has been alleged that brain death was mistakenly diagnosed can be ascribed to failure to exclude these factors. Misunderstanding also arises occasionally from confusion between brain death (when breathing has irreversibly ceased and the heart beats only for as long as artificial ventilation is maintained) and other unresponsive states. The commonest of these is the vegetative state, in which patients are without any recognizable mental function and in whom destruction or disconnexion of the cerebral cortex can often be demonstrated by careful dissection of the brain after death. However, these patients breathe on their own and if adequately cared for can live for months or even years. Though many sensitive observers regard this as a state worse than death, these patients are not brain dead and the issues of ethics which arise are quite different.

There was an interesting contrast between the response of the British Medical Journal and of the Lancet to the Colleges document. The former welcomed it in a few lines, expressing the hope that this would settle the issue finally; the latter commented at length and expressed lingering doubts that the demands of transplant surgeons for heart-beating donors might still put unfair pressures on those caring for brain-dead patients. Dr Norman Shumway, who maintains a successful cardiac transplant programme in California, has commented on the Colleges document: "The people who have to be persuaded are the doctors. The public finds it easier to accept this concept than does the medical profession. Certainly it is now often the relatives of the acutely brain-damaged patient who are the first to raise the possibility that the brain may be dead, or so badly damaged that survival will be in a vegetative state. They often first broach with their doctors the wish that artificial support should be withdrawn if this is certainly the state of affairs. This view has also had repeated support from the religious leaders, the most recent being the Archbishop of Canterbury in his Edwin Sherwin lecture at the Royal Society of Medicine. Just how reactionary doctors can be, in spite of public opinion, was shown by a lecture by a neurosurgeon published only three weeks before Dr Coggan's lecture. The neurosurgeon explicitly stated that in his unit ventilators were seldom turned off and most patients died within six days. But once brain death has occurred progressive dissolution of the brain and then of other organs proceeds even if mechanical ventilation is maintained; to allow days of decomposition in the ward reflects no credit on the doctors who are so indecisive as to let this happen, and indeed this is exactly what defined criteria for the diagnosis of brain death are designed to prevent. The Colleges document is therefore to be welcomed: with its authority and its practicality it should help to resolve uncertainty in the minds of doctors confronted with brain-dead patients, who are anxious to act appropriately but may be reluctant to do so because they fear criticism from their colleagues or even legal censure. It should lead to more humane medical practice, which is what society wants of its doctors.

References
1 Conference of Royal Colleges and Faculties of the United Kingdom, Diagnosis of brain death, 1976, Lancet, 2, 1069.
5 Jennett, B, and Plum, F, Persistent vegetative state after brain damage, Lancet, 1, 734.
6 Jennett, B, Resource allocation for the severely brain damaged, 1976, Archives of Neurology, 33, 595.
9 Shumway, N, 1976, World Medicine.
10 Coggan, N, 1976, reported in The Times, 19 December.

The definition of death

Ian Kennedy University of San Diego, California*

I have always taken the view that on balance legislation defining death is unnecessary and potentially counterproductive. It is, however, a debate which is fairly evenly balanced. Skegg favours legislation. In this Journal (2, 190–191) he assesses and dismisses the arguments against legislation, presents his prima facie case for legislation and volunteers a draft proposal. His arguments, however, are not free from objection. The case for legislation is not strong, consisting of three points. First, in the absence of a medical consensus legislation is called for. But, if brain death is to be the definition adopted this does not represent any departure from existing medical practice, it merely involves identifying, in circumstances complicated by modern technology, the state which has always been regarded as death. Thus, there is no absence of medical consensus on the concept, merely, if at all, on the process of recognizing it. This is why I and others have urged some form of code of practice so as to

* When this paper was written Mr Kennedy was the visiting Professor of Law in the University of San Diego. He is a member of the Faculty of Law at King's College, University of London.
standardize and universalize this recognition process. Indeed, other important areas of medical practice are so regulated, eg, a code of practice on experimentation with human subjects developed by various research bodies. If the definition were to go beyond that traditionally regarded as death then legislation would be needed but there is little likelihood of this. Further, if Skegg were right and there were no medical consensus, where is Parliament to get its guidance from, how is it to select which medical view to follow? Second, Skegg says there is a need for clarification to remove doubt and uncertainty. This does not of itself compel the conclusion that legislation is the only or the appropriate mode for such clarification. Third, it is unsatisfactory to leave the issue to a jury, Skegg argues. Though this is a debatable proposition it is in any case an argument which refers only to the criminal law and has no relevance to possible civil law cases where there would be no jury and the judge, eg, in a malpractice suit, would have to state the law.

Legislation would not be conducive to trust

Fundamentally my objection to legislation is one of style. I just believe the matter can be better dealt with in other ways more conducive to doctor-patient-public trust. For the most part legislation would be an irrelevance as the vast majority of cases do not call for any second thoughts. For the few which do, I would prefer to leave the matter free from legislation, cognizant of the fact that legislation is never the end of the story but so often the means of fostering litigation by those who feel aggrieved and have a statute to pick their way through. I add that if, as I suspect, the main aim of the legislation is to facilitate transplant surgery, something of only minute relevance in the whole picture of treating the dying, this is in itself a ground for objection, if only for public relations reasons. The public is still uneasy about transplants and to see a law on death promoted and passed with transplants in mind would add to the unease and could operate in the long run against the future interests of transplant surgery.

Practical objections to a legal definition

This leads me to further objections. Skegg's draft proposal is not without flaws. It exactly invites the kind of attack I referred to above, and, having recently been asked to advise on the Kansas and California Statutes in the USA, I have some insight into the ingenuity of lawyers, particularly defence counsel. Here is not the place for detailed criticism. I note, however, the following:

1 What does Skegg mean in his introductory remarks by 'Ideally it would apply to all persons, for all purposes'? In this less than ideal world are there some it may not apply to, who would not then be dead? If so, do we have various types or states of death as in the disastrous Kansas Statute.

2 The phrase, 'Shall be regarded as dead for legal purposes' (my emphasis); are there other purposes for which the person shall not be so regarded? Why use the word 'regarded'? Does this not suggest some fiction is being employed? Why not say, 'a person is dead when . . . etc'?

3 I am not clear whether death should be predicted on the irreversible cessation of all brain activity. My understanding is that the brain stem is the critical component and that there may sometimes be some electrical activity still measurable in the brain for some time after the brain stem has ceased to function. This may cause confusion or uncertainty.

4 If irreversible cessation is to be the criterion I agree that some guide is necessary as to what irreversible involves. The second provision proposed by Skegg addresses itself to this point but again is open to objection. The word 'may' suggests it is merely permissible but not necessary to deduce irreversible cessation from the three named criteria. The object of the statute could be defeated if a doctor could legitimately disregard these and continue artificial respiration when it was in the interests of someone, even himself, to do so. Further, surely the word 'spontaneous' or 'unaided' must appear before the words 'respiration' and 'circulation' to avoid uncertainty and to make sense. The little word 'or' rather than 'and' may also create problems. Finally, reference is made to the 'appropriate period' and 'in accordance with good medical practice' in a statute the raison d'être of which is that there is no consensus of medical opinion on whether it is good medical practice to regard patients with such symptoms as dead.

5 Does Skegg mean to propose through this legislation that this determination must be made in every case or else a person is not legally dead? In most cases, as I have said, this whole issue is irrelevant, but could someone claim that since the criteria mentioned in the legislation were not established the patient was not legally dead? Skegg would, of course, say that such an interpretation was perverse, but I do not think his draft proposal puts the issue beyond doubt. It could certainly cause some lawyers to advise some doctors to act with great circumspection and mark the first step down the path of 'defensive medicine' well trodden in the USA.

Legislation is not the answer to the problem

I hope I have shown by these observations that legislation is not necessarily the answer to problems. I still hold to the view that a more flexible code of practice which responds to medical opinion and which would be interpreted in good faith is to be preferred.