

be available to tackle particular problems.

Undoubtedly, the academic R & D community has the capability to provide much needed help to states and localities. More funds should be made available for this purpose by the states and the federal government, but they must be in addition to those provided by the federal government for the solution of problems of a national nature. Associations that represent state and local interests at the national level, such as the Education Commission of the States, should inform their members both of the desirability of the use of academic scientists to analyze state and local problems and of the practical problems that must be overcome on both sides if the relationship is to work well. They might also sponsor a conference of state and university research administrators to discuss the problems that have been identified.

### Summary

In this brief article we have touched on some of the solutions to problems universities are encountering in working with the expanding "new federalism."

These arrangements will bring faculties into new kinds of relationships, which they can find stimulating if they are prepared ahead of time to accept the kind of public scrutiny that they have not encountered at the national level and to learn about the political system and the politician (13). Universities will find advantages for their academic programs if they involve faculty and students in programs that promote the advancement of public good provided that caution is exercised to prevent the development of arrangements that restrict academic freedom, push the university into the political arena, and drain its financial resources. Faculties need to work closely with their university administrations to make sure that valid academic principles are upheld. The exercise will be time-consuming and frustrating, but vital to the objective and the high quality support the public expects from universities.

### References and Notes

1. *Science Resources Studies Highlights* (73-313) (National Science Foundation, Washington, D.C., September 1973).
2. M. D. Reagan, *The New Federalism* (Oxford Univ. Press, New York, 1972).
3. Professor Reagan feels that the term "new federalism" is simple "romantic rhetoric, a facade behind which the national government is to abrogate its domestic role, to reduce its pres-

ence merely to that of an onlooker." He proposes a new label, "permissive federalism" which conveys that there is a sharing of power and authority between national and state governments, but that the state's share rests on the permission and permissiveness of the national government (2, p. 163).

4. Advisory Commission on Intergovernmental Relations, 14th Annual Report, *Striking a Better Balance—Federalism in 1972* (Government Printing Office, Washington, D.C., 1973), pp. 4-5.
5. D. K. Price, *Government and Science* (New York Univ. Press, New York, 1954), p. 92.
6. ———, *The Scientific Estate* (Oxford Univ. Press, New York, 1965), p. 71.
7. W. Lilley III, T. B. Clark, J. K. Iglehart, *Natl. J.* 5 (No. 9), 292 (1973).
8. Executive Office of the President, "Circular A-21 revised" (Office of Management and Budget, Washington, D.C., 2 September 1970).
9. Appropriations Acts for Fiscal 1966 for Departments of Defense; Labor; and Health, Education, and Welfare.
10. R. C. Stephenson, Chairman, Task Force on Grant and Contract Relationships with State and Local Agencies, "Task Force Report" (Committee on Governmental Relations, National Association of College and University Business Officers, 1 Dupont Circle, Washington, D.C., June 1973).
11. R. S. Woodrow, *Science* 176, 885 (1972).
12. G. W. Bonham, *Change* (May 1973), pp. 13-14.
13. L. M. Campbell, "A program for improving intergovernmental science programs," in *Science for Society*, J. E. Mock, Ed. (Georgia Science and Technology Commission, Atlanta, 1970), p. 67.
14. This article is an adaptation from a report by a study committee within the National Council of University Research Administrators. Committee members were Robert C. Anderson, University of Georgia; Donald R. Baldwin, University of Washington; Doris H. Merritt, Indiana University-Purdue University at Indianapolis; and Sidney G. Roth, New York University. D. C. Spriestersbach, University of Iowa, served as chairman.

### NEWS AND COMMENT

## Manslaughter: The Charge against Edelin of Boston City Hospital

*Boston, Massachusetts.* In October 1973, Kenneth Edelin, then chief resident in obstetrics and gynecology at Boston City Hospital (BCH), performed an abortion on a woman who was somewhere between 5 and 7 months pregnant. During the course of the abortion, the fetus died. Six months later, on 11 April, a grand jury indicted Edelin for manslaughter in the death of that fetus.

The case of the Commonwealth of Massachusetts v. Kenneth Edelin is medically and legally complex; it is one in which a lot of people besides the citizens of the Bay State and one black doctor defendant have a stake. Whatever its outcome, this case could affect physicians, medical researchers,

women seeking abortions, and "right-to-life" groups that are trying to end abortions altogether. Boston attorneys and prosecutors involved in the case think there has never before been one like it.

Whether the Edelin case will ever go to trial is a decision that is now in the hands of Superior Court judge James McGuire who, early this month, heard a defense motion to dismiss. It is expected that it will take him a couple of weeks to contemplate the issues and hand down a ruling. If he rules for Edelin and dismisses the case, that's that. If he rules for the prosecution, there will be a trial at which a number of perplexing questions besides Edelin's guilt or innocence will be aired.

The Edelin case came to light early in 1974 when officials from the district attorney's office, investigating the hospital for reasons that had nothing to do with Edelin, came across the body of a "well-nourished black male fetus" in the pathology department morgue. It was the body of the fetus Edelin had aborted in October. For reasons that are not clear, no one had signed a death certificate\* and the body had never been removed from the hospital. Assistant district attorney Newman A. Flanagan made further inquiry into the circumstances of the abortion and came to the conclusion that Edelin had killed the fetus. Flanagan decided to prosecute.

The grand jury obviously felt he had cause and handed up an indictment for manslaughter alleging in startling language that Edelin "did assault and beat a certain person, to wit: a male child described to said jurors as Baby Boy and by such assault and beating did kill the said person."

\* In Massachusetts, a certificate of stillbirth is required for any fetus of more than 20 weeks gestational age.

There is no contention that the abortion itself was illegal. What the assistant district attorney is alleging is that the fetus, consistently referred to as "Baby Boy," was viable at the time of the abortion and that it would have "remained alive had it not been for the conduct of the defendant."

If the case goes to trial, the jury will be asked to deal with two categories of controversial questions. The first has to do with the facts in this particular case: argument about the gestational age of the fetus and about what Edelin did or did not do in the operating room during the course of the abortion.

Then, there will be broader questions of law and ethics. Is a fetus a "legal person" entitled to protection under the 14th Amendment to the Constitution? If so, when does that protection begin? Does legal personhood begin with conception or later, perhaps with fetal viability? And when is that? If a fetus is a person and if it is viable, does a physician performing an abortion have a legal or ethical obligation to try to save its life? If he does save the baby, who is then responsible for it? Each of these questions is implicit in this case although, obviously, it will not answer them all.

If the case does go to trial, and if Edelin is convicted, appeals could take these troublesome questions to the Supreme Court. As Flanagan said in an interview, "This case could go all the way to the top." He sounded as though he would like that.

Edelin is being defended by William P. Homans, Jr., a big-league criminal lawyer in Boston who says he "supposes" he can be seen as a "political lawyer." He was once in the state legislature, has handled a number of civil rights cases, and has defended many black people. His colleagues describe him as a Boston Brahmin by birth but say he is anything but wealthy because he often works for little or no pay. Everyone seems to think that Edelin is in good hands with Homans.

In his motion to dismiss, Homans claimed that Edelin had done nothing illegal in light of the Supreme Court's 1973 ruling in *Roe v. Wade* which legalized abortion, and he argued that the doctor was well within the bounds of normal medical practice in performing the abortion by hysterotomy, a surgical procedure very similar to that used for birth by cesarean section.

Homans also contended that a fetus is not, in fact, a legal person and, therefore, it could not be the victim of man-

Advances in biomedical science are raising important problems of ethics and public policy. This is one of a series of occasional articles planned for News and Comment on the conflicts involved.

slaughter. Lawyers seem to be of varying opinions about whether *Roe v. Wade* applies to the Edelin case. Although the Supreme Court did not fully address the issue of legal personhood in *Roe v. Wade*, it did note that "the unborn have never been recognized in law as persons in the whole sense." Other courts, including one in Massachusetts, have subsequently reinforced that position.

Flanagan argued for the prosecution that *Roe v. Wade* does not apply to the Edelin case.

#### Case Stunned Doctors

When the 11 April indictment against Edelin was handed up, Boston's huge medical community was stunned. When he was suspended from his duties at BCH, it was outraged. So, reportedly, were the citizens served by the hospital in the inner city.

On 18 April, Edelin's suspension was reversed. The Boston Board of Health and Hospitals reinstated him, finding that he had done nothing "inconsistent" with established hospital practices or applicable Supreme Court rulings. Edelin, who is said to be well regarded by both his colleagues and his patients, is now a full member of the BCH staff, although, reportedly, he is not performing abortions there any more.

Why is Kenneth Edelin being prosecuted for manslaughter? Many Boston doctors and lawyers are convinced it is for political reasons. They point out that this is an election year, that longtime district attorney Garrett H. Byrne was in a tough primary race and needed publicity. The Edelin case, they speculate, would win him support in this heavily Roman Catholic city.

The accusation that the case is political, not criminal, makes Flanagan flush with indignation. "How can anyone say that the district attorney would press a case for political gain? Since the boss won [the primary was on 10 September], some people have even asked me if I'm going to drop charges. This is not a test case, not a political issue. A

crime has been committed." Flanagan is firm, definitive on the point. But he apparently does see the Edelin case as something other than a run-of-the-mill manslaughter indictment and is working on it full time.

The discovery of the body of "Baby Boy" that resulted in the Edelin indictment was an accidental by-product of an investigation of research practices at BCH. During 1971 and 1972, four scientists, whose work was unrelated to Edelin's, conducted an experiment with women scheduled for abortions. The purpose of their work was to compare the ability of two antibiotics to reach the fetus, so they gave one or the other of the drugs to pregnant women and then measured drug concentrations in the dead fetuses after abortion. That case came to the attention of Boston "right-to-lifers" and was, in the fall of 1973, the focus of a stormy hearing before the Boston City Council.

It is not clear just how far along in pregnancy the woman in the Edelin case was, but there seems to be general agreement that she was at least in her fifth month. On two occasions, attempts had been made to induce an abortion by infusing her womb with saline solution. Saline abortions are common in the second trimester of pregnancy. The solution kills and begins to decompose the body of the fetus which is expelled by contractions of the uterine muscle. But, in this case, saline did not work. So, the abortion was performed by hysterotomy.

Homans recalls that his first problem with the case was finding out the specifics of the accusation. "We had no information about what the district attorney was alleging from the time the indictment was handed up until late July. We had to file a motion for a bill of particulars to find out what we specifically are charged with." The court instructed the prosecutor to answer some of Homans' 19 questions but not all. The court, for example, denied a request that Flanagan declare how long "Baby Boy" would have lived had Edelin not intervened.

However, the bill of particulars does provide the following information. By what "instrumentality or instrumentalities" was the alleged manslaughter committed? How did Edelin supposedly do it? Replied the prosecutor, "with his hand or hands."

The defense asked for a description of the "person" who was allegedly killed. The state describes him as a "well-developed, well-nourished black

male fetus in the fetal position measuring crown to rump 8.5 inches (21 cm), 13 inches (33.5 cm) in length and weighing 700 grams (1.54 pounds). The head was symmetrical and covered with fine black curly hair." Flanagan has a picture.

There are no absolute standards for determining fetal age but there are averages. The late pediatrician Virginia Apgar has written that the unborn infant is "14 or 15 inches long by the time pregnancy is two-thirds completed," and that it will weigh "a little more than two pounds, on the average, by the end of the sixth month."

The size and weight of the fetus will be important to arguments about fetal age and viability that are expected to come up if there is a trial. The prosecution claims that the fetus was 24 to 28 weeks old, and is expected to use the fact it weighed 700 grams as support for that claim. The defense probably would contest that point and argue that the fetus was only 20 or 21 weeks old and that it weighed only 600 grams at the time of abortion. It would claim that the extra 100 grams, recorded at autopsy months afterwards, were added by the formaldehyde in which the fetus was fixed.

The actual act of manslaughter, described in the indictment as "assault and beating," would seem, in ordinary terms, to be a matter of suffocation. According to the prosecution, after cutting open the mother, Edelin reached in and manually separated the placenta from the uterine wall. So far, so good. This would be medically usual procedure. But then, the allegation is,

instead of removing the fetus from its mother, he (i) waited 3 to 5 minutes before taking the placenta and fetus out of her abdomen or (ii) placed his hand in the mother's uterus and compressed the umbilical cord for 3 to 5 minutes, after the hysterotomy had begun and before he removed the fetus. In effect, he is charged with shutting off the fetus's oxygen supply.

The truth of these allegations will have to be determined in court. If it goes to a full jury trial, testimony as to what did or did not happen is expected from persons who were in the operating room. There probably would be testimony from expert witnesses about hysterotomy, with considerable detail about what constitutes usual procedure.

And, it is expected that there would be argument about the viability of the fetus. Had it been "born alive," so to speak, would it have lived, would it have required artificial aid, would it have been mentally damaged?

Flanagan, taking a strict view of the question, believes that it does not matter how long it would have lived outside its mother's body. "God alone knows how long," he says. "Maybe 30 seconds, maybe a lifetime." What he would tell the jury is that it never had a chance because it was murdered after it was physically separated from its mother. He also would present evidence that, in fact, if the fetus was as old as he claims, it might have survived. There are cases of fetal survival at a very early gestational age. It is rare, but some fetuses born at 24 weeks and weighing 1¼ to 2 pounds have made it.

Flanagan is busy collecting records of those cases.

Although it is possible to save very young fetuses, it is hardly yet possible to do so routinely and, always, there is a great risk of serious damage to the brain and nervous system. Presumably, the defense would maintain that the fetus could not have survived in any event. A jury may have to decide.

The whole subject of fetal viability is as complex medically as it is legally, and, so far, researchers themselves have been unable to reach a consensus. The questions will get tougher before they are resolved. As progress is made in fetal research, particularly in the rapidly developing area of neonatal intensive care, the viable fetus becomes younger and younger.

Just what will happen with respect to abortion when it becomes routinely possible to save a fetus as young as five gestational months is something society is going to have to work out. And one way it handles these kinds of perplexing problems is through the courts, through the decisions of judges and of juries that may not have a vast store of scientific information at their command but that, nonetheless, are in a position in our culture to make judgments that can affect us all.

It is going to be a tough decision whether it is made by judge or jury.

—BARBARA J. CULLITON

*A second article will discuss the antibiotic experiment that led to the investigation of BCH and the indictment for grave-robbing that has been brought against the researchers involved.*

## Sex Therapy: Making It as a Science and an Industry

The rapid spread of the human potential movement in America today—which encompasses a wild assortment of new techniques, psychotherapeutic and otherwise, for individual self-exploration and the enhancement of the joys of being human—has provided a

fertile environment for what may be the fastest-growing field of all—the exploration of human sexuality and treatment of sexual problems.

Sex research, sex training, sex education, and sex therapy programs are blooming profusely around the country,

but amid the blossoms there are a good many weeds. People with little or no qualifications are getting into the act—some "educational seminars," for example, offer little more enlightenment than a weekend of dirty movies. There is particular confusion and concern over what constitutes proper training of a sex therapist, and what measures should be taken to curb the abuses that flourish in the name of therapy.

Alfred Kinsey was the first American to pierce through the clouds of puritan ethics and Victorian morality which have shrouded the subject in this country and have exempted it from the mainstreams of scientific and behavioral research. The sex research team of Wil-