Ethical issues relating to the 'donation' of human and animal organs for transplantation

Clare Louise Hamer

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The candidate confirms the the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

This thesis is an investigation into several proposed ways of increasing the supply of organs for transplantation purposes. It starts from a consideration of two sorts of donors which are already in use: humans declared dead according to brain-based criteria and nonhuman animals.

In the first chapter I attempt to provide a theoretical underpinning for the brainstem criterion of brain death. I also criticise certain rival theories.

In the second chapter I consider what constraints govern what we may do to the newly dead body – the fact that someone is dead does not mean we may treat their corpse as we please. I consider Professor John Harris' strong 'opting out' policy, and argue against it. I briefly discuss other alternatives to the UK's present 'opting in' system – 'presumed consent' and 'required request'. And I consider the problems generated by the proposed use as donors of another category of human cadaver – people declared dead according to cardiorespiratory criteria.

The third chapter is an investigation into xenotransplantation – the use of organs from nonhuman animals. I argue that using animals 'just because' they are animals is ethically indefensible. Instead I attempt to justify the killing of (some) animals as organ donors on the grounds that their interest in continued life is weaker than that of a human. But this has some counterintuitive implications concerning arational members of our species.

In the final chapter I discuss the possible use of the 'worst off' category of arational humans – the permanently and irreversibly unconscious. I argue that we have moral obligations to these people which do not stem only from a consideration of their interest in life. However, I think that we may use such people as donors under specialised conditions: if we are as certain as we can be that they are irreversibly unconscious, if their family (and ideally the donor too) have requested it, and so long as it can be done without distress to the public. Under no other circumstances do I think humans ought to be killed for organs.

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Introduction

Does the plight of those with organ failure justify the implementation of stronger policies of organ procurement?

In writing this piece I implicitly assume that it is morally permissible, under some circumstances, for redistribution of organs to take place between some kinds of donors and those in need of organs, for the benefit of the latter. The fact that transplantation of organs takes place so frequently in medical centres around the world suggests that the medical community also, in general, thinks of organ transplantation as being permissible under certain circumstances. Therefore I offer no arguments to support the practice considered as a whole.

Increasing the number of organs available would be enormously beneficial to the 6107 patients on the waiting list for kidneys, 160 for livers, 113 for hearts, 74 for heart and lung, 243 for lungs, 116 for combined kidney and pancreas and 29 for pancreas-only (UK figures at December 31st 2001[1,2]). Indeed as there are no current long term treatments for severe liver and heart failure, an organ transplant offers the only chance of survival in the medium to long term for patients awaiting these organs.

If we are to save or improve the lives of people with end stage organ disease it is necessary to increase the number of organs available for transplant. In February 2001 the British Health Secretary, Alan Milburn, promised to spend three million pounds increasing the number of organ donors. He also pledged to increase the kidney transplant rate by 100%. This was to be done by raising the public awareness of the cadaveric donor scheme by the inclusion of donor card application with credit cards *etc.* Yet it seems unlikely that this strategy will suffice: the number of people entering waiting lists for organs increases year on year whereas the incidence of people suffering the sort of injuries and illnesses that render them suitable (physically) to be considered as donors is showing a slight downturn,

although numbers have remained static for the last two years. There were 876 cadaveric donors in the UK in 1992 and over 800 annually for the next five years. However donor number fell to 757 per annum in 1998 and have remained below 800 for every year since then. In 2001, the last year for which data is currently available, there were 777 donors. By contrast there were 5124 patients on the general waiting list (for all organ types) in 1992 while in 2001 there were 6842.[3]

Disclaimers

It is without doubt the case that organ transplants save lives and, unfortunately, it is also the case that many people currently die who could be saved by a transplant. In this piece of writing I employ the simplifying assumption of referring to all transplants as being 'lifesaving'. In fact this is not the case. Renal transplants, for example, are better described as improving patients' quality of life. Although a renal transplant will increase the probable life expectancy of a recipient compared to remaining on renal replacement therapy (dialysis), neither form of treatment for renal failure is likely to provide a normal lifespan. Nor can a renal transplant be said to be the only way to save a patient from immediate death: dialysis, combined with a regimen of blood pressure control, fluid management, and medications to maintain haemoglobin levels and control calcium loss can extend, often by many years, the life of a patient whose kidneys have failed. As a rough guide, it is estimated at the transplant centre in which I work that a patient with a functioning kidney graft has an 80% chance of surviving for 10 years. A patient on dialysis has a 20% chance of surviving for that period of time.

Hearts, lungs and livers are more clear cut cases of lifesaving transplants: in most cases patients reaching 'end stage' disease of these organs will die within a period of few days to a few months without a transplant (the times vary according to the organ failing and to the adequacy of replacement therapies). However, for simplicity, I will refer to the practice of transplantation as being 'lifesaving' throughout this piece of writing. This will not affect the arguments which follow.

Throughout this work I also follow customary medical usage in referring to the creatures used as organ sources as donors, without employing scare quotes. The

reader ought not to take this to mean that I believe nonhuman animals or dead or irreversibly unconscious humans who have not previously expressed an opinion to be capable of giving informed consent to be so used (even if they were willing). There seem few alternatives to the term 'donor': 'giver' or 'benefactor' both carry the same air of voluntariness as 'donor' and 'source' sounds, to my ear, too coldly clinical – I worry that if we start to think of donors as being 'sources of organs' we are in danger of ceasing to see them as creatures with interests and moral status. I apologise in advance if my use of the term 'donor' grates with the reader – it seems to me to irritate less than the alternatives.

In this thesis I rely on several assumptions that are not argued for. In chapter two I as good as assume that 'the right' has primacy over 'the good' – I do not present a full case for the claim. In chapter three I present a less than full case for my belief that it is morally permissible to use nonhuman animals for medical purposes. This is despite my also not fully justified belief that relevantly similar animal and human interests should be treated equally – I present a 'presumption in favour of equal consideration'. And finally, I assume in both chapters three and four that at least one of the things that is objectionable about death is that it deprives people of future satisfactions and cuts short plans and projects. Readers should not infer that I think that this is the only thing that is objectionable about death.

What sort of donors do I consider?

The fact that organs are sometimes given to those whose own organs are failing raises the question of what doctors should be entitled to do in order to procure organs for their patients. There are many creatures in the world, both human and otherwise, from whom it would be physically possible to remove organs for the benefit of others (usually, but not exclusively humans). In the case of kidneys, 'split livers', single lungs and corneas this need not involve the death of the donor. However a typical cadaveric donor may provide two kidneys, a liver, a heart or heart valves (which may be given to more than one person), a pancreas, two corneas, skin (for burns patients) and bone marrow (for leukaemia sufferers). It is clear that many more people may be helped by a dead donor than by one whose life we wish to preserve.

The discussion of possible donors which I offer in this piece of writing may be criticised for considering only certain categories of potential donors from among all those who have physically suitable organs. I do not, for instance, consider the possibility of forcibly removing one of a paired organ from convicted murderers; a position which a more cunning philosopher than I could perhaps argue for (along the lines of 'he who maliciously takes a life must give back something to save a life'). I also do not consider John Harris' 'Survival Lottery' idea: under which a healthy person could be killed if two or more people could thus be saved by his organs.[4] I limit the possible donor categories as I do because I wish this piece to be of interest not just as a work of academic philosophy but in practical terms to those who make the policies which govern organ procurement. For this reason I take as my starting points in chapters one and three two groups of donors which are already used: brain dead cadavers and nonhuman animals. (The latter are not presently used as whole-organ donors to humans, however pigs are used as donors of heart valves and pancreatic islet cells to humans, many species of mammal are used in preclinical trials and some (again pigs alone, to the best of my knowledge) are being genetically modified in preparation for use in humans.) I proceed from a consideration of these groups whom, I think, it is safe to assume are currently considered (rightly or wrongly) to be *relatively* ethically uncontroversial to other groups of possible donors whom I believe to be relevantly similar.

Theoretical underpinnings

For the same practical reasons I strongly desire that my theory achieves reflective equilibrium – that it accords as nearly as possible with common sense. For all organ donors but especially for the most emotive category, dead human beings, it has always been important for those who excise organs to do so in a manner which is open to public scrutiny and defendable against criticism. In the light of the recent 'organ retention' scandals at British hospitals (which, although the organs were not taken for transplant nonetheless had a significant negative impact on public perceptions of the work of transplant teams) it is even more important. Thus my proposals are limited to those that could, I hope, one day become practice. That is to say, I generally limit myself to considering ideas which could be made acceptable

to the public.

I must note finally, before beginning, that I fail to set out (or indeed to have) a formed moral theory which governs my thinking in this piece. This is partially due to word-limit constraints: this essay is supposed to be an exercise in applied ethics and not in normative ethics. Suffice it to say I am not a Contractualist, a Deontologist or a Utilitarian, although I recognise that there are circumstances under which the appeal to a social contract, to 'the right' and to consequences all carry weight.

Notes and references

1. http://www.uktransplant.org.uk/statistics/general_statistics/waiting_list_2000_2001.htm
2. The pancreas-only figures shown here are far from being a true reflection of the number of diabetics who could, in fact, be made insulin-independent with a transplant. Rather, the people on the waiting list tend to be those diabetics who are already known to transplant teams having received a previous renal transplant. (Renal failure is one of the complications of uncontrolled diabetes.) The figures are also skewed by the fact that pancreas transplantation is in its infancy compared to that of other organs.
3. http://www.uktransplant.org.uk/statistics/general_statistics/cadaveric_donors_and_transplants_1992_2001.htm
4. It should be noted that Harris himself describes the lottery idea as a 'hypothesis' and not as a serious proposal for organ donation. See Harris (1995), p222.

Chapter One

The determination of death: concepts and criteria

Under what circumstances is it ethically defensible to remove organs from human beings and other animals for transplantation purposes? Since the first renal transplants of the 1950s this question has been hotly debated by ethicists, lawyers, public policy makers and the medical profession. However, at the beginning of the twenty-first century, the range of possible answers has expanded, which has made it imperative that we formulate our answers to these questions carefully.

In the first section of this work I intend to concentrate on the seemingly most plausible and least ethically problematic answer: that we can remove transplantable organs from human beings if they are dead. This does not mean that I believe organ removal to be ethically permissible 'if and only if' something is dead; throughout this work I intend to discuss whether death is necessary, sufficient, both or neither for the ethical excision of organs. In fact I do not believe that death is either necessary or sufficient for the ethical removal of organs for transplantation. In chapter two I attempt a philosophical underpinning for the claim that, even after a being has been declared dead, there are other ethical issues to consider before removing organs; in chapter three I discuss the killing of non human animals for their organs and in the fourth chapter I shall argue that donation from a living, irreversibly unconscious, human donor, under certain specialised circumstances, may be acceptable. However, if it is ethically permissible to remove organs at all, removing them from the dead, on first appearance at least, seems to involve fewer ethical problems than removing them from the living. Exploring this category of donor first is appropriate as human 'brain dead' cadavers have historically been the major source of organs for transplant.

Yet this seemingly relatively unproblematic suggestion in fact ushers in a host of questions, the most hotly debated of which runs as follows; "under what

circumstances can we declare someone (or something) to be dead?" This question and my attempt to answer it will occupy the first chapter of this work. In addition to being an interesting metaphysical question it has immense practical importance in the field of organ transplantation; if we think it permissible to remove organs for transplant from the dead we wish to know when it is along the process of dying that a person becomes dead. For the purposes of organ donation we require only a *criterion* of death. In other words we need to know only which clinical features are indicative of death and how these can be reliably detected. However in order to justify my criteria I must examine the further question of which features (clinical, spiritual or otherwise) can be said to be *constitutive* of death. This question must be addressed if my criteria are to have defensible conceptual underpinnings.

Questions about death

Death is an extremely slippery concept, about which several different types of questions are regularly asked. These may take the form of metaphysical questions ("what makes it true that a formerly living person has become dead?"), epistemological questions ("by what criteria can we know that someone has become dead?") and clinical questions about testing ("what tests are appropriate for determining that someone has died?").[1] Unfortunately, questions of the first sort, concerning the analysis of the concept of death, are frequently muddled with questions of the second sort (which are, confusingly, often proposed as searches for the 'definition' of death). It is vitally important to distinguish between these two very different questions if I am to clearly delimit the scope of my project.

The need for a criterion

At a recent symposium on organ transplantation which I attended, one of the speakers, a distinguished liver transplanter, talked of his dismay when, having achieved a technically perfect transplant of a liver into a woman dying of acute hepatic failure, he discovered that she was, in fact, brainstem dead, and had been so at the time of the transplant. Because we wish to avoid mistakes like these, and for other moral, legal and social reasons, we wish to know when someone is dead. For example, we assume that living people have certain interests (and perhaps

rights) that the dead do not, such as interest in not being caused pain. And respect for the living takes a radically different form to respect for the dead. In law, certain things may be done to a corpse which it is illegal to do to a living person (usually because they will cause death or serious injury). Burial and cremation are the most common examples but I am more interested in the removal of organs and in nontherapeutic medical interventions for the purpose of organ procurement. Both of these acts constitute battery if performed on a living person but both may be permissible after death, under appropriate circumstances (I will have more to say on this in chapter two). Murder charges may be proven or thrown out depending upon whether we believe that the accused's act was what caused death. (David Lamb cites an interesting case of a trial in the early days of organ transplantation of a man accused of killing another man by shooting him in the head. His defence counsel claimed that the cause of the victim's death was not in fact the bullet in his brain but the later excision of several of his vital organs by transplant surgeons.)

From a purely practical perspective there are certain behaviours which are appropriate when faced with a living human being which are not when we face a dead person. (There is a (probably apocryphal) story about a student nurse working in a terminal care ward. One of the patients died and a few minutes later the relatives arrived. The ward sister told the trainee to go into the patient's room and make her look 'natural' before the relatives went in. The student propped the patient up in bed, placed her spectacles on her nose and put a newspaper in her hand.) Other practical considerations show the need for a clear elucidation of criteria for declaring death: it is widely (although not universally perhaps) agreed that we would not wish to give a treatment the administration of which not only cannot improve the patient's condition but prolongs an existence meaningless to the patient. A desire not to prolong the suffering of relatives and the need for resources to be conserved to be spent on the living also affect our choice. It is important also that the general public have faith in the medical judgement that death has occurred if they are to trust physicians to treat their everyday maladies. And the feelings of medical staff must be taken into account. I recently overhead an intensive care specialist talking about her revulsion at being forced by a brain-dead patient's family to ventilate him until his heart stopped: "he was rotting away" she said.

Criterion and definition

For all these reasons and more, we need some indicator (or indicators) of death such that someone is dead if and only if he or she displays this criterion. However, as Fred Feldman[2] notes, no matter how good a criterion might be for determining that death has occurred, it is not to be confused with an analysis of the concept of death, of *what it means* to be dead. A point which I shall discuss in more detail below is that a criterion of human death need have no relevance to nonhuman biological beings such as racoons, gerbils and large root vegetables. Yet I, at least, would still like to think of the concept of death as one that applies universally to all biological beings – I do not think that there is one form of death for humans, another or several others for the rest of the animal kingdom and still others for plants.

A criterion of human death does not offer any insights into the nature of death; it merely helps us to determine when death has arrived. It is proposed as a practical tool – as such it is successful if enough people adopt it. It may be superseded or require revision if advances in medical technology bring to light a new or better criterion: an obvious example of this is the 'heart-lung' definition of human death which, for many years was accepted as the only criterion of death until advances in resuscitative and intensive care technology meant that people whose hearts had stopped could be revived, and that other people appeared to be dead even though their hearts and lungs continued to function. A criterion may be useful even if counterexamples exist. The analysis of human death (of what it means for humans to die) on the other hand "does not purport to be useful. It is not intended as a solution to any practical problem. Success for an analysis is measured by the extent to which it serves to enlighten us about the nature of death itself".[3] An analysis of death must apply equally to anything that can die, and, if true, is necessarily true and true for all time, even if no-one adopts it.

It is obvious that a further distinction needs to be introduced here. In order to formulate a useful criterion of human death, I must examine what an analysis of the meaning of death would consist of. In attempting to provide an adequate set of epistemological features to determine when death has occurred one is forced to ask the further question "what makes it the case that these particular clinical features

are indicative of death?" And in a world where different sets of clinical features (with different underlying concepts) are proposed to mark death's occurrence the need to critically examine these concepts becomes urgent. My biological account of death is at odds with other broadly 'biological' definitions, such as Martyn Evans' 'heart-lung' definition (1996). However, it is also in opposition to other proposed definitions of death. In particular I wish to criticise that collection of 'ontological' theories which turn on the notion of the "conditions of existence of persons",[4] such as that of Michael Green and Daniel Wikler and of Karen Grandstand Gervais. It is vitally important for a clear understanding of the problem to be aware that, although I disagree quite vigorously with some of the other biological arguments available, the differences between my position and theirs are trivial compared to the gulf between the set of broadly biological analyses of death, and the ontological or moral analyses which I shall be discussing. In other words the difference between myself and the other biological-based theorists exists at the criteriological and not the conceptual level.

Thus, although I wish to examine the concepts of death underlying the various different proposed criteria for death, I must also examine the nature of the concept of human death. I will sketch my analysis of the concept later in this chapter, however, I suspect that I will be unable to provide a full analysis without devoting the entirety of this work to the problem (and quite possibly, not even then). If my argument is the weaker for resting on assumptions that remain partially unexamined then so be it. My limited aim in this chapter is to describe and criticise competing criteria of death, together with their conceptual underpinnings, before setting out my own brief analysis and criteria. Before I begin this task however, I must briefly explain why it is that advances in technology have occasioned the need to choose between competing analyses of death.

Death as a process

Until the twentieth century the conceptual vagueness surrounding the notion of death mattered little; diagnosing death was a relatively uncontroversial matter. Death, whether in the form of the permanent cessation of cardio-respiratory capacity, the death of the brain or some subset thereof, or more esoteric concepts

such as the loss of the 'breath of life', or 'the departure of the soul from the body', was an event of fairly brief duration which could be tested for by listening for an absence of heart sounds or checking that breathing had ceased. It should be noted that, even before the introduction of resuscitative techniques and mechanical ventilation, the declaration of death involved what Gervais calls 'a decision of significance' – "a decision that there is a certain feature (or cluster of features) whose permanent absence constitutes the death of that person".[5] Let us consider an example. A man suffers a huge myocardial infarction. His heart irreversibly ceases to beat. Soon afterwards, he loses consciousness. Because his heart is no longer working, oxygenated blood is no longer transported to his brain or other organ systems and waste gases are not brought to the lungs for removal. After around five minutes the cerebral hemispheres of his brain have been irreparably damaged by anoxia – he can never regain consciousness. Some minutes later his brainstem also succumbs. Trained medical staff arrive on the scene but decide that he has been 'down' too long to make resuscitation worthwhile. However, many of this man's organs remain viable, his kidneys for example can survive without oxygen for up to forty eight hours if quickly excised and correctly preserved. His corneas remain perfectly usable for a number of days. Some cells with a low oxygen requirement remain viable for weeks after the original cardiac event. His hair and nails will continue to grow for weeks if not months. Biological activity is still discernible in his body until total putrefaction has taken place. The big question is: at what point did death occur?

We may know all the medical facts pertaining to the process of deterioration in this unfortunate man's body. However, we are able to ask the further question "at what point in this process of deterioration did the man become dead?" Was it when his heart stopped? Was it when he lost consciousness for the last time? When the capacity for consciousness was irreversibly lost? Perhaps it was when he lost the capacity to regulate his bodily processes? Or was it when his life was deemed to be 'not salvageable' by the medical staff in charge of his resuscitation?[6] Once the fatal process of events had been set in motion, whether by the cessation of the heart, or by damage to the brain, the other vital processes soon followed. Under these circumstances, when the different proposed features which mark that death has come occur close together, it is not necessary to argue about which of the

proposed underlying analyses of death are correct.

However, the development of advanced resuscitative techniques and the availability of intensive care necessitated a redefinition as the technological leaps involved caused a 'splitting' of the notion of death. A heart, once stopped, could be restarted, breathing and blood pressure could be maintained artificially, and intensive care units started to produce patients who, although permanently unconscious, had regained the capacity for spontaneous respiration. To quote Gervais "We have a conceptual problem to resolve, then, when it is no longer possible to live with a plurality of meanings or an unclarity of meaning attached to a particular concept".[7] Conceptual lack of clarity is tolerable in some situations (for example, it may not matter if I live my life believing whales to be fish rather than mammals (so long as I do not make my living as a marine biologist)), but in the case of something of such immense practical importance as the nature of human death unclarity can no longer be tolerated once the splitting up of the process of dying over hours and days forces us to question what it is that constitutes death. (Although it is important to note that while advances in technology necessitate our re-examining our concept of death they do not create the vagueness, they simply reveal the confusion that has always been present.)

So it is important to examine our analysis of death in order to provide criteria for declaring death to have occurred which are both useful and plausible. However, this raises the further problem of why the question of the nature of death is a *philosophical* question? Is it not a task more suited to physicians or lawyers to lay down the necessary and sufficient characteristics of human death? The question is philosophical rather than medical or legal as although physicians may show, for example, that a person exhibits an inability to spontaneously control their own internal milieu when tested, and although testing positive is a reliable indicator that death has occurred, the judgement that such an inability is constitutive of death goes beyond medical authority. Whether a patient is to be classed as alive or dead rests on our concepts of life and death. As David Lamb states "the concept of death cannot be exclusively determined by medical criteria. This is because it is related to more general philosophical beliefs concerning the *meaning* of life and death".[8] (Even if one disputes this, to claim that the determination of the nature of death is

primarily a medical task is to adopt a philosophical position on the matter (albeit a possibly incoherent one), namely that it is empirically decidable.)

Death as a biological concept

I must make it clear that the concept of death which I propose to examine is a biological concept – that is to say I believe that there is some concept of death as the cessation of biological processes which applies to all living beings. According to a variety of closely related theories which I shall later loosely group under the heading of 'higher brain' based positions, the irreversible loss of consciousness or of 'personal identity' is necessary and sufficient to count as the death of a human being. It follows from such definitions, the latter especially, that the death of a human being must be a radically different thing to the death of other animals: faced with an irreversibly unconscious human being and an irreversibly unconscious dog an adherent of one of the above sort of theories must be prepared to hold that, whilst the dog lives, the human is dead. I shall argue below that this conclusion is absurd and that a biological definition of death is correct – ultimately, however, I may be unable to prove that there is not a 'personal' concept of death which applies to human beings alone.

Which functions, according to our biological concept of death, are so important that their loss leads us to say that the organism as a whole is dead? Becker defines it thus: "a human organism is dead when, for whatever reason, the system of those reciprocally dependent processes which assimilate oxygen, metabolise food, eliminate wastes, and keep the organism in relative homeostasis are arrested in a way which the organism itself cannot reverse. It is the confluence of these and only these conditions which could possibly define organic death, given the nature of human organic function".[9] I think that this definition is not wholly satisfactory – it does not meet the 'no counterexamples' stipulation mentioned above. For example, a being undergoing cryogenic freezing may fulfil all the conditions of Becker's definition, and yet still be returned to life after a period of suspended animation. Similarly, a sufferer of Guillaime-Barre syndrome may temporarily lose the capacity to breathe and be unable to remedy this problem themselves. However such a person is likely to remain fully conscious, and, so long as their breathing is taken

over by a machine for a short while, should soon return to full spontaneous functioning. However, I think that something like Becker's definition must be correct – for, working within a biological framework, we must agree that some parts of an organism may die without causing the death of the organism as such. Tonsils, appendixes, and assorted other organs may be removed such that not a single one of the cells which constitute that organ remains functioning, without this causing any (lasting) harm to the organism considered as a whole (indeed the removal of an aberrant appendix is positively beneficial as leaving it *in situ* may cost the organism its life). It is also the case that organisms are able to survive the loss of functions necessary for their continued existence as long as these functions are replaced by artefacts; some banal examples being iron lungs and renal dialysis.

Control systems

We need here to enter the realms of 'general systems theory', in order to introduce the concept of a 'critical system', the death of which is equivalent to the death of the organism 'as a whole'. Organisms are examples of 'open systems'. An open system may be defined as a nonstatic system which exchanges both matter and energy with the environment but tends towards a steady state by keeping entropy to a minimum ('entropy' may be defined as a measure of disorganisation). In other words, an open system, such as a living thing, maintains itself in a quasi-steady state by means of the continual import and export of material to and from the environment.

Ludwig Von Bertalanffy puts it this way:

> The character of the organism as a system in a steady (or rather quasi-steady) state is one of its primary criteria. In a general way, the fundamental phenomena of life can be considered as consequences of this fact. Considering the organism over a shorter span of time, it appears as a configuration maintained in a steady state by the exchange of components... Superimposed on the steady state are smaller process waves of basically two kinds. First there are periodic processes originating in the system itself and hence autonomic (*eg* automatic movements of the organs of

> respiration, circulation, and digestion; automatic-rhythmic electrical activities of nerve-centres and the brain supposedly resulting from rhythmic chemical discharges; automatic movements of the organism as a whole). Secondly, the organism reacts to temporary changes in environment, to 'stimuli', with reversible fluctuations of its steady state. This is the group of processes caused by changes of external conditions and hence heteronomic subsumed in physiology of excitation. They can be considered as temporary disturbances of the steady state from which the organism returns to 'equilibrium', to the equal flow of the steady state.[10]

Open systems contain internal mechanisms which operate on the energy and matter entering and leaving the system to lower the amount of entropy, which causes the system to become more organised while the environment becomes disorganised. The 'control system' is this reciprocal system of internal mechanisms. To return to Becker for a moment; his definition of death stated that "a human organism is dead when ... the system of those reciprocally dependent processes which assimilate oxygen, metabolise food, eliminate wastes, and keep the organism in relative homeostasis are arrested in a way which the organism itself cannot reverse".[11] The central notion here is that of the functioning body as a system. When the control system, in virtue of its network of complex biofeedback mechanisms, detects a change in one of the many regulatory systems of the body (whether caused by stimuli from without, or by internal process waves), it causes appropriate changes in other mechanisms in order to maintain equilibrium. As a pair of examples among the many thousands available; in humans, the control system causes peripheral blood vessels to dilate, pores to open and sweat to be produced in the presence of a rising internal body temperature; in plants the control system causes the petals of flowers to turn towards the sun. The notions of a thermostat or the Watt steam governor may prove helpful here. This latter is equipped with a rudimentary device which measures the discrepancy between the way things currently are and the 'optimum' state. It then acts in such a way as to bring about the desired state. The machine is manufactured in such a way that the greater the discrepancy, the harder it works. Thus the machine automatically tends to reduce the discrepancy and may come to rest if the 'desired state' is reached.

> The Watt governor consists of a pair of balls which are whirled round by a steam engine. Each ball is on the end of a hinged arm. The faster the balls fly round, the more does centrifugal force push the arms towards a horizontal position, this tendency being resisted by gravity. The arms are connected to the steam valve feeding the engine, in such a way that the steam tends to be shut off when the arms approach the horizontal position. So, if the engine goes too fast, some of its steam will be shut off, and it will tend to slow down. If it slows down too much, more steam will automatically be fed to it by the valve, and it will speed up again.

From Richard Dawkins, "The Selfish Gene".[12]

In simple organisms almost the whole system is the control system. More complex organisms develop specific structures to create a master control system superseding all subsidiary structures. In human beings the brain is the control system.

Caution is required here; all I wish to say is that if we are searching for a biological analysis of the concept of death it seems that the sort of thing we are looking for is something like the definition offered by Becker, for the reasons outlined above. I think that Becker's definition utilises the concept of control or critical systems although he does not explicitly recognise it. I further think that all biological beings have some form of critical system, the loss of which constitutes the death of that being.

However, *the use of the brain as the critical system in humankind is criterial rather than definitive*: brain death is indicative of death, but does not itself constitute death. Had evolution progressed otherwise perhaps human life could have been based around some complex process of photosynthesis in the manner of the humanoid plant Zhaan in the television series 'Farscape'. And, although our best medical knowledge certainly seems to indicate that the brain is indeed the control system in man it could be that, just as the old heart-lung criteria of death were superseded by

brain death, in the future brain-based criteria are ousted in favour of better (because more reliable) criteria; perhaps it may transpire that the human brain is in fact regulated and organised by activity in the soul which can only be measured using futuristic technology. For this reason, it is no objection to the use of brain-based biological criteria of human death to point out that plants and trees do not have brains, although they are clearly biological organisms which die in a relevantly similar way to the way humans die. It is sufficient to note that the same concept of death applies to all biological beings; roughly, the irreversible (or usually irreversible, barring extreme cases involving the use of cryogenic technology and the like) loss of the interdependent regulatory processes which together prevent the organism from disintegrating.

Becker believes that some biological functions can be mechanically replaced without the organism therefore being classified as 'dead'; I agree with him on this point. Certainly, people may be dependent upon artefacts to replace some (or many) of their vital processes without which they would undoubtedly die rapidly, without thus qualifying as being 'dead'. It must be noted that Becker's position seems a little muddled at this point: he stipulates both that for death to have occurred organic functioning must have ceased in a way in which the organism cannot reverse, and that an organism still qualifies as 'alive' so long as 'functions necessary to survival' are replaced by artefacts. It is surely the case, though, that when someone has irreversibly lost the capacity to respire spontaneously and is maintained on a ventilator, this is an example of a cessation of spontaneous organic functioning which the unfortunate victim cannot reverse. This does not count as a point against a 'critical system' biologically-based concept of death however. *In order for a biological organism to count as 'dead' it is necessary and sufficient that that being's critical system has irreversibly ceased to function spontaneously.* My position requires only the cessation of spontaneous organic functioning; in a moment I shall elaborate on why I believe this to be the correct approach. Further, my concept of death encompasses those (currently science fiction) situations in which all the functions of the critical system may be replaced by artefacts. In order to more clearly elucidate what this means, it is time to present in a little more detail my case for claiming that, in humans, the brain is the critical system.

The brain as a 'critical system'

Currently, none of the functions of the brain that are deemed important to my or to other people's concepts of death (such as vegetative functions and the capacity for and content of consciousness), can be adequately artificially reproduced. Whilst I am interested in the question of whether consciousness could ever exist in an artificial brain, the majority of the literature on this subject tends to concentrate on the autonomic processes, and so I shall largely restrict my enquiries here to the question of whether it is necessary for these so-called 'vegetative' functions of the brain to be 'spontaneously' produced and not the result of human artifice in order for a person to be considered 'alive'. However, part of the human critical system, at least, consists of what Von Bertalanffy calls "heteronomic processes subsumed in the physiology of excitation", *ie* the organism's response to the environment. Although this is a very reductionist way of viewing the importance of consciousness to human mental life it provides the basis of my argument that the claims of some commentators that life support technology is able to completely replace the human brain as the body's 'control system' are flawed: current medical technology does not even begin to address the issue of replacing the organism's sensory processes and responses to the environment.

I have argued that the critical system in man is the brain, as this organ not only controls man's ability to unconsciously regulate all the interrelated systems which prevent the bodily system from becoming chaotic, but also forms the seat of his responses to the environment. However, from this point a further problem arises: what constitutes the death of the brain? Given that a system is composed of smaller systems, critics are entitled to enquire just what constitutes the critical system of the critical system (for example, see Martyn Evans, 1995). It is my belief that an area of the lower brain known as the brainstem is this critical system, as it forms the anatomical substratum of the capacities for both integrative and conscious activity.

The 'critical system of the critical system'

Brainstem criteria for human death, as tested for in ITUs in this country, consists in two main features: the irreversible loss of the capacity for consciousness and the irreversible loss of the capacity to breathe spontaneously. These properties do not exhaust the notion of a critical system, there are many other regulatory mechanisms which can be lost, however they are probably the most simple to diagnose, and fit neatly with folk beliefs of death as the 'departure of the soul from the body' and as the 'loss of the breath of life'. There are good reasons for excluding some other functions of the brain (most notably the *content* of consciousness; beliefs, desires and a host of other mental states, as (loosely) located in the cerebral hemispheres) from the critical system: without exception, patients who have been correctly diagnosed as brainstem dead proceed to circulatory collapse, even when electroencephalographic activity was detectable elsewhere in the brain at the time of diagnosis.[13] Of course, this argument is open to the response, by those who do not accept brainstem criteria, that even if every patient diagnosed as brainstem death goes on to develop asystole, this does not provide evidence to support the contention that human death occurs at the moment brainstem death develops. Rather, according to these critics, it shows that brainstem death is an infallible prognostic indicator that death is going to occur. Making the prediction that someone is going to die is not the same as proving that they are already dead. I see no way of decisively refuting this objection without merely stipulating that brainstem death is death; it has been propounded both by those who share a biological concept of death, but wish to advocate different criteria (such as a heart-lung based collection), and by those whose concept of death is opposed to the biological concept (such as those who wish to define human death in terms of 'the conditions of existence of persons'). And it is not exclusive to philosophers critical of brainstem death, doctors also speak in these terms at times. Doctors Ben Jameson and Stephen Bonner write "relatives need to understand that brain stem death is an irretrievable state, with somatic death an inevitable consequence, despite all available supportive measures".[14] (Although to be fair to Jameson and Bonner, I think this is a slip of the tongue rather than a belief that brainstem death is not truly death – they also say "[relatives] need to also understand that it is a legal definition of death in the UK".[15]) Fortunately, I have a second reason for delimiting

the critical system as I do.

As I mentioned above, the lower brain contains the anatomical basis of the 'capacity' for consciousness; a structure known as the Ascending Reticular Activating System which runs up the brainstem. Clinical and experimental work has shown that lesions in this area of the brain produce irreversible unconsciousness, even if all other brain structures are intact. Given that it is presently impossible for this consciousness-producing element of the brain to be artificially reproduced, an individual who has suffered this kind of damage has, in practice, irreversibly lost the capacity for consciousness. John Searle states "when we describe something as an unconscious intentional state, we are characterising an objective *ontology* in virtue of its *causal* capacity to produce consciousness. But the existence of these causal features is consistent with the fact that in any given case their causal power may be blocked by some other interfering causes, such as psychological repression or brain damage ... any unconscious state is the sort of thing that is in principle accessible to consciousness".[16] Even if, as in the damaged ARAS case, a person is unable to ever again bring any of these intentional states to consciousness, these states must still be the sorts of things that are capable, in principle, of being brought to consciousness. In practice, however, the irreversible loss of brainstem function is all that is required to render the patient permanently unconscious. In principle, of course, only the complete destruction of the cerebral hemispheres, the anatomical locus of the content of consciousness, would be sufficient to allow us to refer to an individual as irreversibly unconscious. So my criterion appears open to the objection that if, in the future, it becomes possible to artificially reproduce the function of the ARAS as the 'on/off' switch for consciousness, the concept of the 'critical system of the critical system' will have to be modified to reflect the fact that only the complete destruction of the higher brain areas causes the irreversible loss of consciousness. However, as I offer the brainstem theory only as a criterion of death rather than a definition, the postulation of future technological advances does not constitute a knock down argument against my position. Criteria, as discussed above, are open to revision, and revisions of the sort discussed above do no harm to the overall concept of death as the cessation of the critical system.

Two arguments for the use of the death of the brainstem as the criterion of biological death

My argument that the death of the brainstem at present constitutes our 'best guess' criterion of death takes two (related) forms. First, it is the case that, when the brainstem is destroyed or irreversibly ceases to function (the difference is not important for our purposes), consciousness is irretrievably lost and the homeostatic mechanisms of the body rapidly lose integration. I argued above that this is because, in man, the brainstem is 'the critical system of the critical system' – the supreme regulator of the body. When the brainstem is lost, the remaining functions of the body become mere 'artefacts of vital processes' (to use Becker's term), and are no more indicative of 'continued life' than the growth of the hair or fingernails. This is the keystone of my argument, and I shall offer it in more detail presently. Before doing this I wish to examine a more pragmatic answer to the question of why we should take the death of the brainstem to be criterial of death.

The pragmatic argument

At the present time, the period for which the body of a person whose brainstem has been irreversibly destroyed or has irreversibly ceased to function can be maintained is severely limited; "despite the most aggressive support, the adult heart stops within a week of brainstem death and that of a child within two weeks".[17] It appears that when the 'spontaneity' underlying the vegetative functions is irreversibly lost asystole is the inevitable result. However, is this an unalterable fact, or merely a product of the limitations of medical science?

As seen from the above quote, Lamb, writing in the mid-eighties, certainly believed that, regardless of the treatment given, the body of a brain dead person could not be maintained for more than a few days. This view is shared by other leading contributors to this debate, such as the President's Commission for the Study of Ethical Problems in Medicine[18] and Korein[19] who states that "no investigator ... has presented evidence that irreversible cardiac arrest may be postponed more than a week (exclusive of that in infants and children) and most often these final irreversible changes occur prior to 48 and even 24 hours after brain death".

However, at around the time that Lamb was writing, research was being conducted which indicates that the development of asystole following the death of the brain is merely a contingent fact, stemming from the inadequate replication of the functions of the lower brain by life support technology rather than being an unalterable fact of physiology. The most quoted study is by a team of Japanese researchers who found that brainstem dead patients lacked an antidiuretic hormone normally made by the brain: when the hormone was administered intravenously it became possible to maintain the patients for an average of twenty three days after brain death instead of the week that had been the norm.[20] Singer also cites cases of brain dead pregnant women who were able to carry their child to term as proof that "The coordinated forces of modern intensive care medicine have replaced the role of the brain in regulating the body".[21]

Despite these great advances, the current situation is that the 'forces of modern intensive care medicine' can still only imperfectly replace the vegetative functions of the lower brain: the longest period of time for which a brain dead ex-patient has been maintained is 201 days – hardly a lifetime.[22] However it is conceivable that, in the near future, brainstem dead ex-patients could be maintained in ITUs for long periods, perhaps indefinitely (let us assume indefinitely in order to present the strongest case against my position). This is of course only a possibility at the moment and, as such, has not been addressed by the major proponents of a brainstem definition of death (Lamb, Bartlett and Youngner and even Pallis, the author of the intensive care doctor's handbook on the subject). However, medical evidence demonstrates that improvements in technological, anatomical and physiological knowledge are increasing the amount of time the bodies of brainstem dead ex-patients can be sustained. This issue and its implications for brain death as a criterion of death urgently needs to be addressed. The pragmatic argument that brainstem dead patients cannot be sustained for very long may be overturned by advances in technology, and so we need another argument to support the contention that brainstem death criteria should retain a central place in our thinking even if these science fiction cases become reality.

The irrelevance of 'artefacts of vital processes'

I should re-emphasise, at this juncture, that I believe that the biological concept of death involves more than the presence or absence of vegetative autonomic functions. Part of the notion of the critical system involves the organism's ability to respond to changes in the environment. In the case of humans, this responsiveness has become extremely highly developed, from mere 'sensation' we have developed perception, self consciousness and so on.[23] Because such a definition permits consciousness to enter the equation, some of the problems raised by the 'spontaneity' issue can be avoided by my presentation of the death of the brainstem as indicative of human death. For example I believe that my criterion evades one of the charges brought by Josef Seifert[24] who raises the question of how to categorise those who are dependent on technology for their bodily maintenance yet who remain conscious. Seifert states that "if this dependence (on a ventilator) meant death, many persons who depend on dialysis, heart-machines (*sic*), *etc.* for reasons other than brain death would likewise be dead. The question of whether such a dependence is irreversible or not makes no difference. Would a man whose lungs are irremediably paralysed and who remains conscious be dead because he needs ventilation?" (See also Bartlett and Youngner[12]). In the case of human beings, the loss of the system of autonomic and heteronomic processes entailed by the loss of the critical system takes the form of the irreversible loss of not only vegetative functions, but of the capacity for (and, in practice, the content of) consciousness and thus does not succumb to these objections.

The problems really arise when we consider possible future situations concerning patients in whom the capacities for consciousness and for spontaneous autonomic processes have been irreversibly destroyed but in whom the latter, at least, may be mimicked by an artefact.

With our exclusion of the possibility that these patients are victims of a deefferented or 'locked in' syndrome such as described by Seifert and Bartlett and Youngner above, the attractiveness of defining them as 'alive' certainly wanes. However, we should certainly not allow our distaste for the idea of permanently maintaining these beings to cloud our judgement concerning the definition of life and death. If it were

possible to maintain the vegetative functions of an irreversibly unconscious person artificially (we shall suppose indefinitely to preclude the argument that these people are merely dying), are such patients really in any different a situation than those who are irreversibly unconscious yet who respire *etc.* spontaneously? (And who are, thus, alive.)

Seifert clearly believes that the mere fact of machine dependence is insufficient to declare someone dead, whether the dysfunctional part is the brain or some other vital subsystem. Similar arguments are advanced by Skegg[26], Green and Wikler[27] and Gervais[28] who ask why it is that a brainstem dead patient maintained on a ventilator should be classed as dead. To quote Gervais, "To say that the functioning is no longer natural is not to answer the central question... Why should we consider the brain-dead, respirator-driven body a corpse and not a living, mechanically sustained patient?". These arguments forcefully make the point that it may not matter that the control system is lost, and that the organism no longer functions as an integrated whole so long as the artefacts do their job. Regardless of whether the patient relies on a team of medical and nursing staff to make minute adjustments to their life support systems or whether they are able to do this themselves, according to these critics, all that matters is that it is possible to maintain the patient indefinitely. If I wish to argue that someone in the sort of condition described above is dead, I must justify my claim.

In perhaps the most clearly stated argument of the above sort, Green and Wikler (in Cohen *et al* (1981)) argue against the unique importance of the lower brain. (In fact they argue against the biological importance of the brain as a whole, but their argument, in this section, refers mainly to vegetative functions.) They accept that the brain is "the organiser, the integrator" and that "the other organs form the work-force regulated by its commands"[29]. However, they still deny the irreplaceability of the brain, arguing that "the respirators and other life-supports which maintain body functioning after lower brain death collectively constitute a sort of artificial lower brain"[30] – the development of a more perfect mechanical substitute is, they assert, only a matter of time. Thus, when the job of the brainstem is performed by these artefacts, "the body's life-system continues to function as a system".[31]

What 'an artificial lower brain' would entail

Interestingly, neither Green and Wikler or any other of the above authors discuss whether their proposed technological advances would involve simply machines which, with human input, could maintain brainstem dead patients indefinitely or whether they propound the much more radical concept of machines which are able to make the necessary adjustments themselves. It is vitally important to clarify the type of position adhered to by these authors: I believe it makes the difference between life and death.

The first of the two possible interpretations above seems to be the most plausible interpretation of what Green and Wikler have in mind. This possibility entails modest increases in medical knowledge and the use of technology which, although not currently available, is not considered to be complete science fiction by those involved in such matters. It is suggested that in the relatively near future doctors will be able to maintain a brainstem dead patient indefinitely in an ITU – in short, aggressive support after a diagnosis of brainstem death will remove the inevitability of the development of asystole. I am willing to accept that those functions of the lower brain which are responsible for autonomic processes are, in principle, amenable to replacement by artefacts. However, I would hotly contest the suggestion that such machines would together constitute an artificial system. True, highly trained medical and nursing staff would leap into action every time an alarm went off, titrating drug levels and adjusting gas pressures, but they would not constitute an open system in the sense defined above. I think stretching the concept of a patient's bodily system to include other people would be unwarranted. The system would no longer be metastable, but would consist of a variety of discrete elements which, outside an ITU, could not support life. If this interpretation of Green and Wikler's claim that the ventilator, inotropes, and so on collectively constitute a 'sort of artificial lower brain' is correct, I believe I would be justified in retorting that their assertion stems from an inadequate and crudely reductionist understanding of the functions of the lower brain. As the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research (1981) states:

> While the respirator and its associated medical techniques do substitute for the functions of the intercostal muscles and the diaphragm, which without neuronal stimulation from the brain cannot function spontaneously, they cannot replace the myriad functions of the brainstem or of the rest of the brain.[32]

Let me explain this a little more. Ventilation of the respiratory system in man is controlled by a centre located in the medulla oblongata, a region of the brainstem. This centre comprises two portions, an inspiratory and an expiratory centre. Information concerning changes in the carbon dioxide tension in the blood is fed to these centres from chemoreceptors in the carotid and aortic arteries. When the level in the blood rises, impulses from the chemoreceptors stimulate the inspiratory centre, which in turn sends impulses along the phrenic and thoracic nerves to the intercostal muscles and the diaphragm. The increased rate of contraction of these bodies increases the rate of inspiration, increasing ventilation of the respiratory surfaces and removing the excess carbon dioxide. Each inhalation and exhalation is minutely controlled by the brainstem. As the lungs fill and expand 'stretch receptors' in their walls are stimulated and send impulses along the vagus nerve to the expiratory centre in the medulla. This 'switches off' the inspiratory centre, causing the muscles to relax and expiration to take place. The stretch receptors are no longer stimulated, the expiratory centre is 'switched off', and the inspiratory centre is once more 'switched on'. Inspiration takes place again.[33] This method is in fact one of two homeostatic mechanisms controlling respiration, a fall in the oxygen saturation of the blood stimulates breathing in a different way. However, this is a philosophical not a biological work and I shall not dwell on the details of this here.

Suffice it to say, neither of the two mechanisms controlling respiration in the normal brainstem even remotely resemble the way in which it is controlled by a ventilator in an ITU. Positive pressure ventilators effectively consist of a large set of bellows which force mixtures of oxygen and air (or any other gas you like) into a patient's lungs. The number of respirations is not adjusted automatically in response to a rising carbon dioxide tension, although the change will set off an alarm to alert the medical staff tending the machine. Nor is the switch from inspiratory to expiratory

breath made spontaneously; it occurs simply as a result of staff setting the machine to blow air into the lungs at a set rate. Given this, I do not believe that it is plausible to claim that a being maintained under such circumstances continues to function as a system.

Let us now consider the science fiction interpretation of Green and Wikler's claim: a machine which is able to replace all the functions of the brainstem, maintaining equilibrium between all the various bodily processes. It is conceivable that in the distant future, everything there is to know will be known about the functions of the brainstem. In addition let us imagine that technological advances continue at the current pace, and that micro-electronic engineering will continue to produce ever-smaller and more powerful devices. Doctors faced with a brainstem dead individual could implant a massively more complex version of the Watt governor into the space previously occupied by the organic brainstem. Such a machine would control and regulate all the diverse functions of the body, reacting to changes in the status of one function by adjusting the status of one or more other functions. However, even on this reading of Green and Wikler's argument, all that could be assumed is that we are talking about the very limited case of those individuals unfortunate enough to have permanently lost consciousness but who have been fitted with a sophisticated mechanical artefact replacing the autonomic processes of the brainstem. In such a situation, the other function of the brainstem, the generation of the capacity for consciousness is still absent. Although the creation of a machine which may, with assistance, maintain the autonomic essentials of human life may be possible, it is misleading to suggest that such a machine would be fulfilling all the roles of the brainstem, a point which Green and Wikler's account singularly fails to address. Their notion of an artificial lower brain is very impoverished compared to the real thing.

However, it seems that medical scientists may already have discovered a way to at least partially replicate the consciousness-generating function of the brainstem. An article in *The Sunday Times* of 1st March 1998 discusses an electronic 'pacemaker' which delivers electrical pulses to the brain and appears to mimic the function of the ARAS in patients in persistent vegetative states (PVS). The report notes that "Most PVS cases are associated with damage in the lower part of the brain which does

not then communicate with the upper part, responsible for thinking and higher consciousness. It seems that the pacemaker is able to bridge the gap and stimulate the revival of higher brain functions".[34] When the electro-stimulation is active, patients may be able to move and speak; lapsing back into unconsciousness when the current is turned off. Of course, such technology is in its infancy; it does not work on all patients and its creator, Francois Cohadon, professor of neurosurgery at Bordeaux University, reports that the technique is 'very crude'. However, such devices are becoming a reality.

If this sort of tool could be combined with a machine which could replicate the autonomic functions of the brainstem, then I would be prepared to call individuals fitted with such devices 'alive'. Such a combination would seem to meet the criteria of an 'open system'. (Another motive for not writing off the notion of electro-mechanical brains as impossible is the desire to avoid the species-chauvinistic claim that 'living' beings can only take carbon-based forms.) If advances of this sort were to become a reality, then the criterion of brainstem death as human biological death as propounded above would have to be revised or abandoned. Note however, that this need not harm the general biological definition of death as offered above; we would merely have to work out a new set of criteria. (Of course, if the creation of artefacts able to take over the functions of parts of the body other than the brain proceeded at the same pace, we may create a group of beings whose organic body has been completely replaced, and who are, thus, immortal. Similarly, we may need to revise the murder laws to cover cases of people maliciously switching electricity supplies off, or removing batteries. However, a discussion of these situations is beyond the limited scope of this thesis.)

In short, I agree with Green and Wikler that improvements in intensive care technology may indeed allow the body of a brainstem dead individual to continue to function indefinitely. However, except in the very specialised situation described above I would take issue with the idea that this means that the person is still alive. A person maintained by the discrete functions of many independent life support engines no longer functions as a system.

Let us recap. I believe that a biological concept of human death, taking the form of

(something like) "a human being is dead when his or her critical system irreversibly ceases to function" is correct. Further, I believe that, in humans, the brain (and more specifically, the brainstem) forms this critical system. I hope I have provided an argument which justifies the claim that brain death is human death, and that I have set out what the use of brainstem criteria would involve. However, I have not yet made explicit why it is that I believe that a biological concept of death trumps all other possible concepts.

An alternative concept of death

The above proposal holds that a state which does not (or certainly need not) correspond to the comprehensive destruction of the whole brain constitutes 'brain death'. It is hardly surprising then that other authors have proposed different criteria for brain death, based on the loss of other brain functions, most frequently the loss of the 'higher brain' functions. Here I wish to present two arguments which may be loosely termed 'higher brain' concepts of death as brain death. They pertain, respectively, to the loss of psychological continuity or 'personhood' as criterial of death, and to the permanent loss of consciousness. I wish to show how both of these concepts, although certainly necessary in order for us to declare that death has occurred, are not, by themselves, sufficient. I begin by examining the ontological argument of Green and Wikler; and attempt to show why I believe that such an account is the wrong way of looking at the nature of human death.

The argument begins as follows: "To state that an ailing patient, Jones, is still alive, is in fact to make two claims; the second of which is usually taken for granted. One is that the patient is alive. The other is that the patient is (remains) *Jones*".[35] Further, "If we do establish that the patient, even if alive, is not Jones, and if no one else is Jones, then we will have established that Jones does not exist. And this, of course, establishes that Jones is dead".[35]

Something seems odd here – Green and Wikler apparently want to differentiate the living body of Jones which may continue to exist after Jones has ceased to be (in the sense of having lost his unique psychological characteristics) from Jones himself. Hence, the patient may be alive but not be Jones if Jones has irreversibly

lost his personal identity, or, more usually, Jones may cease to exist at the time the patient (retaining Jones' traits) dies – "The death of persons, unlike that of bodies, regularly consists in their ceasing to exist".[37] This dualism is brought out more clearly in Green and Wikler's discussion of beings which have never had, and which never will have, a personal identity in this sense. Referring to anencephalic infants, the authors note that such beings will never develop consciousness. They note that "it does not follow from our argument that all humans lacking the substrate of consciousness are dead... We ... need only point out that the identity criteria for the anencephalic, never-to-become conscious infant do not involve the causal substrates for higher level psychological continuity. The conditions for life and existence will be those of *human bodies* rather than those of persons[38] (my italics).

There are at least three problems with this argument. First, Green and Wikler do not discuss what 'the conditions of existence for human bodies' consists in. Perhaps they do not consider it a sufficiently interesting question to merit a discussion. However, given that anencephalic infants are, none the less, human, we still need an account of what it is for them to die, which Green and Wikler do not provide. Second, we need to know why anencephalic infants die according to the conditions of existence for human bodies whilst brainstem dead adults die according to the conditions of existence for persons. Green and Wikler provide no argument for this vital distinction. Third, although the authors state that the patient, Jones, may be 'divided up' into Jones' organism and Jones' psychological predicates; and although they further assert that, in some cases, Jones may cease to exist while his organism continues to function, they provide no argument to support the latter claim. Yet as long as Jones' organism continues to exist, it is surely open to the proponents of biological concepts of death to enquire just why the persistence of biological activity is not relevant in a declaration of death. Green and Wikler provide no argument to support their claim that the death of a human being should be taken as the death of the person, yet as their position throws up the anomalous situations of some members of the same species being said to die according to different criteria than others merely because of a biological defect, some supporting work is obviously needed.

Following up this point I contend that Green and Wikler's position seems somewhat

absurd when viewed from the perspective of evolutionary biology. Consider a situation in which a man and a dog sustain relevantly similar injuries to the higher areas of their brains, which causes both of them irreversibly to lose consciousness yet be able to spontaneously control their internal milieu. According to Green and Wikler's account, in such a circumstance the man would have ceased to exist whereas the dog, having never possessed the "causal substrates for higher level psychological continuity", continues to live. But, according to evolutionary theory, the development of our cerebral hemispheres to the point at which they provide the locus for personal identity is merely the product of evolution. Man and dog are, in many ways, relevantly similar – the man is simply further up the phylogenetic scale rather than on a different scale altogether. Of course, supporters of theories of the above type could counter by stating that, although humans and dogs may be relevantly similar in many biological ways, it is man's greater psychological capabilities which set him apart and mean that his death must be determined in a way unlike the death of other biological beings. However, this Green and Wikler do not do.[39]

As noted above, 'personal identity', on this account, is anatomically sited in the higher brain areas "a given person ceases to exist with the destruction of whatever processes there are which normally underlie that person's psychological continuity and connectedness. We know these processes are essentially neurological, so that irreversible cessation of upper-brain functioning constitutes the death of that person".[40] Green and Wikler thus offer an account of human death based around the loss of personal identity which occurs when the anatomical substratum of consciousness, the 'higher brain', irreversibly ceases to function. In the case of brain death or brain excision, "the resulting body cannot have the kind of causal relation to earlier person-body stages which is required for the personal identity to hold".[41]

Until now, I have been using Green and Wikler's term "the upper (or higher) brain" without question. In a footnote, the authors state "We will use the terms "upper" and "lower" to designate the parts of the brain which sponsor cognitive and regulative functions, respectively. These are not terms of the physiologist's art; it is possible

that this neat division of brain parts is false to the facts and that some sections of the brain are involved in both kinds of activity, but we do not see how the present discussion would be thereby undermined".[42] The argument is undermined because there is no clear anatomical substratum of brain death when thought of in terms of the loss of psychological characteristics. Although a definition of death need not be 'useful' in itself, although it is not set out to solve practical problems, it serves no purpose if we cannot derive from it criteria indicative of death's occurrence. Without such criteria a proposed concept is useless as it leaves the matter of declaring death open to interpretation.

Certainly, the cerebral hemispheres and cortex seem to be the locus for most of the features which make up a person's psychological characteristics and confer a sense of identity over time. Within such structures may be found most of the features relating to human cognitive and affective capacities. However, subsumed under the general heading of "damage to the upper brain" are discrete conditions such as cerebral death, which entails "irreversible destruction of both cerebral hemispheres exclusive of the brain stem and cerebellum", and neocortical death which entails "the destruction of cortical neurons bilaterally while deep structures of the cerebral hemispheres such as the thalamus and basal ganglia may be intact along with the brain stem and cerebellum".[43] It is not yet understood which of these structures are essential for the possession of personal identity.

Oliver Sacks (in "An Anthropologist on Mars"), describes the case of a boy who developed a brain tumour which had destroyed his pituitary gland, optic chiasma and tracts and extended into both frontal lobes. In addition it had invaded the temporal lobes and the diencephalon, or forebrain. Damage to the temporal lobe, the seat of the memory system in man, prevents the brain from consciously registering new events: Sacks' unfortunate patient was unable to recall information presented to him only a minute previously. The tumour had also caused retrograde amnesia, a gradual erosion of memories going back several years prior to the development of the tumour. Sacks reports "There was not an absolutely sharp cut-off here, but rather a temporal gradient, so that figures and events from 1966 and 1967 were fully remembered, events from 1968 and 1969 partially or occasionally remembered, and events after 1970 almost never remembered".[44] I think a strong

case can be made for claiming that many of the processes which underlay this patient's psychological continuity and connectedness were destroyed; the patient had no (conscious) memory of events occurring later than 1970 (Oliver Sacks was first introduced to him in 1977). Sacks notes "whereas for the rest of us the present is given its meaning and depth by the past..., as well as being given potential and tension by the future, for Greg it was flat and (in its meagre way) complete".[45] Yet clearly the patient was not dead, indeed he possessed "a cheeriness, an inventiveness, a directness, an exuberance, which other patients, and indeed the rest of us, found delightful in small doses".[46]

Green and Wikler's argument depends on our acceptance of Jones as being "essentially an entity with psychological properties"; yet the case described above casts doubt on their assertion that a patient "ceasing to be Jones" whilst retaining a functioning organism is sufficient for declaring Jones to be dead. As Gervais notes, a patient may lose his unique psychological characteristics in circumstances other than brain death. Hence we could imagine a patient more damaged than Greg developing total amnesia with no memory of who he was or had been. Gervais states "We might then say that the patient has ceased to be Jones because Jones' psychological history has been erased, yet be unhappy with the conclusion that Jones is dead, because some mental life remains, supported by Jones' body. Jones' mental life, however impoverished or altered, is still Jones' mental life".[47] Thus, ceasing to be Jones is a necessary condition for Jones' death, but not a sufficient one. Personal identity is retained so long as the patient retains the capacity for mental life; and such identity does not require the continuation of a particular psychological history.

Gervais' Ontological Theory

By offering "a theory that reduces to the demand that personal identity is retained as long as conscious functioning is retained",[48] Gervais avoids the problems identified above for Green and Wikler, (the facts that, firstly, we are uncomfortable with the prospect of identifying someone who has irreversibly lost their unique personal identity but who remains conscious as being dead and, secondly, that no-one seems entirely sure whereabouts in the brain the "anatomical substrate of personal

identity" resides). Like Green and Wikler, Gervais presents a notion of human death as brain death, with the importance of brain death stemming from its implications for the death of the person. This is claimed to be a 'neocortical death' theory – "a neocortical-death criterion is one example of a persistent-vegetative state criterion for declaring death".[49] However, problems arise from Gervais' rather incautious use of the terms 'neocortical death' and 'persistent vegetative state'. As David Lamb (1990) notes "Gervais appears to equate neocortical death (a neuropathological concept) with the persistent vegetative state (a clinical concept)".[50] Neocortical death requires an isoelectric EEG – as I shall discuss in a moment, few persistently vegetative patients meet this criterion.

Gervais presents her theory thus: "Consciousness, a necessary condition for psychological continuity, is the *sine qua non* of personal existence. Since upper-brain death results in the permanent absence of consciousness, it is the death of the person".[51] This proposal certainly seems to be more workable than Green and Wikler's suggestion: indeed it incorporates the essential insight of Green and Wikler's position without succumbing to many of the problems. For if a patient is permanently unconscious one may say with certainty that he or she will have lost his or her unique psychological characteristics. Hence, Gervais' position evades most of our worries concerning victims of total retrograde amnesia, senile dementia, and suchlike, wherein the essence of the personality has been lost but the brain retains the capacity to support consciousness.

Perhaps if Gervais had left her argument here it may have held some water (although not much; I shall argue below why I believe that the permanent absence of consciousness is a necessary but not a sufficient condition for, death). It does, however, succumb to what I believe to be a fatal flaw. Gervais states "We must think of human death not in terms of what it has in common with canine death or feline death, but in terms of what it represents for human relationships; abandonment of all roles, the end of all interactions, and the reconstituting of rights and obligations. Permanent unconsciousness, *whatever its basis*, represents these changes" (my italics).[52] Gervais criticises Green and Wikler's stipulation that the upper brain is the only portion of the brain involved with personal identity as being unacceptably narrow. Instead, she holds that "human death, understood as the

death of a person, is a state in which the function of consciousness has been irreversibly lost as a result of one of several possible combinations of damage to the brain substratum".[53]

I believe that this sort of analysis of death fails for a number of reasons. First, as I discussed above, limitations in medical technology mean that, in practice, an irreversible coma will result from the loss of the Ascending Reticular Activating System whilst the areas of the brain which house the contents of consciousness, the cerebral hemispheres, remain intact but inaccessible. Gervais must class people whose unconsciousness can be traced to this sort of malfunction as dead. However, unconsciousness of this sort is only irreversible due to the limitations of current medical technology. Indeed reversal of such states may not be wholly science fiction, if the article quoted above from *The Times* is to be believed. It is only when those brain areas which form the anatomical substratum of the mind, the seat of memory, emotions *etc.*, have been destroyed that we can truly claim that consciousness and personal identity have, necessarily and in principle, been lost. By making permanent unconsciousness, *whatever its basis*, her criterion of death as death of the person, Gervais allows too much. By including cases where unconsciousness is contingent upon the loss of support systems such as the ARAS rather than being the necessary result of the destruction of the anatomical seat of consciousness Gervais' theory shows itself to be inadequate.

I think the above constitutes a refutation of Gervais' position; however I have, in addition, several other objections.

First, as David Lamb notes, there are clinical objections to making a diagnosis of death when the brainstem continues to function, as it is "still uncertain whether fragments of consciousness or awareness may be mediated by sub-cortical structures".[54] Diagnosing death in terms of the irreversible loss of sentience is difficult for several reasons. Compared to the diagnosis of brain stem death a longer time scale is involved – whereas brain stem death manifests itself within hours or days, months may pass before the clinician is confident that the cerebral cortex has been irreversibly destroyed.[55] One of the biggest barriers to accurate diagnosis is the nonhomogeneity of the class of 'unconscious' patients. For

example, people in persistent vegetative states may display a variety of responses to stimuli:

> Nearly all regain sleep-wake cycles; many display the facial appearance of interest; and some even show emotional fluctuations with occasional infant-like tearing or smiling in response to non-verbal stimuli. Although none follow moving objects consistently, some occasionally move the eyes slowly towards visual stimuli. Others blink inconsistently to visual threat, startle or close the eyes in response to sudden noises, or demonstrate reflex groping or sucking.[56]

However in its most severe form the condition involves "a complete unawareness of the self and the environment" and also involves a terminological change from 'persistent' to 'permanent' "... when irreversible PVS can be diagnosed with clinical certainty".[57]

Problems in the diagnosis of a consciousness-oriented concept of death may not prove insurmountable for Gervais' account; she argues that the burden of proving that consciousness is irreversibly lost under certain circumstances of brain destruction is a medical, not a philosophical, problem. And I do not wish to deny that some patients, those in the most severe form of PVS, are completely insensible (I discuss the difficulties involved in accurately diagnosing irreversible unconsciousness in chapter four). However, I think that the dissimilarity of patients grouped together as 'unconscious' by Gervais poses serious problems for her account. The responsiveness to stimuli of some patients in persistent vegetative states may be dismissed as simple reflexes: alternatively it may represent awareness, albeit in a much attenuated form. I am not sure that Gervais' exclusion of the above sort of responsiveness from the category of consciousness is legitimate (indeed, a large problem with Gervais' account is that she fails to define what she means by 'consciousness' yet her account turns on the notion). She states "Experiencing *per se*, however limited it may be, defines life".[58] The irreversible loss of the capacity for consciousness (and thus for experience) is death. So why does Gervais want to rule out some experiences such as the

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unconscious response to pain? Is the response to pain of someone in a persistent vegetative state so different to the way a normal human responds when asleep?

Drawing this section to a close, I believe that there are insurmountable problems facing any definition of death based upon the loss of consciousness or personhood. Some of these problems apply only to individual accounts of death so defined, such as those discussed above. Others apply more generally to all theories of this type. Chief among the latter group is the fact that loss of consciousness and personhood, although necessary for human death, are not sufficient. For the reasons discussed above I do not wish to label those who are persistently unconscious or who have lost their unique psychological traits as dead. Equally clearly, those who are dead have lost these features. However, human death consists of much more than the mere loss of consciousness. According to Hellenic and Christian tradition, death is a hybrid concept, incorporating the ideas of both the loss of the 'breath of life', and of the 'departure of the soul from the body'. Definitions of death which use loss of 'higher brain' functions as criterial fail because they address only one of these components. Such definitions do not cohere, either with 'folk' knowledge (hence the frequent claims by these authors that the public need to be corrected in their erroneous opinion that pink, respiring, but permanently unconscious people are alive), or with the majority of medical opinion on the subject: they thus leave themselves open to dispute. As David Lamb notes, "any criterion which, when fulfilled, leaves it possible for someone to say that the patient is still alive is unsatisfactory".[59]

The proponents of such definitions point out that their definition pinpoints what is unique about human death: I believe, on the contrary, that human death is a biological phenomenon, and should be viewed as such. Certainly the criteria used in declaring death in humans will be different from those used in declaring death in, say, tomato plants, indeed these criteria are open to revision with advances in medical technology. However, it seems somehow absurd to claim that, despite what we know about evolution and the common origins our species shares with other 'higher' mammals, our 'death' is a radically different thing to that of even the most sophisticated nonhuman animal, simply in virtue of our possession of consciousness (which we know other mammals possess) or personhood (which we

suspect some other mammals may possess to a limited extent (for more on this subject see chapter three)).

Notes and References

1. Stell, L K http://www.pitt.edu/~cep/41-3.html.
2. Feldman, F (1992).
3. *Ibid*, p15-16.
4. Green, M, and Wikler, D (1981), p106.
5. Gervais, K G (1986), p2.
6. In this essay I shall discuss only two main types of analysis of what it means to be dead, thus ignoring a third position, sometimes known as the 'moral' definition of death (*eg* Veatch) which states that a person ought to be declared dead when his or her life is no longer worth living. Although I believe that the definition of death, or at least finding a workable criterion for declaring death has important moral implications, I believe that the analysis of the concept of death is a biological rather than a 'moral' sort of thing. Unfortunately, limitations of space prevent me from discussing this fascinating proposal here.
7. *Ibid*, p22.
8. Lamb, D (1985), p9.
9. Becker, L (1981), p42.
10. Von Bertalanffy, L (1968), p128-9.
11. Becker, L (1981), p42.
12. Dawkins, R (1989), p51.
13. Pallis, C, and Harley, DH (1996), p29.
14. Jameson, B, and Bonner, S (2002), p3.
15. *Ibid*, p3.
16. Searle, J (1992), p160.
17. Lamb, D, (1985), p37.
18. President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research (1981), p35.
19. Korein, J (1978), p27.
20. Neurosurgery, vol. 18, 1986, p565-7, cited in Singer, P. (1994).
21. Singer, P (1994), p31.
22. *Ibid*, p31.
23. For a plausible account of the evolution of consciousness, see Nicholas

Humphrey, A History of the Mind, Chatto and Windus, 1992.

24. Seifert, J (1993), p176.
25. in Zaner *et al* (1988), p 207
26. Skegg, P D G (1984), p204.
27. Green, M, and Wikler, D (1981), p53.
28. Gervais, K G (1986), p70.
29. Green M, and Wikler, D (1981), p57.
30. *Ibid*, p57.
31. *Ibid*, p57.
32. President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research (1981), p35.
33. Adapted from Toole, G, and Toole, S (1991).
34. The Sunday Times, 1st March 1998, p24.
35. Green, M and Wikler, D (1981), p61-2.
36. *Ibid*, p62.
37. *Ibid*, p71.
38. *Ibid*, p72.
39. I thought of this argument myself, but found a version of it, elucidated much more clearly than I have done, in Gervais, p115.
40. Green, M, and Wikler, D, (1981), p71.
41. *Ibid*, p70.
42. *Ibid*, p51.
43. McMahon, J (1995), p93.
44. Sacks, O (1995), p43.
45. *Ibid*, p46.
46. *Ibid*, p55.
47. Gervais, K G (1996), p117.
48. *Ibid*, p153.
49. *Ibid*, p11.
50. Lamb, D (1988), p45-6.
51. Gervais, K G (1986), p157.
52. *Ibid*, p152.
53. *Ibid*, p150.
54. Lamb, D (1985), p53.

55. *Ibid*, p56.
56. Levy DE *et al* "Differences in cerebral blood flow and glucose utilisation in vegetative versus locked-in patients", Annals of Neurology, 22, 673-682, cited in McCullach, P (1993), p58, and in Lamb (1985), p54.
57. http://www.med.upenn.edu/bioethic/Museum/Jadrovski/PVS.HTM.
58. Gervais, K G (1986), p119.
59. Lamb, D (1985), p13.

Chapter Two

Restrictions on the use of dead people as donors (or "being human and dead is not sufficient")

There is an increasing discrepancy between the number of organs available and the number of potential recipients. Geoff Koffman, the Editor of the British Transplantation Society newsletter, states "the current system [of organ procurement] is failing as witnessed by the declining number of cadaveric renal transplants performed in recent years together with the growth of the national waiting list".[1] Emotive appeals for more organs are made by those who are dying or becoming debilitated whilst awaiting transplants, and this suffering is undoubtedly immensely distressing to the patients themselves, their families and their medical caregivers. It is understandable that many of those with first hand experience of end-stage organ failure support extremely bold policies of organ procurement.[2]

Dead people are, currently, the most common source of organs – in the year 2001 2339 cadaveric organs were transplanted in the UK: 378 living donor organs were used in the same period.[3] As I noted in chapter one, taking organs from dead people seems, *prima facie*, to raise fewer ethical complications than taking organs from other sources. However, as the living donor figures show, death is not a necessary condition for the donation of organs for transplant (I shall argue in chapter four that the removal of organs from a living but irreversibly unconscious donor may also be acceptable under certain circumstances). Death is also not a *sufficient* condition, either legally or morally, for donation. In the United Kingdom organ procurement from cadaveric donors currently operates according to this assumption as set out in the Human Tissue Act 1961, covering England, Scotland and Wales and the Human Tissue Act (Northern Ireland) 1962. Donation is on an 'opt in' basis – the fact that there is a suitable ventilated body in an intensive care unit does not, people think, give us free rein to do as we like with it.[4] Those who wish their organs to be used in the event of their death may choose to carry donor

cards or to place their name on the organ donor register. If they should die in such a manner that their organs are suitable for transplant the subject of donation is raised with the relatives who retain the power to override the donor's decision. In the case of someone who has not expressed an opinion during life the relatives are used as proxy decision makers. The decision of the relatives is deemed to override any prior wishes the donor has expressed – "Even where there is evidence, such as a signed donor card or registration on the NHS Organ Donor Register, that the deceased wished to be a donor, relatives may refuse consent. Although technically the doctor could proceed with the removal of organs, in practice the wishes of relatives will always outweigh those of the deceased".[5] In the rare circumstance that the relatives cannot be traced and an appropriate search for them has been fruitless the 'responsible officer' of the hospital in which the body lies may give consent. Under no other circumstances may cadaveric organs legally be removed.

It is known that this system fails to capture all potentially usable organs: each year people who would make very suitable donors die in hospital without being utilised. The precise number is very hard to estimate: data is being collected on all hospital deaths in a three month period in 2002 in order to gain an accurate knowledge of the number and of the reasons why such patients are not brought to the attention of the transplant teams. However, it is thought that perhaps as many as twenty five percent of ventilated patients declared dead according to brainstem criteria in Intensive Care Units are not referred to transplant services and their relatives are thus never approached regarding a donation. Furthermore around twenty five to thirty percent of families approached refuse consent for their relative's organs to be used (this is a figure for the UK: the US figure is thought to be as high as 50%).[6] Thus there is a 'pool' of recently deceased people whose organs are 'wasted'; whether due to pressures on intensive care staff preventing an approach being made, to a very understandable unwillingness to intrude on a family's grief, or to a refusal by the next of kin.

There is another, potentially larger, pool of patients who have recently come to be considered as a possible source of organs. Patients dying on general and neurosurgical units and those who come into Accident and Emergency departments and cannot be resuscitated – in other words patients whose deaths are determined

to have occurred according to non-brainstem criteria – have recently returned to prominence as a source of organs, having not been so considered since the introduction of brainstem death criteria.

The structure of chapter two

In this chapter I shall address the following questions. Ought transplant teams to have access to all physically suitable organs in order to help those with end stage organ failure to live? And what may be done to someone who is dying but not yet dead in order to prepare him for use as a donor?

I shall assume in this chapter that there exists a satisfactory definition of death (whether mine or not) and that the diagnosis of death is therefore not contentious.

'Hard Law'

In 1999 the British Transplantation Society (BTS) conducted a referendum among its members, assessing opinion on what they called 'presumed consent/opting out' legislation – a series of proposals for changing the donation rules from the present opt in system to something 'stronger'. One of these, the so called 'hard law', proposed that organs always be harvested from suitable deceased people, regardless of their prior wishes, or the wishes of the family. A similar idea was also independently propounded by John Harris in a lecture given to the Manchester Institute for Nephrology and Transplantation in June 1999 and in several newspapers around that time. In what follows I tend to use Professor Harris' formulation as he goes into more detail than does the BTS (and also because the proposal was rejected by BTS members). Harris' claim seems to be that the law governing organ donation in this country ought to be changed from the current 'opting in' policy to something much stronger.

Harris says:

> "The donor card scheme is clearly failing us all. We must get away from the idea that people can allow their bodies and those of their relatives to be simply buried or burned when they die. This is a

> terrible and cruel waste of organs and tissue that may save life or restore health... The problem is that we, as a society, have bent over backwards to make sure that potential donors and their relatives are protected against anything that might cause them distress or unease. But the same consideration has not been shown to potential organ recipients and their families. Both are entitled to our concern. There are then two groups of people we must consider, donors and recipients. If we ask what each group stands to lose if their preferences are not respected we get very different answers. One group stands to lose their lives. The other group have already lost theirs and at worst, will know prior to death that one of the many things they want to happen after their deaths will not come to pass".[7]

He continues:

> "One way of expressing an equality of concern for both groups of people, bearing in mind what both stand to lose, would be to ensure, through legislation, that all cadaver organs, organs from dead bodies, should be automatically available at death without any consent being required. The dead after all have no further use for their organs, the living do".[8]

Harris' scheme is ostensibly an opt out proposal: he says "People would not have the ability to register objections except for the strongest reasons. They would have to explain why they would wish other people to die rather than have their organs used."[9] However, it contains the potential for forced excision against the 'donors' and the families' wishes if other sources of organs cannot meet demand. Harris draws analogies with Coroners' post mortem examinations, for which people may not refuse consent and in talking of people's right to conscientiously refuse consent says "The crunch, of course, comes when ... conscientious objection will cost lives. Then we have a hard choice to make. It is surely far from clear that people are entitled to conscientiously object to practices that will save innocent lives... Fully consensual schemes are always best. But when so much is at stake, thousands of lives in Britain alone, and hundreds of thousands, perhaps millions world-wide, we

must consider even mandatory schemes to prevent such needless loss of life".[10]

What, if anything, is wrong with this policy? I should begin by noting that I agree with Professor Harris that the number of organs available for transplant should, obviously, be increased if the increase can be achieved by morally acceptable means. I depart from him when considering what is morally acceptable – I think that Harris' proposed policy is too demanding. Harris is prepared to countenance the idea of involuntary posthumous organ excision if this is the only way of obtaining sufficient organs for transplant. I do not (necessarily) object to opt out policies (of this more later) – I do object to non opt out policies.

According to Harris, involuntary posthumous organ excision is not only morally acceptable, it is morally *required*, under some circumstances, due to the large number of people waiting for organs who will die if a suitable match does not become available. By increasing the supply of organs we would be able greatly to reduce the number of deaths among those on the waiting list. Thus the right course of action is the one that produces this good, the action that saves the greatest possible number of lives while, according to Harris, nothing of comparable importance is lost as a result.

Why is it wrong to remove organs from the dead against their wishes? Harris is clearly correct to claim that dead people can never again be aware of anything and so lack the experience of having been 'harmed' if their organs are used after their death contrary to their wishes. I shall argue that Harris' talk of considering both the donor and thwarted recipient masks two contentious issues in the debate between utilitarian and other moral theories.

Can we compare harms?

A minor problem with Harris' claim is that I am at a loss to think of a way to compare the losses to potential donor and thwarted recipient except in a very rough intuitive manner. How does one compare having one's posthumous wishes disrespected to dying? These seem to me to be harms from completely different realms and I am unable to conceive how we might find a scale on which to order them.

Need we compare harms?

The problem with Harris's 'equal consideration for the potential donor and the recipient' requirement is wider than the specific case of organ donation. It is, rather, a particular example of the ongoing debate in moral philosophy about the relative primacy of 'the right' and 'the good'. The response to Harris' claim, then, goes much deeper than this particular problem in applied ethics, and forms an objection to utilitarianism considered as a whole. The objections take two main forms, I call them 'the problem of distributive justice' and 'the problem of non-moral space'. Both objections stem, essentially, from the fact that utilitarianism denies autonomy to moral agents: first because it requires that they be used as means to another's end if the consequences are sufficiently good and second because they are compelled at all times to maximise good results. In opposition to this we might say, with Charles Fried, that "right and wrong have an independent and overriding status because they establish our basic position as freely choosing entities. That is why nothing we choose can be more important than the ground – right and wrong – for our choosing. Right and wrong are the expressions of respect for persons – respect for others and self-respect".[11] Because this discussion forms only part of what I wish to say in this chapter I do not present a full argument for the claim that the right overrides the good – I merely offer a synopsis.

The problem of distributive justice

The first problem is that while it is rational within a life to suffer harm in order to obtain some benefit this principle cannot straightforwardly be applied *between* people in the manner which Harris attempts here. (*nb* I hope that my use of the definite article here is not misleading: I do not wish to imply this is the only 'problem of distributive justice' – simply that it is the problem distributive justice raises for Professor Harris' policy.) As Norman Daniels puts it: "it is rational and prudent that I take from one stage of my life to give to another, in order to make my life as a whole better. But it is *morally problematic* just when society can take from one person to give to another in order to maximise, say, total happiness"[12] John Rawls sets out the utilitarian position as follows: "a society is properly arranged when its institutions maximise the net balance of satisfaction. The principle of choice for an association

of men is interpreted as an extension of the principle of choice for one man".[13] Making this extension work requires "conflating all persons into one through the imaginative acts of the impartial sympathetic spectator" and so the fundamental objection is that "Utilitarianism does not take seriously the distinction between persons".[14] Or, as Robert Nozick puts it, "Individually, we each choose to undergo some pain or sacrifice for a greater benefit or to avoid a greater harm... Why not, *similarly*, hold that some persons have to bear some costs that benefit other persons more, for the sake of the overall social good? But there is no *social entity* with a good that undergoes some sacrifice for its own good. There are only individual people, different individual people, with their own individual lives".[15]

We (usually) think that courses of action that involve harming innocent people (as well as others such as lying and stealing) are morally unavailable to us even if our goal is to help others: this thought is denied by the utilitarian. The objection, then, is that *utilitarianism yields some very counter-intuitive solutions to questions of distributive justice.*

How might we defend the claim that we must not harm people even to save the lives of others? Nonutilitarian theorists would dispute the claim that the pursuit of utility (in this case maximising the number of lives saved) should be the fundamental objective that guides our actions. The basic normative principle of John Rawls' contractualism is that agents behind the veil of ignorance would agree to respect autonomy. "They would agree not to interfere with one another's projects, except where this is necessary to prevent a similar interference with their own".[16] Rawls says that "It has seemed to many philosophers, and it appears to be supported by the convictions of common sense, that we distinguish as a matter of principle between the claims of liberty and right on the one hand and the desirability of increasing aggregate social welfare on the other; and that we give a certain priority, if not absolute weight, to the former. Each member of society is thought to have an inviolability founded on justice or, as some say, on natural right, which even the welfare of everyone else cannot override".[17] Although Rawls thinks that the above is common sense he also provides an elaborate philosophical defence of the idea by arguing that these restrictions are the consequences of the principles which would be chosen by people with diverse goals making choices from behind his veil

of ignorance. Because people are broadly motivated by self interest (desiring happiness, freedom and so on), the agents operating behind the veil of ignorance are motivated in the same way and they know they will retain these desires whatever specific desires and interests they develop in life. "The agents will know that, whatever they want, they will want their most important desires to be satisfied, they will want the freedom to satisfy them, and they will want the power to do so".[18] People operating behind the veil of ignorance, motivated by their discrete ends, would choose a more-or-less equal distribution of goods and services, deviating from this only when the new arrangement is better for the worst-off than under any other arrangement (the 'difference principle'). "Since agents in the original position are to be ignorant of their place within the structure of the society that will result from their choice of basic rule, there is an initial presumption in favour of equality of distribution of goods and duties. For none will wish to be disadvantaged. They may rationally accept deviations from this basic equality however, provided that the resulting increase in efficiency *leaves the worst-off person under the new system better off*'.[19] So Rawlsian contractualism resolves the problem of distributive justice – avoids having to claim that innocent people ought to be harmed, or that we should lie or cheat, if so doing led to an overall good result – as rational agents in the original position would not agree to such a principle.

The dead are harmed by involuntary organ excision. And the benefit to organ recipients does not outweigh the harm.

I shall argue that dead people are harmed by being used as organ donors against their wishes. Harris notes that the dead have already lost their lives – they cannot ever again be *aware* of any harm done to them. He believes it follows from this that the worst thing that can happen to them is knowing premortem that their wishes will not be respected. I disagree: I wish to argue that the dead have 'surviving interests' which are harmed when they are used as unwilling organ donors. And the harm done is not outweighed by the benefit conferred upon the recipients of organs obtained in this way.

In order to establish this, I need first establish that it matters in any way to the dead person what happens to them after death. This will involve a digression away from

the case at hand into the more general question of what constitutes an interest and how interests confer obligations upon other people.

Interests

The account of interests and harms to interests which I shall utilise throughout this work is the theory propounded by Joel Feinberg in his 1984 book 'Harm to Others'. Feinberg says "One's interests, then, taken as a miscellaneous collection, consist of all those things in which one has a stake, whereas one's interest in the singular, one's personal interest or self-interest, consists in the harmonious advancement of all one's interests in the plural. These interests, or perhaps more accurately, the things these interests are *in*, are distinguishable components of a person's well-being".[20]

What sort of things have interests? A popular approach, and one which I shall adopt, is to say that, *usually*, consciousness or sentience is necessary for the possession of interests. Consciousness and sentience are not the same thing. As Mary Anne Warren notes "To be sentient is to be capable of at least some of the many forms of suffering and enjoyment... Because not all conscious experiences are either pleasurable or painful, evidence of consciousness is not necessarily evidence of sentience".[21] However, as she also notes, the two capacities do tend to co-exist: conferring, as they do, a joint survival advantage. There is little point in being able to feel pain if one is unable to recognise the source of the pain and remember to avoid it in future. In what follows I generally refer to consciousness as being that which confers interests.[22]

It is important to recognise the limited scope of what is being claimed here: to say that only conscious beings have interests is not to say that nonconscious living things cannot have welfare needs. It is to say only that they themselves cannot care about their welfare.

> "If we think of interests as stakes in things, and understand what we have a stake in as defined by our concerns, by what matters to us, then the connection between interests and the capacity for

> conscious awareness becomes clear. Without conscious awareness beings cannot care about anything. Conscious awareness is a prerequisite to desires, preferences, hopes, aims and goals. Nothing matters to nonsentient nonconscious beings. Whether they are preserved or destroyed, cherished or neglected, is of no concern to them".[23]

'Harming' as a setback to interests

Harming, according to Feinberg, is "the thwarting, setting back, or defeating of an interest"[24] – we are harmed when something in which we had a stake is damaged. Harming need not come only from the action of an agent – interests can be blocked or defeated by ill luck without any agency being involved. However interests can be *invaded* only by human beings, whether acting intentionally or through culpable omissions: this is the type of harm that concerns us here. "One person harms another in the present sense then by invading, and thereby thwarting or setting back, his interest".[25] "An invasion is a (usually hostile) crossing of another person's boundaries, an encroachment on the other's territory. To enter wrongfully the sphere of another person's self-government is to violate his autonomy, that is to infringe his right of self-determination".[26] Those with end stage organ failure are harmed – their interests are set back or impeded – by their illnesses and if they die of them then their interests are defeated. However, does the possibility of overcoming these harms justify an invasion of the interests of others?

I realise that this brief discussion of interests leaves some unanswered questions – I will explore the interests of the living in more detail in chapter three. In this chapter I intend to explore only the special sort of interests – 'surviving interests' – which can be ascribed to the dead. I restrict the discussion in this way as these interests are on the periphery of the concept: the idea that the dead can have stakes in things seems somewhat odd. I think that little light will be shed on these special sorts of interests by a discussion of less controversial interests. That said, I believe that surviving interests, like the interests of the living, confer moral status on their possessors.

The link between consciousness, interests and moral status

According to the Feinberg/Steinbock account, interests and consciousness are (usually) necessary and sufficient conditions for the attribution of moral status to a being. "It is ... [the] ... notion of *mattering* that is key to moral status. Beings that have moral status must be capable of caring about what is done to them. They must be capable of being made, even if only in a rudimentary sense, happy or miserable, comfortable or distressed".[27]

'Moral status' will be made to do quite a lot of work in this piece of writing so I ought to explain what I mean when I use it. The concept of moral status is, according to Mary Anne Warren, "a means of specifying those entities towards which we believe ourselves to have moral obligations, as well as something of what we take these obligations to be".[28] I shall follow Warren's definition of moral status as being simply something which generates obligations in others in what follows (rather than, as other authors have done, discussing whether moral status also confers duties on those who possess it.[29]) This is because the entities whose moral status I shall discuss in this work – dead and irreparably unconscious human beings and non human animals are all incapable of having duties to others.

I should note that in this work I talk of 'moral status' but not of 'rights'. In so doing I am following Bonnie Steinbock in attempting to evade the quagmire that is the rights debate. Steinbock states:

> "The question of who counts morally is more basic [than the question of who has rights or what sort of rights] in that it is an issue for all moral views even those that reject rights... Interests are the content of rights; without interests, there would be nothing for rights to protect. Equally, if a being has no interests, it can have no claim against others, nothing that they are required to consider from a moral perspective. The possession of interests is therefore a minimal condition for both rights and moral status. All beings who can have rights have moral status."[30]

A second reason for wanting to avoid the matter is that the ascription of rights to

many of the creatures I shall discuss: the dead, the irreversibly unconscious, and animals is likely to arouse controversy. Because of anxieties of this sort I prefer to introduce the idea of moral status in terms of obligations, not rights. As John Wetlesen says "Even if a subject is not ascribed rights, other agents may have direct duties towards it, and this is the main thing".[31] I leave the question of whether there really are such things as moral rights, and who possesses them, unaddressed. My concern here is with the interests which confer moral status, those which confer duties upon others: their nature and from whence they derive.

A criterion for moral standing must satisfy certain conditions if it is to be defensible. The first of these is that the properties which admit a being to the class of creatures possessing moral standing must be empirical properties. As LW Sumner states "The function of a criterion is to distribute a certain moral right [or moral standing] among the entities in the world in accordance with their possession or lack of certain properties. It cannot serve this function unless we have some independent means of ascertaining which entities possess the properties in question".[32] The second condition is that the criterion must be general, "it must be capable of resolving most (preferably all) questions of moral standing".[33] I hope that the 'interests view' will demonstrate that standing ought to be conferred on the dead, animals and irreversibly unconscious human beings. Steinbock hopes it also applies to future (as yet undetermined) people and to foetuses too, but such applications are beyond my remit here. The final requirement is that a criterion for moral standing must be *morally relevant*. "There must ... be some reason for thinking that it is in virtue of an entity's possessing just *these* properties that it has *such* rights [or, still trying to avoid the language of rights, that it must or must not be treated in certain ways], that *these* properties mark the crucial watershed between entities with these rights and entities without them".[34]

The limits of moral status as a source of obligations

A moral status theory cannot, of course, account for all our questions about human moral obligations. Warren states "Many of our obligations are based not only on the moral status of those towards whom we are obliged, but also upon situational factors, such as a promise we have made, a personal relationship in which we are

involved"[35] and so on. Ascriptions of moral status simply represent very general claims about the way we ought to conduct ourselves regarding certain sorts of beings and the obligations we owe to such entities.

The dead as a problem case

How does the 'interests view' of moral status confer moral status on dead people? Although there is a clear connection between interests and consciousness, although the standard case of an interest-holder in this sense would be a conscious being, this does not account for all our intuitions concerning the sort of being which is *typically* conscious but for some reason is not in the present case. More specifically, following Feinberg, I would like to extend the class of interest-bearers to those beings which *are, were*, or *will be*, conscious (although in this piece of writing I am concerned only with those who *were*). In other words, following Feinberg, I consider going against someone's posthumous wishes regarding organ donation to be a 'harm' rather than simply a 'wrong', although it is also a wrong. It is a harm, I shall argue, because it is an invasion of interests which survive their death. But the notion of 'harming' seems to imply a change in state of the person affected, at least in our common sense understanding of the word. So it is difficult to apply this notion to those whose lives have ended: surely nothing can ever again change for them (either for better or worse)?

This is problematic – nonconscious things with a 'welfare' such as plants are denied interests on the Feinberg/Steinbock account – they do not have moral status in themselves because they themselves do not care what happens to them (although this need not mean we have no moral obligations *regarding* them). If non conscious entities do not possess moral status why should we make an exception simply because a given non conscious entity was once conscious? My argument that dead humans are relevantly different from plants and inanimate objects has two parts. In this chapter I present my argument for dead people having some direct moral status by arguing that some interests survive death and so can be harmed. And I discuss why plants and machines lack moral status in my discussion of more 'usual' interests in chapter three.

Posthumous harming as a 'puzzle case'

How can something happening after death be a harm to the dead person? This is a tricky problem as intuitions pull in both directions. On the one hand we do feel sorry for a dead person if a project to which they devoted their lives collapses in ruins soon after their death, on the other hand we are acutely conscious of the fact that they can never know of it. In what follows I draw heavily on the account of posthumous harms given by Joel Feinberg and George Pitcher: I have little original to say. The idea of posthumous harming is a very perplexing one: Pitcher says "On the one hand, we think that if the business Mrs White established and was proud of in her lifetime should collapse in ruins soon after her death, that really can't be a disaster *for her.* She is beyond disasters of any kind. On the other hand, we cannot rest quite content there: we think that in some way we do not wholly understand, it would have been better for Mrs White if her business had not failed so soon after her death."[36]

How can interests survive death? Feinberg distinguishes between 'want-fulfilment' and 'want satisfaction': only the latter involves an experiential requirement. "The *fulfilment* of a want is simply the coming into existence of that which is desired. The *satisfaction* of a want is the pleasant experience of contentment or gratification that normally occurs in the mind of the desirer when he believes that his desire has been fulfilled."[37] We usually think that want-satisfaction is less important than want-fulfilment. Feinberg says "The pleasure that normally attends want-fulfilment is a welcome dividend, but the object of our efforts is to fulfil our wants in the external world, not to bring about states of our own minds".[38] "Because the objects of a person's interests are usually wanted or aimed-at events that occur outside his immediate experience and at some future time, the area of a person's good or harm is necessarily wider than his subjective experience and longer than his biological life... When death thwarts an interest, the harm can be ascribed to the person who is no more, charged as it were to his "moral estate"".[38] George Pitcher invites us to reflect on this by considering two possible worlds: in World I a philosopher is feted after his death, in World II a disgruntled neighbour burns down his house and destroys his life's work, preventing anyone ever seeing it. Pitcher says "we would all, I think, judge that the philosopher's life in World I is better than his life in World

II, and that the neighbor's vicious action on World II really harms the philosopher".[40]

There seem to be two separate problems with the idea that people can be harmed after their deaths.

The experience problem

The first (which is usually called the 'experience requirement' or 'experience problem') is the problem we face in making sense of the idea that someone can undergo a harm and not be aware of it. The dead obviously cannot be aware of anything bad that happens after their death. However, I think this seeming problem in ascribing interests to the dead is not in fact a problem. For we can think of circumstances in which we would want to describe a living person as being harmed, even if the victim is not aware of it.

The experience requirement for harming applies to persons still living who are betrayed, deceived, ridiculed behind their back, or whose life's work collapses, as Mrs White's did, even if their lack of awareness is due to something of rather less consequence than death – say perhaps they are on holiday on a remote island with no telecommunications. And in such a case of harm to a living but ignorant person we do not usually think that the harm is done only when it is discovered. If the act itself were not harmful then the discovery of it would not be a bad thing. Nagel says "Loss, betrayal, deception, and ridicule are on this view bad because people suffer when they learn of them... For the natural view is that the discovery of betrayal makes us unhappy because it is bad to be betrayed – not that betrayal is bad because its discovery makes us unhappy".[41] Strong intuitions, then, pull in favour of something more than simply *experience* being important.

Conversely, we do not think that mere experiences, in the absence of 'real' events in the world, are somehow as rewarding as the real thing. As Jeff McMahon points out, it also counts heavily against the experience requirement that experiential states are sometimes irrational or inappropriate, and that it is possible to induce false beliefs of harm or benefit.[42] Consider the famous Experience Machine of Robert Nozick, capable of simulating any desired experience to a passive user

floating in a tank. Nozick asserts (correctly, I feel) that we would not want to plug into the machine because "we want to *do* certain things, and not just have the experience of doing them. In the case of certain experiences, it is only because first we want to do the actions that we want the experience of doing them ... [and because] ... we want to *be* a certain way, to be a certain sort of person. Someone floating in a tank is an indeterminate blob".[43] To be sure, in most cases of harming, the victim is aware that he or she has been harmed. That does not mean that these fringe cases of inexperienced harms cannot count as harms.

So it seems relatively easy to dismiss this first problem: the requirement that all harms must be experienced harms. Why should the fact that the victim can definitely never become aware of the matter differ from a case where, as a matter of contingent fact, he does not become aware of it? For these reasons, Feinberg contends, "harm to an interest is better defined in terms of the objective blocking of goals and thwarting of desires than in subjective terms; and the enhancement or advancing of an interest is likewise best defined in terms of the objective fulfilment of well-considered wants rather than in terms of subjective states of pleasure".[44]

However, to say that the dead have interests capable of being harmed still seems odd in a way that talk of unexperienced harm to the living does not. Perhaps the problem lies in the fact that the dead person no longer exists. Who is the subject of these harms?

The 'no subject' problem

In what sense can we owe an obligation to someone who no longer exists? Even if someone expresses an objection during life to the removal of their organs after death for transplant purposes, once they are dead not only is there no longer a person who holds these opinions or objections, but also there is nobody to be distressed if the wishes are violated. (The family of the decedent may be distressed, and may possess certain rights which serve as reasons why the body should not be used, but that is a different matter and will be discussed below.) The second problem, then, concerns who is the *subject* of such a harm – as long as one is alive one's posthumous wishes are not in a position to be damaged, once one

dies there is no 'you' remaining to be harmed.

In Tom Stoppard's 'Rosencrantz and Guildenstern are Dead' the protagonists debate the 'no subject' problem.

Rosencrantz: We might as well be dead. Do you think death could possibly be a boat?

Guildenstern: "No, no, no... Death is ... not. Death isn't. You take my meaning. Death is the ultimate negative. Not-being. You can't not-be on a boat.

Rosencrantz: I've frequently not been on boats.

Guildenstern: No, no, no – what you've been is not on boats. [45]

This dialogue I think neatly captures the Epicurean idea that "death, the most terrifying of ills, is nothing to us, since so long as we exist death is not with us; but when death comes, then we do not exist. It does not then concern either the living or the dead, since for the former it is not, and the latter are no more".[46]

How can the now dead person be harmed? All that remains of him is his material body. To avoid this problem we must think of the person not simply in terms of his present condition but from an objective and timeless perspective. Feinberg writes "The view I would like to defend is that the interests harmed by events that occur at or after the moment a person's nonexistence commences are interests of the living person who is no longer with us, not the interests of the decaying body he left behind".[47] The account of harming the dead to which I adhere, following such authors as Feinberg, George Pitcher, Thomas Nagel, Fred Feldman and others involves considering more than just the subject of the harm's present state when deciding whether or not to call an occurrence harmful. Nagel says "most good and ill fortune has as its subject a person identified by his history and possibilities, rather than merely by his categorical state of the moment – and ... while this subject can be exactly located in a sequence of places and times, the same is not necessarily true of the goods and ills that befall him".[48] On this account, harms of which we are unaware, even harms after death, "constitute a perfectly intelligible catastrophe".[49]

This helps us to begin to make sense of the idea of posthumous harming. Feinberg says "All interests are the interests of some person or other, and a person's surviving interests are simply the ones that we identify by naming *him*, the person whose interests they were. He is of course at this moment dead but that does not prevent us from referring now, in the present tense, to his interests, if they are still capable of being blocked or fulfilled, just as we refer to his outstanding debts or claims, as if they are still capable of being paid. The final tally book on a person's life is not closed until some time after his death".[50]

The idea that posthumous events can constitute harms has enormous intuitive plausibility. Most people (even philosophers who hold that harms, generally, must be experienced to count as harms, for example, Peter Carruthers[51]), think that death is a harm. More than that, they think that death is often the worst harm imaginable (this depends on factors such as the age of the dying person, and their condition – the death of someone in intractable pain may not be seen as a worse harm than continued life).[52] Yet the 'no subject problem' applies with equal force to the idea that death is a harm as it does to the notion of a posthumous harm: if one denies that the latter can be harmful one must also deny that the former can be. And consider our everyday thoughts about murder: we do usually think that this is a great evil. But if the murder is instantaneous and painless then, according to the no subject problem, where is the harm? This seems very counterintuitive. We need to be aware, also, that the 'no subject problem' applies to some unfortunate people who are not dead. Consider someone rendered irreversibly unconscious: such a condition is, subjectively, identical with death. That is to say, unlike the living but ignorant who could theoretically be made aware of their situation, these people can never know about things occurring after they lose consciousness for the last time. Our pretheoretical feelings when we think about such things are not only sympathy for the family of the victim of such an accident, we also feel sorry for the victim himself: we feel that a terrible thing has befallen him even if he himself is not aware of it. I hope the above discussion has been sufficiently compelling to establish that there is at least 'something in' the idea that one can be harmed by events occurring after one's death, although, given the seemingly intractable debate on the matter, I am sure they do not provide a final solution.

What sorts of interests survive death?

Of course, not all interests can survive death: only the type which Regan calls 'preference interests' – interests *in* things – are really plausible candidates (I discuss welfare and preference interests in much more detail in the next chapter). And the category needs to be restricted still further: the sort of preference interests that require a change in the person's state will necessarily expire with their owners. So, for example, a desire that I finish a project (not that my project be finished) will die with me, as will my interest in enjoying myself and in avoiding pain. The interests which survive are those which do not involve the deceased taking an active role – say an interest in one's children or one's business flourishing. I think that concerns regarding the disposal of one's body are of this sort.

Harming the antemortem person

Having established, I trust, the intuitive plausibility of the idea that a dead person can be harmed by having his surviving interests invaded, it is now open to me to ask in what way can they be harmed? George Pitcher and Joel Feinberg distinguish ways of thinking about the deceased into two categories: the postmortem person and the antemortem person. The former would be a description of the dead person as they are now – dead matter; the latter a description of the person as they were while living. As Pitcher writes: "no one would want to argue seriously that a postmortem person can be harmed after his death... A serious question can arise only over the issue of whether or not an antemortem person can be harmed after his death. The question is this: is it possible for something to happen after a person's death that harms the living person he was before he died?".[53]

'Backward causation'

There is an obvious problem with this sort of account however: "If the interests are those of the living person who is no more, then the problem is to explain how his lot can be made better or worse, as it were *retroactively*".[54] The solution to this apparent paradox is that "posthumous harms do not entail backward causation because they ... do not entail physical causation at all... The occurrence of the

harmful posthumous event ... *makes it true* that the antemortem person is harmed, and that occurrence is in a sense *responsible* for the antemortem harm".[55] Pitcher offers the analogy of harm caused by events occurring some distance away: if a man, Black, loses his son in a plane crash in some remote part of the world we would still say that he is harmed without needing to postulate "the plane crash sending out infinitely rapid waves of horror, diminishing Black's metaphysical condition".[56]

Problems remain of course: there are, for example, problems in determining *when* an antemortem person begins to be harmed by a posthumous event.[57] Feinberg notes that "we would be well advised not to seek more precision in answer to such questions than the subject matter permits"[58], which may or may not be a cop out. And, despite its slight incongruity, this account seems to me to be the best way of capturing the important intuition that the dead are harmed by events occurring after their deaths. Feinbergs' earlier work, which involved interests surviving their owner as free floating entities, was comprehensively refuted by Ernest Partridge (1981).

To conclude this section, I believe that we have direct moral obligations to the dead based on properties of the people themselves. If I am correct then the removal of organs against the wishes of the deceased seem to be a definite case of posthumous harm.

Are 'surviving interests' sufficient to outweigh the benefit to potential recipients?

Surviving interests confer moral status upon the dead just as more usual interests confer moral status upon the living – they give us moral reasons to do with the person themselves not to do certain things to them. But how strong are the obligations conferred by surviving interests? As an analogy, in chapter three I will argue that animals have interests and so possess moral status and that we thus have *prima facie* reasons not to cause them pain or to kill them. Yet I still believe that it is morally permissible to kill them in order to give their organs to humans – the enormous benefit of saving a human life trumps the obligation to (usually) refrain from taking animal life. By the same token is it not open to Professor Harris

to concede that the dead have surviving interests but still to claim that these interests are overridden by the interest in continued life of those in need of organs? I need to provide further argument if I am to convincingly argue that we are morally prohibited from excising organs from the unwilling dead.

I do not think that harming 'surviving interests' is the only thing which makes Harris' policy morally impermissible. I also object to it on the grounds that using the dead against their wishes causes moral problems for the living and, more fundamentally, because I do not believe that the situations of people living with organ failure and of potential donors need to be compared in the way that Harris believes they ought. The former is a small point, so I begin with this. The second is what I call 'the problem of non-moral space' and is given a detailed discussion in a few pages' time.

Harm to the living

It is possible to argue that there are some things which it is wrong to do after a person's death whilst denying Feinberg's claim that the dead are 'harmed'. These arguments take several forms, the following may not exhaust the possibilities: (1) that failing to respect the wishes of the dead damages an important social institution and so constitutes a harm to the living and (2) that regardless of the damage done to the institution of promising we simply ought to respect a promise made to the dead, just as we ought to respect promises made to the living. For reasons of space I cannot go into detail on these points, but offer a brief synopsis of each.

Regarding point (1), it seems plausible that to fail to respect the wishes of a given dead person would damage the institution of respecting the wishes of the dead (more formally, the institutions of keeping promises to the dead, or of respecting wills) and would leave presently living agents wondering whether their, as it were, 'to-be-deceased' wishes would be respected. As Partridge says "Formal contracts such as wills, and informal contracts such as promises, can thus purposefully and intelligibly be drawn to protect the interest of the living, while alive, to affect events beyond their death. The survivors, having similar motives, are well advised to protect their interests by respecting the wishes of the deceased, thus strengthening the just traditions and social contracts that protect the interests and expectations of

all, while alive, to have posthumous interests".[59] Respect for the living, then, gives us a reason why posthumous wishes ought to be respected. If a will is violated on the grounds that the will writer is dead and so 'beyond harm,' "those who violated the will would lessen their own expectations that their wills, in time, would be secure after their deaths".[60] And regarding point (2) it also seems plausible that, for similar reasons to those discussed above, promises can survive the death of the promisee. Barring an unforeseen change in circumstances the promiser ought still to carry out his promise. The analogy with debts may be useful here: we talk of a person's debts (or assets) as surviving them, even though they themselves are no longer capable of paying them back, or of caring if their assets are squandered.

These ways of respecting the wishes of the dead for reasons not directly concerning the dead are very useful – they avoid the lingering doubts about how the dead can be harmed and provides further ammunition against a possible Harris rejoinder that organs should be taken from the dead *even if* doing so harms them. However I prefer to think of these arguments as constituting additional reasons against disrespecting the wishes of a dead person, working in conjunction with the theory of posthumous harming, rather than in isolation. The idea that certain things done to a dead person damage *them*, the dead person, underlies certain common sense intuitions which we are loath to relinquish.

Conclusion to the 'agent centred restrictions' section

The first objection to Harris' proposal then is that it can involve harming some people in order to benefit others, an idea that strikes many people as being wrong and which is also backed up by moral argument. There are some things we *must not* do to people, just to benefit others. This does not mean that it is always wrong to harm some to benefit others of course. Whether it is wrong will depend partly on the nature of the harm, on the significance of the benefit and on the alternatives available. I discuss some circumstances under which it may be morally desirable to harm some people for the sake of others in the next section and hope from that discussion to make it clear why the plight of those needing organs, although terribly sad, is not a circumstance that justifies the unwilling excision of organs from the dead. Before I explain this, I wish to briefly explore a small side argument which

Harris employs to support his claim that organs ought always to be removed.

The argument from precedent: Coroners' postmortems

Harris is prepared for the sorts of response I made above. Because of this he argues that, although we may commonsensically believe in such 'agent centred' restrictions on action, there is in fact a precedent for going against the wishes of the dead with regard to what is done with their bodies: it is not possible to refuse consent for a Coroner's postmortem examination. "Postmortems can be ordered in the public interest. If there's a public interest in finding out the cause of death – and ... [the 1999 Alder Hey and Bristol organ retention scandals] ... show not all the bits are put back – how much greater is the public interest in saving the life of a citizen at risk?".[61]

As an aside, I think that the fact that organs were retained without consent and without the relatives' knowledge in Bristol and Liverpool is irrelevant to the present question. Harris wishes to convince us that, despite the distaste some people may feel for compulsory organ retrieval, it is something with which we ought to be made to come to terms. I do not believe anyone would accept, or that Harris is seriously proposing, that removing organs without informing the relatives (whether or not consent ought to have been obtained) is an example of a desirable practice with which the public ought to reconcile itself.

However, my main objection is to Harris' styling post mortems (PMs) as being in the public interest. I accept that the public interest and the interests of future patients with the same disease is *part* of the reason why we wish to find out the cause of death in unusual cases, but it is by no means the only reason. PMs are often done in cases where foul play or medical negligence are suspected – I would argue that in these circumstances the examination is not done for the public (although the public obviously benefit if a murderer is caught) but for the dead person – so that action may be taken against the person who harmed him, just as it would be against someone who harmed a still living person. D. Gareth Jones writes "it would seem that the nature of the consent required to carry out autopsies for audit and teaching/ research purposes is different from that required for coronial purposes when

sudden, unexplained death has occurred. In the former situation, justification for the autopsy stems far more from the needs of the biomedical profession than from those of the deceased, whereas in the latter the reverse holds".[62] PMs are also often done for the purposes of easing the grief of those left behind – to tell them why their loved one died and also, in the case where a genetic risk factor is suspected, to discover whether they too are at risk. While this is a case of doing something for third parties, not for the dead person themselves, it is not done in the 'public interest'.

Another reason why the cases are not analogous is that, following a PM, all the organs are returned to the body to be buried or cremated (barring those infamous cases a few years ago), or, if they are not, consent is specifically obtained. If the desire to remain 'whole' is what motivates many people to refuse consent to donate their organs (and it seems likely that it is), people with such beliefs may not have such a strong objection to a PM as the organs are returned to the body afterwards (although I accept that they are likely to find even the temporary removal of their organs to be offensive).

The final point is that Coroners' postmortems are relatively rare: hospital postmortems (which the premortem patient or his relatives are free to refuse) are much more common. While the public may not object to having no right to refuse if they think that PMs only happen relatively rarely (or, as is also possibly the case, while there is no public outcry because it is not common knowledge that there is no right to refuse a PM), Harris' proposal would involve a much more widespread use of the dead and so would be more likely to provoke public displeasure, I think.[63]

Second objection to Harris: non-moral space

My second main point of contention with Harris' theory is that, by claiming that our 'concern' for those in need of organs justifies our removing organs from the dead against their wishes, it is too demanding. Let us make the strongest case for Harris and ignore the difficulties I think we would face in finding a scale on which to order these different sorts of harms. Let us agree with Harris that dying is 'worse' than having one's interests regarding the disposal of one's body thwarted. Even if we

were to concede all this, it is not obvious how this would require us, ordinary people with no medical qualifications, to do anything to help those with failing organs.[64] This is, I think, the strongest objection to Professor Harris' policy. One may accept that the benefit to the living organ recipient outweighs the harm done to the dead unwilling 'donor' (or one may at least accept that it is problematic simply to assert that the harm to the dead is sufficient to rule the action out). But, even if one makes this concession to Harris, one is not required to accept that his policy should be put into practice. Regardless of the benefit obtained we need not perform involuntary organ removal as it requires too much.

Utilitarianism makes no distinction between causing an event and allowing it to happen when it was physically within our power to prevent – we are as responsible for outcomes which we fail to prevent when it is in our power to do so as we are for events we straightforwardly cause. This is at odds with our common sense belief in what Peter Carruthers calls 'non-moral space'. In ordinary life not many of us believe that we have a duty to help all those people we could possibly help (unless perhaps we have caused them to be in their harmed condition, or unless perhaps the circumstances are extraordinary), even if it would cost us little or nothing to do so. So although we can agree with Harris that it is a great shame that people are dying for lack of organs (and who could disagree) we need not agree with his conclusion that this compels us to acquire organs against the wishes of their previous owners.

Harris thinks that not only *may* people donate their organs, but that the suitable dead are *obliged* to donate their organs, or rather, that doctors are obliged to remove organs from all suitable cadavers without obtaining consent. He says that those who refuse to allow their organs to be used "would have to explain why they would wish other people to die rather than have their organs used"[65] and talks of "other areas of human life [in which] we believe that we have an obligation to ensure the survival of the maximum number of lives possible".[66] What can we say in response to this?

The importance of intention

The first thing to note is that, by talking of 'wishing to let people die', Harris seems to be tacitly appealing to the utilitarian claim that there is no moral difference between active killing and allowing to die. In 'The Marxist Conception of Violence' he makes this point explicit: "If we have a duty not to kill others, it would be strange indeed if the duty not to kill by positive actions was somehow stronger than the duty not to kill by negative actions."[67] But to say that those who refuse to donate their organs 'wish other people to die' seems to be a very strange thing to say. Surely we can differentiate between something that we simply did not do and something we refrained from with the intent that a harm occur? Why does Harris think that killing should be equivalent to letting die in this case?

I accept that, in those popular thought experiments in which a doctor, believing death to be in his patient's best interests, either acts so as to hasten death or refrains from acting to slow the process, if the underlying intention – that the patient's life is ended – remains the same, then perhaps it is difficult to speak of a moral difference between acts and omissions. However, someone who refuses to donate their organs need not have the death of the thwarted recipient as their intention (indeed we would be shocked if this were the case). They may well fervently wish that the recipient obtain an organ from another source, or that they miraculously recover from their illness. They may also not think in terms of thwarted recipients at all. All the person who refuses to donate aims at, it seems to me, is having their body remain whole after their death.

So it seems to me that, in the above, Harris conflates those cases of killing/letting die comparisons when the *intention* – that the person dies – is the same, with those cases when a death is a foreseen but not intended consequence of one's actions. While I am prepared to agree with him that the acts/omissions distinction often may not be morally relevant I think there *is* a moral difference between intending a death and simply foreseeing that it will occur. By phrasing the refusal to donate in terms of the acts and omissions distinction – in terms of 'wishing to let someone die' – Harris gives it a moral weight which it does not merit: he makes the person who refuses to donate appear morally culpable when, I believe, they are not (they may be guilty of a lack of charity but this is a moral failing of far less magnitude than allowing someone to die). And, in fact, in the case of those who refuse to donate

their organs, it may not even be correct to say that the death of the recipient is foreseen. As I noted in the introduction, not all transplants are lifesaving.

Denying agents freedom

On Harris' account the only thing that counts is the consequences: something has occurred which reduces the total amount of good in the world and which must be rectified if at all possible. But if omitting to help is thought of in these general terms – that the fact that there is someone, somewhere, who could be helped – it seems impossibly restrictive, denying agents the opportunity ever to be saintly, or to engage in non moral activities. The problem here is that, under utilitarianism, it seems impossible to do more than one ought – acts are divided into two categories: either morally obligatory or morally prohibited. Commonsense morality customarily adds a third category, supererogatory acts, which, although a very good thing to do, are not obligatory. We do not usually think that we are obliged to do 'absolutely anything' to save others, even when the cost to us is relatively trivial. We do not give all the blood we can give (indeed 90% of the population of the UK does not give at all), we do not give all our spare money to charity, we do not all place ourselves on the bone marrow donation register. And we do not think of ourselves as morally blameworthy if we spend some of our time idly watching television or on holiday rather than working for the underprivileged.

Bernard Williams says "It is because consequentialism attaches value ultimately to states of affairs, and its concern is with what states of affairs the world contains, that it essentially involves the notion of *negative responsibility*: that if I am ever responsible for anything, then I must be just as much responsible for things that I allow or fail to prevent, as I am for things that I myself, in the more everyday restricted sense, bring about".[68] Under a consequentialist scheme, agents are required to give up their personal plans and projects and, presumably, those obligations and rights stemming not from general duties one has to everyone but which arise specifically from personal situations – families, friendships, promise making, wronging *etc.*, whenever doing so would increase the general good. This requirement in itself is not the problem for utilitarianism – almost every other moral theory (nonegoistic theory at least) could require great sacrifice under appropriate

circumstances. The problem lies in the utilitarian insistence that each agent in all cases produce the best available outcome. In other words, there is a discrepancy between "the way in which concerns and commitments are *naturally* generated from a person's point of view quite independently of the weight of those concerns in an inpersonal ranking of overall states affairs, and the way in which utilitarianism requires the agent to treat the concerns generated from his point of view as altogether dependent for their *moral* significance on their weight in such a ranking".[69] It is this which alienates the agent "from his actions and the source of his action in his own conviction and thereby ... undermine[s] his integrity".[70]

The oddness of thinking that reducing suffering is always the most important thing for us to do

Why does the fact that there is this unfortunate state of affairs – a person whose organs are failing – have any consequences for what we, as uninvolved parties, not doctors or nurses, have to do? David Schmidtz makes this point well in a thought experiment he call 'Fast Pain Relief'. This imagines that there is a button which, if pushed, will cause all sentient life to painlessly cease to exist. "You will, of course, minimize suffering in the process".[71] Schmidtz says, correctly I feel, that this case "shows us that minimizing suffering is not the only thing that matters. Nor is it always what matters most. Further, there are things (*eg* all sentient life) that ought not to be sacrificed merely to minimize suffering".[72] Whether minimising suffering matters a little or a lot in the cosmic scheme of things need not be addressed because "suffering could matter quite a lot without it being true that we ought to spend quite a lot of our lives working to put an end to it".[73]

An aside about 'prevention cases'

To say all these things does not, of course, mean that the appeal to consequences has no power; it would be absurd to say this. This is the intuition from which Harris' point derives its strength I think. Most people (nonutilitarian philosophers included) tend to favour something like Harris' 'rule for maximising the number of lives saved' under certain circumstances, or at least not to rule it out.

Under what circumstances does the appeal to consequences permit (although not, I

think, compel) nonutilitarians to harm some people for the sake of others? Perhaps looking at more concrete examples of the above sort will help us reach a definite conclusion. I am thinking here of such well known philosophical 'intuition pumps' as Bernard Williams' example of 'Jim and the Indians', in which a tyrannical dictator invites Jim, a (so far) innocent bystander, to kill one of a group of hapless Indians who are due to be executed unjustly. If Jim kills the one the remainder will be set free, if he refuses all (including the one) will be shot. Or, as another example, the equally well known case of 'the fat potholer', in which, if the fat man blocking the entrance to a rapidly flooding cave is not blown up and killed he, and the rest of his trapped party, will die. If he is blown up and the entrance thus cleared the remainder of the group will be rescued. If the cases are formulated this way two important points must be noted. The first is that the situations are extremely unusual. The second point is that formulating the cases this way presents the agents with choices in which they must choose the lesser of two evils. Everyone is at risk: the fat potholer and the single Indian picked out for execution are going to die in any case. In such extraordinary cases, where a decision has to be made if all are not to perish, and where we cannot save all at risk, I think we may (although we are still not compelled in the way Harris says we are) think it right to maximise the number of lives saved, even if this does involve doing harm to some people (killing them) to benefit others. It is this combination of a rare 'one off' situation and the need to make a decision which will result in the death of some which makes the difference.

It is not very clear how prevention cases like this can be made relevant to the situation in which one of the parties is dead; in the above emergencies all are at risk. The situation becomes more complicated when acting involves harming someone who was not at risk[74] so it seems likely that even more complications would ensue when one of the parties is dead. The 'extraordinary circumstances' condition still applies however. For example, in the event of a plane crash in a remote desert when one of the passengers dies but not before he tells the remainder that he has religious beliefs that means his body must remain whole, it may be that the survivors are permitted to dissect and eat the body of the dead person if that is their only hope of surviving until rescue arrives. But because this is a 'one off' situation it does not lead to the conclusion that we can routinely use the

dead against their wishes to save the lives of others. Everyday tragedies such as the plight of those in end stage organ failure are sadly neither extraordinary nor likely to end in the foreseeable future. Thus they are not ones in which we feel a decision need be made – we cannot morally retrieve organs against the donors' and families' wishes. As Anne Maclean says "The situation ... [of people with failing organs] ... is not at all unusual, and it would not be perceived as one which requires a decision or choice".[75]

Is the case of posthumous donation unique?

It could be argued that the case of posthumous nonvoluntary organ donation is not relevantly similar to other cases in which the demands of utilitarianism are seen as excessive (such as those in which we are compelled to donate all our money to famine relief until we reach the point of marginal utility) because in the case of donating money, although the cost is arguably trivial compared to the benefit, there is still a cost. Organ donation, on the other hand, does not cost the dead person anything at all, because they can never know of it. If, as I argued above, it makes sense to talk of the dead having interests and being capable of being harmed then if some dead people wish their bodies to remain whole after their death, they can be said to have an interest in their bodies remaining whole and are harmed if this is not respected (the antemortem person is harmed).

But there is a second response to this objection: to think in these terms is to step into Harris' model of thinking – that the fact that there is something bad entails that we are duty bound to help. I do not believe this to always be the case. So the dead need not (are not compelled to) offer their remains for general use after death, just as the living need not offer to donate blood or give their money or time to charitable causes. To compel them to give up their claim to decide what ought to happen to their remains is to require too much, just as it requires too much to compel the living to forgo some things so as to make time for striving to make the world a better place.

Conclusion to the discussion of Harris' 'hard law'

Harris' theory requires too much: he needs to do more than point up the fact that organs are 'wasted' to establish we are obliged to do something about it, especially when doing something about it involves causing harm. The fact that it is physically possible for us to change things does not mean that we are obliged to do so. Whilst I am sure that my brief overview of this debate cannot provide a knockdown argument against Harris I hope my discussion has at least cast doubt on the suggestion that we are obliged to compare the two groups, donors and recipients.

Other alternatives to the opt in system of cadaveric donation

Harris' proposal does not exhaust the possibilities for change from the current position in the UK. 'Presumed consent' and 'required request' are two other options which would obtain more organs than are available under the present system. Presumed consent can take different forms: it may be 'hard', as it is in Austria, where the views of relatives are not taken into account (were it not for the possibility of opting out during life this proposal would be as strong as that of Harris) or 'soft' as in Spain, where relatives' views are sought and are allowed to override the presumption in favour of donation. Required request is as it sounds: simply an obligation on the part of intensive care staff always to ask relatives of potential donors. What can be said about these schemes? The first thing to notice is that, like 'hard law', they involve a conflict between the need to respect a patient's autonomy and the need to the maximise the number of lives saved. As Jones says "Proponents of presumed consent argue that the value of self-determination must be balanced by another value, that of maximising overall well-being or benefit".[76]

Arguments for presumed consent

Presumed consent is proven to increase the number of organs available. According to a report presented at the International Congress of the Transplantation Society meeting recently, the nations with the highest per capita organ donation rates in the world are Spain, Austria and Belgium (all operating under presumed consent laws).[77] Moving to such a policy would arguably also increase donor numbers among those declared dead according to non brainstem criteria: it would permit those who die in accident and emergency departments and on general wards to be

prepared for donation (for example by having cooling fluid introduced into their bodies, and by having chest compressions continued) while the relatives are being sought. This is not currently permitted in the UK. (I discuss these and other potential sources of organs from non heart beating donors in the next section.) Finally it is argued that presumed consent relieves the burden on families. "Many families do not know the wishes of their loved ones, and when faced with the decision at the time of a tragic event, they do not consent to donation of their next of kin's organs. We believe the paperwork should be handled before, when people are calm and thinking clearly. This shouldn't be something that the family has to deal with at the time of losing a loved one".[78]

Presumed consent is, in fact, not a great conceptual distance from the present law in the UK as set out in the Human Tissue Act of 1961. "The Act states that if a person has expressed a wish in writing or orally in the presence of two or more witnesses during his or her last illness, that their body or any specified part may be used after death, the person "lawfully in possession" of their body – interpreted as the hospital authorities if they have died in hospital – may, unless there is reason to believe the request was subsequently withdrawn, authorise removal from the body of any part in accordance with the request. *If there is no evidence of such a wish the person lawfully in possession of the body may still authorise the removal of the organs provided that, after making "reasonable enquires" there is no reason to believe that the deceased had expressed an objection or that the surviving spouse or any surviving relative objects*"[79] (my italics). However, "In practice, relatives are always consulted and asked to give explicit consent. Where they cannot be found or they refuse, donation does not take place".[80]

Arguments against presumed consent

One problem with presumed consent is the risk of causing distress to relatives and, by so doing, creating ill will which would outweigh any advantages. If organs were removed and relatives subsequently came forward with objections the cause of transplantation could suffer adverse publicity. Offending the family's feelings could have a major impact on their trust and respect for the medical profession. It is also possible that the recipient could be exposed to medical risks if organs are removed

without discussion with relatives. Families are a valuable source of information about their loved one's previous health and lifestyle and are questioned as part of the donor screening process. A final concern is that if an individual does not register an objection this silence may indicate a lack of understanding rather than an agreement with the policy. As D. Gareth Jones states "If individuals and families are not told they can opt-out, or how they may object to organ donation, presumed consent could essentially become a means of avoiding consent altogether".[81] For these reasons, in the majority of countries operating an opt out system health care professionals still ask the family for consent.[82]

Required request

Required request is the 'weakest' of the proposed changes to the opt in scheme (it entails the smallest divergence from the present opt in system). A policy of this sort is already operated in parts of the United States and, according to a circular within the transplant profession which I received some months ago, moves are afoot to move to such a policy informally in the UK (although there are no plans to make it a legal requirement). True required referral is defined thus: "that it shall be illegal, as well as irresponsible and immoral to disconnect a ventilator from an individual who is declared dead following brain stem testing without first making proper enquiry as to the possibility of that individual's tissues and organs being used for the purposes of transplantation".[83] The policy means opportunities for donation are less likely to be overlooked and supporters argue that, far from being an intrusion, approaching all families regarding donation actually eases suffering. I am not sure that all families would find that donation eases their pain, but it certainly seems to be true that, for some people, a donation can be a great source of comfort in coming to terms with such a loss. As things stand at present it is possible that they will not be given this opportunity. The website for UK Transplant – the body which orchestrates and regulates transplantation in this country – phrases this rather strongly – "Many individuals may be having their right to donate removed if their relatives are not approached. The next of kin also have a moral and legal right to know they can donate organs and tissue if they or the family so wish."[84]

Ought the UK to move to a presumed consent or required

request policy?

The British Medical Association is in favour of opt out. The general population seems to be less so. "The transplant community and the population of the UK are divided over the issue. In an opinion poll carried out by the Department of Health in 1999, 50% of the public said they favoured the current system, 28% supported a shift to presumed consent and 22% expressed no preference".[85] An opt out policy is attractive in that it captures more donors, both of the conventional heart beating brainstem dead kind and by permitting interventions on newly dead people whose deaths did not occur in an intensive care unit. It is quite likely that a large proportion of the increased numbers would come from those twenty five percent of potentially suitable brainstem dead people whose relatives are not presently approached regarding donation and from non heart beating sources whose organs would be salvageable if a presumed consent policy allowed them to be prepared immediately after death. One would hope that those people who actively object to the policy would exercise their right to opt out. However, the concern that donation under such a system could be simply the result of a failure to consider the matter rather than an informed desire not to opt out is significant. It should be ensured that the policy is well advertised and people be presented with every opportunity to opt out: a compulsory yes/no answer section could perhaps be included on driving license and passport applications. The need not to cause public outrage is also very important. The general public has been shown not to be wholeheartedly in favour of the move and, especially in light of recent organ retention scandals in the UK which shook public faith in the medical profession, it is important for transplanters not to appear to be 'body snatchers' as such adverse publicity can have a negative effect on donation rates as a whole. While neither problem perhaps gives us reason to rule out an opt out policy they provide significant stumbling blocks. If a presumed consent policy is adopted it ought to be along the lines of the Spanish system with scope for the relatives to refuse, rather than the Austrian policy, and perhaps ultimately, as Jones states, "it is preferable to increase the supply of organs by other means".[86]

Preparing the dying for donation: non heart beating donors

The various opt out policies discussed above do not exhaust all the possibilities for increasing the number of cadaveric donors. 'Non heart beating donors' (hereafter NHBDs) were, prior to the establishment of brain based criteria for death, the only source of organs for transplantation. However, organs from a body in which circulation has ceased some minutes prior to excision are considerably less desirable than organs from the brainstem dead which (as the declaration of death does not require cardiac arrest and asystole) are perfused with warm oxygenated blood up to the moment the organs are removed. In the kidney, the only transplanted organ with which I have any degree of personal experience, warm ischaemic injury causes, in the short term, acute tubular necrosis – delayed function of the transplant due to death of renal tubules, which are particularly susceptible to being deprived of oxygen. In the long term it is associated with suboptimal function and shorter graft survival times when compared to a kidney which has a short warm ischaemic time (all transplanted kidneys are exposed to at least a few minutes of warm ischaemia as they are being connected to the blood vessels of the recipient). Other organs may be rendered untransplantable by being subjected to a prolonged period of warm ischaemia (in fact few organs other than the kidney are used from such donors as, while delayed function in a new kidney is survivable, delayed function of a heart or liver is not). For this reason, in the early years of transplantation when waiting lists were smaller, the non heart beating donor was phased out in favour of the heart beating brainstem dead donor. However, as the number of patients entering waiting lists continues year on year to outpace the number of available organs people declared dead according to cardiorespiratory criteria have once again begun to be considered as sources of organs.

The variety of patients potentially considerable as NHBDs is broad, encompassing such diverse categories as those who suffer cardiac arrest and cannot be resuscitated, those who are maintained in an intensive care unit but who do not meet the criteria for brainstem death discussed in chapter one, and even (in the case of some protocols) those who are alive and competent but with sufficiently unpleasant medical conditions that 'allowing to die' and subsequent donation is considered as an option. As Potts and Herdman put it: "These patients are either

competent with intolerable quality of life or incompetent but not brain dead, because of severe, generally neurological, illness or injury with an extremely poor prognosis as to survival or any meaningful functional status. A significant number of patients therefore, can be identified for whom, after proper safeguards and with informed consent from the competent patient or from surrogate decision maker(s) for the incompetent patient, life-sustaining treatment may be discontinued."[87]

NHBDs may be divided into two rough categories. (In fact, current NHS policy is to divide NHBDs into four categories – 'dead on arrival', 'unsuccessful resuscitation', 'awaiting cardiac death' and 'cardiac death in a brain dead donor'.[88] These subtleties are not necessary to my argument here). Controlled NHBDs are those whose cardiorespiratory function is being artificially supported but who cannot be declared dead according to brainstem death criteria – perhaps because of the presence in their bloodstream of drugs which could conceivably mimic some of the symptoms of brainstem death, or for other, more radical reasons (such as that they are not dead). This category is the most desirable as it allows doctors to "maintain as normal as possible blood and oxygen supply to organs, [to] provide organ-conserving interventions as necessary, discontinue breathing and circulatory support when a proper decision and proper consent to do so has been obtained to allow the irreversible cessation of cardiac and pulmonary function so as to meet the legal standard of death, and then to begin preserving and removing organs as soon as possible before they start to deteriorate".[89] Uncontrolled donors are those whose cardiac function has not been artificially supported. These are usually people brought into accident and emergency departments having suffered cardiac arrest, or people suffering such an arrest on a general ward. "This "uncontrolled" event dictates great speed in retrieving organs, early organ preservation interventions, or sequences of resuscitation efforts that start and stop depending on the status of the donor and the transplantable organs."[90]

'Uncontrolled' NHBDs

The different categories pose discrete ethical problems. The major problem with uncontrolled donors is that, in order for organs to be salvageable, interventions aimed at preserving them "must be started so quickly after death that circumstances

do not allow consent to be obtained".[91] Leicester, the only UK centre to have recently attempted to operate an uncontrolled NHBD program, retrieved a small number of kidneys in this way. Although kidneys obtained by this method are not removed until after consent has been obtained, uncontrolled NHBDs usually have cannulae sited in their femoral arteries and are perfused with cold preservation fluid. They may also be placed on a machine which performs chest compressions and be given anticoagulant and vasodilating drugs. This treatment of the dead for the benefit of others, without knowing their wishes, seems somewhat akin to Harris' proposal above and the primary objection to it is the same: that it constitutes disrespectful treatment of the dead body (it is also relevantly similar to the practising of endotracheal intubation, which I mentioned at the conclusion of my discussion of Harris).

If restricted to those who arrive in A&E carrying a donor card the policy is, technically, lawful under the present Human Tissues Act (whether or not it is ethical perhaps depends on whether the holder of the donor card was fully acquainted with the small print of the Act), which (as the reader will recall) states: "If any person, either in writing at any time or orally in the presence of two or more witnesses during his last illness, has expressed a request that his body or any specified part of his body be used after his death for therapeutic purposes or for purposes of medical education or research, the person lawfully in possession of his body after his death may, unless he has a reason to believe that the request was subsequently withdrawn, authorise the removal from the body of any part or, as the case may be, the specified part, for use in accordance with the request".[92]

However, the backlash among the general public was sufficiently severe to cause the Leicester unit to suspend its uncontrolled donor policy (controlled donors are still used) and it seems unlikely that retrieval from uncontrolled NHBDs will ever again become a practical possibility unless the law is changed to a formal presumed consent law which would authorise, when there is not notice to the contrary, "nonconsensual organ perfusion or even in some cases organ removal while awaiting consent for donation".[93]

Another potential objection to uncontrolled non heart beating donors is the definition

of death used. Potts and Herdman note that among policies in the USA the definitions of death employed are not constant, and that organ retrieval programmes "either are unclear or specify organ removal from immediately to 5 minutes after heart stoppage".[94] Orr *et al* note that a particular heart retrieval policy which they examined required only ""two minutes of pulselessness" which may include asystole, ventricular fibrillation, or electro-mechanical disassociation".[95] This does not sit easily with the definition of death discussed in the previous chapter as the irreversible cessation of the body system: the donor is declared dead according to cardiac criteria but then the retrieved heart is restored to function in the recipient's body. Orr *et al* observe that death would not be declared in the recipient if he or she underwent such a period of pulselessness while awaiting surgery. Any protocol which leaves itself open to the criticism that the donors are not dead yet are treated as such ought to be amended, in order to avoid having a negative impact on the public perception of transplantation. The Leicester protocol did not succumb to such objections, I think. Hearts were not retrieved and so the team were able to leave the donor body for much longer following the cessation of cardiac function – a minimum of ten minutes – sufficient to ensure that the heart muscle was irreversibly damaged.[96] This fits much more easily with a definition of death as the irreversible cessation of function of the body system as a whole, while allowing that parts of the system – the kidneys – could still be utilised.

Controlled NHBDs

Controlled donors, then, appear to raise the fewest problems, both technically and ethically. However, there are problems here too. Transplantation has (with the exception of living related donor programmes) always been bound by the so called 'dead donor rule' which states that "persons who have been or may be designated as donors have, during a final illness, rights to health care that meets appropriate, prevailing medical and ethical standards... Donor patients must not be killed or their deaths hastened by the taking of organs ... [and] ... their welfare and care must not be compromised by preparation for organ retrieval."[97]

This is backed up by law: as the patient is not legally dead, doctors must act solely in his or her interest – to act against their interests without consent could constitute

legal battery. And the International Code of Medical Ethics declares that "A physician shall act only in the patient's interest when providing medical care which might have the effect of weakening the physical and mental condition of the patient".[98] Furthermore, "no proxy has the power to authorise otherwise".[99] The problem is that some of the procedures performed on controlled NHBDs are not in their interests: Potts and Herdman acknowledge that "there must and should be interventions undertaken in the management of a patient for whom consent to be an organ donor has been given ... that would not be undertaken in a nondonor patient with a similar medical condition".[100] These take the form both of things which prolong the process of dying and could, conceivably, arrest it, and of things which hasten the dying process. What may be said about this?

Concerns that actions intended to optimise the conditions of organs for transplant may in fact prevent death in someone clinically proven to have suffered intracranial damage incompatible with any meaningful quality of life were partially what prompted the Department of Health to declare a moratorium on an NHBD programme practised in Exeter in the early 1990s. This policy involved admitting patients with rapidly deepening coma due to what the doctors considered "irremediable intracranial haemorrhage"[101] to intensive care units for the purposes of 'non therapeutic elective ventilation'. Shaw states that if the policy resulted in people entering persistent vegetative states on more than rare occasions "the permissibility of the practice would require review".[102] In fact, none of the patients enrolled in the Exeter programme survived and their lives were prolonged for no more than 24 hours, after which all could be declared dead according to conventional brainstem criteria.[103]

However, the case becomes more problematic if the procedure hastens death. Potts and Herdman in their 1997 report appear to believe that 'allowing the donor to die' by removal of life support equipment is a passive rather than active means of bringing about death. They state that the prohibition against active euthanasia is one of the principles which gives "a solid ethical foundation for whatever is done in donation and transplantation" yet they find it appropriate for doctors to "discontinue breathing and circulatory support when a proper decision and proper consent to do so has been obtained to allow the irreversible cessation of cardiac and pulmonary

function so as to meet the legal standard of death".[104] Now these authorities may believe that the distinction between actively killing and allowing to die has moral significance even when the intention – that the person should die – is the same. However I am not so sure that the distinction as they draw it is sufficiently strong to bear the moral weight placed upon it. The first thing to note is that, even if the distinction is morally relevant, I am unsure whether it applies here – the deliberate removal of a ventilator and other intensive care paraphernalia seems like a distortion of the idea that one is passively allowing death. The second thing to note is that, even if the doctors' appeal to such a principle is credible, some of the active interventions performed on the still living patient in order to maximise the viability of their organs, specifically the use of vasodilating and anticoagulant drugs, can sometimes hasten death. Is this active euthanasia? Or worse, is it active killing in order that another might benefit? May such interventions be performed by appealing to the doctrine of double effect?

It is my belief that those donors whose deaths are imminent and those who are either competent with an intolerable quality of life or incompetent with a life deemed by medical staff to be 'not worth living' present relevantly different cases (the latter two cases may also differ from each other – see below). In the case of the former any shortening (or prolonging) of life brought about by interventions aimed at improving organ quality will only make a difference of a few hours or minutes – as mentioned above all of the patients enrolled in the Exeter protocol proceeded to brainstem death within 24 hours. In the case of the patient with "intolerable quality of life", the problem is perhaps more grave. It seems difficult to appeal to a doctrine of double effect here – the object is to kill the patient (or allow her to die) albeit with her consent. Let us consider these as two separate groups then.

Ways to ethically (and legally) use patients whose death is imminent and almost inevitable

Advanced directives

While acting against a patient's interests (conceived here in a relatively straightforward way as 'their physical health') is illegal (and unethical), subjecting patients to procedures which are simply not in their interests (rather than actively against their interests) could perhaps be permissible, so long as such treatment does not cause their care to fall below that of prevailing standards or compromise their welfare, and so long as consent is always obtained beforehand. If this consent came from the patient themselves, prior to their becoming incompetent, then I think that such treatment could be viewed in the same light as people who freely consent to donate blood, bone marrow or even single kidneys – these practices are similarly not in the interests of the donor (although we could say they are in the 'preference interests' of someone who freely chose to donate) but are perfectly ethically permissible as long as informed consent is obtained.[105] Shaw notes that advanced directives permitting doctors to withdraw treatment from a patient if they should enter a condition that they deem would make life not worth living are already legally valid and thinks that it "would not be difficult to permit doctors to comply with advance directives to perform specific non-therapeutic procedures which did minimal harm and were important to the values of an incompetent patient".[106] However, he is pessimistic regarding the success of this policy, suspecting that it might cause public revulsion and so have a negative impact upon donation as a whole. I am not convinced that this would be the result. I discuss my reasons for thinking this in a slightly different context – that of ending the lives of, and possibly then excising the organs of, those in irreversibly unconscious states – in chapter four.

Proxy consent

As Shaw notes, there are in fact exceptions to the rule that proxies may consent only to beneficial treatment. "Parents give consent to non-therapeutic research on their children provided both risk and harm are minimal. With similar restrictions

ethics committees allow research on patients unable to give consent because of dementia or critical illness. The justification in each case is that the harm is minimal, the benefit can be obtained no other way, and there is a belief that the patient would have consented if competent".[107] Preparing someone whose death is imminent to be a controlled non heart beating donor, whether it be by inadvertently hastening death by the use of anticoagulants or by prolonging life by maintaining them on a respirator while preparations are made, causes minimal, if any, harm. As Shaw says, such things "cause no distress to the patient himself. If the family, from their knowledge of the patient, believe that organ donation would have been desired, permitting the minimal harm entailed is ethical."[108]

Widening the scope of the term 'interests'

Shaw also notes that the UK law which bans interventions not deemed to be in the interests of the patient unless the patient himself consented while competent uses a narrow definition of interests – physical health. Shaw advocates a broader definition, invoking preference as well as welfare interests, which would allow doctors to do "what we believe incompetent persons would have wanted, and acting in accordance with their known values... A dead person may never regret not being used as an organ donor. But we all want our lives to have meaning at the end as well as throughout."[109]

The Doctrine of Double Effect

It seems to me that once consent is obtained, whether from the donor or from proxies, the doctor's use of death hastening techniques can be justified ethically by appeal to the doctrine of double effect. The aim of using anticoagulants and vasodilators is not to hurry death, a slightly earlier death is rather a foreseen but unintended side effect of their desire to preserve the organs in the best possible condition. However, I do not think that the doctrine can be applied to the other category of controlled NHBDs – those whose death is not imminent. It is to those donors which I now turn.

Patients whose death is not imminent

As well as patients who have become incompetent and are about to die, the class of patients eligible to become controlled donors includes patients who *need not be dying at all.* These may be those who, as quoted above, are "competent with intolerable quality of life or incompetent, but not brain dead, because of severe, generally neurological, illness or injury with an extremely poor prognosis as to ... *any meaningful functional status*".[110] (my italics)

Potts and Herdman do not separate out the specific problems concerning these patients from those whose illness or injury means they are almost certain to die soon, but I am very unsure that they ought to be included in the group without further comment. For them, as Orr *et al* state, "continued survival is possible but is not desired because of the burdens of continued existence or poor quality of life".[110] Surely, for these people, the removal of life sustaining measures *is* active euthanasia, despite Potts and Herdman's desire to avoid such claims? The question of whether these people may be used as controlled donors then surely becomes secondary to the vexed question of whether people may request euthanasia? Ought someone who is competent but with a proven organic medical condition (*ie* not simply depression) sufficient to render their lives 'not worth living' be allowed to end their lives? Ought they then be allowed to donate their organs? And ought proxies be allowed to make these decisions for their incompetent but not dying relatives?

The measures undertaken by doctors regarding these donors do not seem to fall under the doctrine of double effect. In the case of the patients discussed above whose deaths are, in any case, imminent, the introduction of coolant or vasodilatative drugs merely hastens an inevitable event. However, potential NHBDs whose death is not imminent must undergo procedures directly aimed at bringing about death. It is unlikely that simply vasodilating these patients would be sufficient to bring about death – instead they must have their ventilators or other support removed. Potts and Herman consider this to be 'passive euthanasia'. I am inclined to agree with Harris and with James Rachels that, in circumstances when the doctor's aim is to bring about death, the means used to obtain the result are morally

irrelevant. And, in any case, removal of a ventilator seems to me to be an active not a passive means of bringing about death.

This category of controlled NHBD raises interesting parallels to my discussion of diagnosing brainstem death and to the use of irreversibly unconscious people as donors which I shall propose in chapter four.

In chapter four I will claim that we may, under certain circumstances, ethically kill and remove organs from people who are irreversibly unconscious. However one obvious way in which this might seem objectionable is that, in order for organs to be usable, death must be an event of fairly brief duration, not the protracted death brought about by the withdrawal of nutrition which is the most common way of ending the lives of PVS victims. In other words it is necessary to bring about death by very active means.

However, if we do not believe that there is a significant moral distinction between 'allowing to die' (especially not allowing to die by removing life support apparatus) and killing by more active means then this would seem to provide support for my claim. So from the fact that incompetent people whose lives are deemed to be of no value to them are already being killed (or allowed to die) by the (to me) seemingly quite active method of removal from a ventilator, which will ensure a rapid enough death that their organs are suitable for transplantation, it seems but a small transition to saying that those who are unconscious but not ventilator dependent ought to be caused to die in some painless rapid way and their organs excised. (Perhaps the unconscious patients idea includes more safeguards for the patient not fewer – Orr *et al* use as their example of the incompetent patient someone who is "ventilator-dependent and has minimal awareness of his or her environment"[112] – my chapter four proposal would require that patients have no awareness of their environment.)

The parallel with chapter one grows from residual concerns about whether brainstem death *is* death or is merely 'an infallible prognostic indicator' that death is imminent. For if it is the latter (and some who advocate transplantation hold that it is) then transplanters *already* kill dying people by active means when they retrieve

organs and the distinction between controlled NHBDs and brainstem dead donors becomes blurry. If these suspicions are warranted, the 'dead donor rule' may have no subjects at all.

Overall conclusion

In order to obtain more organs from human cadavers for transplant it will be necessary to implement some or all of the above policies. While the benefits are obvious, there are also drawbacks. In the case of Harris' proposal it is fairly easy to point up an objection to the underlying philosophical principle; for other policies the objections tend to stem from concerns about possible misuse rather than from any specific philosophical objection. Evidence which suggests that doctors disagree on important matters such as declaring death to have occurred and are also not always fully open regarding their treatment of the newly dead gives weight to these concerns.

Notes and references

1. British Transplantation Society Newsletter (1999), p1.
2. See, for example, the *Manchester Evening News* of 9th June 1999 in which, following John Harris' recent public advocation of the routine salvaging of organs from all suitable cadavers without the need to obtain consent, several Manchester dialysis patients spoke of their suffering, and gave their unconditional support to such a scheme.
3. http://www.uktransplant.org.uk/statistics/general_statistics/activity_summary_2001.htm
4. In fact the terms of the act allow those who would retrieve organs slightly more freedom than they, in fact, exercise – more on this in the 'presumed consent' section.
5. http://www.uktransplant.org.uk/newsroom/policy_and_statements/statements/opt_in_or_out.htm
6. *Ibid.*
7. http://www.midwalesonline.co.uk/kidneylife/Pages/summernews13.html
8. *Ibid.*
9. http://news.bbc.co.uk/hi/english/health/newsid_281000/281404.stm
10. http://www.midwalesonline.co.uk/kidneylife/Pages/summernews13.html
11. Fried, C (1978), p8-9.
12. Daniels, N (1985), p96.
13. Rawls, J (1972), p21.
14. *Ibid*, p24.
15. Nozick, R (1974), p32-33.
16. Carruthers, P (1992), p40.
17. Rawls, J *op. cit.*, p24-5.
18. Carruthers, P *op. cit.*, p38.
19. Carruthers, P *op. cit.*, p41.
20. Feinberg, J (1984), p34.
21. Warren, M A (1997), p55.
22. The ability to feel pain (and pleasure) is not immediately relevant to the issue of organ donation for reasons I elucidate in chapter three.
23. Steinbock, B (1992), p14.

24. Feinberg, J *op. cit.*, p33.
25. Feinberg, J *op. cit.*, p34.
26. Feinberg, J *op. cit.*, p52.
27. Steinbock, B *op. cit.*, p5.
28. Warren, M A *op. cit.*, p9.
29. *cf* Sumner, L W "Abortion and Moral Theory" (1981), p26-31.
30. Steinbock, B *op. cit.*, p10.
31. Wetlesen, J (1999) p289.
32. Sumner, L W (1981) p32.
33. *Ibid*, p32.
34. *Ibid*, p32.
35. Warren, M A *op. cit.*, p9.
36 Pitcher, G (1984), p183.
37. Feinberg, J *op. cit.*, p84.
38. *Ibid*, p85.
39. *Ibid*, p86.
40. Pitcher, G *op. cit.*, p185.
41. Nagel, T (1979), p5.
42. McMahon, J (1988), p33, footnote 4.
43. Nozick, R *op. cit.*, p43.
44. Feinberg, J *op. cit.*, p85.
45. Stoppard, T (1968), p78.
46. Epicurus, "Letter to Menoeceus", p30-31, quoted in Fred Feldman (1992) p128.
47. Feinberg, J *op. cit.*, p89.
48. Nagel, T *op. cit.*, p5.
49. *Ibid*, p6.
50. Feinberg, J *op. cit.*, p83.
51. Carruthers, P *op. cit.*, p81. *nb* Carruthers thinks that death is a harm as it denies all future subjective pleasures – he makes it clear that he does not subscribe to Feinberg's objective view. But it seems to me that the no subject problem still applies.
52. Perhaps they feel that 'dying' rather than 'death' is the worst harm imaginable – it would make no sense to say that someone who has been

dead for two hundred years is harmed more by death than someone who has been dead only one hundred years. But saying that it is 'dying' which is the harm also ushers in problems. For the process of dying, in itself, may involve less suffering than some non fatal illnesses or injuries – surely we only object to dying because it leads to death? The harm of death seems to be tied up in what it deprives us of – the loss of all future opportunities for satisfaction. But while someone is dying they retain the opportunity for satisfaction, it is only once they are dead that the opportunities are curtailed.

53. Pitcher, *op. cit.*, p184.
54. Feinberg, *op. cit.*, p89.
55. Feinberg, *op. cit.*, p91.
56. Pitcher, *op. cit.*, p186.
57. Pitcher writes interestingly on the 'shadow of misfortune', *op. cit.*, p187.
58. Feinberg, *op. cit.*, p92.
59. Partridge, E (1981), p254.
60. *Ibid*, p260-1.
61. http://www.learn.co.uk/glearning/secondary/science/lesson02/article10.htm
62. Jones, D G (2000), p85.
63. Harris may not have chosen the strongest example in his attempt to argue from precedent. The newly dead are often used to practice life saving procedures such as endotracheal intubation (in which a small incision is made in the throat and a tube passed down the windpipe). Jones reports that "only ten percent of the training programmes identified as making use of newly deceased patients for teaching purposes required either verbal or written consent from the patient's families" (Jones, DG (2000) p88). Indeed, it is argued by advocates of this use of the dead that a move to asking for consent would be undesirable as it "would raise a significant emotional barrier for clinicians who are often hesitant to approach distraught relatives with requests of this nature ... [and because] ... waiting for consent would result in a delay, thereby conflicting with the need to complete the procedures before the onset of *rigor mortis*" (p89). The reasons for proceeding

without consent in this sort of case are startlingly similar to those proposed by Harris: proponents appeal to "the substantial social benefit that can be gained and because the dead person is not at risk of harm" (p89). Are these practices acceptable? Jones argues that they are, or at least can be, so long as consent is obtained. He believes that the fact that the body remains whole means that families are often prepared to consent to such procedures, whereas they may not be willing to agree to something more invasive. Jones cites a study which found that "a number of parents consented to their newly dead children being used in teaching intubation skills but not to an autopsy" (p89).

64. Obviously doctors, in virtue of their occupational role, have obligations to try and stave off death. But even they are not morally obliged to do everything they physically could to save people.
65. http://news.bbc.co.uk/1/hi/health/281404.stm
66. Harris, J (1999), p399.
67. Harris, J (1974), p211.
68. Williams, B (1973) p93.
69. Scheffler, S (1982), p9.
70. *Ibid*, p9.
71. Schmidtz, D (2000), p688.
72. *Ibid*, p688.
73. *Ibid*, p689.
74. *cf* for example Thompson, J J (1976).
75. Maclean, A 1993, p101.
76. Jones, D G *op. cit.*, p158.
77. http://www.presumedconsent.org.futuresite.register.com/
78. *Ibid.*
79. http://www.uktransplant.org.uk/newsroom/policy_and_statements/statements/opt_in_or_out.htm
80. *Ibid.*
81. Jones, D G *op. cit.*, p159.
82. http://www.uktransplant.org.uk/newsroom/policy_and_statements/statements/opt_in_or_out.htm
83. *Ibid.*

84. *Ibid.*
85. *Ibid.*
86. Jones, D G *op. cit.*, p160.
87. Potts, J and Herdman, R (1997), p24.
88. Manchester Royal Infirmary Renal Transplant Unit internal document.
89. Potts, J and Herdman, R *op. cit.*, p8-9.
90. *Ibid*, p9.
91. *Ibid*, p25.
92. http://www.uktransplant.org.uk/about_transplants/legislation/human_tissue_act/human_tissue_act.htm
93. Potts, J and Herdman, R *op. cit.*, p26.
94. *Ibid*, p5.
95. Orr, R *et al* (1997), p9.
96. Private discussion with Hany Riad, Consultant Transplant Surgeon in Manchester.
97. Potts, J and Herdman, R *op. cit.*, p8.
98. http://www.wma.net/e/policy/17-c_e.html
99. Shaw, R (1996), p73.
100. Potts, J and Herdman, R *op. cit.*, p50.
101. Riad, H (1995a), p714.
102. Shaw, R *op. cit.*, p73.
103. Feest, T *et al* (1990).
104. Potts, J and Herdman, R *op. cit.*, p46.
105. There was an interesting case on the transplant unit where I work a few years ago concerning a man whose two children had inherited a renal disease from their mother. The man had already donated a kidney to his older child; when his younger child also succumbed to the disease he requested that the transplant team remove his second kidney for his daughter, and that he be maintained on dialysis. The transplant team refused, claiming that consent for such a damaging procedure could not be 'informed'.
106. Shaw, R *op. cit.*, p75.
107. *Ibid*, p75.
108. *Ibid*, p75.

109. *Ibid*, p76.

110. Potts, J and Herdman, R *op. cit.*, p24. (*nb* the relevant word excised here was 'survival', which refers to those whose death is imminent discussed above).

111. Orr, R *et al*, *op. cit.*, p8.

112. *Ibid*, p8.

Chapter Three

Other sources of organs: Xenotransplantation and the Argument from Marginal Cases

If we are to save or improve the lives of all or even most of the people with end stage organ disease it is necessary to increase the number of organs available for transplant. I discussed in chapter two the problems which would arise if we moved away from our current 'opt in' policy of retrieving organs from cadavers. Although solutions may exist to some of these difficulties it is unlikely that cadaveric donor numbers will ever be sufficient to meet the needs of all potential recipients. Thus it appears that we must look elsewhere. Xenotransplantation, although not currently part of routine clinical practice, is one of the greatest hopes for alleviating these problems of scarcity.

We currently use large numbers of sentient nonhuman creatures in animal to animal preclinical trials of xenotransplants. In the abstract book for the Spring 2002 British Transplantation Society Annual Congress I see animal to other animal xenotransplantation experiments involving rats, cats, 'nod mice', and Landrace pigs, among other species. New Scientist magazine carries frequent reports of such research.[1] And, although animal-to-human whole organ xenotransplantation has been performed only on an ad hoc basis[2], pig heart valves are a standard therapy for some forms of human heart disease and a report from this summer's (2002) Transplantation Society meeting in Miami states that 'hundreds' of diabetic patients worldwide have been treated with porcine islet cells.[3]

Protocols have been created to permit, in principle, trials of animal to human transplants once technological obstacles have been overcome. Although there is, at present, no clinical xenografting activity in the UK, the Department of Health advisory group on the ethics of xenotransplantation which published its report in 1996 appeared generally favourable towards the practice and the use of genetically

modified pigs as a source of organs for human transplantation was deemed ethically acceptable. In July 1998 the United Kingdom Xenotransplantation Interim Regulatory Authority (UKXIRA) was established within the Department of Health. This body will deal with applications to undertake clinical trials in xenotransplantation in humans. The Report of the Working Party to Review Organ Transplantation published by the Royal College of Surgeons of England in January 1999 contains the following statement "The Working Party recognised that some of the problems associated with xenotransplantation are close to solution and that initial clinical trials might well take place in the not too distant future".[4] "Moral and societal problems involving ... the use of animals as donors" were given bottom billing in a list of obstacles awaiting resolution, after more scientific difficulties, namely "immunological problems such as acute vascular rejection, cellular rejection and chronic rejection; incompatible receptors in the recipient for foreign protein ... [and] ... infectious problems, both to the recipient and the population as a whole".[5] It seems that the policy makers believe the introduction of xenotransplantation into clinical practice to be delayed merely by technical and financial difficulties and not by ethical problems.

The structure of this chapter

I discuss in this chapter whether species membership can count as a 'morally relevant characteristic' permitting us to use all species of nonhuman animals as organ donors whilst forbidding us to use any human beings. I begin by establishing that animals have interests and that some of these interests confer moral obligations upon us. I then assess the claim that there is a morally relevant difference between humans and other animals which explains differential treatment in the matter of organ donation. Why do people think that humans may never be killed to meet our ends when animals may be so used? I discuss two possibilities. The first, which David DeGrazia calls the '*sui generis*' view, is, I think, what grounds most human uses of animals. This is the belief that being human 'just is' morally relevant. I argue that this view is unjustly discriminatory against animals. Second I discuss whether being human confers some special property or properties which are morally relevant in this situation. Perhaps a comparison of the relative strength of creatures' interest in continued life might serve as a 'morally relevant difference'.

Although such a comparison does typically fit common sense thinking that there is 'more to be concerned about' when a human dies than when a non human dies it is vulnerable to the so called Argument from Marginal Cases (hereafter the AMC): some humans, in virtue of intellectual handicaps, have 'less to lose' in death than some animals.

However, I believe that any account which attempts to select donors simply by comparing 'interest in continued life' faces two large problems. First, although it is possible to make such comparisons in a 'rough and ready' way, I think it is not possible to pin them down very precisely which would be necessary if the comparison were to serve as a practical tool determining who may and who may not be utilised as an organ donor. The second problem is the conflict with common sense intuitions entailed by the AMC: many people (myself included) are reluctant to subscribe to the idea that as humans' interest in continuing to live grows weaker so too do our obligations to refrain from killing them. So the comparison of 'life interests' will do only limited work in my argument. First I circumscribe it such that it uses a clear cut biological boundary, the boundary of consciousness, to avoid life-comparative problems turning into practical slippery slope problems. Second I attempt to unpick the intuition that 'less is lost' when a creature with a weaker interest in continuing life dies than when one with a strong interest does. Although I subscribe to the idea that, indeed, less *is* lost *from the point of view of the subject* when an irreversibly unconscious person dies than when a normal person (or even certain species of animal) dies I do not wish to follow this to the conclusion that the moral prohibition against *killing* such people is weaker than the prohibitition against killing normal humans. I do not believe that such a human lacks moral status or (and this is slightly different) that we have no obligations regarding him. In other words, I come to the conclusion that there is, ultimately, something special about being human.

Why kill animals and not humans?

I think that two commonsense intuitions underlie most human behaviour towards animals.

(1) Animals have a degree of direct moral status – because their lives can go better or worse *for them* we may not treat them 'exactly as we please' – we have obligations to them (not merely 'with regard to' them).

(2) It is not unethical to use animals as donors (and in other contexts) as although animals have moral status this is lower than that of humans. In other words, the reasons for protecting them against being killed or injured are fewer, or weaker. We might say that we have only a *prima facie* reason not to kill them, which may be overridden if an important human goal is served by so doing. We should 'show respect' for the animals we use, taking care to minimise any pain and suffering caused and to minimise the number of animals used.[6] We also ought not to use the last remaining members of a species without replacing them, although this is more to do with concerns in environmental ethics than to do with the interests of the animals themselves. So long as these conditions are observed we may use animals for our ends.

If creatures 'have to' die or suffer to meet our ends it is felt that it is highly preferable if they be nonhuman animals rather than members of our species. These assumptions are not universally accepted. Some philosophers would deny assumption one and argue that we look to the needs of animals not because of concern for the animals themselves but rather out of sentimental attachment to them if they are our pets or because they are useful to us in the case of farm or laboratory animals. I discuss RG Frey's denial of moral standing to animals in a moment and touch upon that of Peter Carruthers in chapter four. Other people do not accept the second premise and would assert that animals may never be used as means to human ends. SRL Clark, for example, says "I myself then do not believe that chimpanzees, rats and the rest should be sacrificed even for an acknowledged greater good: such sacrifice infringes their right to refuse. In my

morality, all creatures with feelings and wishes should be thought of as ends-in-themselves, and not merely as means."[7]

I have a degree of sympathy with this viewpoint: many of the things which humans do to animals cannot, I think, be justified. However, I do feel strongly that the use of animals in clinical and research medicine, at least, so long as it is humane and done only for the most serious of reasons, is permissible.

May we use animals at all?

My stance on the use of animals could be argued to lend my thesis a resemblance to the claim made by John Harris in the previous chapter. Harris claims that the needs of dead and living humans ought to be weighed in a sort of calculus: I argued against him that such a comparison should not be made – that dead people who refuse to donate are 'off limits'. Yet in this chapter I seem to be making a Harris-like move: the lives of human recipients and animals donors are weighed and animals sacrificed. Clark calls this kind of position 'Kantianism for humans, utilitarianism for animals'. Limitations of space prevent me from making a full case for my belief. However, in my defence, I would note that I claim *only* that the use of animals in medicine and medical research is justified. I believe we ought to use animals to serve human goals only if the end result is of great value (or at least great hoped for value – not all experiments can be successful) and only if there are no other means of achieving the objective. The interests of animals in continuing to live ought to trump our desires for new cosmetics, for instance.

The use of animals in this special context is, I believe, justified for three reasons.

First, transplant surgery is carried out under general anaesthesia, and the 'donors' destroyed without being permitted to regain consciousness, so the pain and suffering which often attends the use of animals in research can be entirely avoided. Presumably it is possible to house the animals in such a manner that they are unaware of the disappearance of their fellows to the operating theatre and so experience no anticipatory dread. If pain and fear are avoidable then the harm done to the animal is simply that of having its life ended prematurely and I shall

argue that animals are harmed less by death than are normal humans. This is, of course, not to say that they are not harmed *at all*: on the contrary, I think that all of the species of animals which could be used as donors to humans can plausibly be said to be done a harm in being killed (I discuss this more in a moment). However, the things that could be said to be objectionable about such killings are limited in this way. By contrast, I shall argue that our obligation not to kill even the most profoundly intellectually impoverished human beings does not stem only from considering the present condition of the potential donor. Some of our obligations to these people stem from sources which are inapplicable to animals and we also have obligations regarding them which do not apply to nonhumans (of this more at the end of this chapter and in chapter four).

The second reason why they may be used is that the end result is one of enormous importance – transplantation helps very ill people to live or to regain a semi normal life and the importance of saving a human life is (I believe) sufficient to justify ending an animal life.

We may wish to add a third reason supporting the use of animals – that animal as well as human medicine benefits from such uses. Animals are as susceptible as humans to diseases such as diabetes (which can destroy the kidneys), other renal diseases such as polycystic kidneys, and hepatitis. However I am unsure of the strength of this third argument – our primary goal in using animals is to improve human life, not animal, and to appeal to this point is to appear to create a smokescreen masking our true intentions.[8]

These considerations work together to underpin my belief that animals may, morally, sometimes be killed to meet human goals. The harm done to animals is justified by the great good it produces.

Justifying assumption one

The case for the moral considerability of animals is relatively easy to make. Most people believe that animals (well, mammals, birds, reptiles and so on at least, I am less sure about invertebrates) do generally have interests. To put it crudely for now, they believe that such creatures can feel pleasure and pain and that their lives can go better or worse *for them*. Because of this they have some moral status – we have obligations *to them*. This is borne out by law – since the Protection of Animals Act of 1911 animals (in the UK) have had legal protection from 'unnecessary' harm (whatever this means) whether stemming from deliberate action or from a failure to act.

In chapter two I introduced the ideas that consciousness is *usually* necessary and sufficient for the possession of at least a minimal set of interests and that interests are what confer moral standing. Care is needed here: it is not consciousness *per se* which confers moral status, consciousness is a prerequisite for having interests. Bonnie Steinbock says "Only beings with interests can have claims against moral agents. Interests are compounded out of beliefs, aims, goals, concerns. Biological life alone does not endow a being with interests. Permanently nonsentient, nonconscious beings cannot have interests. Without interests, they cannot have moral status".[9]

It would be wrong to pretend that this is uncontentious however. In chapter two I discussed some examples where present consciousness is not necessary, arguing that dead people who have previously been normal 'interest holders' have 'surviving interests'. With regard to the sufficient condition, some philosophers have argued that being a possessor of interests alone is not sufficient to grant moral status to a being: that self consciousness, rationality, or even the capacity to be a moral agent is necessary in order for a being to qualify for moral status. Other philosophers agree that interests are what counts but deny that animals have interests. My response to these more stringent conditions for moral standing takes two forms. First, I attempt to show in a moment that (a) animals have interests and (b) these interests confer a limited degree of moral standing. If having interests is sufficient to confer moral status then more demanding criteria for the possession of, that is,

admission to the class of beings which possess, such standing are ruled out. Second, it is also the case that any criterion which claims to be the *sole* criterion for conferring moral standing on beings and which sets the entry requirements high faces the problem that as well as excluding animals from the sphere of moral concern it will also exclude human babies and the profoundly mentally handicapped. I discuss and partially reject one such argument in chapter four. I do accept, however, that rationality, autonomy or the ability to be a moral agent may be capacities which confer different degrees of moral standing *within* the class of beings with a degree of moral standing: I discuss this convoluted problem later in this chapter.

The problem of what is required in order for a being to be admitted to the class of the morally considerable is not a problem for the dead: assuming that they were 'normal' human beings during life then they were paradigmatic examples of the sorts of beings which have moral status and I hope that the account of posthumous harming given in the previous chapter shows that some interests (and thus moral status) persist after death. It is, however, a problem for claims to moral status made on behalf of animals.

Do nonhuman animals have interests?

RG Frey denies that animals have interests and, thus, moral status (Frey actually says 'rights', but, as mentioned at the beginning of chapter two I hope to avoid getting entangled in the rights debate). Frey makes a two pronged attack; following Tom Regan he says that interests may be thought of in two ways. We can talk of some things being 'in our interests' – those things which contribute to our wellbeing; and we can talk of things which we are 'interested in' – our desires, and wants. Regan calls these 'welfare interests' and 'preference interests' respectively.[10] Frey thinks that if interests are thought of in terms of welfare interests then the claim that animals have interests yields counterintuitive results as nonsentient things can also be said to have interests in this way. Alternatively, if they are to be thought of as 'interests in' things then animals are excluded from the class of interest-possessors as, in order to have interests, animals must have wants and beliefs which, Frey believes, they cannot be said to possess in the absence of language.

(1) Welfare interests

Frey says (correctly I think) that animals clearly have interests of this sort – "in the sense of having a good or wellbeing which can be harmed or benefited".[11] However, he thinks that acknowledging these sorts of interests provides little succour to those who wish to ascribe moral status to animals "for it yields the counterintuitive result that even manmade/manufactured objects have interests, and, therefore, on the interest requirement ... have or at least are candidates for having moral rights".[13] Frey thinks that "anything, including tractors, can have a good, a well-being ... if it is the sort of thing which can be good of its kind"[13], because a tractor unable to perform certain tasks is not a good tractor. "Thus, to say that it is in a tractor's interests to be well-oiled means only that it is conducive to the tractor's being a good one if it is well-oiled."[14]

Frey has a point: it does seem perfectly reasonable to talk of things being better or worse for various sorts of non (*ie* never) sentient living beings, and, although this is even more derivative, never-sentient never-living things. We talk of 'needs' of being met or unmet: my plant 'needs' to be watered, my car 'needs' an oil change. However, although I agree that it makes sense to talk of what is good or bad for nonsentient things, the 'needs' of devices such as tractors and those of living nonsentient things are not the sort of needs which generate *interests*.

The case of living nonsentient things and of manmade devices is not identical. Plants can have a 'good' independent of human interests (think of flourishing weeds). Steinbock calls this sort of wellbeing 'autonomous goodness'. I do not wish to dwell on the differences between plants and artefacts – it is not relevant to my case as, although plants can be healthy or fail to thrive, they are like artefacts in *not caring.* Plants are indifferent between treatments that help or harm them, although they have a welfare this does not create welfare *interests.*

It is the experiential requirement that makes the difference, that confers interests. It is not in my interests to allow my car to run out of oil or my plant to die. Steven Sapontzis states "would we ordinarily say, as Frey does, that "it is in a tractor's interests to be well oiled"? I think not. While 'need', 'want', 'lack', 'harm', 'benefit',

and 'good' are all commonly applied to plants, artifacts, and so on, 'interest' is not. 'Interest' is commonly reserved for the people and animals who will benefit or be harmed by the needs of plants, artifacts and so on being unmet."[15] As Steinbock says "It matters to sentient beings how you treat them".[16]

The Feinberg/Steinbock account of interests does not entail that what happens to nonsentient things does not matter at all. It holds simply that it does not matter 'to them'. As Steinbock states "All the interest view denies is that ... [a nonsentient thing] ... has a stake in its own preservation ... We can have obligations *regarding* mere things, but these obligations are not to them. We have no obligations *to them* because it does not matter to them how we treat them".[17] By contrast, the welfare interests of sentient things matter to them because they are capable of having preference interests about what happens to them: they can prefer one or another outcome and their lives can go better or worse according to what actually happens. To attribute this sort of interest to animals we need to deny the conclusion Frey draws from the second horn of his dilemma.

(2) Interests as desires

Bonnie Steinbock sets out the second horn of Frey's alleged dilemma succinctly: "To want something is to have certain beliefs – in particular, the belief that one does not now have what one wants. Animals cannot have beliefs, according to Frey, because to have a belief is to believe that a certain sentence is true. Only creatures with linguistic ability can regard sentences as true. Since animals lack linguistic proficiency, they cannot have beliefs. Without beliefs, they cannot have wants; without wants, they cannot have interests. Without interests, they cannot have rights. Equally, they lack moral status".[18]

Are animals language users?

How might this claim be countered? Readers will no doubt be familiar with the often-cited studies concerning the teaching of American Sign Language to great apes. A possible response might be to say that these animals are language users. These animals' grasp of language was sufficient to enable them spontaneously to make up new signs for novel objects, to instigate conversations, to use sign language when alone and to teach sign language to their offspring. Koko the gorilla had a mean IQ score of 80.3 using the standard human tests, averaged over seven tests.[19] These experiments also suggest that these animals have degree of self-consciousness: they demonstrate a crude awareness of other minds, inasmuch as they are capable of acts of deception which require insight into the position of the person being deceived, (feats not possible for humans with strong autistic traits). It is not appropriate to go into great detail here but for examples of great ape (and other nonhuman animal) sophistication see Byrne (1995), Byrne and Whiten (1988) and Patterson and Gordon (1993).

However, this does not seem a terribly hopeful approach: in the most successful of the AMESLAN experiments the animals were able to acquire language to only approximately the ability level of a four year old child and so I think it would be wrong to claim that this qualifies the great apes as 'language users' in our sense. Although these studies are impressive, an inescapable conclusion is that even the great apes, the creatures with the greatest ability for learning a human like language, can only dubiously be described as language users. The chimps failed to progress beyond the level of a 36 month old child and few of their utterances were spontaneous. And other animals (even mammals which have a great deal of interaction with us) fall outside the category of language users in any meaningful sense. Clearly, another sort of defence is necessary.

Being a language user is not necessary for possessing preference interests

A more powerful weapon against Frey is to deny that language is always necessary for beliefs and thus deny that it is always necessary for the possession of interests. Frey holds that when someone believes something what he or she believes is that a

certain sentence is true. "Now what is it that I believe? I believe that my collection lacks a Gutenberg Bible; that is, I believe that the sentence "My collection lacks a Gutenberg Bible" is true... If what is believed is that a certain sentence is true, then no creature which lacks language can have beliefs."[20]

Steven Sapontziz counters Frey thus: "The proper conclusion of Frey's analysis of belief *statements* is that in order to understand such statements, one must be able to understand sentences. This conclusion is neither controversial nor relevant to the issue of whether animals can believe; it is relevant only to whether animals can formulate or understand belief statements."[21]

It seems perfectly possible to make sense of the idea of having beliefs which are not beliefs about the truth or falsity of a sentence. Stephen Clark employs the notions of *de re* and *de dicto* beliefs to make this point. *De re* and *de dicto* beliefs are different ways of thinking about things: either in terms "of what is said" (*de dicto*) or in terms "of the thing" (*de re*). So, taking the example of the belief that 'the cat is on the mat', Clark states that a belief *de dicto* would be an attitude towards the proposition that the cat is on the mat – believing it to be either true or false (a 'belief statement'), whereas a belief *de re* would be about the cat itself. In expressing such a belief in verbal form we would be bound to admit that what we believe about the cat is that she is on the mat. But an unexpressed belief about the cat is simply an expectation, when the cat or an image of the cat is in mind, of finding her on the mat. "This need not involve any attitude towards a proposition or even a verbal formula, simply a readiness to find the cat there, a having-it-in-mind before we reach the place."[22]

De re beliefs seem to be the appropriate way to explain what drives animal desires and so their preference interests. This idea is also propounded by John Searle who states "I conclude that the fact that fine grained distinctions cannot be made for animal beliefs and desires does not show that animals do not have beliefs and desires".[23] George Graham suggests a way in which we might try to think of these beliefs. His claim is that "Belief networks occur along something like a continuous or floating scale".[24] For example he, Graham, may have a belief that a particular piece of music is beautiful. A trained musician may also have that belief but will be

able to point to many more subtleties and examples of cleverness in the piece to support his belief than are available to Graham. Both believe that the music is beautiful, yet Graham's belief is based on a far more impoverished network of other beliefs than is that of the musician. This idea of an impoverished set of beliefs can be applied to animal cases. A dog "may believe that the cat has run up the tree although he has no notion of the value of soil and water or of whether the tree has leaves or needles and burns. [The dog] conceives of the tree with his own stock of concepts."[25]

But what does this mean? Does the dog believe that the cat is up the tree, or that the 'small brown fun-to-chase thing' is up the tree? Does the dog then consider a cat and a squirrel in the same way? What if the animal was not out of reach up a tree but on a wall, say? Would the dog still apply the same concept? This answer leaves it open to the critic to question just what the dog's stock of concepts might consist in. The answer is that we cannot know precisely but that *we need not know*. We do not need to be able to pin down precisely the content of an animal's mental state in order to assert that it has content. All that is necessary is that it refers to something: that it is 'about' something. So we can, roughly, work out what it is that an animal is interested in, even if we cannot pin it down precisely.

Daniel Dennett (1996) states that whenever an agent acts it acts on the basis of a particular understanding or misunderstanding of the circumstances and intentional (in Dennett's special sense of the term, meaning 'aboutness') explanations and predictions rely on capturing that understanding. To predict the action of an intentional system – an animal in this case – or to know what it is interested in, you have to know what things the beliefs and desires of the agent are about, and you have to know, at least roughly, *how* those beliefs and desires are about those things, so you can say whether the crucial connections have been, or will be, drawn. So we can, according to Dennett, tolerate slack in our knowledge of how an agent thinks about things without denying that they can have thoughts which are about things. The dog believes that the cat is up the tree even if its concept of 'cat' and 'tree' cannot be determined. Ultimately, it is difficult to say that animals have full fledged beliefs. However, full fledged beliefs are not necessary for ascribing preference interests to animals. These interests require only what Steinbock calls

'belief-like states'.

Animals, without the aid of language, are unable to 'cut as fine' as we are in expressing beliefs. In contrast "There is no limit ... to what we (humans) can believe, and to what we can distinguish in belief".[26] Yet, despite our ability as language users to 'cut as fine' as can be required in describing our beliefs and desires, we do not always do so. This seems to provide further support against Frey's idea that beliefs are always beliefs about the truth or falsity of a proposition. David DeGrazia says "I, for one, do not know the precise content of my own concept of rabbit. Indeed, I doubt it has a precise content".[27]

In case the reader remains unconvinced by this woolly talk of 'belief like states' with indescribable content, other evidence supports the ascription of beliefs, desires and thus interests, to nonhumans.

Attributing 'belief-like states' does explanatory work

To my mind, the most compelling evidence supporting the claim that animals believe is that it fits better with our actual experience than does the alternative. Much animal behaviour would seem inexplicable if we did not employ the working assumption that they have beliefs (Dennett (1987) calls this 'taking the intentional stance'): animals seek food when they are hungry and (with the possible exception of Labrador dogs) cease to eat when they are sated, they seek shelter in bad weather and to avoid pain and so on. The list is endless. This behaviour by itself is perhaps insufficient to say that animals *really* believe and desire; a windup toy could head towards food or a warm spot by the fire if suitably aimed, yet we would be loath to impute desires. But add the behaviour to our knowledge of evolutionary theory and of the similarities between human and animal physiology and it seems more difficult to deny the existence of desires. We know that mammals at least are physiologically much like us: they are, as it were, 'wired up' in the right way to be sentient. And, as Sapontzis puts it, "there would be no evolutionary point to their being sentient if they could not recognize, desire, and pursue those things that give them pleasure"[28] and similarly avoid those things that cause pain.

In 'real life' we do not usually entertain serious doubts about many of the things our household pets can be said to believe (although this may, to some extent, be due to familiarity). For example, when, in the evening, the dog which has been happily sleeping all afternoon becomes restive, whining and placing its head in its owner's lap, we believe it wants its evening meal. Admittedly, our convictions about animal beliefs falter when we move into more complex territory (it would be difficult to claim that the dog believes it is interrupting its master's writing a letter to the Daily Telegraph with its demands for food), and we also become unsure of what to say when we descend the phylogenetic scale to the level of worms and flies. We are fairly confident in attributing simple beliefs to animals relevantly like us, however. This conviction does not derive solely from our *ad hoc* interactions with animals – further evidence for the theory is provided by scientific study both in laboratories and in natural settings (I will not list examples here as they are too numerous).

And, as well as helping us predict behaviour, attributing interests and thus a degree of moral status to animals, as David DeGrazia notes, helps explain many of our ethical intuitions. "Kicking dogs, whipping horses, and otherwise hurting sentient animals is clearly *prima facie* wrong. To justify any such action would require a special explanation – say, the need to prevent the crazed dog from killing a child. But pulling weeds, tearing up the grass playing football, breaking stones for fun, and killing animals that are indisputably insentient (say, amoebas in a petri dish) generally does not seem even *prima facie* wrong, unless the actions affect the interests of sentient beings."[29] We do not think that the wrongness of kicking a dog stems only from the distress caused to its owner; by contrast it is hard to see how there could be anything more than this wrong with damaging a lawn by playing football on it.

So attributing limited beliefs to animals does explanatory work: it helps to account for their behaviour and for our common sense moral attitudes towards them. It fits with known scientific facts about the way the world works. It seems to me that, as George Graham says, "when the ascription of beliefs to animals best explains behaviour, animals believe".[30] As an aside, of no particular argumentative weight, David DeGrazia notes that Frey has, in public lectures although seemingly not in print, now conceded that animals have interests.[31]

Animals have at least some interests and thus a degree of moral status

It is my belief that Frey's attempt to deny interests to animals fails. Humans and other animals differ from plants and tractors because they care about what happens to them. Their welfare is important *to them*, regardless of what it means for anyone else, because they are creatures capable of having preferences and desires in the sense discussed above. This is why they have welfare *interests*, not just a welfare. On the Feinberg/Steinbock account "the ability to have $interests_2$ [things we take an interest in] is necessary for the ability to have $interests_1$ [things which are in our interests]. It is only if treatment can matter to a being that it can be said to have a *sake*"[32] (my italics). Bernard Rollin echoes this sentiment: any animal, even man, is not explicitly conscious of all or probably even most of its needs. But what makes these needs interests is our ability to impute some "mental life", however rudimentary, to the animal, wherein, to put it crudely, it seems to care when certain needs are not fulfilled... Thus, to say that a living thing has interests is to suggest that it has some sort of conscious awareness, however rudimentary".[33] Humans and other animals have a 'sake' in a way that nonsentient things do not – this is what makes the difference.

For this reason, we confer upon animals *a degree of moral status*, by which I mean simply that there is 'something to be concerned about' in our treatment of them, in a way that there isn't in our treatment of stones or of plants (which have a welfare but not welfare interests). We have moral obligations to animals which we cannot have to stones or plants (although we could to the owners of these things, perhaps). I believe then (following Steinbock) that the minimalist requirement of being 'the sort of thing that is or was (or, although it is not my concern here, will become) sentient' is usually necessary and always sufficient for the possession of at least *a minimal set of* interests, and that these interests confer a degree of moral status. If a being has a 'sake', if it *cares* that its life can go better or worse for it, then this imposes some restrictions on what may be done to it for other's purposes. Or perhaps I should say 'most' humans and animals. This idea is part of what drives my circumscribed AMC argument as mentioned in the introduction to this chapter. Some humans – those who are irreversibly unconscious – do not have interests in

this way: they are unable any longer to care what happens to them. I will say more on this in a later section.

Problems remain for this account of interests, of course. First, some philosophers would wish to attribute moral status to things which can never be conscious – to the sort of things that simply are not conscious. 'Deep ecologists' would argue that plants, animals considered at the species rather than individual level, and even habitats have moral status (*ie* our moral concern for the object under consideration stems from the thing itself, not from worries about the effect that damaging it may have on sentient things which care about it).[34] I do not think this is the case – I think that our obligations concerning the environment are 'with regard to' it, not 'to' it. However, I shall leave the question open here – this is why I say 'usually' necessary in the above. All I am concerned to show is, as Steinbock says, that animal species, 'the environment' considered in some abstract sense, tractors and so on, cannot *themselves* care about what is done to them.

A second problem is that sometimes creatures have preference interests in things which are not in their welfare interests, or are wrong about what they think will satisfy them. I note this only in passing, but do not think it an insurmountable problem for this account of interests.

However, to attribute moral status to animals is not to say that they have as great a status as human beings. As Warren notes "There are sound reasons for recognizing stronger obligations towards some sentient beings, such as those that are moral agents [and] those that are members of our social communities".[35] This will be the subject of the latter half of this chapter.

How to address assumption two

Most people would agree that taking the life of, or injuring, a human being is a more heinous crime than doing these things to an nonhuman animal. What is it about animals that means that they always take second place to all human beings, even when they appear to possess the same sorts of interests that rule out the use of humans? This sort of talk introduces the notion of a 'morally relevant difference'

whether one chooses to call it so or no. This is a slippery sort of concept to grasp so I will spend a little time setting out an explanation of it.

The Principle of Formal Equality[36] states that relevantly similar cases should be treated similarly: differential treatment requires a relevant difference. We require a *relevant* difference to treat unequally as people are not equal in every sense – some are cleverer, taller, better at one thing or another, than are others. At the same time, James Rachels argues, "when people *are* equals – when there is no relevant difference between them – justice requires that they be treated similarly".[37]

What may be said about this idea? I must note that I do not entirely agree with Rachels for two reasons. I think sometimes it is perfectly permissible to treat people (or perhaps 'creatures', to avoid begging any questions about species bias) differently without needing to demonstrate any 'morally relevant difference' between them to support one's action. Further, I do not think that some differential treatments are a matter of *justice* at all.

I think that the question of *how* one intends differently to treat the relevantly similar beings in question matters a great deal. For example, if one chooses to *improve* the situation of one person and not that of another is that wrong? Well it could be, if one were somehow responsible for improving the situation of both but neglected one's duties in the case of one but not the other (an example might be when one has a duty to provide a service such as health care or education). Even here it is not clear when one's differential treatment is *unjust*: what if one person requires more intensive medical care, or more tuition, than another in order to achieve the same standard of health or education? Things are more straightforward when one is under no obligation to improve the lot of any particular person yet chooses to benefit one and not another. It seems hard to say what is wrong with this. Suppose X and Y both have a passion for chocolate cake. I have a chocolate cake and, not owing anything to either of them, I invite Y round to my house to eat it with me but not X. Why should this be wrong? And particularly, why should this be a matter of justice? Some choices simply do not require that we show a relevant difference.

That said, I think it is also relatively clear that there are some circumstances when

we ought to show a relevant difference between creatures if we intend to treat unequally. What sort of things may be relevant? It seems to me that this is dependent on the question asked and, perhaps more importantly on the context. We now believe, although for a long time most people did not, that skin colour or gender are not reliable markers of a relevant difference when it comes to choosing between people for most everyday purposes – when choosing between candidates at job interviews, deciding who should be admitted to public places and so on. However, racial differences remain relevant when deciding whether someone needs to be screened for sickle cell anaemia and gender differences when deciding who should be offered gynaecological care. And just as there are differences between members of our species there are clearly a great many differences between humans and animals, most too trivial to be worth noting. It is clear that a great many of our 'discriminations' (it seems odd even to call it that) between people and nonhuman animals are not wrong at all – why would it be wrong to deprive a cow of the chance to go to university, to give a fatuous example? However, in other cases, I think we do need to look a little more closely at the beings among which we differentiate, as it is far less obvious that the differences in treatment are justifiable. Both within our species and between our species and others there are certain core interests – 'relevantly similar interests' – which are possessed by all (or almost all) members of the class (although the class of 'relevantly similar interests for humans' is obviously not fully coextensive with the class of 'relevantly similar interests between humans and animals'). It is this sort of interest which concerns me.

Establishing a presumption in favour of equal consideration

I subscribe to a loose principle of 'equal consideration of relevantly similar interests' (hereafter usually 'equal consideration') with respect to animals. That is, I believe that animals 'matter' sufficiently that those of their interests which are *relevantly similar* to the interests of humans ought to be given equal moral weight with the human interests. The rough idea that 'morally relevant similarities ought to be treated equally' is found in most (perhaps all, I am not sure) of the major theories of ethics. However, although the general ideal is widely subscribed to, there is widespread disagreement about what these similarities may be. Tom Regan thinks that being a 'subject of a life' in his sense is a morally relevant similarity. He states

"like us, animals have certain basic moral rights including in particular the fundamental right to be treated with the respect that, as possessors of intrinsic value, they are due as a matter of strict justice".[38] John Rawls asserts that "Each person possesses an inviolability founded on justice that even the welfare of society as a whole cannot override"[39] (although in Rawls' theory only those subject to the terms of the social contract are entitled to equal consideration – animals are excluded and human 'marginal cases' not discussed in any detail). And Peter Singer says "The capacity for suffering – or more strictly, for suffering and/or enjoyment or happiness – is not just another characteristic like the capacity for language, or for higher mathematics... If a being suffers, there can be no moral justification for refusing to take that suffering into consideration. No matter what the nature of the being, the principle of equality requires that its suffering be counted equally with the like suffering – in so far as rough comparisons can be made – of any other being".[40] In its appeal to interests, regardless of who possesses them, my theory is more similar to that of Singer than the other authors. However I do not accept all the conclusions Singer draws from this account – I explain more at the end of this chapter.

To refuse to give equal weight to the relevantly similar interests of human beings is now considered to be invidious. But what happens if this sort of principle is extended beyond the boundary of our species? I agree with Singer that "having accepted the principle of equality as a sound moral basis for relations with others of our own species, we are also committed to accepting it as a sound moral basis for relations with those outside our own species – the nonhuman animals".[41]

Such a principle by no means requires us to believe that humans and animals have 'equal moral status', nor does it entail a moral requirement to 'treat humans and animals equally' (whatever that may mean) or to deny the absence of any differences between animals and humans. However if applied to all our relations with nonhumans it would still require substantial revisions in our behaviour. It rules out what DeGrazia calls a 'general discounting' of animal interests of the sort that is evident in, say, hunting or consuming animal flesh – a devaluing of their interests relative to ours simply because they are animals. I do not discuss the application of the principle of equal consideration of interests to animals in cases other than organ

donation – such a discussion is beyond the scope of this thesis. Word limit concerns also prevent me from arguing fully for the principle: however it is possible to establish what DeGrazia calls 'a presumption in favour of equal consideration of relevantly similar interests' over unequal consideration. This presumption stems from two main sources.

It grows first from the fact that animals have interests – their lives can go better or worse for them. If some of the interests possessed by animals are the same sort of interests possessed by humans then this at least raises the question of whether they could be relevantly similar – it is not absurd to talk in this way.

And second, if it is even possible that the interests could be relevantly similar then surely simply *assuming* that they are not is pernicious: the example of racism and perhaps sexism (although I am less sure about this) should make us wary of accepting contemporary moral standards unreflectively. The fact that black people were once treated as possessing lesser moral status than whites does not by any means prove that our current treatment of animals is unethical; however it does provide a reason why we should insist that these practices should be *justified.* According to my Cassell Concise Dictionary a species is 'a group of organisms (taxonomically subordinate to a genus) generally resembling each other and capable of reproduction.[42] But as Hugh LaFollette and Niall Shanks ask "Why should our primary classification (whatever that means) be our species rather than biological class (mammals), biological order (primates), sub-species distinctions (race) or cross-species distinctions (gender)?"[43] Each distinction might be primary for a different reason: as mentioned above, race is relevant if our aim is to identify humans at risk of sickle cell anaemia. And even if we did find one sort of classification to be biologically primary, how does that make it *morally* relevant? "Moral properties and biological properties are categories from different domains. We cannot merely assume a particular biological property is morally relevant; we must show it is relevant. And even if it were shown; its relevance would be established by referring to moral principles, not brute biological facts." [44]

I have, I hope, provided good reasons in support of assumption one: reasons why we think that higher mammals, at least, have some moral status. However, we use

them in preclinical trials of xenotransplantation techniques and as donors of heart valves and pancreatic islet cells to humans. In the future the transplant community intends to use them as solid organ donors to humans. These practices rest upon assumption two: that there is a 'morally relevant difference' which justifies our differential use of humans and other animals in this case. What sort of thing could mark the difference so that we may not be killed for our organs while non humans may?

I must point out here that I shall not be considering one possibility which some would claim marks the difference – the possession of an immortal soul. While I do not wish to categorically deny the existence of such things as souls I feel they ought not to be called upon to do explanatory work here as their existence or otherwise is unverifiable.

The case against equal consideration

A first attempt to ground assumption two: the *sui generis* view

I shall begin by considering what I believe to be a very implausible attempt to justify unequal treatment: one which denies that relevant interests ought to be considered equally. Many (perhaps most) people think that the answer to the question 'why may we kill animals for their organs while human beings are off limits?' is so obvious it need not even be asked – believing perhaps that the practice is self evidently permissible. Humans are humans, animals are animals, and that is all there is to it: we use (eat, chase for sport, experiment on and so on) only the latter (or, at least, only in very rare cases the former: such instances being greeted with public outrage if they become common knowledge). Regardless of the similarities between our species and others there is something 'special' about people; something that sets us apart from all other animals. We may claim to find certain animals 'special' too, but these claims tend to be due to the partial affection of animal lovers rather than based on an impartial consideration of properties of the animals themselves. Although we may show great affection for our pets we also commonly breed sentient animals for food, destroy them if they move into our homes uninvited and use them in experiments testing not only medicines but also products of lesser

importance, such as cosmetics. In other words, most people who advocate the use of animals as organs donors who would yet be horrified at the thought of using humans tend to think that our membership of the species *homo sapiens* is reason enough to protect us all from such usage while permitting at least some nonhumans to be used. That is, they think that species alone is reason enough and need not be backed up by supporting argument.

It might be argued that to attack such a view is to attack a straw man, that no-one really believes that is it the raw fact of species membership which is relevant, but that species is a marker for a difference that is relevant. I disagree, I think that layperson thinking about the matter (I include transplant surgeons in this category for my purposes here) does not usually go deeper than noting the species difference. David Degrazia (who coined the term 'the *sui generis* view') notes that this position is "rarely acknowledged by philosophers" but captures "a common conviction about the moral status of humans".[45]

This sort of thought is, in any case, not confined to lay people – Anne Maclean is an example of a philosopher who specifically rejects the idea that it is any particular capacity of humans which makes them morally 'special'. Talking of the 'grossly mentally handicapped "Baby Jane Doe"' she states "there is *everything* to be concerned with from the moral point of view – *there is the baby*, who is as much an object of moral concern as any other baby".[46] Similarly, when unconscious people are under consideration, Maclean asserts "once again there is *everything* to be concerned with from a moral point of view, *there are the people themselves*".[47] Jenny Teichmann also advocates this position: "'everyone' has to mean every human being, not every 'person' as defined by philosophers. The distinction between human beings and other things is natural, not arbitrary and not difficult to draw either in principle or in practice. But the differences between levels of intelligence, between living coherent or incoherent memories, between being sane and insane and so on are matters of degree, not of kind".[48]

Robert Nozick, when talking about grossly retarded human beings being compared to animals makes a different sort of defence: "these people are, after all, human beings, of the same species as we are, however retarded or handicapped. Even

supposing a particularly retarded individual turns out to be no more rational or autonomous and to have no richer an internal psychology than a normal member of another mammalian species, he nonetheless is a human being, albeit defective, and must be treated as one." [49] I discuss Peter Carruthers' version of this sort of defence, that 'mentally defective' humans (Carruthers' term) ought to be protected because they are members of a class who, generally, we protect, in chapter four.

I think that people who appeal to *sui generis* type arguments to differentiate between humans and animals, when the subject is who should be killed for their organs, are wrong. Species is not a clear cut boundary and even if it were it is not clear how we ought to draw moral conclusions from this biological fact. (I also think that, *contra* Teichmann, the boundary of consciousness clearly is a boundary, or at least as much one as the boundary of the species: it is not arbitrary. But I am moving too fast.)

A series of arguments against the *sui generis* view

1: The argument from taxonomy

The system of taxonomy (the classification of individuals into groups and subgroups on the basis of relevant similarities) was devised by a Swedish botanist called Carl von Linne (Carolus Linnaeus) and published in 1758. According to Linnean taxonomy, "The smallest taxon is usually the species (a group of potentially interbreeding individuals). Closely similar species are first grouped into a 'genus'... Genera are next grouped into larger units, such as a 'family' and families themselves are grouped into an 'order' and so on." [50] Linne classified humans as a unique species (*Homo sapiens*), genus (*Homo*) and even family (*Hominidae*) from the rest of creation. Under the Linnean system "Our nearest relative, the chimpanzee, is not *Homo* but *Pan* (there are two species, *Pan troglodytes* and *Pan paniscus*) while the gorilla is a separate genus, *Gorilla gorilla*, and the apes as a whole belong to the family *Pongidae*".[51]

A 'cladistic' interpretation of taxonomy (*ie* one designed to reflect evolutionary history rather than animal's present appearance) "shows that humans are not a

separate lineage from the modern apes: we *are* apes, and specifically we are close relatives of the gorilla and especially the chimpanzee... The everyday sense of the word 'ape', which excludes humans, and the term 'pongid' must be abandoned when we are talking about evolution. Nonhuman apes are ... a grouping formed by subtracting humans from the valid clade of apes-including-humans". We are more closely related to chimpanzees than these animals are to gorillas. To put it rather melodramatically, "if we were chimpanzees, our closest relatives would not be those big black animals in nearby forests that look rather like ourselves, let alone those reddish Asian animals [orang-utans] that hang from the trees, but the naked and bipedal humans".[52,53]

It is clear (to everyone apart, perhaps, from Creationists) that human and nonhuman animals spring from the same genetic stock. Further, whilst we share a distant common ancestor with all mammals, we are particularly closely related to the African great apes: humans and the two species of chimpanzee technically belong in the same genus (imagine seeing the labels '*Homo troglodytes*' and '*Homo paniscus*' on cages in zoos!). Rosemary Rodd notes that "It is commonly accepted that the chimpanzee-gorilla-human split occurred about 8-10 million years ago. Human, gorilla, and chimpanzee lines have been separate for approximately the same length of time as those of brown, black, and sun bears (*Ursus arctos*, *Ursus americanus*, *Helarctos malayanus*); and the African ape-human line diverged from that of the orang-utan at about the time of the split between the ursid line and the genus *Tremarctos* (spectacled bear)"(54).

Jared Diamond notes that "The genetic distance (1.6%) separating us from pygmy or common chimps [*Pan troglodytes* and *Pan paniscus*] is barely double that separating pygmy from common chimps (0.7%). It is less than that between two species of gibbon (2.2%) or between such closely related North American bird species as red-eyed vireos and white-eyed vireos (2.9%) or between such closely-related and hard-to-distinguish European bird species willow warblers and chiffchaffs (2.6%). The remaining 98.4% of our genes are just normal chimp genes. For example, our principle haemoglobin, the oxygen-carrying protein that gives blood its red colour, is identical in all 287 units with chimp haemoglobin." [55] So genetically we are very close to some nonhuman animals: does this give reason to

think that species is not relevant?

We should perhaps refrain from drawing too many conclusions about the 'humanness' of chimpanzees (or vice versa) from this research as other work has shown that nearly 75 per cent of human genes have some counterpart in nematodes – millimetre-long worms. And, as a *New Scientist* article notes, some scientists believe that genetics will be unable to tell us what, if anything, marks the boundary between humans and other animals. Although chimpanzee and human DNA is 98.5 per cent similar (according to this article) "the way it is arranged on the chromosomes is somewhat different. Chimps have 24 pairs of chromosomes, humans 23. Eighteen of the pairs are pretty much identical, but the rest have been reorganised, with large chunks of DNA moved around. For example, compared to the chimp, human chromosomes 4, 9 and 12 contain huge inversions. In the case of chromosome 12, this has the effect of shifting almost a quarter of its DNA from one end of the chromosome to another. Such rearrangements could alter the activity of critical genes by moving them closer or further away from the pieces of DNA that switch them on and off." [56]

2: Ring species

If one is not convinced by the above, another argument remains. Richard Dawkins suggests that humans and (other) chimps are an example of a 'ring species'. Dawkins states "it is we that choose to divide animals up into discontinuous species. On the evolutionary view of life there must have been intermediates, even though, conveniently for our naming rituals, they are usually extinct." [57] The best known example of ring species are the herring gull and lesser black-backed gull, clearly distinct species in Britain yet linked by a continuous series of interbreeding individuals all the way around the world. Dawkins points out that this example is easily identifiable as the two species are separated only by distance. Most ring species are separated by time, in that usually the intermediates are historical rather than currently living animals. However "All pairs of related species are potentially ring species. The intermediates must have lived once. It is just that in most cases they are now dead." [58]

There are similarities between the questions surrounding the grey area at the species boundary and the grey area at the beginning of life: "It is no use telling these people [pro-lifers] that, depending on the human characteristics that interest you, a foetus can be 'half human' or 'a hundredth human'. 'Human', to the discontinuous mind, is an absolute concept. There can be no half measures. And from this flows much evil." [59] The ape-human intermediates no longer exist. Yet finding even one living intermediate would be sufficient to destroy our current boundary system. "We need only discover a single survivor, say a relict *Australopithecus* in the Budongo Forest, and our precious system of norms and ethics would come crashing about our ears. Racism would blur with speciesism in obdurate and vicious confusion." [60]

3: A *reductio ad absurdum* argument

The small genetic difference between the other great apes and ourselves also appears to commit one (in a *reductio ad absurdum* kind of way) to making some rather odd concomitant distinctions between species which one may generally think of as being so similar as to be almost indistinguishable. If one wishes to base one's distinction between humans and all other animals on this small genetic difference *and nothing else* one is logically committed to treating differently chimpanzees and gorillas and to treating both of these species differently from orang-utangs. Some people who have made a study of such creatures have suggested that the species do differ in observable ways, so to take the example to its absurd extreme we must also note that we are committed to treating differently the different species of gibbon (between whom there is greater genetic distance than between humans and chimps), and the red-eyed and white-eyed vireos. Few who wish to protect all and only humans from use would wish to commit to this, I think, which suggests that something other than pure genetics is behind the favouritism.

4: Superior nonhuman beings

If membership of our species *per se* is what confers 'full moral status' on all and only humans then we ought fervently to hope that if our species encounters alien creatures of the sort beloved by science fiction television writers – nonhumans who are much more advanced than we are – the aliens do not assign moral standing according to this policy.

5: The dubious moral status of some genetic humans

In fact, not everyone does ascribe full moral status to all genetically human creatures: think of those on the 'right to choose' side of the abortion debate. And, even more clearly, consider hydatidiform moles – these are genetically human, yet noone would consider ascribing full moral status to them.[61]

Appealing to species *per se* or capacities of species?

The species boundary is not as clear cut as Teichmann claims it is: it cannot be so. So species *per se* seems a very weak ground for making distinctions in moral standing between creatures. Humans and their closest relatives are connected by a continuum rather than being adjacent but separate and to claim that the boundary of our species is immutable would effectively be to deny the theory of evolution. And why ought mere species membership inform our beliefs about moral status? In the absence of supporting argument it is dangerous simply to *assume* that unequal treatment based on species membership is correct: human history warns against the wisdom of accepting current moral norms unreflectively, especially when the evidence of animal interests provides a presumption in favour of equal treatment.

Denying that species membership is a good candidate for the job does not mean that we cannot find any morally relevant reasons for treating humans and animals differently for our organ donation purposes: perhaps species membership confers something special which make the human interest in not being used as an organ donor relatively stronger. LaFollette and Shanks call this position 'indirect speciesism' – "the view that there are morally relevant differences which accompany species differences".[62]

This appears a much more promising avenue of enquiry: no matter how closely related we are to chimpanzees it is clear that *homo sapiens* as a species have made what Jared Diamond calls 'a Great Leap Forward', developing art and technology and, crucially, language, around 40,000 years ago. "Until the Great Leap Forward, human culture had developed at a snail's pace for millions of years. That pace was dictated by the slow rate of genetic change. After the Leap, cultural development no longer depended on genetic change [but instead allowed humans to communicate easily and thus rapidly to work out solutions to problems in ways that would not have been possible without spoken language]. Despite negligible changes in our anatomy, there has been far more cultural evolution in the past 40,000 years than in the millions of years before." [63]

It is uncontroversially true that the average human is clearly a more sophisticated animal than the average chimp, pig or dog. His mental and emotional life is richer than what these animals could aspire to.[64] Diamond's points suggests a way of setting a moral boundary between *homo sapiens* and all other animal species which does not rely on raw membership of our species. Perhaps the possession of language and the increased mental abilities it confers makes a difference? I mentioned above why this type of consideration is not suitable as a criterion for *admitting* beings into the class of 'morally considerable creatures' – it may still serve as a useful means of grading *degrees* of moral status within the class of beings with such status. Perhaps humans are harmed more than animals are by being used as organ donors and this is why they ought not to be used.

A second attempt to ground assumption two: differences between the human and nonhuman interest in continuing to live

The kinds of 'harming' or of 'thwarting of interests' discussed in the animal welfare literature tends to take two forms: causing suffering and ending lives. While both of these are the sorts of interests which humans and animals share, only the latter is relevant to the special circumstance of using animals in transplantation. Pain and suffering, although usually a major consideration in comparisons of humans and

animals, is not relevant to our case here as organ donation may be performed under general anaesthesia and the donor then destroyed without being permitted to regain consciousness. I suppose there may be residual concerns about the conditions in which an animal bred for transplant is kept, and especially in any suffering which may be entailed by genetic modification, but I shall assume that these problems are remediable. The harm with which we must be concerned here is simply the possible harm done by killing a creature.[65]

Death as a harm

Is death a harm to the one who dies? This is a contentious subject: it seems slightly odd to talk of a harm of which one is unaware, and of harms which have no subject. These ideas seem paradoxical: while we live we are not harmed by our own death, but as soon we die, we cease to be aware of anything, and, worse, there is no 'us' remaining to be harmed. In chapter two I discussed these difficulties in relation to the question of whether the dead can be harmed posthumously. I hope that the account of antemortem harming and surviving interests given in chapter two sufficed to support the intuition that posthumous events can be harms: the same arguments give substance to the claim that death is a harm. Even if I was unconvincing, the intuition that death is *a harm* to the dead remains a powerful one: most people, philosophers and laymen alike subscribe to it, including those philosophers who claim that the dead cannot be harmed by events occurring after their death.[66]

I adhere in the following to the view that death is a harm because of what it deprives people of: I accept that this is far from the only possible explanation but it is one common among the philosophers I discuss. The susceptibility to be harmed by death, on this view, stems from the possession of interests: something with no needs or desires, or things which are better or worse for it, cannot be harmed if its life is ended. In my discussion of Frey above I made a case for the attribution of crude preference interests to at least some animals. These preferences confer welfare interests – the animal cares about what happens to it and for this reason is, arguably, harmed if its preferences are thwarted. But do animals have an interest in continued life in the way that humans do? If they do, the principle of equal

consideration must come into play. To make such a claim for animals is contentious. Some philosophers argue that, although animals may be deprived future happiness by death, they cannot have an interest in continued life as they cannot form such a complicated thought as a desire for life.

Animals are harmed by death

Are animals harmed by death? Ruth Cigman thinks that they are not as in order for death to be a harm it must thwart the individual's 'categorical desires'. Such a desire "does not merely presuppose being alive (like the desire to eat when one is hungry), but rather answers the question of whether one wants to remain alive".[67] (*nb* Cigman actually says that animal death is not a 'misfortune' but as Regan notes, these terms seem to be co-extensive when applied to humans and animals – what would it mean for someone to be harmed without this being a misfortune and *vice versa*?). How should we respond to this? I hope that my earlier discussion of Frey suggested that animals are capable of having at least belief-like states and desires in the absence of language. Can they desire continued life?

Many animals exhibit behaviour which could be indicative of a preference for their lives to continue (although in an attenuated or at least 'not fully describable' sense, due to their lack of language) – they are able to recognise and avoid life-threatening situations. My dog, when imagining herself 'threatened' by a gunshot in the distance, takes extreme evasive action. Kittens are unwilling to walk on a transparent surface over a perceived drop and, if forcibly placed on the 'deep' side of the testing apparatus, reportedly 'freeze in terror': the same response is seen in human babies.[68] However, the fact that a dog is afraid of a gunshot does not prove that it fears the gun will kill it. And as we descend the phylogenetic scale we see animals exhibiting aversive responses to stimuli (caterpillars wriggling on pins, for example) even to the point at which we are fairly sure that their nervous systems cannot support consciousness – that they are exhibiting mere 'trophisms' rather than any felt desire to escape their circumstances. So we find it hard to conceive, in human terms, the extent to which an animal desires that its life continue, and we also find it difficult to determine where, on the phylogenetic scale, to say that this ability ends. Only the first problem is of direct concern to us in this thesis as only

animals physiologically similar to us are at risk of being killed as donors to humans.

Cigman does not think that the responses to danger described above are sufficient to describe an animal as being afraid of death. In order for death to be a harm, she contends, one needs to possess "the related concepts of long-term future possibilities, of life itself as an object of value, of consciousness, agency and their annihilation, and of tragedy and similar misfortunes".[69] There are, as Regan notes, problems with Cigman's theory. What would animals have to do to prove they possess long term goals? Countless experiments show animals forgoing present pleasures for larger future goals and such like. However the impossibility of ascribing clear cut beliefs to animals makes it difficult to say exactly what they think in these situations. I agree with Professor Cigman, animals do not possess the concepts she mentions to any great extent, they cannot desire that their lives continue in the way that normal humans can. What would follow from this? Not very much, I think.

Must we desire life in order to have an interest in life?

The first thing to note is that not all humans have the categorical desire for continued life. Lawrence Johnson gives as an example the case of a young healthy man with good prospects who wishes to kill himself as he has been dumped by his girlfriend. This seems to be a clear case of having an interest in life which is at odds with one's formed desire (for death). Johnson says "it would seem to me that it would be in the young man's interests to frustrate his desire to terminate his life".[70] And consider human babies and severely intellectually subnormal people. Here are people who may have no categorical desires at all, yet who are generally thought to be harmed by death. Although an attempt could be made to bring babies, at least, into the fold under a potentiality argument, it is difficult to see what could protect adult humans incapable of categorical desires. I shall say more about this kind of thought in a moment.

We need not appeal to a specific preference for continued life in order to say why death is a bad thing. As I alluded to in the previous section, I operate in this thesis according to the belief that death is a bad thing primarily because of the

opportunities it cuts off. While this is not the only possible reason for saying that death is an evil, it seems to me a plausible one. As Michael Lockwood says "we need not, usually, even appeal to a person's preference for going on living *per se*, by way of explaining why it would be wrong to end his life – though that preference alone would *suffice* for judging it wrong to do so. In so far as it is rational for people to fear and avoid death, this is ... largely because ... it does, in general, represent the ultimate frustration of the majority of one's desires." [71] In fact, attributing the wrongness of killing *only* to the violation of a preference for life seems odd. In cases where killing is done instantly and painlessly as the person sleeps it becomes vulnerable to the 'no subject' and 'experience' problems discussed in chapter two. The desire is not violated during life, the person is unaware of being killed, and, once dead, the subject of the preference is gone. I assume the notion of the antemortem person is not available here – a preference for continued life could not be a surviving interest.

It seems to me that although having a preference for continued life is a sufficient condition for describing something as having an interest in living it is not a necessary condition. And if the interest in continued life comes simply from having desires which ought not (other things being equal) be frustrated by death, then animals as well as humans have such an interest.

Regan says:

> "... it does not follow that individuals who lack any grasp of long-term future possibilities *have* no long-term future possibilities. On the contrary, even if we assume that animals fail to have a sufficiently rich grasp of long-term future possibilities, in Cigman's sense, animals do have a psychophysical identity over time. Barring unforeseen developments, Fido will be the same dog tomorrow, and tomorrow, and so on into the indefinite future as he is today. The untimely death of such an animal, therefore, does cut that individual's life short, not only in the sense that a living organism ceases to be biologically alive, but, more pertinently, in the sense that a particular psychological being ceases to be. And

> it is this latter fact, not whether animals have a sense of their long-term future possibilities, that is decisive in giving an account of the harm or misfortune death can be for them. Death, for them is a misfortune, a harm, when death for them is a deprivation, a loss, and it is the latter when their death is contrary to their welfare-interests, even assuming that they themselves have no preference-interest in remaining alive or in avoiding death." [72]

To conclude this section, it seems entirely reasonable to think of death as being a harm to an animal, even if the animal has no formed desire to go on living as such. The animal has a (welfare) interest in continuing to live in virtue of it being possible for its life to go better or worse for it, even if it cannot form the desire to continue to live.

Animals are harmed by death but humans are harmed more

This is not the end of the matter however. Most people also think that the *difference* between what humans and animals lose in dying is morally relevant. That is, we do generally think it is 'worse' when a human being dies than when an animal dies: worse, that is 'from the point of view of the dead creature'. Death is a greater deprivation for the human than the animal because a human 'loses more': there are more reasons for us to point to in describing the death of a human as a bad thing. As David DeGrazia puts it, "Assuming that some animals are harmed by death, death seems to harm some morally considerable beings more than others".[73]

I concede that normal humans are, usually, harmed more by death than are animals. The preference for continued life is relevant here: except in cases of painless death of which the subject is unaware, the fact that humans fear death and can regret its cutting short our projects does make it a worse thing for us than for animals. And the plans and projects of humans are usually far more complicated than those of animals – 'more is lost' in a typical human death than in an animal death.

The implications of this for organ donation

If the death of a nonhuman 'matters less' for it than the death of a human for the human, then perhaps it should matter less to everyone else too. In other words, perhaps it matters less when nonhumans are *killed*. Let us attempt to unpick this. John Harris states "Talk about the lives of individuals having moral value [moral status, in my sense] refers to the moral reasons we have for respecting claims to continued existence made by or on behalf of such creatures. To evaluate these claims and compare them to other possibly competing claims, seems to presuppose some view about just what it is that makes life important, that makes it wrong to end a life prematurely, and of what it is that makes some lives, or the lives of some individuals, more important than others." [74] What might this thing be?

I argued that animals are harmed by death and that they have an interest in continuing to live even if they cannot *take an interest* in so doing. This interest in not dying is sufficient to confer a limited amount of moral status – we do not think we should kill nonhumans 'without good reason' because continued life matters for them. However, the 'without good reason' clause is interesting – we generally think that humans *must not* be killed simply when it suits other people's ends. By contrast we think that animals may be killed if there is 'good reason' and that saving the life of human organ recipients counts as a good reason. So there is something special about human beings which means that although *their* interest in living may never (or almost never) be overridden, the interest animals have in living may be overridden much more easily. What underlies this? Apparently, some sort of variant of the idea that humans are more 'complex'.

The ideas that a human's life 'matters more' to it than a nonhuman's life for the nonhuman and that taking human life is thus a morally weightier matter appears both in common sense thought and, in varying forms, in the work of a great many diverse philosophers for example Peter Carruthers, Joel Feinberg, RG Frey, Lawrence E Johnson, Michael Lockwood, James Rachels, Tom Regan, Peter Singer and Bonnie Steinbock. These writers disagree with each other on the question of whether nonhumans can be said to possess an interest in not dying. They agree however that, even if death does harm animals, less is lost in animal

death than in human death and a lesser moral status thus conferred. We have, therefore, only a relatively weak, overrideable, reason not to kill animals. So the strength of one's 'interest in going on living' is, according to these philosophers, a morally relevant difference which justifies differences in whom we may kill. *We need not give equal consideration to animal and human interests in continuing to live as they are not relevantly similar – the human interest is stronger.*

Here are a few examples among the many available: I have chosen examples from three different philosophical positions to emphasise how widespread this belief is. Tom Regan, in presenting his lifeboat dilemma in which four humans and a dog all occupy a lifeboat which can sustain only four of them, says "the harm that death is, is a function of the opportunities for satisfaction it forecloses... To throw any one of the humans overboard, to face certain death, would be to make that individual worse-off (*ie*, would cause *that* individual a greater harm) than the harm that would be done to the dog if the animal was thrown overboard." [75] Peter Carruthers states "when we enter sympathetically into the death of another, trying to see what their death may have meant from their point of view, we do seem naturally to focus on those plans and projects that have now been cut short. For this would explain the fact ... that many people feel less sympathy – from the perspective of the one who dies – for the death of a baby or an old person who has let go their hold on life. For in such cases, no forward-looking motives for survival may exist." [76] And James Rachels says "When a mentally sophisticated being dies, there are more reasons why the death is a bad thing". [77]

What sort of things might make the difference? Many different properties are proposed, but rationality, self consciousness and the ability to be a rational contractor are perhaps the three most widely propounded ones. These properties all tend to fall, one way or another, under the nebulous concept of 'personhood'.

What makes the difference?

The concept of personhood and its application is problematic: different philosophers have differing ideas as to what constitutes the state. Jenny Teichmann says "To determine in a particular case whether or not some individual is a 'person in a

philosophical sense' necessarily requires the making of *ad hoc* decisions about boundaries".[78] Mary Anne Warren notes that some philosophers take 'person' as an honorific term meaning simply 'being with full moral status', and in particular, with an interest in life which may not be overridden for the greater good, without making any claims about the characteristics of the creature. Others require that a creature possess certain empirically testable characteristics. It is not clear how the link between the metaphysical and the normative definitions of personhood ought to be forged. Some (such as the early Warren) claim that it is 'self evident' that a 'person in the empirically testable sense' has full moral status. Others (such as H Tristram Englehardt[79]) attempt to form an argument linking the two concepts. In addition, among those philosophers who do require that a creature demonstrate certain characteristics in order to be a person, criteria for personhood vary from self consciousness and rationality to more demanding requirements such as the ability to be a moral agent.

I accept Teichmann's point: the application of the concept of 'personhood' is very problematic (in fact I shall argue in the 'difficulties in comparing lives' section below that it is probably unusable). However the idea which underlies the term does appear to possess considerable plausibility: when we consider the lives of typical members of our species and compare them to the lives of typical nonhumans we do tend to reach the conclusion that human life is 'richer' than that of animals. And, in the absence of any good reason to think that membership of our species has any ability to confer moral standing, and given that I choose not to discuss any possible moral status conferred by the possession of a soul and such like, it seems that this richness is what gives 'persons' a greater interest in life continuing and which thus makes their death 'worse' (for them) than the death of a nonperson.

Earlier I used the fact that animals have both welfare and (attenuated) preference interests to demonstrate they are morally considerable. However, human beings typically have a capacity greater than do nonhuman animals to plan for the future, to be self aware and autonomous and to have meaningful interactions with others. These types of interests confer a higher moral status as they mean that *more is lost* when a human being dies than when an animal does. If the 'badness' of death is due to what it deprives us of (as I assume), the human whose life is cut short

undergoes a greater deprivation as they had a 'higher stake' invested in their lives than animals. And humans are capable of forming a desire to go on living, with all the complex thoughts about time, nonexistence and so on that this entails. Animals cannot have such desires.

Humans have a higher moral status than animals, but I am not sure why

In short, it is not at all clear exactly which of these proposed ways of conferring higher moral status on humans than animals works. However, between them, they are widely accepted. Fortunately it is not necessary for me to discuss in detail exactly which of these proposals is the most plausible candidate for conferring full moral status on humans, for reasons I set out in the remainder of this chapter. In what follows I lump together these ideas under the crude heading of 'having a richer life'. Death is more of an evil to creatures with a richer life. This does not do justice to the complexity of the arguments but suffices for our purposes.

I begin by noting a corollary of the idea that some lives are richer than others (in one of the above ways) and that this confers higher moral status. It is not obvious how such a position protects those human beings who do not have the normal range of human interests. This is not to say automatically that babies, profoundly mentally handicapped people and so on are to be utilised if we use animals – the belief that normal humans have a stronger interest in not dying than do animals may still be compatible with protecting atypical humans. It does mean that supporting reasons must be given. But first, the problem.

The 'Argument from Marginal Cases'

This sort of argument has been around in the animal ethics literature for almost thirty years. The Argument from Marginal Cases (henceforth, the AMC) centres around a single unpleasant fact – some human beings have intellectual lives which are less complex than those of the average cat or dog. As a consequence their interests may be only of the most basic welfare variety. For whatever level of animal mental complexity that can be imagined for those creatures used in transplant-related surgery, whether the reader believes that they are persons or

merely beings with basic interests, it is possible to imagine a damaged human whose mental life is less complex. Thus it is hard to say why such humans ought to be given preferential moral status if animals are not.

Here is my statement of the AMC as applied to the specific case of xenotransplantation:

(1) It seems undeniable that many species other than our own are conscious. Because of this they have (at least a minimal set of) interests: they try to avoid pain and to seek to meet basic needs such as hunger and shelter. They may be said to have a stake in their lives and an interest in them continuing. These interests confer (at least a limited) moral standing.

(2) It also seems undeniable that some profoundly cognitively damaged people lack the usual range of human interests. That is, they have only the sorts of interests possessed by nonhuman animals and are likely to have a less 'rich' life than many animals. The worst cases – those who have permanently lost consciousness – have no mental lives at all and are wholly unable either to desire continued life or to have even the limited interest in continued life I ascribed to animals. It seems difficult to say how such people are harmed by death.

(3) Thus, on a comparison of present interests some humans are found to be equivalent to, or worse off than, some nonhumans. The worst cases lack even the sorts of interests that confer the limited moral status we usually attribute to animals. For this reason they appear, at least, to be as vulnerable as animals to being killed or injured for human purposes if a sufficiently good reason is found.

(4) Yet, our conduct towards these very intellectually subnormal humans and the comparable animals does not reflect this. To take our specific case of xenotransplantation, intelligent animals such as pigs and dogs are currently being killed in animal to animal models of transspecies

transplantation. Human beings are not currently used as involuntary or nonvoluntary organ donors (unless certain dubious 'urban myths' are to be believed[80]), and it is not at present common even to countenance the idea of such treatment.

(5) So what grounds this differential treatment? As we saw above, species *per se* cannot provide a moral justification for such a belief. And a comparison of interests does not seem to provide a morally relevant difference protecting all humans while allowing all nonhumans to be used. It seems entirely reasonable to ascribe the interest most relevant in the case of donation – an interest in continued life – to animals, and some human 'marginal cases' appear to be deprived of less in death than are animals.

(6) If we cannot find anything to serve as the criterion which justifies our unequal treatment of humans and animals when the question is whom we can kill for their organs then we must concede that our present differing behaviour towards nonhumans and profoundly cognitively impaired humans is unwarranted. Most proponents of the AMC conclude by stating that this leaves us with two choices: first we could increase the moral status of animals to that which is currently granted to these damaged human beings (*ie* that they not be killed or caused pain to meet other people's ends) or second, we could concede that we may treat human marginal cases as we now treat animals. *For if some humans are harmed by death only to the extent that animals are then it is not 'more wrong' to end their lives than it is to end the lives of the animals currently used, according to the principle of equal consideration of relevantly similar interests discussed above.*

Unpleasant choices

This seems like an invidious choice. I do, as a matter of fact, think that something resembling the second choice is the correct one, but my reasons for believing this

do not stem solely from the AMC. I shall explain this further in a moment and in chapter four.

The plausibility of, and problem with, the idea that having a 'richer life' gives a relatively stronger interest in remaining alive

The AMC is a problem for any account of moral status which gives humans higher status based on some capacity which they possess rather than on the brute fact of their species. However, the AMC itself faces two problems.

The first problem actually applies to the idea that different interests in continued life may be compared as well as to the AMC (which grows naturally from the idea that this comparison can be made). It is that it seems inordinately difficult to compare the strength of the interest in continued life among beings all of whom are conscious. The kinds of animals physically suitable to provide organs for humans are also the kinds who have the greatest claims to personhood, or, at least, the kinds who exhibit a degree of rationality or self-consciousness. They of all animals are deprived of most in death and so they of all animals have the strongest interest in not having their lives ended prematurely. However, because animal minds are so different from those of humans it is difficult (I think impossible) to compare them.

The second problem is with the scope of the AMC. I believe it needs to be restricted. While it has a great deal of intuitive plausibility when we think in prudential terms about 'what is lost' from the subject's perspective, and while it serves to inform our beliefs about the relative wrongness of killing humans and animals, I think we ought to be wary of allowing it to lead us to any conclusions about the permissibility of *killing human beings.*

The case for a circumscribed AMC

The intuition that some lives are 'richer' and thus that there is 'more to be concerned about' in ending them than there is for less complex lives is a powerful one. When thought about in broad terms it seems plausible, most people can agree that a normal human generally does have a richer and more complex life than does a dog

or a cat (whatever we mean by 'richer' or 'more complex) – they have 'greater opportunities for satisfaction', or are 'persons' when animals are not (or at least, have more of the capacities which are typically ascribed to 'persons' by philosophers).[81] However, it seems very difficult, when it comes down to it, actually to make formal inter species comparisons of lives. This does not apply only when we try to make comparisons across the species boundary of course – just as we are unable to know what it is like to be an animal in this sense we also perhaps cannot know truly what it is like to be another human. The point is that it is unclear just how such comparisons between lives can be made with sufficient accuracy as to decide precisely what is lost in different deaths.

There is an extraordinarily large amount of discussion regarding the extent to which human and animal lives can be compared: I attempt to wade through the muddle in the appendix to this thesis. However, because I suspect that the discussion is intractable, it does no work in my argument. I offer instead a circumscribed human and animal comparison which I hope will be able to do some practical work in helping us to determine who might be a suitable candidate for organ donation. I wish to assert something which I hope will excite no controversy: irreversibly unconscious human beings *have no interest in remaining alive* – it no longer makes sense to talk of their lives going better or worse *for them*. To phrase it according to other theories: their life contains no opportunities for satisfaction, they are unable to value their own life. Regardless of what the reader chooses to believe from my discussion in the appendix to this thesis of the extent to which animals are rational, language-using moral agents, the fact of the matter is that, at the very least, they have a limited interest in continued life. *By contrast, whatever criteria are used, a permanently unconscious human has no (present) interest in continuing to live.*[82] If we are to assign moral status purely on the basis of present interests it would seem that irreversibly unconscious people have a lesser claim than do animals. An obvious objection is that it is not possible clearly to delimit such a class of human beings – I address this in chapter four. For now, I shall assume that it is possible to determine a class of human beings who have no present interests. (They may have surviving interests which are relevant – I discuss this in chapter four. In this present section I restrict my discussion of the irreversibly unconscious to those who, like many dead people, have expressed no strong feelings regarding their treatment.)

Obligations to and concerning humans are not conferred only by a consideration of interests

May we draw any direct conclusions from this regarding how we may treat such people? I do not believe that we may. Even given the extreme example of human lacking any interests I do not think it follows that such a comparison could act as a basis for a policy for selecting humans who could be killed for their organs. But this is what the comparison of interests in continued life is often assumed to prove. Singer imagines "living a life with no conscious experiences at all. Such a life is a complete blank; I would not in the least regret the shortening of this subjectively barren form of existence. This test suggests, therefore, that the life of a being that has no conscious experiences is of no intrinsic value." [83] I agree with Singer until the last sentence – surely it is correct that such a being has no capacity for caring about anything done to it and indeed its life may have no value *to it*. However I contend that this does not mean that we are not free to treat it in any way we please.

I talked above of 'creatures' with richer and poorer lives being harmed to differing extents by death and so having differing degrees of moral status. This idea is usually relatively unproblematic as the creatures with the highest status tend to be those who are genetically human. But the AMC makes problems for this account: when we compare the lives of the 'worst case' intellectually damaged humans – those who are irreversibly unconscious – and animals we are drawn ineluctably to the conclusion that 'less is lost from the subject's point of view' when the human dies than when the animal does. These humans – if this account is followed – appear to have a lower moral status than animals: they would appear, in fact, to have no status at all. So if a creature has no interest in its life continuing – if its life can no longer go better or worse for it – then other people need have no interest in the continued life either. They may, in the situation which occupies us here, kill the creature for its organs because the reasons from refraining have been lost. Ought we to accept this? Singer's comment makes it clear that he does, and the 'interests' account of moral status I described earlier may also appear to support this conclusion.

I think that the 'interests view' can accommodate the idea that the cases of mentally impoverished humans and of non humans are different. The differing strength of the interest in continued life is, I think, what grounds the assumption about the differing seriousness of killing normal humans and animals. However I am anxious to show that rightness or wrongness of killing humans should not be decided only on these grounds. I agree that normal humans do have a greater interest than do animals in staying alive (and even that some nonhumans have a greater interest than the most damaged humans). However, I do not think it follows that we have few or no obligations to and regarding these worst off human beings. I wish to subscribe to the 'little to be concerned about in death from the point of view of the profoundly handicapped human subject' part of the AMC without being tied to the idea that there is 'little to be concerned about *per se*'. A weaker interest in life is relevant to what we might wish to say about the sadness of a death, or the harm to the victim, but we must be careful when drawing conclusions from this to apply to the question of the relative wrongness of killing as, in humans but not animals, other sources of moral obligation come into play.

James Rachels, Peter Singer and John Harris have done the most work in attempting to compare interests in a way which is impartial between species and to create tools by which we might objectively compare different lives. In this section I briefly set out the version created by Rachels in "The End of Life" in order to point out some objections to the enterprise of assessing a subject's interest in continued life to determine our moral obligations. Readers should not infer from this that the theories of these three philosophers are identical. They are, however, sufficiently similar in relevant respects to be lumped together for my purposes here. Readers should also not infer that only utilitarian philosophers wish to deny moral standing to irreversibly unconscious humans: the early Regan seemed to hold a similar view. (In fact Regan even queried whether irreversibly unconscious people are human.[84])

Rachels: 'the rule against killing' and 'the badness of death' fit together

Because these philosophers, Rachels, Singer and Harris, are keen to protect the *subjects of valuable lives* rather than the merely (biologically) alive, some people, such as the persistently unconscious, fall outside the scope of protection offered by this sort of 'rule against killing' entirely. To quote Rachels "In killing such persons, or allowing them to die by neglect, the justification isn't that their lives are being traded off against some 'higher value' or that an exception is being made from some dire necessity. It is simply that the point of the rule, in such cases, is lost." [85]

According to Rachels "Death is a misfortune, not because it puts an end to one's *being alive* (in the biological sense) but because it ends one's *life* (in the biographical sense)." Thus "to show how the termination of one's life can be a bad thing ... we need to examine some aspects of what it means to have a life." [86] Rachels thinks that we use the word 'life' in two ways. "On the one hand when we speak of 'life' we may be referring to living things, to things that are *alive*... On the other hand when we speak of 'life' we may have in mind a very different sort of concept, one that belongs more to biography than to biology. Human beings are not only alive, they *have lives* as well." [87] I use the idea of a biographical life here as a stand in for the more general notion of a 'richer life' discussed above: the idea seems to correspond quite closely to the idea of some kind of personhood (not least because both are stipulative terms and somewhat nebulous). He states "From the point of view of the living individual there is nothing important about being alive except that it enables one to have a life. In the absence of a conscious life, it is of no consequence to the subject himself whether he lives or dies." [88] This is uncontroversial, I think. Rachels continues "Therefore, in so far as we are concerned to protect the interests of the individuals whose welfare is most directly at stake we should be primarily concerned with lives and only secondarily with life".[89] This seems to me to be far less acceptable.

For Rachels, the relative 'richness' of a life confers relative moral status: in comparing the death of a 'mental defective' to that of a normal woman he states "less can be said about why her death was a bad thing; there are fewer reasons for

regretting it just as there are fewer reasons for regretting the death of a dog than the death of a (normal) human being".[90] Singer echoes this idea. When, in 'Practical Ethics' he compares the 'value of life of a horse (to the horse)' to 'the value of life of a human (to the human)' this is not the end of the matter – he wishes also to draw conclusions about how they may be treated. "We are not, of course, going to attempt to assign numerical values to the lives of different beings, or even to produce an ordered list. The best that we could hope for is some idea of the principles which, when supplemented with the appropriate detailed information about the lives of different beings, might serve as the basis for such a list. But the most fundamental issue is *whether we can accept the idea of ordering the value of different lives at all*." [91] (my italics)

The fit with our common sense intuitions

This sort of argument fits, to an extent with 'layperson' moral thought – we do often think it 'worse' when a young person dies than when an old one does, or when an intellectually normal person dies that a profoundly mentally handicapped person. We feel it is worse for them, and we may also feel it is 'worse' for the survivors too, for the sorts of reasons Rachels mentions. However, this is the extent of my agreement: we need not, as Rachels does, think that this means it is less evil to kill a subnormal person than a normal one. Rachels says "the explanation of the point of the rule against killing, and the explanation of why it is bad to die, should fit together".[92] I agree with Rachels that we may, putting ourselves in the shoes of the subject, think that the death of a handicapped person with few interests is less bad than that of a normal person. However I would object that it does not follow that we would take the *killing* of a handicapped person with few interests any less seriously than that of a normal person. It seems to me that in the above quoted passages Rachels is making an illegitimate move from intuitions about how 'tragic' a death is to considerations about the wrongness of ending that life. Thinking that little is lost from the perspective of the subject when a profoundly mentally handicapped person dies need not lead us to think that there is 'nothing to be concerned about' when we take the perspective of a prospective killer. On the contrary, we do not tend to think that there is 'nothing to be concerned about' in the killing of even the most grossly handicapped miserable human being, we do not usually think it any less evil to kill

such a person than it is to kill the happiest of men. As Anne Maclean says "the 'natural good or evil' of a death bears no relation to the *moral evil* of bringing about that death".[93]

Species prejudice again?

It should be noted that the common sense disagreement with Rachels and Singer occurs only when the killing of *humans* is the issue. I think that many people would agree with Rachels that 'the explanation of the point of the rule against killing and the explanation of why it is bad to die' do fit together when the rule is applied inter- and not intra-species. That is, most people would agree that it worse to kill a human than a dog, and, now the appeal of the *sui generis* view has been tarnished, they could offer as justification the fact that the dog possesses a weaker interest in life. It is this idea which, in the absence of any good reason for thinking membership of our species to be a morally relevant difference, now informs the second assumption at the start of this chapter.

In humans, should 'the rule against killing' and the 'badness of death' fit together?

Some people may also agree with Rachels that it is better to kill or fail to save a severely mentally handicapped human rather than a normal one in emergency situations where not all can be saved. That is to say, many people could at least see the sense in such a suggestion (this is not to say that they would agree to it!).

However, while I think Rachels' proposal is something to which most people would agree when comparing humans and animals, and even something some people may agree to in disaster situations when some humans must die in order that others might be saved, it is not, I think, something to which most people would agree to when the killing of handicapped human beings under non emergency circumstances is the issue. When killing even the most profoundly mentally handicapped humans in 'everyday' situations enters the agenda, we tend to think that something other than a comparison of quality of life becomes relevant. I wish to argue, against Rachels, that there are reasons why we ought to refrain from killing humans which do not stem from a considerations of their present 'interests package' – reasons

which do not apply to animals. George Graham comments that Singer's and Rachels' theory "tells us to factor out externalities in determining the value of life ... [*ie* a] creature's relation to me (or to us) cannot be what makes its life superior or weighty, morally".[94] I do not believe that external restrictions should be wholly ignored in this matter and I discuss these in chapter four.

To put it another way, I think that the plausible idea that 'less is lost' in some deaths than others which informs our decision that usually it is morally more appropriate to kill animals for their organs than humans can do only limited work when applied to humans. Insofar as we believe that it is 'less bad *for the subject*' when an animal dies than a human so too do we often think it 'less bad *for the subject*' when some extremely intellectually impoverished humans die than when some relatively sophisticated animals do. Even Maclean, a staunch advocate of the idea that simply being a human being is special (see page 116), acknowledges that there may be 'something in' the idea that some badly-damaged people cannot value their lives and that this may affect how we treat them. However, she argues (correctly, I think), that we may decide to end the life of someone who is terribly handicapped or comatose, not because 'there is no longer anything to be concerned with from a moral point of view' but because that is what respect for the person dictates at that point. "Such considerations [having to do with the quality of a person's life] do not determine *whether or not* a person is entitled to respect; they do determine, at least in part, what *counts* as respect in a given case." [95] Thus, if we decided that euthanasia was 'the best and kindest course' for someone permanently comatose "we would not be denying him respect in killing him, let alone denying that he still merited respect: we would be *showing* him respect – we would be doing what we thought respect for him *required* in the circumstances".[96]

The fact that the irreversibly unconscious human cannot care what happens to them is a reason supporting his or her use as a donor, but it cannot be the whole story. Moral standing may be conferred on humans without present interests in ways which are not available to animals (I am thinking specifically of the idea of harms which survive the loss of their subject, as discussed in chapter two). Additionally, factors external to the creature under consideration may confer obligations upon us not to treat humans in certain ways. We may worry that creating a policy of killing

the most damaged humans for their organs would be to step onto a slippery slope to using people whose deficits are much less, we may fear that such a use would cause a dangerous loss of sympathy for the most damaged humans or we may worry that social instability would ensue. These factors need not apply in the case of animal donors. I explore these ideas, and the obligations they impose upon us, in chapter four.

Conclusion: the argument from (the most) marginal cases

It it time to draw some conclusions. First, the nonhuman animals under consideration as organ donors clearly are conscious, and thus have interests and a degree of moral status. This is relatively uncontroversial; though some of them at least may not be able to reflect on their desire that life continue, they are capable of feeling hungry, afraid, or happy and possess interests in the limited, unreflective and probably 'not fully describable in words' sense discussed above. We do, currently, use (kill) these animals in transplantation experiments and a limited amount of clinical practice and it is intended that their use will increase in the future. We do not use humans. Intuitions concerning the greater importance of normal human lives (both to those who live them and, by extension, to others) seem to support this distinction. Underlying reasons are harder to find however. I hope that I have shown that species membership as such cannot provide grounds for protecting all human beings at the cost of all nonhumans. And, notwithstanding the fact that most humans can, roughly speaking and for the sake of argument, be said to have a stronger interest in life than most animals *the AMC still holds*: some humans have a weaker interest in life than animals. However, I think that the idea that lives may be compared and conclusions drawn from this regarding relative moral status must be restricted in two ways. First, it is not possible to make an accurate comparison between species when all the beings under discussion are conscious – such comparisons are impossible to make with any precision. Second the conclusions we draw from the fact that some humans have a relatively weak interest in continued life must be restricted – they must not lead to the conclusion that 'little is lost' *from the point of view of society as a whole* when human 'marginal cases' die. In particular we must not conclude that the wrongness of killing them diminishes in step with their impoverished interests. *This is why we have obligations to and with*

regard to even the most damaged human beings which do not apply to animals.

Yet despite what has been said in the latter sections of this chapter, I believe that some human beings, as well as animals, may in fact be utilised as organ donors. I have so far merely hinted at the reasons we have for conferring moral status on, and otherwise showing respect to, the most intellectually impoverished humans. In chapter four I will discuss them in more detail. I will also suggest that these considerations sometimes make it ethically permissible to *use* 'permanently comatose' people as organ donors – not because they lack value, and so we may do as we will with them, but because, just as different ways of treating people become appropriate as they pass from being alive to being dead, so it is appropriate to treat such unconscious people differently from normal human beings.

Appendix to chapter three

To what extent do animals meet the definition of 'personhood'?

Mary Anne Warren distinguishes between a 'minimalist' and 'maximalist' definition of personhood. The first of these (the sort of view proposed by Singer) requires only that a person be "a rational and self consciousness being".[97] Some of the animals proposed for use as donors to humans may, I think, reasonably be said to have some claim to be this sort of person.

The minimalist requirement

Singer thinks that a creature's ability to value its life in this way stems from its being self conscious. "A self-conscious being is aware of itself as a distinct entity, with a past and a future... A being aware of itself in this way will be capable of having desires about its own future... To take the lives of any of these people, without their consent, is to thwart their desires for the future." [98] In my discussion of this kind of proposal in the 'Animals are harmed by death' and 'Must we desire life...' sections I made the simplifying assumption that animals are not able to form this sort of desire, so as to make the strongest case against my position.

However there is a great deal of empirical evidence to support the claim that animals are rational and self conscious to a degree. For just one example see *New Scientist* magazine[99] which carries a report of an experiment which supports the idea that dogs have a degree of mathematical ability. The dogs were tested on equipment designed to discover the age at which human babies begin to understand numbers. And there are numerous reports of experiments in which animals (usually the great apes) demonstrate a rudimentary ability to, as it were, step outside themselves and perceive themselves as others do by, for example, using mirrors to examine parts of themselves that would otherwise be inaccessible, or by positioning themselves in such a way that their nefarious activities are not visible to superior apes in their social group.[100]

The problem is that all experimental data of this sort falls victim to the objection noted in my discussion of Frey: we cannot pin down precisely what the animals are thinking. It is not possible clearly to define which creatures (other than ourselves) can be said to possess self consciousness, to consciously 'value their lives', or to desire that they continue, even if we were able clearly to define what 'self consciousness' consists in. The simplifying assumption must stand, I think.

More demanding requirements

Moral agency is often cited as being indicative of higher moral status (*eg* by Warren). But the extent to which animals are moral agents is, if anything, even less agreed upon than their claims to rationality. An oft-cited point against the idea that they are moral agents is the fact that many animals cannot be prevented from predating upon others, even when they are not hungry. However, as SF Sapontzis is keen to point out, many animals such as guide dogs display virtue or, at least, perform virtuous acts. And, though it could be argued that such behaviour is trained into them, as Sapontzis says, why would this make it less virtuous? "It cannot be correct to say that once we have succeeded in making courage and compassion "second nature" in our children, we have robbed their courageous and compassionate actions of their moral [in the sense that the agent recognises the act as moral and acts because it is the right thing to do] sense".[101] Wild animals may display evidence of virtue: stories of porpoises helping swimmers in difficulties and suchlike are common (although hard evidence is hard to come by) Scientific evidence also supports the idea: *cf* for example the experiments of Stanley Wechlin who demonstrated that a hungry rhesus monkey would not press a bar to obtain food if it meant that another monkey received a shock.[102]

It has been suggested that the substrates of morality, empathy, and a rudimentary sense of fairness, have an evolutionary origin in that they are essential for social play without which animals would be at a disadvantage. Studies have shown that social animals which work cooperatively fare far better than do those of the same species who fail to 'bond' in this way.[103] As such, virtue may not be confined to our species. We should not try to make too much of this, clearly animals are not moral agents in the sense that normal adult human beings are. However, this returns us

to the AMC: although probably no animals meet this criterion for strong personhood, neither do all human beings. And, interestingly, humans who fail to meet the 'moral agency' criterion for personhood need not be intellectually deficient. Strongly autistic people may be unable to adopt the perspective required to be a moral agent, despite being highly intelligent in many respects, and criminals may choose not to act morally (they obviously have the capacity to be moral agents but choose, sometimes, not to be).

Animal lives are rich in ways that human lives are not, and we have no way to make a comparison

It is generally felt that the lives of humans and the opportunities open to us are richer than are the lives of other animals. However, I am not sure that it is possible to make sense of this idea if we examine it more closely.

Animals have claims to mental life 'richness' which are inapplicable to humans. Their extended sensory world could perhaps be said to confer interests upon them which we humans cannot possess, interests which we ought perhaps to weigh against those of humans in any calculus. Consider the olfactory sense of a dog or a horse, creatures whose very faces are shaped around the nose; or the 'sonar' employed by bats and marine mammals. Perhaps we could respond that some sorts of interests contribute more to an interest in continuing life than do others. Certainly humans have a far greater capacity to appreciate music, art and literature, and it could be argued that these sorts of experiences give life a greater 'richness' than do the pleasure of beasts (or the base pleasures of humans). However, as DeGrazia notes "Without a compelling argument to support this type of quantitative scale, it looks suspiciously like a product of species bias".[104]

There are large problems then, in comparing lives across species. Most philosophers do not address how the comparison might be made at all. Peter Singer makes a brave attempt but is ultimately unable to make his account work I think.

Singer's 'hypothetical choice situation'

How might intraspecies comparisons of lives might be made? Peter Singer considers the matter carefully: proposing a situation of hypothetical choice in an attempt to compare lives fairly. Although, I think, ultimately flawed, his project is admirable in its honest assessment of the difficulties. Singer imagines that he has 'the peculiar property of being able to turn into an animal' and that:

> "... when I am a horse, I really am a horse, with all and only the mental experiences of a horse, and when I am a human being I have all and only the mental experiences of a human being. Now let us make the additional supposition that I can enter a third state in which I remember exactly what it was like to be a horse and exactly what it was like to be a human being... In this third state, then, I could compare horse-existence with human-existence... I would then be deciding, in effect, between the value of the life of a horse (to the horse), and the value of the life of a human (to the human)." [105]

Singer acknowledges that the coherence of this idea might be questioned, but he thinks that he can "make some sense of the idea of choosing from this position; and I am fairly confident that from this position some forms of life would be seen as preferable to others".[106]

Brave as the attempt may be, I think it is fundamentally unworkable: the difficulties facing any attempt to pin down 'what it is like' to be an animal remain. As noted above, some animals have sensory capabilities which are very alien to us. This means, as George Graham notes, that "Human beings do not have and never can acquire the sort of conceptual equipment, the perceptual endowment, to imagine what it is like to be an animal. We are just *too different* from them." [107,108]

A second problem with Singer's proposal is that some animals, at least, are not self conscious: Graham makes reference to the famous vervet monkey studies of Cheney and Seyfarth. He quotes the ethologists as saying "There are ... many

ways in which a vervet's view of her world is very different from our own... Her mental states are not accessible to her: she does not know that she knows." [109] Note that Graham is not denying that monkeys and other animals have beliefs, desires and emotions, he denies only that we can know what they feel like from the inside. Because of this, it is not possible to make Singer's comparison.

For these reasons I do not think that the debate on the use of animals in medicine is helped by attempting to define the criteria which confer higher moral status on humans and then debating the extent to which animals and defective humans meet or fail to meet the definition.

Notes and References

1. For example, an article by P Cohen (12th January 2002) p7 reports on two research groups which have created cloned transgenic pigs, engineered to cause less of an immune response in humans than normal pigs.
2. For a brief summary of 'Baby Fae' and other cases see Singer, P (1994) p164.
3. Leahy, S and Le Page, M (31st August 2002), p7.
4. The Royal College of Surgeons of England, (1999), p30.
5. *Ibid*, p30.
6. It is regrettable when competing companies produce very similar results (see reference 1) as more animals die than need be.
7. Clark, S R L (1997) p10.
8. The practice of animal to animal transplants for therapeutic rather than research purposes is becoming more common. An interesting article by Philip Bone in the 'Veterinary Record', suggests that the practice is becoming more popular among the owners of pet cats, animals which are notoriously prone to renal failure. This suggestion is supported by the number of (mostly US) veterinary web sites offering the service (see for example http://www.homevet.com/petcare/kidney.html).
9. Steinbock, B (1992) p12.
10. Regan, T (1988), p87.
11. Frey, R G (1980), p79.
12. *Ibid*, p79.
13. *Ibid*, p80.
14. *Ibid*, p80.
15. Sapontzis, S F (1987), p117.
16. Steinbock, B *op. cit.*, p20.
17. *Ibid*, p15.
18. *Ibid*, p21.
19. Patterson, F and Gordon, W (1993) p61.
20. Frey, R G *op. cit.*, p87.
21. Sapontzis, S F *op. cit.*, p120-1.
22. Clark, S R L (1982), p26.

23. In an unpublished manuscript, "Animal Minds" cited by David DeGrazia, (1996), p144.
24. Graham, G (1993), p69.
25. *Ibid*, p70.
26. Dennett, D (1996), p59.
27. DeGrazia, D, (1996), p138.
28. Sapontzis, S F *op. cit.*, p186.
29. DeGrazia, D *op. cit.*, p227-8.
30. Graham, G *op. cit.*, p70.
31. DeGrazia, D *op. cit.*, p4.
32. Steinbock, B *op. cit.*, p18.
33. Rollin, B (1981), p41.
34. Warren, M A (1997), p72.
35. *Ibid*, p18.
36. The Nichomachean Ethics, V.3. 1131a21.
37. Rachels, J (1990), p176.
38. Regan, T *op. cit.*, p329.
39. Rawls, J (1972), p3.
40. Singer, P (1979a), p50.
41. *Ibid*, p48.
42. Cassell Concise Dictionary (1997), p1416.
43. LaFollette, H and Shanks, N (1996), p43.
44. *Ibid*, p45.
45. DeGrazia, D *op. cit.*, p55-6.
46. Maclean, A (1993), p129.
47. *Ibid*, p129.
48. Teichmann, J, (1996), p39.
49. Quoted in Daniel Dombrowski (1997), p158-9.
50. Byrne, R (1995), p9.
51. Singer, P (1994), p177-8.
52. Byrne, R *op. cit.*, p23.
53 Examination of Linne's personal letters of the time suggests that he himself believed that the chimpanzees truly belonged in the *Homo* genus, but that, as a Creationist, he was unable to reconcile this

apparently heretical conclusion with his religious beliefs and so 'fudged' his results.

54. Rodd, R (1990), p23.
55. Diamond, J (1991), p19.
56. Hopkin, K (1999) p30.
57. Dawkins, R (1993), p82.
58. *Ibid*, p82.
59. *Ibid*, p82.
60. *Ibid*, p85.
61. http://www.hmole-chorio.org.uk/
62. LaFollette, H and Shanks, N *op. cit.*, p45.
63. Diamond, J *op. cit.*, p48.
64. This fact, I believe, is a further reason why 'raw' species cannot be a morally relevant characteristic determining treatment in this case. For if humans share 98-and-a-bit% of our DNA with chimpanzees and if we are more closely related to chimps than our three species are to gorillas yet this is deemed to be less important than our possession of superior mental capacities then surely this suggests favouring some sort of 'capacities' criterion over species membership *per se*. Although it remains open to those who wish to protect all and only humans to argue that it is enough to be a member of a species who typically have these capacities – see chapter 4.
65. I shall ignore the possibility of using a donor in the way that 'living-related' human donors are used today – undergoing merely the removal of one of a pair of organs, in which the question of pain may become an issue, as relatively few animal 'donors' are currently used in this way.
66. For example Peter Carruthers (1992), p76.
67. Cigman, R (1980), p58.
68. *cf* the 'visual cliff' experiments of Gibson and Walk cited by Richard D Gross (1987), p140.
69. Cigman, R *op. cit.*, p59.
70. Johnson, L (1983), p175.
71. Lockwood, M (1979), p158-9.
72. Regan, T *op. cit.*, p101.

73. DeGrazia, D *op. cit.*, p232.
74. Harris, J (1999), p294.
75. Regan, T *op. cit.*, p324.
76. Carruthers, P *op. cit.*, p155-6.
77. Rachels, J (1983) p254.
78. Teichmann, J *op. cit.*, p39.
79. Cited in Steinbock, B *op. cit.*, p227.
80. Radford, B (September 2000).
81. By the same token I think that most people would also agree that dogs and cats seem to have richer lives than fish or insects and so that their interest in going on living is relatively stronger.
82. He may have a 'surviving interest' which could come into play – I discuss this further in chapter four.
83. Singer, P (*op. cit.*), p92.
84. Regan, T (1975).
85. Rachels, J (1986), p28.
86. *Ibid*, p50.
87. *Ibid*, p24-5.
88. *Ibid*, p26.
89. *Ibid*, p26.
90. *Ibid*, p58.
91. Singer, P (*op. cit.*), p88.
92. Rachels, J *op. cit.*, (1986), p59.
93. Maclean, A *op. cit.*, p126.
94. Graham, G *op. cit.*, p189.
95. Maclean, A *op. cit.*, p130.
96. *Ibid*, p130.
97. Singer, P (*op. cit.*), p76.
98. Singer, P (*op. cit.*), p78.
99. Muir, H and Mason, B (3 August 2002), p 20.
100. Patterson F and Gordon W, *op. cit.*, p71.
101. Sapontzis, S F *op. cit.*, p31.
102. Cited by Bekoff, M, (13 July 2002), p35
103. Bekoff, M, *op. cit.*, p36-7.

104. DeGrazia, D *op. cit.*, p240.
105. Singer, P (*op. cit.*), p89.
106. Singer, P (*op. cit.*), p90.
107. Graham, G *op. cit.*, p191.
108. We also have difficulty envisaging what it is like to be a brain-damaged (but not unconscious) human being – we might find it very hard to imagine what it would be like to be unable to read for example. Some human minds are so far removed from the norm that it is difficult to know what they believe or experience. Would a human in a post-vegetative state who can speak single words but cannot construct sentences or recognise some of his relatives be considered to have a more or less rich life than a normal healthy dog?
109. Graham, G *op. cit.*, p193.

Chapter Four

Using human beings as donors: four arguments for the use of wholly and permanently unconscious human beings

In this chapter I propose that some human beings ought to be killed for their organs, under certain specialised conditions. However, this is not the straightforward matter of logical entailment that I imagined it would be when I began work on this chapter several years ago. As discussed in chapter three there are enormous practical difficulties in comparing lives across species, or between normal or damaged humans, when all under consideration are conscious interest-bearers. If we are seriously attempting to delimit the class of 'mentally defective' human beings to determine those that may be suitable as organ donors, these difficulties become practical problems standing in the way of the practice. How do we prove that a certain human has a weaker interest in continued life than a given animal? Even if we could prove this, does this really entail that these humans have lower moral status than the animals? And how do we avoid slippery slope arguments to the effect that if a given profoundly mentally handicapped human is a suitable candidate for organ donation then we may also consider others whose deficits are slightly less severe? Because of these, I think, intractable difficulties I impose two restrictions on the interests-based inter-species comparison tool.

First I shall argue that humans may only begin to be considered as donors if they are wholly and irreversibly unconscious. This is clearly a much more stringent requirement than currently applies to the use of animals. The boundary of consciousness is important as it (a) clearly points out to us those human beings who no longer have either preference or welfare interests in the sense discussed in chapter three – they no longer have the capacity to care what happens to them; (b) it helps us to avoid concerns about how to go about comparing lives between beings all of which are conscious, and (c) to avoid slippery slope worries that if we think it permissible to use people with a given degree of intellectual deficit we would

have no way to refuse the use of slightly less handicapped humans.

I argue secondly that we must not use our thoughts regarding people's interest in continued life as the sole basis for making policy about the rightness or wrongness of *killing* them. Although certainly I think many people would think it less of a tragedy when an irreversibly unconscious person dies a natural death than when a normal healthy person does, this does not obviously lead to the conclusion that our moral obligation to refrain from killing them is correspondingly weaker. When we are considering how to behave towards human beings, even those with the most meagre mental life imaginable, we are bound by obligations which stem from sources other than present properties of the person. The Feinberg/Steinbock 'interests' account of moral status fits with such an intuition, I think. In this chapter I wish to suggest that 'anteunconsciousness harmings', like the 'antemortem harmings' discussed in chapter two, impose moral restrictions on how we may treat even the most damaged humans. Such restrictions do not apply to animals. However I also accept that the 'interests' view is perhaps not the 'whole story' when we consider the moral restrictions which apply to the treatment of profoundly mentally damaged humans. Concerns about the effect certain ways of treating such people would have on society as a whole or upon the family of the damaged person also impose limits upon what behaviour is morally appropriate. In other words, we have moral obligations both *to* and *regarding* such humans which restrict our behaviour towards them.

That said, these kinds of considerations can also provide independent reasons for using some human beings. This is the subject of the present chapter.

This chapter grows from a discussion of the contractualist argument of Peter Carruthers who, in his 1992 book 'The Animals Issue' makes a different sort of appeal to the moral relevance of species from those considered in chapter three – that all and only humans are able to be members of a moral community which confers special protections upon its members. I hope to bring out the strength of my arguments from a consideration of the strengths and weaknesses of this account. Carruthers' aim, in his words, is to "defend a theoretical framework that accords full moral standing to all human beings while nonarbitrarily withholding such

standing from all animals".[1] Three arguments are presented in support of this claim: the 'slippery slope argument', the 'argument from sympathy' and the 'argument from social stability'. Clearly, Carruthers denies my first assumption of the previous chapter: it is his belief that animals have no 'direct' moral status. (*nb* Carruthers sometimes talks of animals as having 'indirect' moral status and sometimes as having 'no moral status'. By this he means that we have moral obligations *with regard to* animals but none directly *to* them. I follow Carruthers in using these terms interchangeably.) I am not particularly concerned with refuting this part of his argument, for reasons I set out in a moment. Rather, I wish to draw two conclusions from my consideration of Carruthers.

Carruthers does not succeed in conferring moral status on all humans

I hope to show that his arguments fail to serve his intended purpose of giving moral standing to all human beings. Some human beings, the permanently and irreversibly unconscious, fall outside the scope of protection his arguments afford. I do not mean by this that such people cannot have direct moral status – I mean only that Carruthers' attempt to confer it upon them fails.

Four reasons why Carruthers' arguments can be made to support the killing of some humans for organs

I wish to suggest that we have reasons to think that the worst off human 'marginal cases' – the permanently and irreversibly unconscious – may, under certain circumstances, be used as organ donors. I present four reasons: there may be more.

First, the boundary of consciousness is a clear cut boundary (or at least, as clear as is the boundary of species) so we need not worry about the use of such people leading inexorably to the use of less damaged people.

Second, the boundary of consciousness marks the point from which we confidently say that the subject can no longer care what happens to him. So, on a rough AMC – like analysis, we could say that if normal animals are sentient and have at least a

weak interest in continued life then we have a tentative reason for thinking that these humans ought to be used as donors if animals are.

However I am unhappy to conclude, with Singer and Rachels, that we have no moral obligations to those humans who lack interests. So the third reason for considering such people as organ donors is that we ought to show respect for those desires a now unconscious person had prior to entering his unconscious state. If a person wished, prior to becoming unconscious, that his life be ended and his organs donated should he ever enter such a state, then this gives us a reason to take the organs. Such actions, if they are in accord with the patients' wishes, *count as showing respect* for him.

My fourth reason grows from a consideration of Carruthers' argument from social stability, which aims to protect all humans from being used as means to our ends for reasons not directly to do with the people under consideration. The fact that the permanently unconscious person no longer cares what happens to him does not mean that there is nothing for anyone else to be concerned about. While this offers, I think, the best (although indirect) grounds for arguing that we ought not to utilise humans whose interest in continued life is weaker than that of most animals (or nonexistent), it too can provide an independent argument for using some humans, if it can be shown that such donation will not cause instability.

Carruthers' theory

Carruthers makes two related claims regarding moral relevance. First, under contractualism "intelligence – or at least a certain kind and level of intelligence – is not morally irrelevant".[2] Quite the opposite in fact – it is a sufficient condition for a creature to have moral standing that it be a rational agent: its rationality being, in large part, a function of its intelligence. Second, he claims that "species membership, together with the similarities of appearance and patterns of behaviour with which it is associated, is not morally irrelevant under contractualism".[3]

Carruthers' position is developed along the lines of John Rawls' theory of social justice: he views morality as a construct created by rational contractors choosing

rules by which we might live. In Carruthers' own words: "Morality is here pictured as a system of rules to govern the interaction of rational agents within society. It therefore seems inevitable, on the face of it, that only rational agents will be assigned direct rights on this approach. Since it is rational agents who are to choose the system of rules, and choose self-interestedly it is only rational agents who will have their position protected under the rules. There seems no reason why rights should be assigned to non-rational agents. Animals will, therefore, have no moral standing under Rawlsian contractualism, in so far as they do not count as rational agents".[4]

Carruthers subscribes to the Rawlsian idea that a moral theory must achieve 'reflective equilibrium': *ie* it must accord, at least to a large extent, with common sense intuitions about morality. If a moral theory conflicts with common sense, we can either adjust the theory or give up the belief. He thinks it is a weakness in moral thinking if the conclusions reached do not accord with common sense. He criticises utilitarian thinking for this reason: "Utilitarianism is clearly committed to making substantial revisions in the common-sense moral beliefs held by most people... From the standpoint of the governing conception of utilitarianism – that of an impartial benevolent observer – there can be no reason why the interests of animals should be discounted or outweighed where they conflict with those of human beings. If these consequences are to be acceptable under reflective equilibrium, then we need somehow to explain away the almost universal human belief in their contraries – for example the belief that the interests of an animal count for practically nothing when set against the suffering of a human being".[5] I agree with Carruthers about the importance of attaining reflective equilibrium, not least because of its practical implications. In the field of organ transplantation any plan for obtaining organs which deviates far from common sense thinking runs the risk of causing a backlash among the general public and having an adverse effect on donation, thus negating any benefits of whatever was proposed.

The limited scope of my response

The first of Carruthers' claims above, that being a rational agent is a morally relevant characteristic, accords to a certain extent with what I said in chapter three. The second point, that membership of our species is morally relevant, that it is, in other words, a way of identifying those creatures with full moral standing and separating them from those with none, is a less good fit. While I allowed in the previous chapter that having a 'richer' life may be a way of according a higher degree of moral status to some creatures over others, I required only that creatures be sentient and possess some basic interests in order to be *admitted* to the class of beings with moral status. Carruthers requires more: paradigmatic possessors of moral standing, on his account, must not only be conscious interest-bearers but must also be sufficiently intelligent to be rational contractors. He hopes that his theory will accord 'full moral standing to all human beings while non-arbitrarily withholding such standing from all animals'. I do not believe it succeeds in doing either. However in this chapter I restrict myself to arguing that, according to his theory, we cannot accord any (let alone full) moral standing to the worst category of human marginal cases, the irreversibly unconscious. I hope that my chapter three discussion of how interests confer moral status sufficed to convince the reader that animals (at least of the sort to be used in transplantation) possess a degree of direct moral standing independent of the part they play in human plans or affections: I do not propose to discuss this further here.

Humans who are not moral agents

Carruthers thinks that rationality is only a sufficient condition for a creature to have moral standing, not a necessary condition. He wishes to confer such standing also on nonrational members of our species. Under this position humans, whether rational or not, have direct moral status, animals, whether rational or not, have only an indirect moral status conferred on them by being 'test cases' for the sort of virtues it is desirable for a rational contractor to possess. He states "rational contractors should extend direct moral rights to all members of the human species, *in order to avoid the dangers of a slippery slope and to preserve social stability, and in order not to undermine our natural reactions of sympathy for human suffering.*

Since these arguments do not support the extension of direct moral rights to members of other species, it will turn out that species membership is a morally relevant characteristic from the perspective of contractualism".[6] (my italics) (Carruthers uses the term 'rights' – I prefer to think merely in terms of moral status, for the reason mentioned in chapter two. Carruthers has been accused of conflating the concepts of moral rights and moral status.[7])

Carruthers develops each of the three points italicised in the above (not in the original) separately. I believe I have a response to each. To reiterate, I do not wish to deny that we have moral obligations to even the most damaged human beings, I wish only to deny that Carruthers' arguments succeed in conferring moral standing on humans (and excluding animals). I begin by addressing the 'slippery slope' point.

The slippery slope argument

According to Carruthers, there are no sharp boundaries between a baby and an adult, between a 'not-very-intelligent adult' and a 'severe mental defective' (Carruthers' terms), or between a 'normal old person' and someone who is 'severely senile'. Therefore it would be dangerous to accord rights based on something like the comparative interest view discussed in the previous chapter. "The argument is then that the attempt to accord direct moral rights only to rational agents (normal adults) would be inherently dangerous and open to abuse".[8] For this reason, according to Carruthers, society should allow the inclusion of 'mental defectives' (his term) into the sphere of moral concern. Conversely, the theory permits the exclusion of all animals from the protected circle as it is possible (according to Carruthers) to draw sharp boundaries between all humans and all nonhumans. "There really is a sharp boundary between human beings and all other animals. Not necessarily in terms of intelligence or degree of rational agency, of course – a chimpanzee may be more intelligent than a mentally defective human, and a dolphin may be a rational agent to a higher degree than a human baby. But there is not the same practical threat to the welfare of rational agents in the suggestion that all animals should be excluded from the domain of direct moral concern. Someone who argues that since animals do not have rights, therefore babies do not have

rights, therefore there can be no moral objection to the extermination of Jews, Gypsies, gays and other so-called 'deviants', is unlikely to be taken very seriously even by those who share their evil aims".[9] (*nb* It is important to reiterate that Carruthers' 'sharp boundary' between humans and animals is not to do with the creatures under consideration themselves, only with the bad consequences that will ensue if we step onto his slippery slope. He freely acknowledges in the quote above that many animals may be rational agents to a greater degree than are some 'defective' human beings.)

Carruthers thinks it important that the rule governing who is allocated moral standing needs to be easily understood by the general public, or else it might be misapplied. "To think and speak in terms that withhold moral rights from some human beings is to invite people to try to draw yet further distinctions – for example, withholding rights from those who are sexually or intellectually 'deviant', or from those whose intelligence is low. So I conclude that our slippery slope argument is indeed successful in according rights to all human beings".[10]

The one exception to this rule for Carruthers is unborn children – he willingly concedes that there is 'no clear line' between a foetus and a baby any more than there is between a baby and an adult. However he says "the issues here are not the same. For one of the things that contracting rational agents should consider seriously, in framing their rules, are the natural responses of thought and feeling that antecede moral belief... It is natural to be struck by the suffering of senile old people or babies, in a way that both supports and is supported by assigning direct rights to these groups. It is not so natural for us to respond similarly towards a foetus, however, especially in the early stages, unless we already have prior moral beliefs about its status. A rule withholding moral rights from foetuses, and hence permitting at least early abortions, may therefore be quite easily defended against abuse".[11] The reason underlying this exception in Carruthers' argument is very important. I return to it in a moment.

Before I begin I wish to make a trivial point: it seems to me that in the above statement of the 'slippery slope' point Carruthers moves from attacking a defensible AMC position to a totally implausible one. I agree that anyone offering the above

argument *would* be unlikely to be taken seriously. This does not, I think, mean that other versions of the argument from marginal cases need be so easily dismissed. But I am moving too fast.

Response to the slippery slope argument

I disagree with Carruthers' pessimism regarding the possibility of drawing a boundary between a normal human and a 'mental defective': I think it is possible to do so (and thus to avoid stepping onto the slippery slope) so long as one is careful in defining one's 'defectives'. I think that Carruthers overplays the 'fuzziness' of any possible distinction by considering, in the main, senile old people and babies as his examples of arational human beings. I agree with him that "It is no mere accident of culture or upbringing that a crying baby, or a senile old woman moaning with the pain of terminal cancer, can evoke our sympathy. For what is presented to our senses in these cases differs only in slight degree from the suffering of a child or normal adult".[12] However (and leaving aside the fact that such displays of suffering also differ only in slight degree from that which is presented to our senses by a suffering animal), the fact is that some humans – the permanently and irreversibly unconscious – do not exhibit any signs of suffering in this way. Whether our concern is with suffering (of which such people are incapable) or with the wrongness of ending their lives, I find it difficult to see how such a contractualist position might be extended to give moral standing to such impoverished human beings. I am quite willing to agree with Carruthers that killing or causing to suffer profoundly mentally handicapped but conscious human beings *would* (or could) cause slippery slope concerns. I do not think that these concerns apply to the most severe category of 'mental defectives' – the permanently unconscious.

We must exercise caution however: many conditions, which admit of different degrees of both permanence and unconsciousness, are frequently lumped together by insufficiently scrupulous philosophers (such as those criticised in chapter one). For this reason I must determine a class of fully and permanently insensible human beings.

Permanently and irreversibly unconscious human beings

The following discussion veers far from philosophy and into medicine for which I apologise in advance. However, it is necessary to delimit precisely the class of 'marginal cases' which fall outside Carruthers' slippery slope argument for protecting 'defective' human beings. In other words, it is necessary to show that there is a clear boundary of consciousness in order to avoid objections of the sort I levelled against AMC arguments in the previous chapter (concerns about the validity of comparisons between beings all of whom are undeniably conscious). Such problems are liable to become Carruthers-like slippery slope arguments if they are relied upon to make real world distinctions between beings we may and may not use as donors.

Peter McCullagh has created the global term 'cerebral death' to refer to all those conditions in which the cerebral hemispheres are destroyed but in which the brainstem continues to function. The first thing to note about McCullagh's term is that it encompasses two clinical conditions – persistent vegetative state (PVS) and coma. In point of fact, according to International Working Party Report on the Vegetative State (1996)[13] there are two other variants of clinical presentation, not classified as 'vegetative' by the International Working Party, but which still involve profound cognitive impairment.

These are:

(a) borderline presentations, "in which the patient has a sleep-awake pattern being awake for a major part of the day; generally more definite localising to visual, auditory or tactile stimulation; tracking eye movements following objects or people; may show emotional responses to presence of family; may smile or cry. Agreement was not reached as to whether this stage was vegetative or non-vegetative."[14]

(b) non-vegetative presentations, which may be further divided into "two main non-vegetative or early post-vegetative presentations based on the level of consistency of response: [either] the patient has a sleep-awake pattern; responds to simple commands inconsistently; remains totally

dependent; and has profound cognitive impairments, or suffers the same impairments but is able consistently to respond to simple commands.[15]

I shall ignore the class of 'truly' comatose patients in order to examine the sub-group of the persistent vegetative state. This is because although coma is the most profound state of unconsciousness it is seldom permanent.[16] I also ignore the two non-vegetative conditions above: my concern here is with those patients who are wholly and irreversibly unconscious.

The term 'persistent vegetative state' was created in 1972 to describe a state of 'wakefulness without awareness'.[17] The word 'vegetative' was specifically chosen to describe 'a merely physical life, devoid of sensation and thought'. The 1996 Working Party recommends the terms 'persistent' and 'permanent' be dropped from the diagnosis of Vegetative State since these 'attempted to add a prognosis to a diagnostic terminology'. However, it is generally agreed by neurologists that such patients have lost 'all conscious awareness, including the capacity to experience pain and suffering'.[18]

Characteristics of the vegetative patient

Among the characteristics described by Jennett and Plum were:

(a) The absence of any psychologically meaningful adaptive response to the external environment. (b) Absence of any evidence of a functioning mind which is receiving or projecting information. (c) The patient has prolonged periods of wakefulness. (d) Patients do not speak (verbalise) though may make sounds (vocalise). (e) Patients fail to signal appropriately by eye movements, although they sometimes follow moving objects in a slow intermittent pattern. (f) Initially the EEG may be isoelectric, but considerable activity ... may be found once the state has lasted several months.[19]

The problem of proof

There are two main difficulties facing anyone wishing to declare a patient to be fully and irreversibly unconscious. Unsurprisingly, these are: (a) problems in proving that the patients are completely unconscious (stemming partially from the fact that there appear to be degrees of severity within the class, and partially from a lack of diagnostic tools); and (b) difficulties in proving that the condition is permanent. Let us examine these problems in turn.

Difficulties in diagnosis

It is acknowledged among experts in the field that within the class of vegetative patients there exists differences of degree (the same is true of the class of anencephalic babies). The contributors to the IWPR were unable to decide whether there are in fact three different vegetative states or a single state with graded severity. Patients display differing responses to stimuli – whilst some display none at all "Nearly all regain sleep-wake cycles; many display the facial appearance of interest; and some even show emotional fluctuations... Although none follow moving objects consistently, some occasionally move the eyes slowly towards visual stimuli. Others blink inconsistently to visual threat, startle or close the eyes in response to sudden noises..."[20] The IWPR divides vegetative patients into three general groups based on severity.

(a) Patients who have a sleep-awake pattern, may respond on occasions by a reflex activity in a delayed fashion but are generally unresponsive to stimulation from the environment.

(b) Patients who have sleep awake patterns, generally respond in mass extensor responses or startle responses to stimulation without habituation. This may progress into flexor withdrawal responses. There may be roving eye movements but not tracking; facial expressions may occur to stimulation.

(c) Patients who have sleep awake patterns; single limb response to stimulation; withdrawal or intermittent localisation may occur to touch, sound or visual stimulation; random eye movements may occur but the

patient does not focus on objects or people; though may turn to sound or touch.[21]

A patient may pass through some or all of these stages as he or she recovers, or may cease to progress at any of the stages.

This lack of clarity concerning the severity of the condition is compounded by the fact that the condition is extraordinarily hard to diagnose accurately – so difficult in fact that several commentators, notably Chris Borthwick[22,23], have suggested that the creation and application to patients of this medical term gives a false impression of the degree of diagnostic certainty available. The state does not lend itself to direct diagnosis: as the IWPR notes, brain function is too complex to assess by one single assessment tool. Even scans of the brain can only provide supporting or opposing evidence, they are unable to prove the presence or absence of the state directly. (The IWPR states "Neurodiagnostic tests alone can neither confirm the diagnosis of a Vegetative State nor predict the potential for recovery from awareness."[24]) Thus, a diagnosis must be made on the basis of behaviour. (In fairness it should be noted that the term Vegetative State was coined by Jennett and Plum specifically to provide a clinical diagnosis *based on behavioural observations of the patient.*)

However the mere absence of behavioural indicators of pain or of any other manifestation of consciousness does not in itself prove the lack of such a mental state. The IWPR acknowledges that "deciding the cognitive awareness of the patient, especially when at a very low level, [is] an educated guess since there are, as yet, no tests which can confirm whether the patient has any 'inner awareness".[25] Thus, the diagnosis depends on a number of factors such as the physical ability of the patient to respond, the desire or willingness (if possible) of the patient to respond and the time available for observation and assessment.

Because it is amenable only to diagnosis based on behavioural indicators, the possibility for error is greater than in the diagnosis of other medical conditions. Borthwick cites studies which show a false-positive diagnostic error rate of between 17 and 37 per cent (patients diagnosed as being in a PVS by qualified medical

practitioners who did not, in fact, meet the criteria when tested by trained neurologists[26]). Certain neurological syndromes, notably the 'locked in state', can, behaviourally, mimic profound unconsciousness. Furthermore as the McCullagh quote above shows, many patients in PVSs do evince behaviour – they are neither immobile nor silent; yet it is assumed that their movements are not 'reproducible, purposeful, or voluntary'. Borthwick questions whether this assumption is valid. The results of post-mortem examinations of the brains of people alleged to have been in PVSs is frequently alleged to show damage 'incompatible with consciousness or with the capacity to feel pain'. However, whilst our knowledge of neuroscience remains imperfect, this seems to beg the question to some extent.

Difficulties in giving a prognosis

There are also problems regarding the degree of certainty available to doctors in asserting that the loss of conscious is irreversible. We are given cause for concern by reports such as the one I quoted in the previous chapter about the artificial device created by French scientists and doctors which mimics the function of the Ascending Reticular Activating System (the ARAS is an area of the brain which serves as a sort of 'on/off' switch for consciousness) to allow some patients (admittedly, a small number of those on whom it was tried) in supposedly persistent vegetative states to regain some semblance of consciousness when the device is activated. Because of this, if one wishes to use irreversible unconsciousness as establishing a necessary condition which must be met (along with other conditions, of course) if we are to kill humans for their organs, one would want to exclude from the pool of potential donors patients whose loss of consciousness is caused by lesions in the ARAS; and to use only those who cannot, either in practice or in theory, regain consciousness. There are also reports, cited by Borthwick, of patients awaking from PVS, although whether this is due to them being incorrectly diagnosed or whether the condition need not truly be persistent in all cases is a matter for debate. Borthwick states "It is not possible to predict in advance that any given vegetative state will be persistent, still less permanent. The only means of deciding which initially vegetative clients will qualify for the diagnosis of PVS is to watch them and see if their condition persists".[27] He quotes another study which claims that of eighty four vegetative patients investigated, forty one per cent

became 'conscious' within six months of their injury or illness, fifty two per cent by a year, and fifty eight percent within three years. I think perhaps that Borthwick's presentation of the facts here is rather pessimistic. Whilst his data clearly suggests that some vegetative patients do recover at least some of their faculties more than a year after the injury to their brains, to state simply that they 'became conscious' is not terribly helpful – to what degree did they become conscious?

It is generally agreed that patients who are still vegetative at three months following the brain damage do not make significant levels of recovery. That said, there are several reports in the world literature of patients who have made a late recovery. The IWPR cites a number of examples including a study of several patients who recovered from the vegetative state between 4-8 months after the brain injury, although many of these remained severely disabled. In another study cited by the IWPR, Rosenberg *et al*[28] describe the case of a 43 year old man who was in a vegetative state for 17 months following anoxic brain damage before showing the first signs of awareness. He progressed to being able to tell stories and jokes though he was unable to recognise complex collections of objects in pictures and was unable to read.

Many of these studies are anecdotal reports of single patients and may sometimes be accused of lacking rigor. However, the IWPR cites a few larger-scale studies which may be more convincing, for example a five year follow up of 30 patients in PVS, in which 'five recovered from PVS between one and five years though only two recovered to a level where they could communicate. It is recognised that there is a lack of long-term follow up studies of those patients still vegetative beyond 2-3 years.[29]

So an advocate of a policy of using such patients as organ donors ought to avoid generalisations such as claims that vegetative patients *as a group* meet even this first necessary condition for becoming donors. Such an advocate must also exercise extreme caution in selecting patients whose condition is deemed to be irreversible. Whilst misdiagnosis and uncertainty about the severity of the condition are certainly troubling even as we strive to keep such patients alive (if a patient is not truly insentient his 'random' grimaces and 'vocalisations' may in fact be a

response to untreated pain), they would become absolutely critical if we decided to use lack of sentience as one reason to consider such people as organ donors. We must draw a clear line between states of total and near-total loss of consciousness if we wish to avoid stepping onto a slippery slope. For this reason, I refer to those I usually wish to consider as donors as 'the permanently and irreversibly unconscious': although this term is a mouthful it makes it clear that not all PVSs are suitable candidates.

The totally and permanently unconscious: being as sure as we can be

However having set the case for the opposition as strongly as possible I must now point out that it is also true that within this nonhomogeneous class there exist patients who are truly insentient and for whom we are as certain as we can be that consciousness can never return – *cf* the case of Tony Bland, who was carefully diagnosed, and whose cerebral hemispheres had been empirically confirmed as having liquefied. As the University of Pennsylvania's definition of the state notes, in its most severe form the condition involves "a complete unawareness of the self and the environment" and also involves a terminological change from 'persistent' to 'permanent' "when irreversible PVS can be diagnosed with clinical certainty".[30]

Here are patients who remain in the most severe category of the vegetative state, whose brains demonstrably have suffered enormous damage, sufficient to make trained neurologists as certain as they can be that consciousness is not, and will never again be possible, and who, further, utterly fail to show any outward signs of being conscious. These unfortunates form a more-or-less clear cut category – clinically it is possible to distinguish them from less-handicapped people. The boundary between consciousness and unconsciousness is not entirely beyond dispute: whether for reasons such as those just discussed concerning doubts in the diagnosis, or because the present state of neuroscientific knowledge allows room for doubt about what is means to be truly 'unconscious' (*cf* the concerns expressed by David Lamb at the conclusion of my first chapter). However if the doubts raised in my discussion remain I refer the reader to the discussion of the boundary of species in chapter three in which it was demonstrated that the boundary of our

species, by its very nature, is also not clearly delimitable yet is used as both a necessary and sufficient condition for determining the permissibility of killing a creature for its organs: non human animals may be killed in virtue of their not being human, humans may not be killed.

I think this point puts a brake on Carruthers' first objection. The slippery slope concern that if we were to exclude from the groups of possessors of moral standing only the most severely mentally defective we would then find it hard not to exclude the slightly-less defective derives its power from worries that excluding any human from the possessors of moral status would entail a 'practical threat to the welfare of rational agents'. However, it is possible to find a foothold on this slope of 'marginal cases': we can draw a more or less clear cut line at the boundary of consciousness.

Thinking about human 'marginal cases' only in terms of those who are unconscious also gives us a way to avoid the first problem for the AMC and for life comparative accounts generally which I mentioned in the previous chapter. It is not necessary on my account to concern ourselves with whether a large vocabulary or the ability to enjoy music is more or less important then is having a highly sophisticated nose, or with who meets the criteria for personhood and who does not. For, so long as we can acknowledge that there is 'something which it is like' to be an animal, and 'nothing it is like to be' an unconscious human being then we have a case of a human being who clearly possesses a weaker (or rather 'no') interest in continued life than a given animal (certainly the sort of animal that is used as a donor to humans, in any case).

To say that we can separate out a clear-cut category of humans to whom it no longer matters what we do and to say that they are a clear-cut case of creatures with a weaker interest in life than some animals emphatically does not mean that I think that we can have no obligations to the irreversibly unconscious. I am confident that we do have obligations to and with regard to these people which limit what we may do to them for the sake of other people. These obligations stem from 'surviving interests' of the sort discussed in chapter two – wishes the patient may have had while competent regarding their treatment should they ever enter such a state. They also stem from social stability concerns of the sort Carruthers

discusses (concerns which, as I shall argue in a moment, need not arise if organs are taken only in the proper manner). The obligations do not stem from the slippery slope argument – such people do not present a face with which we can identify in the manner Carruthers describes above so using them need not lead on to using less damaged people.

The fact that we can separate out some humans the (mis)use of whom would not lead to the misuse of others is *in itself* an argument against Carruthers, I think. This is what I meant in the introduction when I said that his theory cannot confer moral standing on these most damaged humans. For, on Carruthers' account, if we are able to find a stopping place on the slippery slope argument (as, I hope, I have) then we lose this slippery slope reason to attribute moral status to the most damaged of human beings. This point, by itself, is by no means a knock down argument against Carruthers, both he and I have other reasons to attribute moral status to humans. Therefore let us move on.

First reason for considering permanently and irreversibly unconscious humans as donors

So the boundary of consciousness provides a stopping place on Carruthers' slippery slope and avoids one of the major problems for 'gradualist' life-comparative accounts of moral status of the kind discussed in chapter three. It provides firm ground from which to counter the claim that we should protect all humans from being killed for their organs as to do otherwise would pose a potential risk to rational contractors. The boundary of consciousness is as clear-cut a biological boundary as the boundary of species; this gives us a first reason for thinking that *the use as organ donors of these people need not lead to the use of other, less damaged, human beings.* It is important to recognise the weakness of this conclusion however. The fact that the permanently unconscious form a clearly bounded class merely begins to suggest that they may be used as donors. Irreversible unconsciousness is not in itself a morally relevant difference separating those humans we may kill for their organs from those we may not, it is simply a necessary condition: I assume that we cannot kill any conscious humans for their organs. And,

as discussed at the end of chapter three, the absence of consciousness does not mean that a person has no moral status; if we decide that it is permissible to kill people in this situation it is not because they do not matter. I simply think that, whatever else we decide about possible human donors, they must be unconscious: if not, the slippery slope argument applies.

Unfair comparisons?

By restricting the category of 'defective' humans I am willing to consider as organ donors to this small subgroup I may be said to be tipping the comparison unfavourably against animals. Like Carruthers I do not deny that many animals are more intelligent, sociable, happy and so on than can be such damaged humans. However, like Carruthers, I think there is something special protecting the humans which the animals do not possess. It is this 'something special' that prevents us from just 'helping ourselves' to organs from humans whose interest in continued life is weaker than that of animal donors. The difference (or one of the differences) between myself and Carruthers is in what it is that we think is 'special' about defective humans, and how it confers protection. Carruthers thinks that being a member of a species who are usually rational contractors is sufficient to confer direct moral status. I believe the relationship between typical, rational adult human beings and severely damaged humans is important: I think we can derive moral obligations *with regard to* almost all human beings in virtue of the fact that rational contractors care about them. However I think that such status can only be indirect. But I think it is also possible to confer direct moral status upon these humans in virtue of the fact that they have surviving interests. I talk more on these matters in a moment.

I limit the class of possible living human organ donors to the permanently unconscious as by admitting conscious humans to consideration one becomes susceptible to Carruthers' slippery slope concerns and to the AMC problem of comparing lives. Although I concede that this is not a fair comparison with the sort of animals which are currently used as donors based on a consideration of *the donors themselves* I hope the reasoning behind it is now apparent. We have obligations to human beings which we do not have to other animals even when the

human being in question is wholly unaware of his treatment. In other words, a consideration of interests is not the only thing which confers moral obligations. I present a fuller case for this below.

The above establishes only that consciousness has a clearly delimitable boundary – it says nothing about *why* it is the sort of thing that may usefully serve as part of a moral boundary which determines those creatures we may, under certain conditions, use as organ donors from those which are forever off limits. This is the subject of my next section.

The argument from our 'natural sympathetic response to human suffering'

Carruthers says "The general thesis I want to defend ... is that some actions are seriously wrong, not because they cause any harm or violate any rights, but simply because of what they reveal about the *character* of the agent"[31] (my italics).

According to Carruthers' theory, rational contractors should take an interest in character because character forms the 'springs of human action': *ie* it determines how we behave except on those occasions when we specifically consider an action before we perform it. The point germane to our discussion here is that contractualists should "believe in a duty to develop in themselves a disposition towards beneficence"[32] as "rational agents should surely wish to agree on more than merely rules of noninterference. For they may be certain that they shall, at some point in their lives, require help from others".[33]

The rules governing how help should be given obviously cannot be fixed: actions demonstrating the virtue of beneficence can take many different forms depending on the situation. "The obvious and only feasible solution is that rational agents should agree to develop a general *disposition* to help those in need, to be exercised when the opportunity arises to do so at no comparable cost to themselves. What they should agree to develop is a general attachment to the good of others, and a predisposedness to act on their behalf".[34]

So it is wrong to cause suffering wantonly as "Contracting rational agents should agree to try to develop a ready sympathy for one anothers' suffering".[35] And it is wrong to end a life as "our reasons for fearing death derive from the fact that we have forward-looking desires that presuppose continued life. We would then expect rational contractors to agree to develop a general attachment to one another's lives".[36] Rational contractors should be prepared not only to refrain from killing but to act positively to prevent death "grounded in a sympathetic appreciation of the motives that rational agents have for going on living".[37]

Nonrational humans are protected under Carruthers' position. "It is no mere accident ... that a crying baby, or a senile old woman moaning with the pain of terminal cancer, can evoke our sympathy. For what is presented to our senses in these cases differs only in slight degree from the suffering of a child or normal adult... Someone who behaves in such a way as to be indifferent to the suffering of a baby or a senile old lady is therefore very wrong, because of what their behaviour reveals about their character".[38] And indifference to the suffering of arational humans runs the risk of setting a dangerous precedent: "Those who begin by rationalising their indifference to the sufferings of the senile may end by so warping their attitudes and moral imagination that they become insensitive to the sufferings of some who are, indisputably, rational agents".[39]

It is from rules of this sort that animals receive their (indirect) moral standing under Carruthers' contractualism. Regarding animal suffering he states "Such actions [as using one's cat as a dart board, even if no-one else will ever find out] are wrong because they are cruel. They betray an indifference to suffering that may manifest itself ... in that person's dealing with other rational agents. So although the action may not infringe any rights (cats will still lack direct moral rights under contractualism), it remains wrong independently of its effect upon any animal lover. Animals thus get accorded indirect moral significance, by virtue of the qualities of character that they may, or may not, evoke in us".[40] Regarding killing: causing the painless death of an animal is not wrong under Carruthers' contractualism. "That someone fails to be moved by the painless death of an animal need not display any cruelty for there is no such thing, here, as entering sympathetically into the reasons that the animal had for going on living. Of course, we could, if we wished, enter

sympathetically into the future pleasures and satisfactions of the animals, which have now been lost through death... But given that this is not what sympathy for the death of a rational agent normally amounts to, the fact that we fail to have such feelings in connection with the death of an animal need not show that there is anything amiss with our moral character".[41]

There is much to respond to here. I wish to say little about Carruthers' discussion of animal suffering, despite it being extremely interesting, as it is not relevant to the special situation under consideration: that of ending lives in order to obtain organs. His treatment of the wrongness of killing is relevant to this case. I think that his theory runs into difficulties when applied to the special subset of 'mental defectives' which I have set up: the permanently and irreversibly unconscious.

'Forward looking interests'

What is important about life, on Carruthers' account, is the 'forward-looking interests' possessed by rational agents, which give reasons for their wish to continue living. "It counts in favour of the contractualist approach to these issues that when we enter sympathetically into the death of another, trying to see what their death may have meant from their point of view, we do seem naturally to focus on those plans and projects that have now been cut short". He continues "this sort of sympathy is only possible in respect of the death of a rational agent, since only such an agent has long-term projects, or the desire for continued life".[42]

To an extent I agree with Carruthers. In the previous chapter I asserted that death is 'bad' because it deprives us of the opportunity to fulfil our important desires. And I agree with him that we might feel less sympathy, from the point of view of the one who dies, when a senile person dies than a normal person. Viewed this way I think many people would concur with Carruthers' suggestion that we may feel no sympathy at all for the death of an early foetus.

However, I believe that this makes it difficult for Carruthers to confer direct moral standing upon the permanently and irreversibly unconscious. For, as discussed in chapters one and three, many people hold the common-sense belief that death is

not a bad thing at all, from the subject's point of view, for someone who is irreversibly unconscious. The terrible thing happened for such a person when he become irreversibly unconscious. Thus we cannot enter sympathetically into his reasons for going on living as there is 'nothing it is like' to be in an unrousable coma: such a state is, subjectively, indistinguishable from death. Thomas Nagel writes "the value of life [to its subject] and its contents does not attach to mere organic survival: almost everyone would be indifferent (other things equal) between immediate death and immediate coma followed by death twenty years later without reawakening".[43]

There is, by contrast, 'something it is like' to be an animal, even if we cannot describe it very accurately. Irreversibly unconscious people have no interests (apart from those similar to the 'interests' of dead people, to do with not having their bodies mistreated or their good name besmirched): we cannot 'put ourselves in their place' and there is no reason, *from the present point of view of the subject of such a state*, why such a life should not be ended. Even if we deny that animals are able to reflect on their interest in ongoing life I argued in chapter three that they have such an interest nonetheless. It seems that animals have more reasons for going on living than do such humans.

Carruthers attempts to evade this conclusion for the most damaged humans by appeal to his slippery slope argument. However, as I discussed at the beginning of this chapter, so long as we are careful to restrict the categories of brain damaged humans we consider, we need not worry about killing such people causing slippery slope concerns – ending the lives of those who are irreversibly unconscious need cause no danger to other humans. So I think that Carruthers' 'argument from sympathy', like his slippery slope argument, fails to support his claim that only all and only humans have full and direct moral status. This argument of Carruthers' gives no reason, either from a sympathetic entering into the subject's life or from a desire to avoid a slippery slope, why the special category of the irreversibly unconscious ought to be given moral protection.

Second reason for considering permanently and irreversibly unconscious humans as donors

The fact that, as far as the subject is concerned, there is 'no longer anything to be concerned about' also gives us a second reason for considering such people as donors. (Although I should reiterate here that my proposed use of such people does not stem from the belief that there is 'nothing to be concerned about' when thinking about these people.) The boundary of consciousness is clear cut. We saw above that by restricting the class of humans who can even enter consideration as beings we may kill for their organs to those who are wholly and permanently unconscious we can avoid the dangers of a slippery slope, and the problem of comparing lives across species. We now have a second reason for proposing their use. Humans who are unconscious have no present interests: they are far less able to be concerned about or harmed by their usage than are the animals which we currently use (and which I suggested in the previous chapter it is relatively acceptable to use.) This sort of thought, that whether they do or do not continue to live is a matter of present indifference to the subjects of these profoundly unconscious states, underlies the feeling held by, I think, many people, that continuing life in the permanent absence of awareness can have no value to the possessor of such a life: that is, that they, at least, have lost the capacity to value it. Intuitively, it seems quite plausible that a person whose consciousness has permanently been lost, who will never again laugh or cry, feel love or anger does seem to have lost everything that makes life 'worth living'. This suggests a way in which a policy of killing people for their organs can be made to fit with common sense intuitions: the thought that, as far as the subject of the life is concerned, all has already been lost is both widely believed and backed up by clinical evidence. It is also, I believe, what makes the 'higher brain' definitions of death, such as those discussed and rejected in chapter one, appealing.

A brief re-exploration of 'higher brain death'

To refresh the memory. These ontological definitions held death to be either (a) the loss of psychological continuity or 'personhood' or (b) the permanent loss of consciousness. In chapter one I discussed at length my reasons for rejecting these positions. I can see no reason for declaring someone who is irreversibly

unconscious yet does not require the support of ventilators, inotropic drugs and suchlike to maintain their biological functioning to be dead. I can see even less reason for someone whose personal identity has been lost (which need not necessarily involve the loss of consciousness as previously discussed) to be declared dead. Differences in quality of life do not begin to provide grounds for a redefinition of death.

However, despite my criticism of these theories, I found them to have a definite intuitive appeal: I hope that the source of this appeal is now clear. Permanently unconscious people, although not dead as argued previously, share an important similarity with the dead – they have lost the capacity to regret their circumstances, to suffer because of their condition, or, indeed, to think and feel in any way. Contrary to the Harvard Committee's contention that "The burden is great on patients who suffer permanent loss of intellect",[44] such a person can never suffer under a burden, make light of it, or even be aware that they are burdened. I hope I have shown how the intuitions that underlie the 'higher brain' concept of death do have a place without committing us to the (I think) unacceptable consequence that we must declare people who are perfused, spontaneously respiring and otherwise able spontaneously to regulate their internal milieu, to be dead.

Moving away from the comparison with animals: some independent reasons supporting the killing of some irreversibly unconscious people for organs

A brief recap. It is commonly assumed that animals have a lower moral status than do humans. I hope that my arguments in that chapter and this sufficed to convince the reader that one of the reasons we have for thinking that animals usually have a lower moral status than humans – their weaker interest in continued life – suggests that some humans too have a weaker interest in continuing to live than do 'normal' humans. And irreversibly unconscious humans have no such interest at all. The inability of the latter group any longer to care what happens to them gives us initial grounds for thinking them to be suitable candidates for organ donation: we can delimit the boundaries of consciousness and so the practice need not cause a slide towards using less damaged people, and we can safely say that the person

themselves no longer cares what happens. However I do not wish to follow the AMC to the conclusion that is sometimes reached: the claim that the lack of present interests possessed by the most damaged of human beings mean that they are of no concern to other people – that we may kill them if it suits us.

In the above I hope to have convinced the reader that it is possible to delimit a category of human being whom, on a consideration only of their present state, would *appear* to have less of a claim to moral status than do animals. This is one way of thinking about 'sympathy' or putting oneself in another's place: it is the way Carruthers seems to have in mind when he uses the term. However, the claim that it may be permissible to kill irreversibly unconscious humans for their organs engenders the possibility of other clashes with reflective equilibrium which have yet to be resolved – it is important to make clear that any such killing would not be performed from a lack of respect. I wish to argue that *the comparison of present interests is not sufficient to determine all our obligations to these people.* We tend, in a common sense sort of way, to think that we have obligations to people which stem from considerations other than facts about the individual in their present state, I believe. These obligations, if they exist, provide the best hope for grounding the 'Kantianism for humans, utilitarianism for animals' idea (the thought that all animals may be used as organ donors yet that no humans may). Certainly I myself know of nothing to do with the present state of the individual themselves that would work to inform such a belief.

What sort of thing might ground such obligations? The interests view (as Feinberg and Steinbock set it out) allows that some interests may survive their owner's capacity to comprehend them and that this gives moral status. This gives us a second possible way to think about sympathy which would allow us to confer direct status on these people. If someone has expressed a desire that their life be ended should they ever enter an irreversibly unconscious state, many people think it appropriate to carry out their wishes under these circumstances, unless there are strong reasons not to do so. I would argue that these people are harmed if their wishes are not carried out, just as the dead people discussed in chapter two are susceptible to harm although incapable of ever being aware of it. This second sort of appeal to sympathy is one to which Carruthers explicitly does not subscribe.

(This is not to say that Carruthers could not agree with me that it is, generally, good to respect the wishes of dead or unconscious people – it is just that his motive for saying so would be different.) I believe that the importance of not causing what I shall call 'anteunconsciousness harming' can also support the removal of organs from unconscious people who wish to die, if they have also expressed the desire to donate.

Anteunconsciousness harming

In chapter two I discussed the apparent paradox we face when thinking about whether the dead can be harmed. On the one hand, nothing can now trouble them, on the other, we feel that something terrible has befallen them. I took the side of those who believe that things can be better or worse for the dead, even though they can never know. I think a similar paradox is at work here: the arguments above supporting the use of irreversibly unconscious people as donors work because we know that they no longer, and can never again, care what happens to them. *However, and for much the same reasons as those which protect the dead, we are not free to 'do as we please' with them – they retain some moral status.* It is true that when we try to put ourselves imaginatively in the place of such patients we find it impossible to think of any reasons they might have now for continuing to live. This is the 'nothing it is like to be' argument discussed above. However, I also think considerations not to do with the present state of the subject are relevant.

While I do not think that such people *presently* care about their continued existence I think it is possible to form an argument that some of them, at least, ought to be killed or allowed to die (I equivocate here, but the distinction is in fact of enormous consequence to this argument and will be discussed in the final section of this chapter) not because they 'cannot care' but rather because it is 'in their interests' based on a consideration of the sort of person they were prior to entering the PVS. And if the right thing to do is to end their lives, then ought we not also respect the further wishes of those who expressed a desire in life to donate their organs, just as is presently done with conventional cadaveric donors?

The idea of 'anteunconscious harmings', like the discussion of the 'interests' of dead people and of how they may be harmed post mortem, in chapter two, is somewhat contentious. I follow Nagel (and others) in holding that it is possible for someone to be harmed without their being aware of it. I shall not go into detail here about the problems concerning this kind of account – the questions of how people can be harmed by things which do not affect them consciously, or of who can be said to be the subject of a harm. The problems for the unconscious are the same as the problems for the dead, I think, and I discussed them sufficiently in chapter two. Suffice it to say, I hold, with Nagel, that "A man's life includes much that does not take place within the boundaries of his body and his mind, and what happens to him can include much that does not take place within the boundaries of his life".[45] The idea stems from the belief that people have interests which can survive their deaths or their entering an irreversibly unconscious state – interests in the survival and prosperity of their families, or businesses, and interests in their retaining a good name are common examples of surviving interests. I believe that interests concerning what is to be done with one's body following death or (and this idea has greater intuitive plausibility, I think, and may, by this means provide support for the attribution of such interests to the dead), following the onset of an irreversibly unconscious state, are also plausible candidates to be surviving interests.

I believe that it makes sense to talk of 'harm' being done to such a person if they are kept alive against their pre-unconsciousness wishes. Such 'harm' is to do with the frustration of their general life plans – the way their lives end in a way which is discordant to the way they lived their conscious lives. Some people find the idea of being maintained in an insensible state to be appalling. By the same token, if they wished that their organs be used to help other after their deaths, then I would say that they are 'harmed' if the organs are not used (barring practical problems like them turning out not to be suitable for transplant, or there being no well-matched recipients).

In order to avoid the assertion that I am advocating the killing of people 'for their organs' I ought to make it clear that I am making two separate points and that the second does not follow automatically from the first. The first point is that it is sometimes appropriate to end the life (and only end the life) of someone in an

irreversibly unconscious state. (*nb* I am not sure whether this should strictly speaking be called 'euthanasia' or not. On the one hand, considering my first argument from sympathy it does not seem possible to talk of death (or anything else) being 'good' or 'bad' for an irreversibly unconscious person. On the other hand, on the surviving interests account, perhaps death is a good for people who have requested it. I shall call it 'euthanasia' here.) This is morally permissible if the patient has previously expressed a desire for this to be carried out and, although this is more contentious, it may also happen when the patient has not expressed an interest either way – I discuss this more in the 'problem cases' section below. Either way, it may be done only if doctors are as certain as they can be that consciousness is wholly absent and can never return. This claim is not uncontentious, but I do not wish to be drawn deeper into the euthanasia debate than necessary. I note simply that this is a widely held belief, and also that it is one backed up by law: since the Tony Bland decision in early 1993 there have been approximately 25 instances in which the UK courts have determined it to be lawful to end (just end) the lives of people in irreversibly unconscious states. However, I recognise that my argument for the excising of organs from those who wished both that their lives be ended and that their organs be used will appeal only to those people who subscribe to the idea that ending the lives of these people is, at least sometimes, the morally right thing to do. For those who believe otherwise my argument does not get off the ground.

So my first point is that it is sometimes appropriate to end the lives of those in an irreversibly unconscious state who have expressed abhorrence at the idea of being so maintained. The second, separate, point is that if the person whose life is to be ended has made it clear during his pre-unconsciousness period that he would wish to donate, and assuming the family do not object, his organs should be used to help others. (The question of what to do if, as is quite likely, the unconscious person had voiced no opinion on the matter will be discussed in a moment in the 'problem cases' section). This extension to the right to have one's life ended would fit well with the way in which we presently think about decisions concerning our own bodies which are not directly beneficial to us. In life, we may freely consent to donate blood, bone marrow, even single kidneys and sections of our lungs and livers and many of us also hold cards that express our desire to donate our organs after death. Both morality and the law find little to quibble with if a nontherapeutic action is

undertaken with the informed consent of the person undergoing the intervention.

Concerns pull both ways

However, I must reiterate that 'surviving interests' need not support either ending the lives of such people or using them as donors. If people have a horror, during their normal conscious lives, of having their lives ended if they enter such a state then that is a reason not to kill them. In the case of people who believed, while conscious, that 'where there's life there's hope' or that, no matter how awful the condition of the patient it would be wrong to end their life, ending their lives would be wrong: it would not be in their interests. (This is not to say categorically that it may not be done – perhaps the burden they impose on a state-funded healthcare program may be deemed to override their interests in being maintained. This is not for me to discuss however.) Similarly if a person wishes that his life be ended if he ever becomes irreversibly unconscious but does not wish that his organs be used then, for the sorts of reasons appealed to in chapter two, we are not permitted to use his organs. I think such prohibitions are fairly clear cut and, as such, will not discuss the matter further here. All I am concerned to show is that, under certain circumstances, we can use unconscious humans as organ donors without denying them moral standing.

Problem cases

However, thinking about anteunconsciousness harming, points up two problem cases for this way of attributing moral status to the most profoundly damaged humans, ones which Carruthers' theory can perhaps evade. These are first those previously normal humans who did not hold or failed to mention an opinion on the matter of their treatment, should they enter such a state, and second those humans irreversibly unconscious humans who have never had any wishes and desires, such as anencephalic and similarly handicapped infants. How ought we to think about these people?

Those who were capable of expressing an interest but did not

The greatest problem is presented by those previously-normal humans who did not offer an opinion on how they would like to be treated if they ever entered a permanently unconscious state. I am unsure what to say about these cases. Probably the best solution would be for the family to act as proxy decision makers. This sort of thought is already applied to decisions to end the lives of people in this state: the argument for ending the life of Tony Bland was of this sort. Bland had apparently never offered an opinion on what he would like done if he ever found himself in such a state. The judges ruled in favour of the family's request that he should die, holding that staying alive was not in Tony's interests. So it could be that the family should also be allowed to decide whether their relative would have wished to donate their organs too.

I have two reservations about the idea of using the organs of irreversibly unconscious people who have never expressed an opinion but whose family or some legally appointed guardian wish them to be utilised. First, although there is talk of killing being 'in their interests' it is not clear what this means as, in the absence even of 'surviving interests', nothing can truly be said any longer either to be in or not to be in the interests of an unconscious person. As such it seems to me that we might be in danger of taking the view that such a life is of 'no value' rather than thinking of such an act as being what the person would have wanted. The second problem is, as noted at the end of chapter two, there are ethical and legal difficulties when proxies give consent to a procedure which is not 'in the interests' of an incompetent patient (where interests are thought of in a straightforward way as 'health'). However, if the decision to end the patient's life has been made, it it perhaps fatuous to talk about whether subsequent organ excision is or is not in a patient's interests. And perhaps both killing and organ removal can be justified if we apply the conditions discussed by Shaw at the end of chapter two in relation to NHBDs. If such a practice causes no distress to the patient, and if the family, based on their knowledge of him, think that it is what he would have wanted, then it seems relatively ethically unobjectionable.

To allow proxy decision makers to make donation decisions on behalf of such people would fit with the way cadaveric organs are presently obtained in this country. Donation can go ahead based on what the family decide is in the interests of the dead person, even if they have never expressed an opinion during life. The second subcategory of controlled non-heartbeating donors discussed at the end of chapter two – those patients who are deemed to have little or no quality of life – also set a precedent, one that seems highly relevant. In these cases the family, in conjunction with the doctors, make the decision both to end life and to excise organs. I say more about these problem cases in the second argument from social stability section in a moment: there are some outstanding concerns regarding the use of these people which are masked by my employment of the phrase 'ending the life of'.

As a factual aside it has to be said that few people are likely to have formally given an informed consent to having their organs used should they ever (fail to) find themselves in a permanently unconscious condition – as such these problem cases are more likely to present a greater source of organs, if they are accepted.

Those never capable of expressing an opinion

The case of humans who have never been capable of expressing their wishes is perhaps the least complicated of the two. Most of these patients (anencephalics being the most widely-known example) are, like the majority of controlled non-heartbeating donors discussed in chapter two, dying. No matter what doctors do, they will die soon. This alleviates concerns about parents requesting euthanasia and organ donation simply in order to avoid the burden of care. However, the fact that the patient has never been capable of making a decision on how they would wish to be treated, and has never had a personality on which relatives could base a guess as to what would be desired, makes their case problematic – we cannot appeal to the second argument from sympathy. All we can fall back on here is the first argument from sympathy – that nothing we do to him can be either a benefit or a burden to such a baby. In such cases I think we must trust the parents to be proxy decision makers, in the hope that they are free from ulterior motives. Trusting the parents to make appropriate decisions brings me to the last of Carruthers'

arguments.

The Argument from Social Stability

Carruthers' third reason for attributing direct moral status to all human beings and to no animals appeals to social stability. According to this argument, rational contractors creating rules should decide "whether those principles would have the desired effect of facilitating a stable co-operative community".[46] A rule withholding moral standing from some humans would produce instability "in that many people would find themselves psychologically incapable of living in compliance with it".[47]

I agree with Carruthers that a rule merely requiring us to 'respect the legitimate concerns of others' is insufficient to do the moral work we would like in protecting innocent human beings as it would "only accord such humans the same protection as items of property".[48] Intuitively most people certainly do feel that the destruction of somebody else's car and the destruction of (somebody else's or our own) child are not morally equivalent. Carruthers thinks it follows from this that the "only way of framing rules that we can live with, then, is to accord all human beings the same basic rights – that is to say, moral standing".[49]

I would certainly share Carruthers' intuitions concerning children, babies, the senile and other such people: I think that allowing the killing of such people would (or at least could) have deleterious effects on society and as such ought not to be considered. And I also agree with him that social stability concerns are sufficient to rule out the utilisation of permanently and irreversibly unconscious people against their wishes. However, Carruthers fails to convince me that the careful use of this latter group, under carefully specified conditions, would lead to social instability. There is a precedent for thinking that such uses will not lead to abuses: think of the many celebrated cases of people in persistent vegetative states who have been allowed to die: these have not, in general, led to outcry or a weakening of moral standards. It is but a small step from agreeing that it is permissible to allow them to die to allowing that their organs be used after death just as the organs of conventional cadaveric donors are presently used.

This is another reason why I think Carruthers' basis for moral status can be challenged (the other two worries were that (a) if a stopping place could be found then his slippery slope argument need not give a reason to confer full moral status to all and only humans and that (b) if there exist humans who have no forward looking interests then we cannot enter sympathetically into their lives to confer status). If it ever became common practice to treat some human beings as if they had no moral status, that is; if no bad societal consequences ensued from our treating them with disdain – then, on Carruthers account, we lose this reason for conferring moral status. Carruthers himself mentions the example of ancient societies in which infanticide and the killing of the crippled and elderly were practised. He claims that such killings were sanctioned by custom and religion and that such methods of achieving social stability are no longer available to us. He also notes that communities which permitted such practices tended to be those on the edge of starvation, and so the killing could be justified as self preservation. However, this seems to me to be missing the point. To claim that the problem in treating damaged human beings as if they have no moral status is only that it might cause social instability seems absurd – we would surely want to agree with Carruthers that there are some things it is simply wrong to do to human beings (such as the sort of abhorrent treatment some black people endured under South African apartheid) – to worry about whether or not they cause social instability is not the greatest concern.

In the previous section I mentioned some safeguards intended to avoid giving the impression that my proposed policy involves killing people 'for their organs'. it is time to mention a few more conditions which must be met in order for social stability to be maintained. The killing and utilisation ought to take place only with the consent of the family of the donor: even if the donor has agreed, pre mortem, to be used (this is the situation in cadaveric organ donation in the UK at present, even though the Human Tissues Act says otherwise). Doctors must be as certain as possible that the diagnosis of total irreversible unconsciousness is correct. This could be done in the way brainstem death testing is currently performed: a doctor who is independent of the transplant team conducts brainstem death tests on two separate occasions, but these are accepted as diagnosing death only so long as there are no possible biasing factors (such as the presence of a drug in the patient's

blood which could mimic some of the symptoms of brain death) and ideally only if there is a known injury which is deemed likely to have cause brain death. And perhaps we ought also to check carefully that the family has no ulterior motive for wanting the person dead (although, in the UK's state-funded healthcare system in which families do not meet the cost of treatment, this is unlikely to be a motive I think).

I wish to suggest that it is ethically permissible, if these conditions are met, to end the lives of people who become unconscious (and who have, ideally, previously expressed both a horror of living on in such a condition and a desire to donate) and to excise their organs to help others. I propose such a use not because these people lack value, allowing us to do as we will with them, but because, just as different ways of treating people become appropriate as they pass from being alive to being dead, so it is appropriate to treat such irreparably unconscious people differently from normal human beings. Anne Maclean, a philosopher vehemently opposed to the idea that the lives of the most profoundly intellectually damaged humans ought to be judged less 'valuable' acknowledges that there may be 'something in' the idea that some badly-damaged people cannot value their lives, and that this may affect how we may treat them. She argues that we may choose to end the life of someone who is terribly handicapped or comatose, not because 'there is no longer anything to be concerned with from a moral point of view' but because that is what respect for the person dictates at that point. "Such considerations [having to do with the quality of a person's life] do not determine *whether or not* a person is entitled to respect; they do determine, at least in part, what *counts* as respect in a given case".[50] Thus, if we decided that euthanasia was 'the best and kindest course' for someone permanently comatose "we would not be denying him respect in killing him, let alone denying that he still merited respect: we would be *showing* him respect – we would be doing what we thought respect for him *required* in the circumstances".[51]

So long as such treatment is not contrary to the known wishes of the unconscious person, I do not see why social stability problems need ensue from the further step of taking organs. I also think such a policy fits with common sense: I mentioned previously that the intuitions which motivate it – that irreversibly unconscious people

can never again care what happens to them – are widely held. It can now be seen that donation under these circumstances can be surrounded by sufficient safeguards to make it acceptable to at least that portion of society who approve of ending the lives of such people.

The requirement for active killing

There is, however, one obvious way in which instability might be caused which I have ignored up to this point. I am forced to concede a point which may make my suggestion appear deeply distasteful and is a large obstacle blocking my assertion that such a use could be made acceptable to the public. (Of course, the fact that a policy is seen as socially unacceptable need not mean that it is not built on solid moral foundations: however, any scheme which makes transplant doctors appear to be 'body snatchers' is likely to be self-defeating by breeding public mistrust and ultimately, a reduction in the number of organs available for transplant.) In order for someone in a permanently unconscious state to be killed in such a way that their organs are useful to others the killing must be an *active killing*, not the arguably passive death provided by the withdrawal of nutrition or by omitting to treat an infection – the only way in which the death of irreversibly comatose people has been brought about previously. Irreversibly unconscious people are seldom ventilated, so withdrawal of ventilatory support (which is sometimes, and perhaps oddly, seen as a 'allowing to die' rather than 'killing') is not an option. Allowing to die by removal of a feeding tube or failing to treat an infection, whether truly passive or not, would render the organs unusable.

I require a further argument then, to the effect that if it is thought appropriate to end such a person's life by passive means, and if, further, it is decided that their organs are to be donated, then it is morally appropriate *actively to end their lives*. The concern is that because utilising the organs of PVS patients requires killing rather than allowing to die then this might 'open the floodgates' to active euthanasia for other categories of patients, and perhaps, a general devaluing of human life. (I assume in what follows that if the patient has expressed approval of donation, the family agree, and the patient is clearly diagnosed as in a PVS then concerns about moving to a policy of active euthanasia for other categories of patient are the only

relevant ones.) How might we respond to this?

Precedents for such a policy

The argument from discrepant views of brainstem death held by some intensive care doctors is relevant here, I think. As mentioned in the first chapter: if (as some people think) brainstem death is simply an 'infallible indicator' of imminent death rather than being death itself then actively killing and the subsequent procurement of organs *already happens*. And it has not led to people being used against their will. As I noted in the first chapter, I can see no way of decisively refuting the argument that brainstem death is a 100% accurate prognostic indicator of the imminent occurrence of what may be called 'somatic death', rather than being death itself, as Pallis claims – perhaps this uncertainty could be put to use here.

However, I have a more potent response to the objection: I think that such active killings already happen, under the second subcategory of controlled non-heartbeating donors discussed in chapter two. The Potts and Herdman 1997 report includes under the heading of controlled NHBDs those who are "incompetent, but not brain dead, because of severe, generally neurological, illness or injury with an extremely poor prognosis as to ... *any meaningful functional status*"[52] (my italics). It is hard to be sure on this point – Potts and Herdman make little mention of this group of patients, preferring to stay on the more solid ethical grounds of those whose death is imminent. However, if these patients are already utilised (and controlled NHBD programmes returned to prominence around a decade ago) then this seems to defuse the slippery slope worry that we would be unable to refuse active euthanasia on less damaged people.

Conclusions

Like Carruthers (and most other people) I think that the killing even of a permanently and irreversibly unconscious human being is a morally (and legally) serious matter; more serious than the destruction of somebody else's property, even though, like the property, the subject of such a killing can never be aware of the destruction. However, as I argued above, I believe that the reasons why it is wrong,

when it is wrong, to kill such people are not to do with the present state of the person in question: rather they are concerned with the feelings of the family, and with respecting the wishes of the person before his or her lapse into unconsciousness (*ie* the moral concerns are similar, and maybe stronger, than those which surround a potential cadaveric organ donor).

Irreversibly unconscious people have direct moral standing, conferred by anteunconsciousness surviving interests, even if their interest in continued life is weaker than that of animals which we think it acceptable to use as organ donors. We also have moral obligations to them conferred in a contractualist manner, although these need not necessarily rule out donation I think. Because of this we may not, as the first two arguments and the AMC discussion in chapter three perhaps imply, 'do as we like' with them.

The arguments which confer standing on these people may serve as reasons independent of a comparison with animals why we might think that such people could be utilised. If a person would have chosen to die rather than live on with no hope of regaining consciousness and if they also wished for their organs to be used after their death then this might provide grounds for such a use. The argument accords with some widely held intuitions in society: (a) that the 'tragedy' in this life has already occurred when consciousness was lost for the last time and that we can see no reason to live when we put ourselves in the place of such people and (b) that if euthanasia is appropriate why should organ donation not be. I hope that I have made the case for the use of these human beings as watertight against abuse as is possible. In order for a donation to be made I require that (i) ideally the donor and certainly the family have indicated that he would wish to die in such a condition; (ii) again ideally the donor and certainly the family should indicate their approval for organ donation and (iii) the diagnosis be as certain as it can be. If these conditions are met, I think that donation from living human beings would be acceptable to at least that portion of society which approves of euthanasia. However, it is also clear that such a proposal has the potential to appear very socially divisive entailing, as it does, the need for active rather than passive killing and the niggling suggestion that people are being killed 'for their organs', much as I have tried to make it clear that the euthanasia decision and the organ donation decision must be independent.

I must acknowledge that, if society as a whole found the idea of using the organs of unconscious people to be abhorrent, despite the fact that it appears to fit with at least some common sense intuitions regarding the current state of the person and also their previous wishes, then Carruthers' point still holds and the practice ought not to be performed. However perhaps we ought to think about the needs of the recipients before we allow ourselves to become outraged at the idea of killing consenting human beings with no quality of life and using their organs to help others. I would not wish to adhere to a Harris-like argument that we should weigh concerns for the donor and the recipient according to a utilitarian calculus but it seems to me that to steadfastly refuse to use even the most damaged human beings in accordance with the carefully circumscribed conditions set out in this chapter is to fail to do all that we reasonably could to help those who are in dire need of organs. And when we consider again the comparison with animals with which we began chapter three such a refusal becomes more invidious: we do currently use animals with interests which grant them a degree of moral standing. We think that the harm done to them is outweighed by the benefit to human beings. However, if we refuse to use even those human beings who are no longer capable of caring what happens to them, even when such usage was proposed not because there is nothing to be concerned about but rather because such an action is in accordance with their wishes, then I think we would find it very hard to avoid a charge of discriminating according to the morally irrelevant characteristic of species.

I also wish to draw a second conclusion. This is that Carruthers' arguments do not succeed in attributing privileged moral status to all and only human beings because it is hard to see how they can be made to protect the permanently and irreversibly unconscious. Carruthers' basis for attributing moral status to humans does not seem to be very strong. On his account the attribution of moral status is contingent upon certain facts about the world: upon there being no way to draw a line on his slippery slope, upon our being able to relate sympathetically to the mentally handicapped and upon public outrage being caused by a policy which allowed the killing of some humans. If these facts do not hold, as I have attempted to show they do not for irreversibly unconscious humans, then it is difficult to see what remains for Carruthers to use to attribute moral status. David DeGrazia goes so far as to

say that Carruthers has 'the wrong basis' for attributing status as his argument is "only as strong as the empirical premise on which it rests".[53] "What is crucial is not rational agency, or one's social and psychological relations to rational agents, but the possession of interests".[54] A related point is that Carruthers' theory seems to struggle to achieve reflective equilibrium. According to his arguments as presented above, he has no grounds on which to attribute moral status to irreversibly unconscious people. It is difficult to see how this could be reconciled with our intuitions.[55]

Stalemate?

Carruthers argues that "Rational contractors who are trying to agree on the rules that will assign basic rights and duties should therefore be aware that any attempt to draw distinctions within the category of human beings may have psychological effects that would prove morally disastrous. They should then agree to assign basic moral rights to all human beings, irrespective of their status as rational agents".[56] A rule excluding 'mental defectives' from possessing moral standing may cause our 'natural impulse of sympathy for the suffering of all who share human form' to be undermined. In contrast "no similar dangers attend the exclusion of animals from possession of moral standing ... for there is a large gulf, both of physical form and modes of behaviour, between human beings and even their closest animal cousins. A dividing line drawn here being clear cut, and appealing to features that are strikingly salient, may therefore be a stable one".[57]

I hope I have, in the preceding pages, given sufficient reason to doubt (a) that Carruthers' arguments are able to confer moral status on the most damaged human beings (I also think that they are not successful in denying moral status to animals, as interest-possession, not similarity to a rational contractor, is what gives admission to the class of beings with moral status. However, I do not argue this point against Carruthers directly) and (b) that Carruthers' arguments accord fully with common sense. They seemingly cannot, as they deny moral status to some humans. However, I must concede that my position, by the same token, also fails fully to achieve reflective equilibrium. I imagine that although many people share the intuition that someone who is permanently unconscious has already suffered a

great tragedy, in comparison to which death will not be so bad, it will not necessarily follow from this that people will share my subsequent reasoning that such people may, under appropriate conditions, be utilised as organ donors.

Notes and References

1. Carruthers, P (1992), preface, pxii.
2. *Ibid*, p54.
3. *Ibid*, p54-5.
4. *Ibid*, p98-9.
5. *Ibid*, p65-6.
6. *Ibid*, p55.
7. DeGrazia, P (1996), p54.
8. Carruthers, P (1992), p114.
9. *Ibid*, p115.
10. *Ibid*, p116.
11. *Ibid*, p117.
12. *Ibid*, p163-4.
13. International Working Party Report on the Vegetative State (1996).
14. *Ibid*, in 'Categorisation' section.
15. *Ibid*, in 'Categorisation' section.
16. The International Working Party defined coma as a "State of unarousable neurobehavioural unresponsiveness. The patient does not have a sleep awake pattern (in absence of bilateral third cranial nerve lesion or lid apraxia) but may respond to painful stimulation by subcortical reflex pattern responses. It is generally accepted that coma rarely lasts more than one month before progressing into the Vegetative State or to higher levels of awareness" (in the 'patterns of recovery' section). Coma is, according to the working party, a single entity.
17. Jennett B, and Plum, F (1972), p734.
18. McCullagh, P (1993), p58.
19. International Working Party Report, 'Patterns of Recovery' section.
20. McCullagh, P (1993), p58.
21. International Working Party Report, 'Categorisation: Vegetative Presentations' section.
22. Borthwick, C, (1995).
23. Borthwick, C (1996).
24. International Working Party Report, section 6.5, 'Executive Summary'.

25. International Working Party Report, 'Difficulties. of Clinical Decision Making' section.
26. Borthwick, C, (1996), references 43 and 44.
27. Borthwick, C, (1995), p206.
28. Rosenberg G A, Johnson S F , Brenner R P (1977), p167-168.
29. International Working Party Report, 'Late Recovery' section.
30. http://www.med.upenn.edu/bioethic/Museum/Jadrovski/PVS.HTM
31. Carruthers, P (1992), p146.
32. *Ibid*, p149.
33. *Ibid*, p150-1.
34. *Ibid*, p152.
35. *Ibid*, p154.
36. *Ibid*, p155.
37. *Ibid*, p155.
38. *Ibid*, p163-4.
39. *Ibid*, p164.
40. *Ibid*, p153-4.
41. *Ibid*, p156.
42. *Ibid*, p155-6.
43. Nagel, T (1979), p2.
44. Quoted in Singer *et al* (1999), p287.
45. Nagel, T (1979), p6.
46. Carruthers, P (1992), p117.
47. *Ibid*, p117.
48. *Ibid*, p118.
49. *Ibid*, p118.
50. Maclean, A (1993), p130.
51. *Ibid*, p130.
52. Potts and Herdman 1997, p24.
53. DeGrazia, D (1996), p56
54. *Ibid*, p164.
55. In a related way, many of Carruthers' arguments concerning animal suffering, which I have not addressed in this piece, seem not to meet his reflective equilibrium requirement: he says, for example, that strangling a

dog may manifest cruelty in the west, but in a culture in which it is believed that this action makes the meat taste better it need not be cruel *and is not, therefore, wrong*. This seems incredible!

56. Carruthers, P (1992), p164.

57. *Ibid*, p165.

Overall Conclusions

In this thesis I discussed several possible ways of increasing the supply of organs for transplant: by increasing the number of cadaveric donors, excising organs from animals, and by taking organs from irreversibly unconscious humans for whom death has been requested.

As I noted in the introduction, regardless of the soundness of the arguments supporting such policies, any proposal to increase organ numbers needs to be acceptable to the general public. Policies which are not acceptable in this way are likely to be self defeating, causing a net decrease in the number of organs available for transplant by making people reluctant to allow their or their loved ones' organs to be used.

Sources of concern

For this reason, it is worrying that, over the course of my investigation, I have found several examples of doctors carrying out the sort of practices presented for discussion here, and doing so away from public scrutiny. As some examples:

In my research into Professor Harris' proposal I discovered that endotracheal intubation techniques are frequently practised on the newly dead, and that only ten percent of the hospitals using cadavers in this way requested consent from relatives[1]. Some doctors actively advocate against asking for consent. They feel that fear of causing further distress would discourage trainees from approaching relatives, and they contend that asking for consent would cause a delay, allowing *rigor mortis* to set in. The procedure cannot be performed once this happens.

When I first began thinking about using living but irreversibly unconscious people as donors I thought that it was an idea which, although morally defensible (with appropriate safeguards), would be difficult to justify to a non philosophical audience. So I was surprised to discover that a subcategory of controlled non heart beating donors – those who are "incompetent, but not brain dead, because of severe,

generally neurological, illness or injury with an extremely poor prognosis as to ... any meaningful functional status"[2] seem very close to falling under this proposal. In fact, it could be said that the use of this category of controlled NHBDs is more difficult to justify morally than my proposed use of permanently unconscious people. By countenancing the use as donors of patients who are not irreversibly unconscious but who have a "poor quality of life"[3] transplant teams make themselves vulnerable to Carruthers' slippery slope argument.

The definition of death also seems subject to gerrymandering under some organ retrieval policies. While I do not think that the higher brain definitions discussed in chapter one are ever likely to underpin policy, the cardiac criteria used for declaring death under some NHBD protocols are contentious.[4,5] Under some protocols death may be declared as little as sixty seconds after cardiac arrest (Orr *et al* point out that a potential recipient would not be declared dead in so short a time if he or she suffered a cardiac arrest while awaiting surgery); other protocols do not specify the criteria for determining death to have occurred. While the doctors who write such policies are acting with good intentions, they wish to obtain organs in the best possible condition, and although consent for 'allowing to die' is always obtained, using a criterion of death for a donor which would not be acceptable for patients who are not to become donors seems to me to run the risk of setting a dangerous precedent.

While the enormous benefit of obtaining organs should not be underestimated, care should be taken that new retrieval policies are justifiable and available for public discussion. This is important both in order to avoid a controversial policy from having a negative impact on organ donation rates and to prevent the doctors themselves from losing respect for their donors.

Other donors

I based my discussion in the previous four chapters around two categories of donors, human cadavers and animals, which are already in use. These seemed to be good starting points for my discussion as I think it is reasonable to assume that the fact that organs and organ parts[6] are already obtained from these sources

means that they are relatively morally uncontroversial. However, there are two other current source of organs which I did not discuss: human to human donation in which the donor remains alive ('living donation') and donation involving the death of the donor from humans who are "competent with intolerable quality of life".[7]

Living donation

Living donation is usually limited to single kidney transplants, however it is also possible for someone to donate part of their liver or a lung lobe. It can take two forms, altruistic and commercial. It is very difficult to obtain any facts about the latter group: paid donation is, and is certain to remain, illegal in the UK. I can think of no moral reason why we might wish this to change and so I do not propose to discuss paid donors at all. Altruistic donors are a trickier situation. This type of donor is an increasingly popular source of organs and patients entering the transplant waiting list are routinely counselled regarding the appropriate way to discuss this matter with their relatives. There were 381 living donor organs transplanted in the UK in 2001, the highest ever number. Numbers have increased year on year since 1992, the earliest year for which UK Transplant provides data.[8] However, it is not always clear that such donations are fully voluntary, and there are concerns about the risk to which the donor is exposed for the sake of another.

I have little to say about the first of these points – by its nature it is not the sort of thing that is reported on. Its importance should not be blown out of proportion – the transplant team takes great care to provide the donor with every opportunity to back out. The recipient is not invited to attend the pre-transplant clinic in which the potential donor is interviewed by the surgeon. At such a meeting a donor with misgivings may be offered a letter stating that he or she is unsuitable for donation for unspecified 'medical reasons'. That said, my personal experience suggests that once the donation work up process has begun, some donors feel it difficult to back out even if they develop anxieties, feeling perhaps that they 'owe' the kidney to their relative once it had been offered.

The second point is more serious. Donating a kidney is much more clearly *against* a person's interests (conceived here as their health) than simply *not in* their

interests in the way that a blood donation is. The donation process itself carries risk: the renal arteries connect to the aorta and so there is the potential for catastrophic bleeding. The donor may also suffer long term post-operative morbidity: a rib is often removed and nerves severed during surgery, both of these have the potential to cause long term pain. And, as kidneys play a role in regulating blood pressure, among other important bodily functions, the donor is at increased risk of developing hypertension compared to a person with the usual complement of kidneys. I assume that donating liver and lung lobes carries a similar or greater risk.

To say this is not to deny that people are free to subject themselves to things which are injurious to health: if we find no reason to ban smoking, drinking and 'extreme sports' then surely we should not refuse people the chance to make such a noble gesture for the sake of a relative or close friend. However, if sufficient organs could be obtained from other sources it would be nice to make the practice of altruistic living donation redundant.

I ought, perhaps, to mention here those people who offer organs not to a specific person as in usually the case in living donation, but to the general 'pool'. I am very unsure what to say about these individuals: is their wish to donate an extreme extension of the sort of beneficence which motivates others to donate blood or even bone marrow or is it rather indicative of a mental illness such as Munchausen's syndrome? At present, such a donation would not be possible in the UK - all unrelated living transplants (this includes donation between spouses) are assessed by a body called ULTRA (the Unrelated Living Transplant Regulatory Authority). ULTRA permits the transplant only if the donor can show clear evidence of a long term close relationship with the recipient (old photographs, letters, marriage certificates and so on are required as evidence). However, even if ULTRA changed its rules to permit donation from people unknown to their recipients, doctors would, at the very least, need to be very sure of the motives driving such donors before they accept organs offered under these circumstances.

People who wish to die

In my chapter four exploration of humans who may, sometimes, morally be killed and whose organs may then be used for transplant I restricted my discussion to people who are irreversibly unconscious. This was in order to avoid the slippery slope argument of Peter Carruthers: if we are prepared to use some humans who are conscious it would be very difficult to draw a line demarcating whom we may not use. However, Potts and Herdman, in their discussion of controlled NHBDs, suggest that both incompetent patients *and* those who are competent but have an intolerable quality of life are included in this category. I have previously given my reasons for believing that it is not possible, morally or legally, to make use of incompetent but not unconscious patients whose death is not imminent without making oneself vulnerable to Carruthers' point. The question remains though, is it possible to allow those who are competent, not dying but with a terrible quality of life to die and donate?

To allow these people to donate would clearly be to appeal to a different sort of argument from that which I employed in my discussion of the irreversibly unconscious. For the latter, my points were that the patients no longer care what happens to them, that they (prior to losing consciousness) or their relatives request it, and that there is no danger of a slippery slope as the boundary of consciousness is clearly marked. For competent patients the matter seems to turn on autonomy. Ought people with appalling qualities of life be allowed to request death?

The legality or illegality of such a request seems to turn or whether it can be fulfilled by an act or an omission: Diane Pretty, who would have required an 'active' killing had her request denied, 'Miss B', whose life could be ended by the allegedly passive means of having her ventilator removed, was permitted to die. I say more on this in a moment.

One of the objections to this sort of request, whether it entails killing or 'allowing to die' is that acceding to it will perhaps lead to a general devaluing of the sanctity of human life in which doctors end life for frivolous reasons, or even end the lives of those who do not wish to die. We should perhaps separate these points out. I do

not see why we should worry about a practical slippery slope moving from ending the lives of competent people at their request to doctors killing people for trivial reasons or against their wishes. So long as death occurs only at the patients' competent request I can see no danger. With regard to the logical slope, people may argue that the idea of the sanctity of human life is perhaps threatened by such acts. In this cursory discussion I cannot fully answer this point but would point out that, so long as the ending of life is done for the sake of the patient and at their request, I would not worry overly about doctors losing respect for human life. It would obviously be a different matter and entirely immoral if doctors acted because in their opinion their patients' lives were worthless.

There are concerns about whether a patients' right to die is equivalent to a right to be actively killed. When a competent patient wishes to die they may often have their request met by passive means - by having a ventilator removed or similar. However, those competent patients who request death and for their organs to be donated must, like the people discussed at the end of chapter four, meet a quick end, in order for the organs to survive in a transplantable state. Perhaps this is morally permissible - I am inclined to agree with Professor Harris that the, when the intention is that the patient should die, the means of achieving death are irrelevant. (Or, at least, an active killing seems no worse than a passive one and possibly even better if it means death can be brought about painlessly.) Even if it is moral, however, it would entail a radical departure from the present legal situation.

This leads me to my last point. As in the case of the irreversibly unconscious patient, there are social stability concerns. I think this is potentially the most problematic issue. Even if no slippery slope is, in fact, involved, if killing competent patients at their request and then using their organs for transplant caused public outrage then I think perhaps it ought not to be done. (Although we could always re-educate the public, of course.)

Animals again

In my discussion of xenotransplantation I assumed that that the animals kept for transplant would be housed in good conditions so that killing them was the only thing wrong with using them. This is quite a big simplification. Peter Singer's *Animal Liberation* takes no stance on the wrongness of killing animals. Instead, it argues for vegetarianism on the basis of the suffering that, as he says, "is, and as far as I can see always will be, associated with the rearing and slaughtering of animals on a large scale to feed urban populations".[9] Many commercial human uses of animals involve suffering for the latter. Need breeding them for donation do so? There seem to me to be two obvious ways in which donor animals may suffer: by being genetically modified to improve the chances of the organ being accepted by the recipient's immune system and by being kept in poor conditions.

Are animals harmed by being genetically modified? I think perhaps only time will tell. Some reports suggest that Dolly the sheep is ageing at a much greater rate than normal sheep (although is she thus 'suffering'?) - it is not implausible to suggest that such manipulation may be injurious to donor animals. However, one might also note that, in order for the organs to be useful for humans, the engineered animals will need to be healthy. For this reason, perhaps genetic modification will not be a significant cause of donor animal suffering.

The housing and general treatment of donor animals is a much more likely possible cause of suffering, I think. It is unlikely that donor pigs would be allowed to roam outdoors as they will need to be kept relatively sterile to avoid the risk of infection. That said, there is no reason why they could not be provided with stimulation, even in an indoors habitat. However, I wonder whether this would in fact happen? To provide the animals with a pleasant environment would inevitably increase the cost of rearing them and, as I noted above, the precedent set by most other forms of commercial animal rearing is a bad one.

What obligations are owed to those with failing organs?

Throughout this thesis I simply assume that organ donation is sometimes the morally desirable thing to do for people whose own organs are failing. In preceding chapters I discussed some limits on the lengths to which we ought to go to obtain organs but I made no attempt to discuss whether people ought ever to get transplants. The 'need' for transplants is a product of medical advances: the first (sadly unsuccessful) human to human kidney transplant was performed in 1933 but it was not until the 1950s, when doctors began to have a better understanding of immunology and the first immunosuppressive drugs were introduced, that the practice began to have a significant success rate. Prior to this, conservative medical treatment was the only option for those with failing organs: this remains the only option for people in developing countries without transplant programmes.

A related point is that I have not discussed the costs and risks which society ought to endure in order to provide organs. Ought we to run the risk of spreading porcine endogenous retroviruses if xenotransplantation becomes technically possible? How much money should be spent on transplant programmes when there are other, competing, medical problems which are also in dire need of funding?

How ought we to choose whom to save?

Finally, I have made no attempt to address the question of how organs should be allocated among all those in need. The figures from UK Transplant show that the waiting list is increasing at a greater rate than the number of donors[10]: whom among the needy should receive this precious resource? Should priority be given to those awaiting first transplants over those whose transplanted organ is now failing? Or the young over the old? Or those with dependents over those without? These questions are the subject of another thesis, I think.

Notes and references

1. See reference 62 in chapter two.
2. See reference 109 in chapter two.
3. See reference 110 in chapter two.
4. Potts and Herdman (1997) p40-41.
5. Orr *et al* (1997), p9.
6. Animals have been used as whole-organ donors only on an ad hoc basis until now, although it is intended to use them in this way.
7. Potts and Herdman, *op. cit.*, p24.
8. http://www.uktransplant.org.uk/statistics/yearly_statistics/yearly_donor_statistics.htm
9. Singer, P (1979b), p22.
10. http://www.uktransplant.org.uk/statistics/general_statistics/cadaveric_donors_and_transplants_1992_2001.htm

Bibliography

Aristotole *Nichomachean Ethics* (translated by J A K Thompson), London: Penguin, 1953.

Arnold, J, Zimmerman, T, and Martin, D "Public Attitudes and the Diagnosis of Brain Death", *Journal of the American Medical Association*, (1968), Vol. 206, No. 9, pp 1949-1954.

Audi, R "The Morality and Utility of Organ Transplantation", *Utilitas* (July 1996) Vol 8, No. 2, pp 141-158.

Bartlett, E, and Youngner, S "Human Death and the Destruction of the Neocortex", in Zaner, R.M. (Ed), *Death: Beyond Whole-Brain Criteria*, Dordrecht; Boston: Kluwer Academic Publishers, 1988, p199-216.

Becker, L "Human Being: The Boundaries of the Concept", in Cohen, M, Nagel, T, and Scanlon, T *Medicine and Moral Philosophy*, Princeton: Princeton University Press, 1981, pp 23-48.

Bekoff, M "Virtuous Nature", *New Scientist*, (13 July 2002), Vol. 175, No. 2351, pp 34-37.

Bernat *et al* "Definition of Death" (letter), *Annals of Internal Medicine*, (1984), Vol. 100, No. 3, pp 456.

Bernat, J, Culver, C, Gert, B "On the Definition and Criterion of Death", *Annals of Internal Medicine,* (1981), Vol. 94, No. 1, pp 389-94.

Bertalanffy, L von *General System Theory*, London; Allen Lane: The Penguin Press, 1968.

Bone, P "Kidney transplantation in domestic cats", *Veterinary Record*, (Spring

2001), pp 9-12.

Borthwick, C "The proof of the vegetable: a commentary on medical futility", *Journal of Medical Ethics*, (1995), Vol. 21, No. 4, pp 205-208.

Borthwick, C "The permanent vegetative state: ethical crux, medical fiction?", *Issues in Law and Medicine*, (Fall 1996), Vol. 12, No. 2, pp 167-85.

British Transplantation Society Newsletter, (Autumn 1999), Issue 13, p 1.

Browne, A "Whole-Brain Death Reconsidered", *Journal of Medical Ethics*, (1983), Vol. 9, pp 28-31.

Byrne, R *The Thinking Ape: Evolutionary Origins of Intelligence*, Oxford: Oxford University Press, 1995.

Byrne, R, and Whiten, A (eds) *Machiavellian Intelligence: social expertise and the evolution of intellect in monkeys, apes and humans*, Oxford: Clarendon Press, 1988.

Cassell Concise Dictionary, The, Cassell, 1997.

Carruthers, P *The Animals Issue: moral theory in practice*, Cambridge: Cambridge University Press, 1992.

Cavaliera, P & Singer, P (eds.) *The Great Ape Project: Equality beyond Humanity*, London: Fourth Estate, 1993.

Charlton, R "Diagnosing Death", *British Medical Journal*, (1996), Vol. 313, pp956-7.

Cigman, R "Death, Misfortune and Species Inequality", *Philosophy and Public Affairs*, (Winter 1980), Vol. 10, No.1, pp 47-64.

Clark, SRL "How to Calculate the Greater Good", in *Animals and their Moral*

Standing, London: Routledge, 1997.

Clark, SRL *The Moral Status of Animals*, Oxford: Clarendon Press, 1977.

Clark SRL *The Nature of the Beast: Are Animals Moral?,* Oxford: Oxford University Press, 1982.

Cohen, P "This little piggy had none", *New Scientist*, (12 January 2002), Vol. 173, No. 2325, p7.

Daniels, N *Just Health Care*, Cambridge: Cambridge University Press, 1985.

Dawkins, R "Gaps in the Mind", in Cavalieri, P and Singer, P (eds) *The Great Ape Project: Equality beyond Humanity*, London: Fourth Estate, 1993, pp 80-87.

Dawkins, R *The Selfish Gene*, Oxford: Oxford University Press, 1989, Second Edition.

DeGrazia, D *Taking Animals Seriously: Mental Life and Moral Status*, Cambridge: Cambridge University Press, 1996.

Dennett, D *Kinds of Minds: Towards an Understanding of Consciousness*, London: Weidenfeld and Nicolson, 1996.

Dennett, D *The Intentional Stance*, Cambridge, Mass; London: MIT Press, 1987.

Diamond, J *The Rise and Fall of the Third Chimpanzee*, London: Radius, 1991.

Dombrowksi, D *Babies and Beasts: The Argument from Marginal Cases*, Urbana: University of Illinios Press, 1997.

Dworkin, R *Life's Dominion: An Argument about Abortion and Euthanasia*, London: HarperCollins, 1993.

Engelhardt, HT "Ontology and Ontogeny", *Monist,* (1977), Vol. 60, pp 16-28.

Evans, M "Against Brainstem Death", in Gillon, R (ed.) and Lloyd, A (ass. ed)., *Principles of Health Care Ethics*, Chichester: John Wiley and Sons, 1994, pp 1041-1051.

Evans, M "Against the definition of brainstem death", in Lee, R and Morgan, D (eds.) *Death Rites: Law and ethics at the end of life*, London: Routledge, 1996. pp 1-10.

Feest, T, Riad, H, Collins, C, Golby, M, Nicholls, A, Hamad, S "Protocol for increasing organ donation after cerebrovascular deaths in a district general hospital", *Lancet,* (1990), Vol. 335, pp 1133-1135.

Feinberg, J *Harm to Others*, New York; Oxford: Oxford University Press, 1984.

Feldman, F *Confrontations with the Reaper*, New York; Oxford: Oxford University Press, 1992.

Frey, RG *Interests and Rights*, Clarendon Press, Oxford, 1980.

Frey, RG *Rights, Killing and Suffering*, Oxford: Basil Blackwell, 1983.

Fried, C *Right and Wrong*, Cambridge, Mass.; London: Harvard University Press, 1978.

Gervais, KG *Redefining Death*, New Haven; London: Yale University Press, 1986.

Gillon, R "Death", *Journal of Medical Ethics*, (1990), Vol. 16, pp 3-4 (editorial).

Gore, S, Hinds, C, Rutherford, A "Organ donation from intensive care units in England", *British Medical Journal*, Vol. 299, pp 1193-1197.

Graham, G *Philosophy of Mind: An Introduction*, Oxford: Blackwell, 1993.

Green, M, and Wikler, D "Brain Death and Personal Identity", in Cohen, M, Nagel, T, and Scanlon, T *Medicine and Moral Philosophy: a Philosophy and Public Affairs Reader*, Princeton: Princeton University Press, 1981, pp 49-77.

Gross, R *Psychology: The Science of Mind and Behaviour*, London: Hodder and Stoughton, 1987.

Hanfling, O (Ed.) *Life and Meaning: a Reader*, Oxford: Basil Blackwell in association with the Open University, 1987.

Harris, J "The Concept of the Person and the Value of Life", *Kennedy Institute of Ethics Journal*, Vol. 9, No. 4, December 1999, pp 293-308.

Harris, J "The elimination of morality", *Journal of Medical Ethics*, (1995), Vol. 21, pp 220-224.

Harris, J "The Marxist Conception of Violence", *Philosophy and Public Affairs*, (1974), Vol. 3, pp 192-220.

Harris, J "The Survival Lottery", in Singer, P and Kuhse, H (eds.), *Bioethics: An Anthology*, Oxford: Blackwell, 1999, pp399-403.

Harris, J *The Value of Life*, London: Routledge and Kegan Paul, 1985.

Holscher, L *The Reality of the Mind: Augustine's philosophical arguments for the human*, London: Routledge and Kegan Paul, 1986.

Honorary Secretary of the Conference of Medical Royal Colleges and their Faculties in the United Kingdom, The "Diagnosis of Brain Death", *British Medical Journal*, (1976), Vol. 2, pp 1187-1188.

Hopkin, K "The Greatest Apes", *New Scientist*, (15 May 1999), Vol. 162, No. 2186, pp 26-31.

Hoshino, K "Legal Status of Brain Death in Japan: Why Many Japanese Do Not Accept "Brain Death" as a Definition of Death", *Bioethics*, (1993), Vol. 7, No. 2/3, pp 234-238.

http://news.bbc.co.uk/hi/english/health/newsid_281000/281404.stm (last accessed 09/12/02).

http://www.hmole-chorio.org.uk/ (last accessed 09/12/02).

http://www.homevet.com/petcare/kidney.html (last accessed 09/12/02).

http://www.learn.co.uk/glearning/secondary/science/lesson02/article10.htm (last accessed 09/12/02).

http://www.med.upenn.edu/bioethic/Museum/Jadrovski/PVS.HTM (last accessed 09/12/02).

http://www.midwalesonline.co.uk/kidneylife/Pages/summernews13.html (last accessed 09/12/02).

http://www.presumedconsent.org.futuresite.register.com/ (last accessed 09/12/02).

http://www.uktransplant.org.uk/about_transplants/legislation/human_tissue_act/human_tissue_act.htm (last accessed 09/12/02).

http://www.uktransplant.org.uk/newsroom/policy_and_statements/statements/opt_in_or_out.htm (last accessed 09/12/02).

http://www.uktransplant.org.uk/statistics/general_statistics/activity_summary_2001.htm (last accessed 09/12/02).

http://www.uktransplant.org.uk/statistics/general_statistics/waiting_list_2000_2001.htm (last accessed 05/12/02).

http://www.uktransplant.org.uk/statistics/general_statistics/
cadaveric_donors_and_transplants_1992_2001.htm (last accessed 05/12/02).

http://www.wma.net/e/policy/17-c_e.html (last accessed 09/12/02).

Humphrey, N *A History of the Mind*, London: Chatto and Windus, 1992.

International Working Party Report on the Vegetative State, (February 1996). Royal Hospital for Neuro-disability, West Hill, Putney, London, UK. On www.comarecovery.org/pvs.htm (last accessed 09/12/02).

Jameson, B, Bonner, S "Maximising Potential: Optimising Organ Donor Care in the Intensive Care Unit", *Transplant Topics*, (Spring 2002), Issue 11, pp 1-6.

Jennett B, Plum F "Persistent Vegetative State after brain damage: A syndrome in search of a name", *Lancet*, (1972), pp 734-7.

Johnson, L "Do Animals Have a Right to Life?", *Australasian Journal of Philosophy*, (June 1983), Vol. 61, No. 2, pp 172-184.

Johnston, M "Human Beings", *Journal of Philosophy*, (1987), Vol. 84, No 2, pp 59-83.

Jones, DG *Speaking for the Dead: Cadavers in Biology and Medicine*, Aldershot: Dartmouth Publishing Company Limited, Ashgate Publishing Ltd, 2000.

Kass, L "Death as an Event: A Commentary on Robert Morison", *Science*, (1971), Vol. 173, pp 698-702.

Kaste, M, Hillbom, M, Palo, J "Diagnosis and Management of Brain Death", *British Medical Journal*, (1979), Vol. 1, 525-527.

Korein, J "The Problem of Brain Death: Development and History", in Korein, J

(ed.) *Brain Death: Interrelated Medical and Social Issues,* Annals of the New York Academy of Sciences, (1978), Vol. 315, pp 19-38.

Kushner, T "Having a Life versus Being Alive", *Journal of Medical Ethics,* (1984), Vol. 1, pp 5-8.

LaFollette, H, and Shanks, N "The Origin of Speciesism", *Philosophy,* (1996), pp 41-60.

Lamb, D "Brain Death and Brainstem Death: Philosophical and Ethical Considerations", in Evans, JDG, *Moral Philosophy and Contemporary Problems*, Royal Institute of Philosophy Lecture Series, Vol. 22, Cambridge: Cambridge University Press, 1987, pp 231-250.

Lamb, D *Death, Brain Death and Ethics*, London: Croom Helm, 1985.

Lamb, D *Hegel – From Foundation to System*, The Hague; London: Martinus Nijhoff Philosophy Library Vol. 1, 1980.

Lamb, D *Organ Transplants and Ethics*, London: Routledge, 1988.

Lamb, D "Diagnosing Death", *Philosophy and Public Affairs*, (1978), Vol. 7, No. 2, pp 144-153.

Leahy, S and Le Page, M "Pig-cell transplant hope for diabetics", *New Scientist*, (31st August 2002), Vol.175, No. 2358, p7.

Levy, D, *et al* "Differences in cerebral blood flow and glucose utilisation in vegetative versus locked-in patients", *Annals of Neurology*, (1987), Vol. 22, pp 673-682.

Lockwood, M "Singer on Killing and the Preference for Life", *Inquiry*, (Summer 1979), Vol. 22, pp 157-70.

Maclean, A *The Elimination of Morality: Reflections on Utilitarianism and Bioethics*, London: Routledge, 1993.

McCullagh, P *Brain Dead, Brain Absent, Brain Donors: Human Subjects or Human Objects?*, Chichester: John Wiley and Sons, 1993.

McMahon, J "The Metaphysics of Brain Death", *Bioethics*, (1995), Vol. 9, No 2, pp 91-126.

McMahon, J "Death and the Value of Life", *Ethics*, (October 1988), Vol. 99, pp 32-61.

Malm, H "Killing, Letting Die, and Simple Conflicts", *Philosophy and Public Affairs*, (1989), Vol. 18, pp 238-258.

Manchester Evening News, 9th June 1999, p9.

Morison, R "Death: Process or Event?", *Science*, (1971), Vol. 173, pp 694-698.

Muir, H and Mason, B "Secret Lives of Dogs", *New Scientist*, (3 August 2002), Vol. 175, No. 2354, p 20.

Nagel, T *Mortal Questions*, Cambridge: Cambridge University Press, 1979.

Nozick, R *Anarchy, State, and Utopia*, New York: Basic Books Inc., 1974.

Orr, R *et al* "Reanimation: overcoming objections and obstacles to organ retrieval from non-heartbeating cadaver donors", *Journal of Medical Ethics*, (1997), Vol. 23, pp 7-11.

Pallis, C "Whole-Brain Death Reconsidered – Physiological Facts and Philosophy", *Journal of Medical Ethics*, (1983), Vol. 9, pp 32-37 (commentary).

Pallis, C and Harley, DH *ABC of Brainstem Death* (Second Edition), BMJ

Publishing Group, 1996.

Partridge, E "Posthumous Interests and Posthumous Respect", *Ethics*, (1981), Vol. 91, pp 245-264.

Patterson, F and Gordon, W The Case for the Personhood of Gorillas", in Singer, P and Cavalieri, P (eds), *The Great Ape Project: Equality beyond Humanity*, Fourth Estate, London, 1993, pp 58-77.

Peabody, JL, Emery, JR and Ashwal, S "Experience with Anencephalic Infants as Prospective Organ Donors", *New England Journal of Medicine*, (1989), Vol. 321, pp 344-50.

Pitcher, G "The Misfortunes of the Dead". *American Philosophical Quarterly*, (1984), Vol. 21, pp 183-188.

Potts, J (Principal Investigator), and Herdman, R (Project Director), Institute of Medicine, *Non-Heart Beating Organ Transplantation: Medical and Ethcial Issues in Procurement*, The National Academy Press, 1997.

President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research, *Defining Death*, 1981.

Puccetti, R "Brain Transplantation and Personal Identity", *Analysis*, (January 1969), Vol. 29, No. 3, pp 65-77.

Pucetti, R "The Conquest of Death", *Monist*, (1976), Vol. 59, No. 2, pp 249-63.

Rachels, J *Created from Animals: the moral implications of Darwinism*, Oxford: Oxford University Press, 1990.

Rachels, J "Do Animals Have a Right to Life?", in Miller, H and Williams, W (eds.) *Ethics and Animals*, Clifton, N.J.: Humana Press, 1983.

Rachels, J *The End of Life: Euthanasia and Morality*, Oxford: Oxford University Press, 1986.

Radford, B "Kidney Devils", *Fortean Times*, (September 2000), Vol. 138, pp 34-39.

Rawls, J *A Theory of Justice* (revised edition), Oxford University Press, 1971.

Regan, T *The Case for Animal Rights*, London: Routledge, 1988.

Regan, T "The Moral Basis of Vegetarianism", *Canadian Journal of Philosophy*, (1975), Vol. 5, No. 2, pp 181-215.

Riad, HN and Nicholls, A "An Ethical Debate: elective ventilation of potential organ donors", *British Medical Journal*, (1995a), Vol. 310, pp 714-715.

Riad, HN, Nicholls, A and Collins, C "Elective ventilation is cost effective and humane", *British Medical Journal*, (1995b), Vol. 311, pp 1370.

Rodd, R *Biology, Ethics and Animals*, Oxford, Clarendon Press, 1990.

Rollin, B *Animal Rights and Human Morality*, Buffalo, N.Y.: Prometheus Books, 1981.

Rosenberg, GA, Johnson, S and Brenner RP "Recovery of cognition after prolonged Vegetative State", *Annals of Neurology*, (1977), Vol. 2, pp 167-168.

Royal College of Surgeons of England, The, *Report of the Working Party to Review Organ Transplantation*, January 1999.

Sacks, O *An Anthropologist on Mars*, London: Picador, 1995.

Sapontzis, SF *Morals, Reason,and Animals*, Philadelphia: Temple University Press, 1987.

Scheffler, S *The Rejection of Consequentialism: a philosophical investigation of the considerations underlying rival moral conceptions*, Oxford: Clarendon Press, 1982.

Schmidtz, D "Islands in a Sea of Obligation: limits of the duty to rescue", *Law and Philosophy*, (2000), Vol. 19, pp 683-705.

Searle, J.R *The Rediscovery of the Mind,* Cambridge Mass; London: MIT Press, 1992.

Seifert, J "Is 'Brain Death' Actually Death?", *Monist*, (April 1993), Vol. 76, No 2, pp 175-202.

Shaw, A.B "Non-therapeutic (elective) ventilation of potential organ donors: the ethical basis for changing the law", *Journal of Medical Ethics*, (1996), Vol. 22, No. 2, pp 72-77.

Singer, P *Animal Liberation,* London: Jonathan Cape, 1976.

Singer, P "Animals and the Value of Life", in Regan, T. (ed.), *Matters of Life and Death,* McGraw-Hill Inc., 1980.

Singer, P and Kuhse, H, (eds.) *Bioethics: An Anthology*, Oxford: Blackwell, 1999.

Singer, P "Famine, Affluence, and Morality", *Philosophy and Public Affairs*, (1972), Vol. 1, pp 229-243.

Singer, P., "Killing Humans and Killing Animals", *Inquiry,* (Summer 1979(b)), Vol. 22, 145-56.

Singer, P *Practical Ethics*, Cambridge: Cambridge University Press, 1979(a).

Singer, P *Rethinking Life and Death*, Oxford: Oxford University Press, 1994.

Skegg, PDG *Law, Ethics and Medicine: studies in medical law,* Oxford: Clarendon

Press, 1984.

Smart, JJC and Williams, B *Utilitarianism, for and against*, London: Cambridge University Press, 1973.

Snowdon, PF "Personal Identity and Brain Transplants", in Cockburn, D, (ed.), *Human Beings*, Royal Institute of Philosophy Supplement, Vol. 29, Cambridge University Press, 1991, pp 109-26.

Stell, LK "Let's abolish "Brain-death"", *Community Ethics* (year not noted), Vol. 4, No. 1. On http://www.pitt.edu/~cep/41-3.html.(last accessed 09/12/02).

Steinbock, B *Life Before Birth: The Moral and Legal Status of Embryos and Fetuses*, New York; Oxford: Oxford University Press, 1992.

Stoppard, T *Rosencrantz and Guildenstern are Dead*, London: Faber, 1968.

Sumner, L.W *Abortion and Moral Theory*, Princeton; Guildford: Princeton University Press, 1981.

Sunday Times, 1st March 1998, p24.

Teichmann, J *Social Ethics: A Student's Guide*, Blackwell, 1996.

Thompson, JJ "Killing, Letting Die, and the Trolley Problem.", *Monist*, (1976), Vol. 59, pp 204-217.

Toole, G, and Toole, S *Understanding Biology for Advanced Level*, (Second Edition), London: Stanley Thornes (Publishers) Ltd, 1991.

Veatch, RM "The Impending Collapse of the Whole-Brain Definition of Death", *Hastings Centre Report*, (1993), Vol. 23, pp 18-24.

Warren, MA *Moral Status: Obligations to Persons and Other Living Things*, Oxford:

Clarendon Press, 1997.

Wetlesen, J "The Moral Status of Beings who are not Persons: A Casuistic Argument", *Environmental Values*, (1999), Vol. 8, pp 287-323.

Wikler, D "Brain Death: A Durable Consensus?", *Bioethics*, (1993), Vol. 7, No. 2/3, pp 240-246.

Youngner, S and Bartlett, E "Human Death and High Technology: The Failure of the Whole-Brain Formulations", *Annals of Internal Medicine*, (1983), Vol. 99, pp 252-258.

Yourgrau, P "The Dead", *Journal of Philosophy*, (1987), Vol. 84, No 2, p84-101.