in 1968. It is significant

that this development took place shortly after Barnard's heart transplant was carried out in South Africa, an event which made headlines throughout the world. The group of physicians who comprised the committee declared unilaterally that individuals in a state of "irreversible coma" who were diagnosed as having "brain death syndrome," could be declared dead (Ad Hoc Committee of the Harvard Medical School, 1968). Prior to this time, it had been accepted by convention that death could only be medically established once the heart had stopped beating. The Harvard Committee gave two reasons for redefining death. First, it stated that there were increased burdens on patients, families, and hospital resources caused by "improvements in resuscitative and support measures." Second, and more ominously, the Committee noted that "obsolete criteria for the definition of death can lead to controversy in obtaining organs for transplantation" (1968: 337).

During the early 1970s the concept of brain death syndrome was challenged in the courts. In one landmark case in Virginia in 1972, the jury ruled against the donor's family who claimed that the transplant surgeons had been responsible for the death of their relative. Other court cases followed, including several involving homicide victims (Simmons et al., 1987). At the same time a debate about medical practice was under way, which focussed in the first place on which tests, if any, could be relied upon to confirm an individual doctor's opinion about brain death, and second on who would be the "gatekeepers" to protect physicians from malpractice suits. These debates captured little public attention. Likewise, scant media space was allotted to the declaration of the Uniform Determination of Death Act proposed in 1981 by a President's Commission, supported by the American Medical Association and the American Bar Association and subsequently adopted by most state legislatures. In opposition to the position taken by many physicians, philosophers, theologians and others (who were writing mostly in professional journals, rather than for the media), the President's Commission opted to further rationalize and update what it characterized as "obsolete" diagnostic criteria and to enshrine a definition of death in law, something which thus far had not existed (Annas, 1988: 621). The Commission recommended that a concept of "whole-brain death," equated with an "irreversible loss of all brain function," be adopted. This condition was carefully distinguished in the report from a "persistent vegetative state," as exemplified by patients such as Karen Ann Quinlan and Nancy Beth Cruzan whose brain stems continued to function despite an irreversible loss of higher brain

function. The earlier definition of "irreversible coma," left room for doubt as to whether patients such as these women could be taken for dead, and the concept of whole brain death sought specifically to clarify this point. Thus physicians in constructing a "uniform" death, deliberately set out to protect themselves, while at the same time ensuring a source of organs for transplants from legally defined dead bodies in a brain dead state.

This relatively quiet remaking of death, "naturalized" without much trouble in North America, has been masked throughout by a focus on the heroics of medicine and the prolongation of life. Two impending deaths are of course involved, that of the donor and that of the recipient. The public imagination has been fired in North America by the medical battle with the second death, that of the recipient, and to this end the "gift of life" has been the driving metaphor. The "life" of the patient from whom organs will be "harvested" is left unmarked except as "donor." The media usually focuses our attention on the moments during and immediately after surgery (although the use of anencephalic babies as donors temporarily changed this priority). Survival rates more than a few days after surgery fail to make more than serendipitous news coverage. Moreover, very few people indeed know about the differing prognoses for transplant patients, long term outcomes, the side-effects and vulnerability to infection and cancer experienced by organ recipients owing to the life-long regime of medication they must take, or about their "quality of life" after surgery.

STRIVING FOR NATIONAL CONSENSUS: THE JAPANESE DEBATE

The situation in North America stands in sharp contrast to that in Japan, where for more than twenty five years the question of the first death, that of the possible donor, has commanded public attention to such an extent that all other technologically related bioethical issues have taken a back seat. The fuel for this debate was ignited in 1968 in Sapporo, when Japan's first and only heart transplant to date was carried out. The physician who performed the procedure was subsequently prosecuted on a murder charge, but eventually acquitted after six years of legal wrangling. The majority of Japanese believe today that the patient whose heart was removed was not brain dead at the time, and that the recipient, who died two and a half months after the operation, was not sufficiently in need of a new heart to have undergone the procedure in the first place.

As part of the current national debate about death, discussion of this case was reopened in 1991. At that time, the president of the Japanese Medical Association, in giving testimony before a government committee examining the question of brain death and organ transplants, reported that twenty-three years earlier, right after the removal of the supposedly ineffective heart from the patient, it had been tampered with, indicating that the involved doctors may have tried to exaggerate the degree of its deterioration (Asahi Shinbun, 1991). In short, the case is now considered in retrospect as a barbarous piece of medical experimentation carried out by a doctor who, significantly, had received a good portion of his training in America.

There have been other well publicized cases in connection with organ transplants which have cast the Japanese medical profession in a questionable light. One such case involved a highly controversial kidney/pancreas transplant at a university hospital in which the organs were taken from a young mentally retarded woman who was purportedly brain-dead. However, neither the woman nor her parents had given permission for organs to be removed (Mainichi Daily News, 1984). In another instance in 1989, a doctor at a national medical school hospital was arrested for swindling more than 20 million yen (about \$180,000 at the time) from a patient by offering to find a donor for a kidney transplant which the patient needed. The patient died one day after handing the money over, having being told by the doctor that the large fee was necessary for recompense to the organ donor (Asahi Shinbun, 1989). Since there is a long-standing custom of giving substantial presents to doctors before going into surgery (a practice which one Japanese doctor living in America has described as bribery) many people believe that rapid commercialization of the organ trade is a realistic possibility, one that is perhaps already in operation to some extent.

In a recent case a patient was declared brain-dead by a medical team, and his kidneys were removed for donation, but it was later revealed that although the family had given assent they were not informed at the time that their relative was brain dead, and that his heart was still beating. When confronted with the situation, one of the surgeons involved stated that, "it didn't even occur to me to tell the family that I was removing the organs after their relative was pronounced brain-dead. They were eager to donate his kidneys and the chances of success are higher with fresh organs, so I went ahead with it" (Mainichi Shinbun, 1991a).

In 1992, in full view of the nation as it watched on television, police entered Osaka University Hospital to issue a warning to surgeons that they should not remove the liver of a patient. In this case, the 51 year old man had provided in his will that his organs could be made available for transplant, and approval had also been obtained from his family. After being hit by a car the man was taken in an unconscious state to a near-by hospital, and then transferred to the Osaka University Hospital for removal of his liver and other organs after he had been declared brain dead on three occasions by different teams of doctors. The police declared (correctly) that in cases of accident or criminal activity a police investigation is necessary, and further that death is not legally recognized until the heart has stopped beating; they warned the physicians to wait until this point was reached. Television viewers were treated to the sight of police marching purposively around hospital corridors, and defiant doctors shutting doors in the face of both television cameras and the police. By the time the liver was eventually removed from the man it had degenerated badly and was beyond use. No one outside the closed doors could ascertain at what point death had been declared, but the kidneys and pancreas were eventually extracted and transplanted into waiting patients. At the time of this incident, it was revealed that this was not the first case in which police had intervened with the intention of preventing physicians from removing organs from brain-dead donors.

It is against this background of public confrontations with the medical world, fuelled by media coverage, that the debate about brain death has taken place in Japan. This debate is punctuated throughout by several oft repeated themes, the most prominent being that there must be public consensus before the present *status quo* can be ended. Taking place in concert with government, professional, and media discussion, therefore, is the most persistent search for a national consensus (*kokuminteki gôï*) among the Japanese public that has taken place to date on any subject. There have been at least twenty national surveys about brain death and organ transplants between 1983 and 1996. Over the years the number of people who recognize brain death has increased from 29% to approximately 45%. In a recent poll, conducted by a government committee using 3000 respondents aged over 20, there was a 79% response rate, of whom 72% stated that they have an interest in organ transplants and brain death. As with all the previous surveys this poll reveals a paradox in that more people approve of heart transplants than accept brain death as a definition of death. In this latest poll, 55% of respondents approved of heart trans-

plants, 14% were opposed, and 31% were undecided or could not answer. However, only 51% of men and 39% of females agreed that brain death is the end of life. Nevertheless, nearly 50%, of respondents regardless of gender, agreed that although brain death is not recognized in Japan, if both the potential donor and his/her family have given consent, then a transplant would be acceptable (Mainichi Shinbun, 1991b). Some of the discrepancy in these responses may arise because respondents do not know what is signified by the technical term brain death. However, there has been so much media coverage in Japan which describes brain death and its diagnosis in detail that in all probability Japanese citizens are more conversant with this concept than those of Canada or the United States. On the basis of interviewing I have carried out in Japan, I believe that a good proportion of the discrepancy can be explained because respondents change their frame of reference as they answer the questionnaire. Many people, even though they are personally opposed to accepting brain death as the end of life, are not in principle totally opposed to the extraction of organs from the brain dead and to their transplantation into other individuals. Many Japanese respondents believe that although they themselves would not choose to become involved with this technology (or so they imagine), other people should be free to do so.

The results of opinion polls are regularly drawn on to support their argument by those opposed to brain death as a signifier of the end of life. Nevertheless, one is left with the feeling, voiced by many members of the Japanese public, that the whole exercise of repeatedly surveying the nation is essentially a farce; that such a complex issue cannot not be reduced to dichotomous variables, and that the idea of trying to achieve a national consensus on such an inflammatory subject is without meaning. One piece of evidence which has emerged repeatedly from the opinion polls, however, is that those opposed to acceptance of brain death repeatedly state that they take this position because they do not trust the medical profession, and that vital decisions with major implications for medical practice should not be left to the discretion of the medical profession alone.

THE POLITICS OF MEDICAL PRACTICE

Until well into this century the practice of medicine in Japan, thoroughly and respectably grounded in Confucian ethics, was acclaimed as a benevolent art (*i wa jin jitsu nari*), but in late modern Japan the word for benevolence (*jin*), has been turned through a play on words into that used for money (*kin*) so that medicine

is now ridiculed as a money-making art (*i was kin jitsu nari*). In a society where it is still sometimes possible to buy a place in medical school, where cheating on national licensing examinations is occasionally exposed, and where doctors appear as the protagonists quite regularly in bribery and corruption scandals, the Japanese public, including some members of the medical profession itself, put little faith in the medical profession as a whole, even though people may have a respect for and trust in their own family doctor.

The media has also kept careful coverage over the years of the positions taken in the "brain death problem" (*nôshi no mondai*) by various professional and lay organizations. For example, in January 1988, after two years of meetings by a working group, the directors of the Japan Medical Association (JMA) voted unanimously to accept brain death as the termination of human life, but despite this decision there remains a lack of agreement among the medical profession, who are deeply divided on the issue. Significantly, the Japan Neurologists' Association, members of which are responsible in practice for making the diagnosis, has rejected brain death as a diagnosis for death, in spite of the ruling of the JMA. They fear that such a definition will lead to the slippery slope down which the handicapped, mentally impaired, and disadvantaged will be at risk for being diagnosed as scientifically dead in a greedy desire to get at their organs.

Some physicians have joined members of the public to form the highly visible Patients' Rights Committee, whose interests are not limited only to the question of brain death. Under the leadership of a doctor from the prestigious department of internal medicine at Tokyo University this committee has recently filed several law suits charging murder when organs have been removed from brain dead patients. As yet no decisions have been reached on these cases, several of which have been thrown out of court.

The government has had a series of advisory panels in place since 1983 to consider the question of brain death, culminating in late 1989 in a Special Cabinet Committee on Brain Death and Organ Transplants. Composed of fifteen members from various walks of life this Committee was charged to make a report to the Prime Minister by 1991. The group was so deeply divided that for a while it appeared that it would never produce anything more than an interim report, but in January 1992 a final report was produced. Ideally the members should have reached consensus, but this goal proved impossible to achieve. The majority position is that brain death is equivalent to human death, that

organ transplants from brain dead donors are acceptable, and that the current definition of brain death as formulated by the Ministry of Health is appropriate. Those who took the minority position made it clear that they wish to have the social and cultural aspects of the problem fully debated. In the opinion of these members, the debate thus far has been largely confined to "scientific" information, which they believe is inadequate. The public has been kept fully apprised of the identities of all those who have appeared before the committee. It is evident that many of those who testified, among them scientists and doctors, have argued against the acceptance of brain death, but nevertheless the majority of the committee eventually moved to support its approval (Nihon Keizai Shinbun, 1992).

The matter was then placed back in the hands of the government. A private member's bill to recognize brain death as the end of life was put before the government in 1995, but its first reading was postponed repeatedly, since other more "pressing" matters of national import continually took priority. Finally, in June 1997 what is called a "compromise bill" was passed by the government. Organs may be taken only from brain dead patients who have given their written consent earlier, and family members may refuse to donate even with patient consent. The bill specifies that brain death is human death *only* for those patients who wish to donate organs (*Japan Times*, 1997).

From the outset the Japan Federation of Bar Associations (*Nichibenren*) made a public statement to the effect that brain death should not be accepted as the termination of life. In its report concerns were expressed for the "sanctity of life," and about possible medical "experimentation." It was also pointed out that there may be unforeseen consequences in connection with inheritance claims, and a lack of public consensus on the issue was noted by them (Mainichi Daily News, 1991). As of July 1997 the Federation has not made a formal statement about the new bill.

The Patients' Rights Committee, the lawyers, the police, many authors and producers of newspaper articles, television programs, and books on the subject of brain death, and even a good number of the medical profession in Japan have been, therefore, publicly contesting the authority of transplant surgeons. What these critical voices usually cite as their principal cause for concern is a lack of trust in the medical teams who will make decisions about cases of brain death, because the critics believe that in the rush to retrieve organs, the process of dying will be curtailed or even misdiagnosed. These groups also comment openly on the lack

of experience of most doctors in emergency medicine who will make the initial diagnosis of brain death. The opponents of brain death are, moreover, explicitly opposed to the secrecy and arrogance of some members of the medical profession, and point out that patients and their families are vulnerable to exploitation when left in their hands. Many of these same groups who have opposed brain death are simultaneously pushing for informed consent, together with frank disclosure and discussion of diagnoses with patients, neither of which practices are by any means routinely established in Japan. This kind of contest, although it is apparently about the nature of scientific decision making is in addition, therefore, a challenge to the hegemony of invested authority, authority which is being exerted in what is characterized by many of the challengers as a traditionally Japanese way, whereby subjects are rendered passive and expected to comply to a medical regimen without question. This aspect of the debate could be characterized as intimately related to the "culture" of biomedicine as it is practised in Japan. However, Japanese I have interviewed on this subject very rarely put the problem this way. Rather, they interpret the workings of the medical profession as being a political issue. Perhaps in the end the choice of labels — political or cultural — is not of much significance. The pervasive atmosphere in which high-tech medicine is practiced in Japan, whether it be the consequence of "politics" or "culture" or both, is one where trust is lacking.

THE MEDIA, THE CULTURE OF TRADITION, AND THE NEW DEATH

In addition to a lack of trust in the medical world, there are other concerns about creating a new death in Japan which are sometimes made very explicit, as was the case in a three hour prime time national television program aired in 1990. To the background of sweet music, viewers are introduced at the beginning of the program to a lively, beguiling Japanese child who was born from a brain dead mother and who, we are told, symbolizes the fact that "new life started from what was thought of by some as a dead body." The audience is then taken to North Carolina where a young man, badly damaged in a road accident, was pronounced brain dead, and transported to another hospital where his heart was about to be removed when he "came back to life." He lived for another six days before death was finally established. This section of the program ends with a close-up of the large ornamental cross attached to the outside of the hospital, and a pan of a nearby graveyard filled with crosses, with a view of the hospital behind it.

In the next scene, an American doctor states that it is difficult to diagnose brain death. He asserts that a clear legal definition is not possible, and that if the guidelines are too lenient then one is in danger of misdiagnosing certain cases, but on the other hand with too stringent a diagnosis many organs "go to waste." Later in the program Willard Gaylin, a psychiatrist formerly associated with the Hastings Centre in New York, described the "excitement" he experienced when he first realized that what he terms "neomorts" could be used for such purposes as testing new drugs, for medical students to dissect in place of using the bodies of "poor" people, and for "recycling body parts into other people." Earlier in the program, he had vividly described the way in which "neomorts" are still warm and breathing, but nevertheless legally dead. Yet another American doctor makes clear that in his opinion, not only brain dead bodies, but also people in so-called "persistent vegetative state" will be recognized as dead in the near future. The camera then moves to a Japanese ward full of patients diagnosed as being in a persistent vegetative state (*shokubutsu ningen*) and viewers are shown how some of these patients respond to human communication by subtle movements of their bodies. Viewers are also told how, in another institution, 13 out of 30 patients in a persistent vegetative state made some significant recovery after continuous intensive treatment, sometimes to the point of being able to speak again.

Together, these scenes and others like them in the program, including several from Europe, give the impression that brain death is not easily diagnosed, and that in any case, brain dead patients are in some clear sense "living." The message is communicated that there is a continuum between brain death and other states, so that no easy black and white, "Western-style" dichotomy can be made between the living and the dead unless one waits patiently for further proof in the form of whole body death, at which time vital organs such as the heart, liver, and lungs would no longer be fit for transplantation. Recent television programs, including one devoted entirely to a special hospital in Sapporo for the rehabilitation of patients in deep coma and persistent vegetative state, have reiterated the same points, but without direct comparison to the "West."

In television programmes such as these the culture of Japan, a morally correct culture, is juxtaposed with the "rational," "cold," "utilitarian" culture of the "West," deeply indebted to Christianity. This comparison is most often made, not by explicitly discussing Japanese values, but by showing "Western" practices. An opposition is therefore set up, as was openly

acknowledged by the programme producer when I interviewed him, between a Japan whose culture is unadulterated by misapplied technology, and the "other" of the "West." Here we see "culture" being self-consciously put to work to fend off excessive incursions from modernity. Moreover, the vigor with which the producer/moderator attacked the doctors on the programme who supported brain death as the end of life, is testimony to the power of culture as a moralizing agent, even when in opposition to the gathered authority of science. However, it is important to recognize that those who create the scientific arguments are also products of contemporary Japanese culture.

It is manifestly clear that when the results of national surveys, an analysis of the vast number of publications on the subject of brain death, and responses to television programmes such as the one described above, are put together with the results I obtained from interviewing more than 50 Japanese citizens on this subject, "culture" cannot be conceptualized as an uncontested, monolithic entity, even in a homogeneous country such as Japan where only one percent of its population are "non-Japanese."

A "JUST ALLOCATION OF SCARCE RESOURCES": THE NORTH AMERICAN DEBATE

In 1989 1,673 cardiac transplants were performed in the 131 American hospitals which carry out this type of surgery, compared to 172 undertaken in 1973 (*ACT Newsline*, 1989). Transplants of all kinds, including many repeat transplants, are routinized in North America and the "cutting edge" of experimental transplant technology is now primarily concerned with such procedures as "cluster" transplants, brain tissue implants, and the paring down of large organs to fit infants and children. Renée Fox who, more than any other social scientist, has researched and written about the routinization of organ transplants, has pointed out that in America the infant discipline of bioethics has already passed through three developmental stages. Bioethics began with an early interest in communication with patients and informed consent, moved through a second period during which concern with the "appropriate" application of technology was dominant, to the present stage in which the question of equitable distribution of scarce resources coupled with cost containment are the twin concerns (1990).

The current drive to "maximize" the availability of organs is grounded in the utilitarian assumption

that organs must be made available for the greatest good of all, and includes a major debate about whether the buying and selling of organs should be institutionalized (although this debate is not nearly as evident in Canada as it is in the United States). Discussion is also focused on the question of what type of contract with potential donors and their families is most appropriate for making organs more readily available (Somerville, 1985); whether adoption of a market model for obtaining organs is appropriate (Protas, 1983; Williams, 1985); and whether the body should be considered a form of property (Andrews, 1986).

In direct contrast to Japan, it is evident, therefore, that whatever discussion now takes place about the remaking of death in the United States or Canada is carried out after the fact of the routinization of organ transplants from brain dead donors. Discussion must therefore inevitably be coloured by pressures that a perceived "organ shortage" adds to such a debate. Furthermore, public consciousness, moulded by the media, is focused almost without exception on the heroics of transplants and on the saving of life, a situation which Ivan Illich has characterized as a fetishization of life (Illich, 1992: 224).

In contrast to historical debates about defining death, the issue is infinitely more complex than it was in earlier times, because there are now two patients whose deaths and lives become inextricably linked through the serendipitous coincidental failure of their body parts. Japan strives in its debate to keep these arguments clearly separated, and until very recently has only permitted transplants from live donors or from cadavers (in the "old" sense of that term). Public attention is overwhelmingly focused in Japan on the fate of potential donors and not on that of the potential recipients of organs, to the frustration of many surgeons. It is not unreasonable to assume that a similar concern about the death of the donor could have evolved in the Euro-America; current biomedical ethics in North America and to a lesser extent in Europe are, after all, grounded in respect for autonomous individuals and their welfare. This basic value inevitably becomes somewhat unravelled with two patients and their competing rights to consider, and one might expect to see some evidence in the media of this conflict of interest, possibly even a national debate similar to the one about abortion.

That there is no debate should, perhaps, come as no surprise in a rational, secular society where it apparently makes little sense to dwell on the misfortune of brain-dead "neomorts"; perhaps it is simply more "healthy" to think animistically of donors as "liv-

ing on" as parts of other people, and to recognize transplants as life-saving devices. Such a position becomes all the more compelling when coupled with the recognition that in 1991 more than 2000 people in the United States were on the waiting list for heart transplants, and the number of donors has actually decreased in recent years, in part because of better safety regulations in connection with driving. One transplant surgeon has talked of the "alarming number of patients who die waiting" (Peters, 1991: 1302), a situation described as a "public health crisis" (Randall, 1991: 1223). But by no means all observers understand this crisis in the same way. Leon Kass, for example, characterized the problem very differently in a recent article on the selling of organs:

Now, embarked on the journey, we cannot go back. Yet we are increasingly troubled by the growing awareness that there is neither a natural nor a rational place to stop. Precedent justifies extension, so does rational calculation: we are in a warm bath that warms up so imperceptibly that we don't know when to scream (Kass, 1992:84).

If one peers behind the heroics of medicine and the messages of scarcity, many of the same concerns are revealed in North America and the United Kingdom as those in Japan, but with one significant difference: in the two Western settings, these concerns are usually expressed in professional journals, or briefly reported in newspapers and then confined to oblivion, and thus do not become registered securely in the public consciousness.

For example, Fox and Swazey's assessment of a Gallup Poll taken in 1985 concludes that "many respondents ... expressed anxiety about the possibility that if they signed a donor card physicians might prematurely take steps to pronounce them dead, to surgically excise their organs, or even to hasten their death" (1992: 57). Another smaller survey revealed that the willingness of people who perceive themselves to be marginalized by society to become donors (in particular African Americans), is lower than among the middle classes (Childress, 1989). This finding has a macabre irony to it since, from the point of view of surgeons, the "best" organs come from those who die suddenly from causes like traffic accidents, gunshot wounds, or knifings, and the numbers of young African Americans and Hispanics whose deaths result from such causes are disproportionately high.

Not only is the American public cautious,¹ but several studies have shown that involved nurses and other medical staff are often conflicted when it comes

to identifying donors and approaching their families to obtain consent (Caplan, 1988; Prottas and Batten, 1988; Youngner et al., 1989). The fact that we cannot bring ourselves simply to talk of "death" but refer consistently to "brain death," clearly suggests that life is still present in the minds of most people, according to Youngner and colleagues. This same research team has also pointed out that newspaper and television accounts regularly report that patients who have been declared brain dead later "die" when "life-support" measures are removed. Similarly, Youngner's team claims that health professionals use terminology "that implies such patients die twice" (1989: 2205).

The apparent North American reluctance to cooperate with donation drives and campaigns is perhaps one manifestation of the same lack of trust in medical decision-making so evident in Japan. Despite the existence of the Uniform Determination of Death Act, a little known but vociferous contest continues in Euro-America about definitions of death, but participation in it is confined largely to physicians and philosopher/bioethicists. At present, two types of death are legally recognized in North America, cessation of heart and lung activity together with the flow of certain vital fluids (whole body death), and the irreversible loss of all brain function (whole brain death). Despite the short time since brain death was first recognized, the slippery slope, an idea which many Japanese commentators worry about, looms large in North America, because there has been an incessant push, particularly in the United States, to revise the definition of death yet again, so that cessation of higher brain functioning alone could determine death.

Youngner and colleagues conclude that health professionals should do more to resolve clinical and conceptual issues in the current definition and determination of death before making any further changes. Fost, arguing along similar lines, has reached a more radical conclusion. In his view, the problem with utilitarian justifications for redefining death is that such justifications invite constant redefinition whenever utility requires it, creating "not only instability, but the perception and possibility that unwanted persons can be defined out of existence [whenever] it serves the greater good" (1988: 7).

ANENCEPHALIC INFANTS AND THE ORGAN SHORTAGE

The debate over anencephalic infants, which continues unresolved, is illustrative of Fost's concern. Anencephaly is an incurable neural tube defect in

which no brain is present above the level of the brain stem. Only 25-45% of such babies are born alive and approximately 95% of them die within one week. Even though these babies can breathe independently, the status of their condition after birth, whether alive or dead, has been debated. For those who define life in terms of whole brain activity, anencephalics are alive because the lower brain is functioning, although death is immanent. For those physicians, philosophers, and social scientists who ground their arguments in concepts of "meaningful life" and "personhood," anencephalics, lacking any potential for personhood, may be counted as dead. These incompatible positions are further complicated because it has been shown that the diagnosis of anencephaly is by no means infallible, and in any case covers a continuum of conditions (Fost, 1988:8; Meinke, 1989). In practice, such infants sometimes remain alive independent of technological support longer than anyone had anticipated, prolonging the anguish of all involved (Abraham, 1988).

The majority of those who argue that anencephalics are in effect dead, or as good as dead, have also promoted the use of their organs for donation, even though the quality of organs taken from these infants is seriously debated (Shewmon et al., 1989). Charles Leslie has argued that we do not usually associate the word quackery with biomedicine (1980: 193), but treatment of anencephalic infants as organ donors is, perhaps, a case in point where such accusations might be in order.

Those surgeons originally involved with organ transplants from anencephalic infants justified their position in several ways: first, they often shifted responsibility for decisions to the parents of the infant by playing up their concerns about creating meaning to their infant's death:

Much of the interest in organ donation stems from parents of anencephalic infants who desperately desire to see some good come from their personal tragedy (Walters and Ashwal, 1988:24).

Involved physicians also resorted in the late 1980s to "definitional gerrymandering," and argued for an amendment to the Death Act so that anencephalic infants could be included on the grounds that they are anomalous, and therefore constitute a special case. Alternatively, physicians conceded that anencephalics are alive, but sought nevertheless to remove organs on utilitarian grounds, or else they sought to create an entirely separate category for such infants stating that they are in effect non-human. In making each of these arguments, the life of the infant is dismissed as having

no meaning because of the infant's non-consciousness and lack of mental functioning, and because its prognosis is uniformly terminal (Caplan, 1987). One surgeon at Loma Linda hospital in southern California declared that an anencephalic infant is preferable to a baboon as a donor. He stated: "Not only does the [anencephalic] have human genes, but it is a nonperson and sure to die; whereas the monkeys are living and, well, there's a down side to that" (Gianelli, 1987: 80). The title of an article written by two other surgeons proudly boasted the use of an "anencephalic monster" for the purposes of donation (Martin et. al., 1969). Terms which mark humanness, like "baby", "infant", or "newborn," are conspicuously absent from the literature in support of continuing these procedures; and interest has been expressed in harvesting organs from other types of "anomalous" infants, such as those with hydranencephaly and microcephaly.

Wilke and Andrusko have commented that no one faults the desire of parents to "redeem" the death of their baby. However, these authors believe it to be a profoundly misguided perspective if the only way an anencephalic child's life can be endowed with significance is through organ donation. Wilke and Andrusko state that "the perspective underlying much of the public clamor is an application of raw utilitarianism, reducing a person to a function" (1988: 33). One pauses for reflection on learning that one author of this statement, a physician, is the President of the National Right to Life Committee, and the other is the editor of the National Right to Life News.

Much criticism of organ transplants from anencephalic infants comes, however, from members of the medical profession and bioethicists with no obvious axes to grind. Fost has this to say, for example :

If our leading medical centres and practitioners tell us that it is responsible to "act first, talk later," that doctors are entitled to make profound policy, what message does this send to the hospital and surgeon inclined to cross yet newer boundaries...? Just as war is too important to leave to the generals, transplantation policy is too important to leave to the physicians (1988: 9).

Fost concludes that one way of achieving social consensus, the usual American way, is to act, and then to invite society to accept or reject the action through legislation, litigation, prosecution, or public criticism. He cites the case of a hospital ethics committee which has explicitly adopted the policy of acting first and talking later (1988: 10). The alternative method is to seek social approval and consensus prospectively,

through professional and lay publications, the legislature, the courts, national commissions, hospital ethics committees, and the like. Fost believes that this method is more likely to include careful consideration of the relevant facts, biased interests, and arguments (1986). The latter method is much closer to the course charted in Japan, with a strikingly different outcome thus far.

As a result of both peer group and public concerns, involved hospitals in Canada placed a self-imposed moratorium on the use of anencephalic infants as donors early in 1988. This moratorium was followed later by American hospitals, and last of all in the California hospital which had conducted the majority of such transplants. At the time, few involved people believed that this development represented anything more than a temporary retreat from the battle front. Sure enough, in 1995 an expert committee of the American Medical Association proclaimed that it should be permissible to take organs from anencephalic infants "while they are living" because such babies "never have thoughts, feelings, sensations, desires, or emotions" (*Journal of the American Medical Association*, 1995).

HUMAN SUFFERING AS FODDER FOR NATIONALISM

Media commentaries often reveal just how deep an association there is between medical heroics, nationalistic inclinations, and culturally constructed values in the minds of at least of some of those writing about contentious issues in medicine. For example the "family doctor" who usually writes in a Montreal newspaper about rather trivial matters such as warts, hernias, and lower back pain had the following to say a few years ago in connection with organ donation from anencephalic infants:

I have never met the Shoutens, but as a father, a physician, and a person proud that they are Canadian, I feel compelled to tell their story one more time. In an age of crooked politicians, unscrupulous business deals and newspapers filled with stories about prostitution, nuclear weaponry ... and war criminals, we must continue to think about the Schoutens, not only to maintain our sanity, but as an inspiration for all Canadians. The world has an acute shortage of heros, we cannot afford to let the memory of these people fade (*Gazette*, 1987).

During the eighth month of pregnancy, the Schoutens were informed that the fetus was anen-

cephalic. Nonetheless, they decided, after being told that the infant would live only at most a few days, to continue the pregnancy to full term with the express purpose of making the infant's organs available for transplantation. The family doctor continues:

[The Schouten's] loss would become humanity's gain... Like all parents experiencing the miracle of birth, the Schoutens immediately bonded, held and fell in love with their baby as she touched their mortal shells and immortal souls. The child was named Gabriel [she was actually named Gabrielle], the archangel of the Annunciation and the herald of good news and comfort.

A short time later as Gabriel took her last breath, another Canadian family waited. Their son had been born without a viable heart. The Schouten's idea that Gabriel's short mortal existence would profit and comfort others was soon to become a reality, for the Schoutens had volunteered Gabriel's organs.

By so doing they had moulded medical ethics. They had decided that it was acceptable to keep a non-viable infant alive long enough for organ donation...

The Schoutens deserve the highest honor we can bestow upon our fellow Canadians. But, what they did wasn't for a medal, a testimonial or for public recognition. It was for mankind. These people are ordinary Canadians like you and me. We won't be remembered for the symphonies we have written, for our great works of art or the records we have held. No one will name buildings or erect statues after us. Our legacy is what we leave to other human beings. Our legacy is the good that we have done to the lives that we have touched. Not for money, but because we cared and loved.

There are people on kidney dialysis, a rather unpleasant process, awaiting donor kidneys for transplantation. Blind people await cornea transplants. Others await borrowed livers, hearts, lungs and other organs. These are not experimental procedures. One year survival rates for kidneys, hearts, and livers are of the order of 95, 88 and 81 percent respectively [not so with infants].

Isn't it time to roll up your sleeve to donate a unit of blood? Shouldn't you be thinking of donating an organ when your mortal life ends? Neither deed will cost you financially. You will be buying immortality for yourself and your family. Achieving immortality as Gabriel has shown us, is within the reach of us all (*Gazette*, 1987).

To my knowledge, the media never reported that the infant born by Caesarean section who received Gabrielle's heart died shortly after the surgery.

In Japan too, ideology has until recently masked individual suffering (although this situation is changing, see Lock, in press). One has rarely been able to read about potential organ recipients in Japan. However, there have been regular media reports about families travelling to Australia or the United States in search of a transplant for their dying child, only to return afterwards to receive anonymous letters accusing them of selfishness and lack of patriotism.

CULTURES OF TECHNOLOGIES

Marshall Sahlins alerted us some years ago to the way in which technologies are culturally produced. Today we are reluctant to start out from the dualities of culture(geography)/technology, culture (technology)/nature, culture (tradition)/nature, or culture (tradition)/technology. The division between mind and practical activity which troubled Sahlins remains very visible in daily life, nevertheless many culture theorists believe it should be consigned to the waste basket, and the duality has itself become an artifact for analysis as we reflect on assumptions embedded in Enlightenment thinking. All three concepts, technology, nature, and culture, are hybrid and without clear demarcations in time and space. This recognition does not mean, however, that we are left with a transnational flow of technology transforming the landscape into a postmodern collage, a jumbled assortment of ill-defined entities. The politics of culture is at work ensuring that the situation is more complex. In the case of biomedical technologies, as we have seen, such politics often rely in part on the cultural articulation of the natural as moral arbitrator to implement or inhibit the naturalization of certain technologies. Alternatively the politics of culture may, as in the Canadian case cited above, resort to a call for a display of nationalism, and the heroics of culturally infused values.

It is worth noting that in Japan the debate about brain death takes place in full knowledge of what has happened and is currently happening with respect to transplant technology in the rest of the world, particularly in North America. In North America, by contrast, the debate is not one in which the politics of alterity figure much at all. On the few occasions when any attention is paid to the Japanese debate it is cursorily dismissed as being the product of religion and "traditional" culture.² The North American debate is driven by the culturally motivated values of utility, meaning-

ful life based on the manifestation of individual consciousness, and progress through technological innovation. These values, naturalized through resort to rhetoric, cannot be readily questioned. However, a comparative analysis of biomedical technologies in action unmasks the work of culture, revealing the shocking silences that go unnoticed as we all participate in doing what comes naturally.

Notes

1. No surveys have been done in Canada to my knowledge.
2. There is some foundation to this claim it seems (Namihira, 1988), but this explanation is hotly contested inside Japan (Lock, 1995; Nudeshima, 1991).

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